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The narrative is changing

The AHJ April issue has a range of articles on several interesting topics. The narrative is now shifting away from COVID-19 as the pandemic appears to be in retreat across much of Africa and the globe, but the opinion piece reminds us not to celebrate too early. In 2021, Africa recorded the fastest surge in COVID-19 cases globally and forecasters warn that the continent's vaccine coverage will not reach 70% until August 2024. The article highlights the challenges Africa has had in accessing vaccines that has left its vaccination coverage so low. It recommends that the best way forward is for Africa to build local vaccine manufacturing capacity.

Carol Natukunda and Elsie
Kiguli-Malwadde report on the
AFREhealth-CUGH Working Group
Satellite meeting at the Consortium
of Universities of Global Health
Conference (CUGH 2022). Keynote
speaker Dr Jimmy Volmink, a professor
in the Department of Global Health
and a former Dean of the Faculty of
Medicine and Health Sciences at
Stellenbosch University, South Africa,
gave his reflections on global health
in a post-pandemic world with a
decolonised mindset.

This is followed by a stimulating article by Lawal et al from Nigeria describing a social culture practice called "omugwo" that helps prevent and manage Postpartum Depression (PPD). The concept of "Omugwo" and its benefits are well expounded.

Despite diverse efforts in the last two decades, the global health workforce (HWF) crisis persists, characterised by widespread shortages, maldistribution and poor working conditions. Francis Omaswa

thoughtfully narrates the challenges and describes the drivers of the HWF trends. He concludes by stating that the experience of COVID-19 pandemic that brought the world to a standstill gives the world an opportunity that should not be lost to revive and revitalize the global HWF movement.

The Infectious Disease Institute (IDI) has given the reader a glimpse into its success during the last 20 years. In the previous two issues, it has reflected on how it has built trust through its programmes and its governance and systems, this last article considers IDI's values, and how they have engendered trust in IDI by a wide range of stakeholders based on integrity, technical competence, resilience, and impact.

An article by Carol Natukunda on health insurance in Uganda gives a narrative of what steps Uganda has taken towards ensuring that its populace gets an insurance scheme. This information was collected at a stakeholders' engagement with Civil Society Organisations in Uganda.

This issue still demonstrates the importance of Women's health through two articles from UNICEF and its collaborators. The articles are on Ante Natal Care (ANC): one describes the enablers and barriers of ANC and infant and young child feeding practices in the West Nile region in Uganda; and another is on the use of partographs in the same region. A partograph is a tool for monitoring maternal and fetal health during active labour. Both these articles are based on the work that UNICEF does in the region to improve health outcomes.

Another article shows how the Scottish Surgical Colleges Supports global health by training surgeons. In this case, they have supported Sudan to get its first paediatric surgeon.

Healthy Entrepreneur, an organization working in Uganda describes a Community Health Entrepreneurship (CHE) distribution Model that motivates voluntarily Community Health Workers (CHWs) by introducing profit as an incentive that empowers them. The model strives to ensure that rural people's health needs are met.

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

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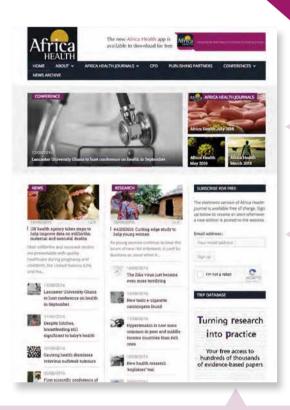
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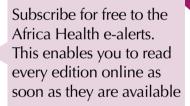
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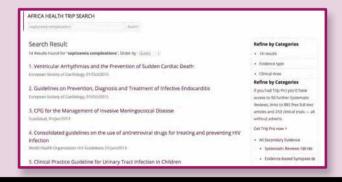


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Building Africa's vaccine ecosystem to support health system resilience



Although the COVID-19 pandemic appears to be in retreat across much of Africa, let's not celebrate too early. In 2021, Africa recorded the fastest surge in COVID-19 cases globally and forecasters warn that the continent's vaccine coverage will not reach 70% until August 2024.1

Difficulties accessing vaccines have hampered Africa's ability to fight the pandemic. To date, Africa has received about 724 million vaccines doses out of more than 11 billion produced globally. Countries on the continent currently import 99 percent of the routine vaccines they need.

But now, there is real momentum from Africa's public and private sectors to bring manufacturing home.

The pandemic's pressure on health systems and constrained vaccine access has underscored the urgent need for Africa to become more self-sufficient in pharmaceutical and vaccine production. To do this will require strong public-private sector partnerships and the perseverance to build responsive, reliable, and resilient vaccine ecosystems on the continent.

But what will it take to attract the funding and know-how needed to establish vaccine manufacturing ecosystems in Africa?

In April 2021, the African Union and Africa Centres for Disease Control and Prevention (Africa CDC) announced a bold ambition to produce up to 60% of the vaccines Africa needs by 2040 in Africa through the Partnership for African Vaccines Manufacturing (PAVM) initiative.2 Several countries have already launched efforts in this direction, including Algeria, Egypt, Ghana, Morocco, Nigeria, Rwanda, Senegal, South Africa and Uganda.

To reach its vaccine production goals, Africa will need not only investment, but must also create appropriate and conducive enabling regulatory environments, build technical skills, and access knowledge-sharing.

Getting the ecosystem right is equally important. Governments need to strengthen regulations and build their own capacity to monitor the quality and safety of vaccines produced to establish a strong and credible vaccine ecosystem. There is also an opportunity for countries to leverage regional regulatory improvement initiatives, such as the African Medicines Regulatory Harmonization (AMRH)³ and the African Medicines Agency (AMA),⁴ which together seek to harmonise

Kevin Njiraini is IFC's Regional Director, Southern Africa and Nigeria

pharmaceutical regulations across the region, provide guidance for the monitoring and evaluation of all pharmaceutical production, including vaccines, and enhance the region's regulatory capacity.

IFC is supporting a number of vaccine projects to advance Africa's vaccine manufacturing capacity and increase access to vaccines. In most projects, IFC has partnered with other development stakeholders to ensure that all the critical levers of successful vaccine project development are developed in parallel, including commercial, regulatory, human capital, and technical aspects.

For example, in Rwanda,⁵ IFC has partnered with the government, BioNTech (a leading biotechnology company), and the kENUP Foundation (a global research-based promoter of innovation), on a project to develop domestic vaccine manufacturing capacity.

In South Africa, IFC is part of a consortium of development partners to support the expansion of Biovac's vaccine manufacturing project.6 While in Senegal, IFC has partnered with the Institute Pasteur Dakar (IPD) to build local vaccine manufacturing capacity and strengthen the regulatory environment.7

Moreover, IFC is also evaluating the ability of health systems in 10 African countries to support vaccine manufacturing.

Investors should take note of the potential of Africa's vaccine market, which, according to McKinsey & Company, is forecast to grow to between \$2.3-to-\$5.4 billion by 2030, up from its current size of \$1.3 billion.8

The development benefits of investing in vaccines are even more impressive.

Vaccines have been proven effective as a diseasefighting tool.9 Building Africa's vaccine production capabilities will help the continent fully recover from COVID-19, the worst pandemic in modern history, and leave it much better placed to face future pandemics.

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A post-pandemic world with a decolonised mindset

Carol Natukunda and Elsie Kiguli-Malwadde report on the AFREhealth-CUGH Working Group Satellite meeting at CUGH2022

The Consortium of Universities of Global Health (CUGH) held its annual conference between 28 March and 1 April 2022. It was an entirely virtual conference. The theme of the conference was "Healthy People, Healthy Planet, Social Justice". The conference format included satellite, plenary, oral presentations, poster presentations and networking sessions. The objective of the conference was to expand participants knowledge, give them an opportunity to share their work and identify new collaborators to improve the health of people and that of our planet.

The African Forum for Research and Education in Health (AFREhealth) and the Consortium of Universities for Global Health (CUGH) Working Group (ACWG) held a satellite meeting on 24 March. This was one of the 29 satellite sessions held ahead of the 2022 CUGH conference. The AFREhealth-CUGH working Group meets each year at CUGH and AFREhealth annual meetings. The meeting was moderated by Quentin Eichbaum a professor of Pathology, Microbiology and Immunology and professor of Medical Education and Administration at the Vanderbilt University School of Medicine, Nashville, Tennessee, USA who co-chairs the ACWG with Abigail Kazembe, the president of AFREhealth and Elsie Kiguli-Malwadde, the vice president of AFREhealth.

Kazembe started off the meeting by giving the history of the ACWG which started in 2017 and has developed over the years to form three subcommittees namely the Education, Student Exchange and Research Committees.

Dr Jimmy Volmink, a professor in the Department of Global Health and a former Dean of the Faculty of Medicine and Health Sciences at Stellenbosch University, South Africa, was the keynote speaker. He addressed the topic "Reflections on global health in a post-pandemic world with a decolonised mindset."

In his address, he highlighted the enormous impact brought about by the COVID-19 pandemic since the outbreak over two years ago. These included, disrupting health services, stretching health systems, limited access to vaccines, stress and mental health issues, loss of jobs and livelihoods and disruption of education. He noted that the need to work remotely and the need to have long distance education during the lockdowns also exposed the digital inequalities in many countries. In

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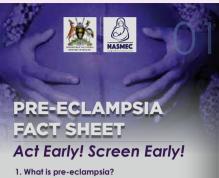
the health workforce it highlighted the fact that there was chronical shortage of specialists in critical care for Intensive Care Units (ICUs). "Many health systems were not prepared," observed Volmink, adding, "COVID-19 revealed the fault lines in health systems around the world. He noted that the issue was not yet over and that this will not be the last pandemic."

He used this background to explain why and how global health as an area of study and practice could achieve equity and address the plight of the disadvantaged without leaving no one behind. "Health and health care are fundamental human rights. Neglecting them not only leads to suffering but erodes trust," he stated. He called for holding governments responsible for taking people out of vulnerable situations. To do this, he added, there must be partnerships with the civil society organisations (CSOs), the private sector and the communities themselves. He noted that depending on the Global North Is counterproductive since it erodes government responsibility to provide basic health commodities such as access to vaccines and bed nets.

The keynote address was followed by an interactive session where attendees made contributions on the COVID-19 response and related global health challenges. Following this session, there were breakout groups for the three subcommittees to discuss their plans going forward. The group later reconvened to share thoughts and ideas, and decide on the way forward for the coming year. It was agreed that the three subcommittees would continue to meet quarterly while the larger ACWG will meet biannually at the annual conferences.

Beyond this particular satellite session, the CUGH 2022 Conference assembled over 2,000 scientists, students and implementers from academia, NGOs, government and the private sector. A wide range of medical and non-medical disciplines were represented throughout the virtual conference. Attendees were inspired and challenged to learn new skills, network, and find ways in which to improve the health of people and the planet.

There were seven subthemes, namely: social determinants of Health, Covid-19; emerging infectious diseases, & other communicable diseases; planetary health, one health, environmental health, climate change and pollution; strengthening health systems, public health, primary and surgical care; bridging research to policy, reforming academia; governance and diplomacy; and non-communicable diseases.



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

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

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

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

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

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

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

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

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

IV. Women who have a family history of pre-eclamp-

sia (either the mother or maternal aunties or siblings have ever had p re-eclampsia)

V. Women who already have high blood pressure

before pregnancy (chronic hypertension)

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

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

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

IX. Women who delay for more than 10

years to conceive after a previous pregnancy (long inter pregnancy interval)

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

Women who have a new partner fathering that preanancy

Women who conceive through assisted reproductive technologies (IVF)

5. What symptoms do women who suffer from preeclampsia exhibit?

- A number of women who get pre-eclampsia may not show any symptoms. Those who show symptoms may exhibit one or more of the following:
- Persistent and / or severe headache that will not go
- away even with poinkillers

 Visual disturbances (photophobia, blurred vision, or temporary blindness)
- Upper abdominal (epigastric pain)Altered mental status (confusion, altered behavior, or agitation)

- Dyspnea or difficulty in breathing
 Swelling of the face, hands, and feet
 Nausea with or without vomiting after the mid-preg-
- Excessive weight gains or sudden increase in weight (more than 5kg per week)



6. Is there a cure for pre-eclampsia?

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

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

Immediate complications of pre-eclampsia to the woman include:

- Convulsions/fits/seizures (eclampsia)
- Stroke
- Kidney failure
- Bleeding from the birth canal before delivery (abruption-placenta)
- Severe bleeding after delivery (postpartum hemorrhage)
- Fluid retention in the lungs (pulmonary edema)
- Liver failure
- Failure of the clotting system leading to uncontrollable bleeding (DIC)
- Maternal death

In the long term, women who have suffered from pre-eclampsia are at increased risk of developing: Chronic hypertension (long-lasting high blood

Chronic (long-lasting) kidney disease Cardiovascular (Heart) diseases such as heart attack, heart failure, etc. Diabetes mellitus

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

- Immediate complications to the baby include:
- Premature birth Beina stillborn
- Born too small (stunting) as a result of impaired fetal growth

Long term complications to the baby include

Increased future risk of long-lasting high blood



9. What should a mother who has had pre-eclampsia do immediately after delivery?

- Watch out for warning and danger signs and symptoms such as headache, visual disturbances, and upper abdominal pain. Return to a health facility if these symptoms develop.
- Ensure to be checked in a health facility after 1 week, 6 weeks, and 12 weeks after delivery. Sometimes the frequency may be more depending on the
- mother's condition.

 Ensure a healthy lifestyle including maintaining a healthy weight, exercise, and eating healthy foods (plenty of fruits and vegetables).

10. What should a mother who has had pre-eclampsia do later in her life?

- Ensure to live a healthy lifestyle including maintaining a healthy weight, exercise, and eating healthy foods (plenty of fruits and vegetables)
- Ensure regular check-ups for the long term complications as listed above (high blood pressure, diabetes mellitus, heart disease, kidney disease, etc.)
- Receive pre-conception care if they choose to get pregnant again in order to optimize them for pregnancy

11. What can be done to reduce complications of

- Encourage all pregnant women to start attending antenatal care early (as soon as they suspect or confirm they are pregnant).
- Encourage all pregnant women to attend antenatal care regularly (as instructed by the health care providers) and to have their blood pressure checked at all visits.
- Assess all pregnant women found with high blood pressure for complications. This may require admission to hospital.
- Practice healthy lifestyles such as maintaining an appropriate weight, eating healthy foods, and exercising regularly as appropriate for the stage of the
- pregnancy.

 Encourage all women to deliver from health facilities.



12. What are the common myths and misconceptions about pre-eclampsia?

- Pre-eclampsia is a result of witchcraft and can therefore be cured by witch doctors.
- Herbs can cure pre-eclampsia
- It is a punishment or disease for cheating women
- The woman gets the disease because her ancestors are not happy with her or the husband
- The disease does not recur

Prof Annettee Nakimuli, Dr. Moses Adroma, Dr. Jackline Akello, Dr. Musa Sekikubo, Dr. Sarah Nakubulwa, Dr. Agery Bameka, Dr. Charles Irumba, Sr. Rehema Nabuufu, On behalf of the Pre-eclampsia subcommittee of NASMEC









"Omugwo" – preventing and managing postpartum depression

Lawal et al describe a Nigerian socio-culture practice that supports the mental health of new mothers

Postpartum depression (PPD) is a global public health challenge and a major concern because each day, 360,000 babies are born and PPD is an unexpected consequence. The prevalence of PPD varies from one country to another based on the system of health care delivery and social support available to women. In the global north, countries like Germany have a prevalence level put at 3.6%, while in Canada it ranges between 8.46% and 8.69%. In the lowand middle-income countries of the global south, prevalence rates are much higher. In Bangladesh, for example, it is as high as 39.4%.3 In Nepal, it is estimated at 29%.4 Research findings in Ethiopia indicate that PPD, estimated at 25%, is a major concern for reproductive health of women.⁵ Estimates for Nigeria were registered at 22.4% and 22.9% (Chinawa et al, 2016).^{6,7} Across all developing and sub-Saharan African countries, PPD ratings range from as low as 1.9% to as high as 82.1%.6

Arguably, PPD on women is a major concern the world over, with barely any visible deliberate or responsive interventions. The high prevalence rates are an indication that attention must be paid to the problem, to provide desirable consideration to the health of post-delivery women to be able to care for their new-borns. Against this background, this paper is an examination of the concept of "Omugwo" (maternal post-partum care) as a social mechanism for the prevention and management of PPD in Nigeria.

The concept of Omugwo

Omugwo is a cultural response to the burden on the mother that arises with the arrival of a new-born baby. While it is not globally widespread as a concept, Omugwo has been institutionalised across many Nigerian communities, especially among the Igbos of the south-eastern region of the country. Practically, it is a support system towards new mothers to take care for their babies in early post-delivery periods.

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Omugwo is a local demonstration of social support offered as a gesture to felicitate in the care of the newborn baby. It is considered a stress-easing mechanism for mothers upon delivery. It is also a gesture of companionship and backup against the daunting task of taking care for a new born child. The practice further serves as a social process of bonding between the usually elderly mother that comes to provide support and the new mother. Scholars have observed that the practice continues to thrive as it contributes to reducing anxiety, stress and preventing mothers from becoming depressed. Studies⁸ have shown that, despite challenges that may arise - usually not major, maternal postpartum care is reported to have a positive effect on the overall health of mothers and their newborns, making it a strong recommendation for the women of Nigeria.

Omugwo as a socio-cultural practice

The practise of Omugwo is a replication of old African traditions where elderly women in the community join their daughters or younger women to provide postdelivery care. A further benefit for the new mothers is found in the considerable lessons they reportedly learn in new born child attention as well as their postdelivery self-care. It has been found to augment and harness desirable relationships between senior women and the younger ones in communities. As a social practice, Omugwo is considered a privilege, especially when an elderly woman is presented the opportunity to provide maternal post-partum care to a younger woman in the community. Often it is preferred that both of the women involved are of same family lineage or clan, and this has defined the choice of who is nominated once a baby is born. But as a tradition also, elderly women are known to pay prolonged visits to their children when a baby is born, to offer both child and new mother-care support. It is considered a form of maternal and child education as many young women use this opportunity to learn, unlearn and relearn about child rearing especially in the very early stages of motherhood.

Omugwo today

Omugwo remains relevant in contemporary Nigeria, but has also spread beyond the south-east region to other regions of the country. It is considered beneficial to both the health and social well-being of the new mother and her new-born child. But the question is: how is it performing especially with the advent of modernity?

This paper observes that modern forms of social relations are inevitably being incorporated into the Omugwo practises, through education, modernisation and technological advancement, among others. However, in spite of these developments of the times, Omugwo remains steadfast in the societal norms of the Nigerian people. At the centre of this multigenerational practices is the much-needed postdelivery support to the vulnerable mother and child, as well as critical baby care skills. According to Mokhtari et al,9 postpartum care delivered at home increases the mother's knowledge of her health and that of her baby. Suffice to note that there are also unintended benefits, such as harmony between new mother and husband ushered in by the support offered by the community, especially the elderly who attend to the post-delivery development. Bonding was also earlier noted as another consequence of Omugwo, where social relations are harnessed between families and the women involved. The process of birth is associated with various forms of body setbacks such as fatigue, stress, anxiety or even depression, and social support offered during postpartum period has been found very effective in alleviating or managing these ills.10

Omugwo in the prevention and management of PPD

Studies in various Nigerian societies have established that Omugwo is effective in not just the prevention but also the management of PPD. In addition, there are some unintended consequences noted, including; new mothers being able to have adequate sleep and eat well with reduced pressures from the burdens of baby care. This also means faster body recovery for the mother and steady development for the infant. It is a stress management mechanism and the associated depression during the fragile post-delivery period, specifically from 10 days to six weeks. It has been found to lower the infant mortality rate.¹¹

The sharing that transpires during Omugwo between the new mothers and the usually much older woman is a proven social capital. It is an avenue for free engagement through which baby caring and many other skills are passed over to younger women. In the process, they are helped to avoid depression, which they are said to develop because of fear, anxiety and inexperience in motherhood. While instances of conflict may arise between the parties, the social cohesion that forms the bedrock of the practice is revered and remains paramount.

In view of the several scholars referenced in this paper, Omugwo comes out as a useful social mechanism that promotes solidarity in families and communities. As a social driver, it has been proven to prevent PPD given the concerted counselling involved. Omugwo thrives on communal living structures that characterise typical households in Nigeria. The practice of elderly mothers making committed relocation to their daughters' homes to partake in the delicate care of the new baby affirms a social system grounded in the traditions of Nigerian societies.

Conclusion

Omugwo is a beneficial socio-cultural mechanism. It is without doubt a proven societal structure found effective for women and their new-born babies, and families in the management of post-delivery experiences. Beyond the various scholarly references made in this paper, further studies are recommended to determine the extent to which it has bearing on women's mental health post-delivery.

Acknowledgements

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Drivers of change in global HWF trends

Francis Omaswa discusses global health workforce challenges

There are currently several movements globally looking at the future of the health workforce (HWF). The WHO recently released Working for Health Action Plan (2022-2030),¹ the African Union and African CDC is looking at the Post-Covid-19 Recovery Plan with dedicated work on the HWF implications and the UK All Party Group on Global Health is looking at the drivers of HWF needs in the UK and globally in the next decade and beyond. I have been privileged to follow and participate in HWF development in the past and these recent discussions and have insights on this topic to share as bellow.

First to keep in mind is that, despite diverse efforts in the last two decades, widespread shortages, maldistribution and poor working conditions persist at the root of all the HWF challenges under discussion. This crisis has been recognised since the publication of the Joint Learning Initiative Report in 2004.² There was a massive global response to the findings of this report culminating in the establishment of the Global Health Workforce Alliance (GHWA) at the WHO headquarters under Tim Evans and of which I was the founding Executive Director and Dr Lincoln Chen was the Chair of the Board of Directors. GHWA received strong global support and funding and undertook a number of studies and convened the First Global Forum on Human Resources for Health in 2008 in Kampala, Uganda.

This forum adopted the Kampala Declaration and Agenda for Global Action (KAGA) that recommended six interconnected strategies:

- Building coherent national and global leadership for health workforce solutions is the very first imperative.
- 2. Ensuring capacity for an informed response based on evidence and joint learning
- 3. Scaling up health worker education and training
- Retaining an effective, responsive and equitably distributed health workforce
- Managing the pressures of the international health workforce market and its impact on
- 6. migration
- 7. Securing additional and more productive investment in the health workforce

Current African HWF status

The take-away message from the KAGA is that HWF planning, education, training and management is a technical field for which there is a shortage of individuals who have undertaken the necessary training and acquired the relevant field experience

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to guide national and global HWF issues including garnering the political support that is critical for policy and resource mobilisation. In most African countries, for example, HWF leadership and management is led by personnel staff or human resource managers who move around in short spells from one government sector to another. However, they have not been trained and lack the knowledge to match the country's disease burden to the needed HWF skills mix, including quantification and incentives.

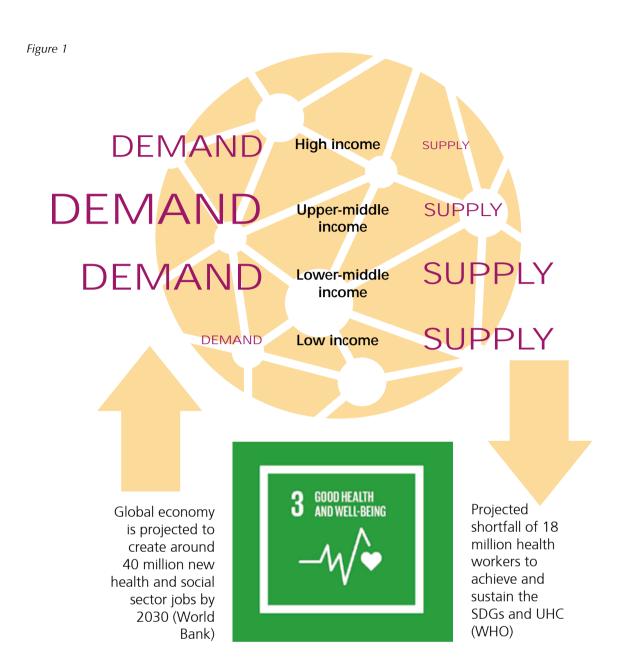
As a result, HWF data needed for planning is inadequate and long-term HWF plans are not well aligned to the skills gaps resulting in shortages, maldistribution, poor working conditions, and workers lacking motivation and support. Education and training do not respond to need and have in many countries become privatised with commercial motives which threaten to erode ethical values, with worrying implications for professionalism.

Weak HWF planning means that the needed investments for HWF do not get mobilised. This in turn results in failed timely employment, absorption and retention of graduates. In many sub-Saharan African countries, HWF vacancies co-exist with large numbers of unemployed health workers. Under these circumstances, rich countries are able to offer employment abroad, leading to the phenomenon known as brain drain but which in reality is brain push by weak health systems (see Figure 1).

Drivers of HWF trends

The emergence of health promotion and health creation as a priority in health services delivery as opposed to the current focus on the treatment of diseases, which is what determines HWF skills demand at present. There is a growing global movement calling for renewed health systems that focus on keeping healthy people healthy as opposed to the current emphasis on treating those who have already lost their health. The HWF skill needs for health promotion and disease prevention will increase the demand for public health workers without necessarily reducing on the need for clinical skills of the HWF. The long-term vision is that if health promotion and disease prevention succeed in reducing illness in the population, this will reduce the demand for HWF with clinical skills.

The 4th Technological Revolution will lead to the exponential rise in the application technology in health systems is expected to have a game-changing impact in the way in which health workers practise their professions. Face-to-face physical interactions between



HWF with their patients and the public will reduce. The entire clinical value chain from presentation, physical examination, investigations, diagnosis, treatment and follow-up can be technology mediated. This can extend to technical support supervision of trainees and monitoring the patient and other staff. The impact of these technological applications is expected to reduce the need for clinical specialists such as surgeons and increase the need for biotechnologists to operate and maintain the machines as well interpret the findings and outcomes. The professional, financial and political implications of these possibilities are too complex to predict at this time.

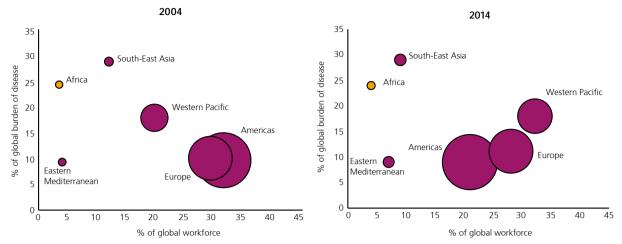
Demographics and population dynamics in countries and regions is another factor that will drive changes in HWF demand. Aging populations mean increased attention to increased needs of aged people. The rich countries with aged populations also simultaneously

face shortage of labour with a small pool of young people to address competing needs in all sectors including health services and care of the aged who cannot look after themselves. The developing countries on the other hand have high population growth rates and a huge pool of young people with over 50% aged under 15 years old and heavily dependent on low per capita incomes of their countries. While these young people present an opportunity to provide the HWF needed by their populations, their countries cannot afford to train, employ and retain them in the health services. As a result, they migrate to the rich countries, who have shortages but the capacity to employ. African HWF densities stagnated during the MDG era and beyond (see Figure 2).

Medical tourism has two types. The first is where patients move across borders and continents in search of medical services. This may happen because the

Figure 2

Distribution of skilled health professionals by level of health expenditure and burden of disease, WHO regions



No change... Africa has 24% of burden of disease but 3% of global health workforce

Sources: WHR 2006; Global Health Observatory (2014 update)

services sought are not available in the home countries or because they are available but not affordable or accessible to the population in need. The ability of patients to find acceptable services outside their own countries weakens the incentives in the home country to build the needed HWF capacity. On other hand the cost of accessing services abroad can be an incentive that inspires the development of country capacity and HWF in order to reduce these costs and increase accessibility and affordability of the services in home countries.

The second type of medical tourism is where medical practitioners move across borders and continents on short term missions to provide medical services. This can be done through organised groups or by individuals. In Uganda for example, we found that 15% of all registered medical practitioners are short-term visitors or medical tourists from other countries, mostly developed countries.³ Some professional associations undertake such activities as part of their normal programmes. This type of medical tourism has the potential to build HWF capacity in countries in need. Their methods of work should be further developed and documented so that all ethical and professional aspects of practice are harmonised and expanded to respond to identified needs.

The health, social and economic consequences of climate change will be a driver of change in the future HWF trends. It is expected that as a result of climate change, we will see more frequent pandemics such as COVID-19. These are attributed to the changes in ecosystems brought about by climate change leading to closer interaction and interface between human and animal activity. Additionally, natural disasters such as floods and prolonged droughts will result in shortages of food, displacement of people and humanitarian

emergencies. Accordingly, health systems capacity along with HWF skills to respond to these events will be needed and drive change.

HWF governance will be a key driver of change in trends at national, regional and global levels. The quality and functionality of international, regional and national institutions that govern HWF will be critical to what directions HWF developments will take at all levels.

At the international level, WHO headquarters has a major role to play at the present time with the WHO HWF Department also acting as the overseer of the Global Health Workforce Network (GHWN) that replaced the Global Health Workforce Alliance (GHWA) that was autonomous but with the Secretariat at WHO. Implementation to scale of key global instruments such as the WHO Code on the International Recruitment of Health Personnel could have a major positive impact on HWF trends if it is popularised and implemented fully. This code is excellent and envisages and provides a tool for the education, training and sharing a global pool of HWF that can be equitably deployed between countries using the various articles in the Code. On the other hand, if this code is ignored the consequences can be catastrophic especially for poor countries who cannot afford to employ them in the face of demographic realities in the rich countries. There are other important global tools such as the many resolutions adopted by the WHAs on HWF over the years including HWF 2030 that should be implemented to scale.4

At regional level, as part of the work of the GHWA, regional networks were established to coordinate HWF development within various regions. The Asia Action Alliance on Human Resources for Health (AAAH) with a Secretariat in Thailand, has worked well in the WHO WIPRO and SEARO regions. In the African Region,



Courtesy of Michelle Betton

the African Platform on Human Resources for Health (APHRH) has a Secretariat with the African Center for Global Health and Social Transformation (ACHEST) in Uganda, which in the past had excellent relations with the African Union Commission and the WHO African Region. The work of these institutions will need better integration with new efforts by the Africa CDC to avoid fragmentation and benefit from institutional memory. The Americas and Europe were coordinated through the WHO regional offices of PAHO and EURO.

At country level, in Africa HWF governance is generally weak despite the fact that there are tools such as the Country Coordination and Facilitation (CCF) developed by GHWA and provides guidance on inter-sectoral collaboration for country HWF planning, education, training and management. WHO has other tools such as the National HWF Accounts and WSIN among others. Advocacy and support for people led Community Health Systems, including motivated Community Health Workers is a low hanging fruit that that continues to elude that attention of governments in Africa.

Conclusion and way forward

It is evident that the enthusiasm within the global community to respond to the global health workforce crisis has waned while the crisis has persisted and has not been resolved. The funding for the response that supported the GHWA and the many regional and country initiatives are no longer visible. Resources for studies and monitoring the performance

of global tools such as the WHO Code on the International Recruitment of Health Personnel and the implementation of the KAGA are lacking and need to be provided to stakeholders. Country level leadership for HWF is weak in most countries. Resources and dedicated efforts to build technical capacity for planning, education, training and management of the HWF will be needed within strong national health systems that are embedded in institutionalised multisector collaboration for HWF development. Regional and global mechanisms should also be well funded to build capacity for joint learning and coordination.

The experience of COVID-19 pandemic that brought the world to a standstill is an opportunity that should not be lost to revive and revitalise the global HWF movement. SDG 3 on Health and wellbeing through the life course has gained preeminence as the pillar for the achievement of all the other SDGs. The HWF is central to community, national, regional and global preparedness and response to future pandemics and should be given priority in reforms that are anticipated in the ongoing negotiations.

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Infectious Diseases Institute: values and development of a trusted health institution

The last of a three-part reflection on the first 20 years of IDI in Uganda

The Infectious Diseases Institute (IDI) [https://idi.mak.ac.ug] is a largely autonomous, non-profit institution wholly owned by Makerere University in Kampala, Uganda that marked 20 years of existence in 2021. The vision of IDI is a "healthy Africa, free from the burden of infectious disease" with IDI aiming to "strengthen health systems in Africa, with a strong emphasis on infectious diseases, through research and capacity development".¹

Following previous reflections on building trust through programme results at IDI² and on governance and systems,³ this paper considers IDI's values – how they have been reflected in IDI programmes and support departments over the last twenty years, and how they have engendered trust in IDI by a wide range of stakeholders (such as individuals and communities served, government, Makerere University, project partners and funders, and IDI staff and volunteers) based on integrity, technical competence, resilience, and impact. We conclude by sketching an emerging practical approach to developing trusted health institutions in Africa drawing on the IDI experience. Also, as before, the authors include, among others, the current IDI Executive Director (ED) and all three previous EDs.

IDI core institutional values

Core values are the essential and enduring principles of IDI to guide the actions of everyone at IDI day by day and year by year – they are the identity of IDI and they show what IDI stands for. Constant recognition of, and adherence to, these shared core values enables IDI to achieve its mission. They have changed little since being hung on the wall in 2005. Staff are expected to demonstrate these values in their daily lives and to be willing to be held accountable to them.

How are the values reflected in what IDI does?

Caring: IDI came into being largely as a response to the devastating effects on individuals and communities

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of the HIV epidemic. The clinic doors opened in 2004 and there was an immediate influx of people desperate for the care being offered free of charge. From the outset, IDI's policy has been to offer good quality care to everyone and so IDI has never charged fees (although a few clients choose to pay to be seen at a convenient time in a more private setting where they receive the same care as everyone else). As a consequence of the demand, the clinic could soon not accept more patients, and instead of simply closing the doors and turning away clients, IDI looked to strengthen services in local government clinics so that patients that had stabilised at IDI could be transferred to such clinics for longer term care – a responsible and caring approach that continues to this day.

Besides clinical care, IDI recognised from early on that part of care is always showing respect to those for whom services are provided. IDI had to develop a relevant African way to address the needs of its clients – what emerged was The Creativity Initiative which changed the tone of the IDI clinic by involving our 'Friends' (no longer termed 'patients/clients') in patient care as clinic guides, peer counsellors, records assistants and as participants in music, art and drama groups so that they became empowered partners rather than passive recipients. Also, several initiatives improved their entrepreneurial skills and livelihoods, with support from IDI partners. This helped change the spirit and enhanced morale in the clinic, engaged all the staff and the people we served as friends.

The IDI Outreach programme (now the Health Systems Strengthening programme) also demonstrated a caring attitude for those not in the vicinity of IDI – the programme has always focused on strengthening local health systems (and never supplanting them by unsustainable projects). The programme extends across urban and rural areas in Uganda and a majority of districts and supports HIV care services for over 20% of all Ugandans living with HIV as well as HIV prevention services. IDI has also sought to broaden support for services in areas where it works, for example by seeking private sources to expand rural maternity facilities.

Integrity: Integrity is evidenced in various ways. IDI has always shown zero tolerance of corruption (with no second chances) and a succession of leaders have consistently set a high tone of integrity that has permeated the organisation. Importance has also been attached to truthfulness, accuracy and completeness of reporting; and adherence to high ethical and scientific standards. The importance of confidentiality in many areas (e.g. patient data, photos, HR records, business

activities, among others) has been a continuing management theme.

IDI has invariably welcomed external audit reports, both statutory and others (such as project audits) and has never received a 'qualified' (i.e. adverse) external annual audit report. Internal audit has been adequately resourced to be effective and has successfully developed into a force for continuous systemic quality improvement (reporting at Board level) in addition to investigating potential abuses both within IDI and within the partners it works with to execute programmes.

Excellence: This is an obvious 'value' for most organisation, and in IDI's case an absolute necessity since IDI has no guaranteed core funding, so if the organisation and its results are not good enough to attract funding (IDI is usually being supported by around 30 funders at any one time) then IDI will be unsustainable. Clinical excellence is partly attested by the reluctance of many IDI Friends to transfer to other clinics once stabilised as they trust the services at IDI. The award-winning core lab at IDI has been accredited by the College of American Pathologists (with annual inspections) since IDI opened - a testament to strong leadership and partnerships, well trained staff, and well-maintained equipment. However, IDI is not complacent - and constantly seeks to improve on current standards across all programmes and support departments, through, for example, continuous professional development, strengthened IT systems, and infrastructure upgrades. IDI also seeks to recruit and retain the highest calibre staff through appropriate HR policies, competitive remuneration, the opportunity to work with global centres of excellence, and the scale of organisation that supports internal career progression pathways. IDI does not self-label as a 'centre of excellence' as it constantly seeks to improve the quality of its performance and ultimately to prove it partly though international standards such as peerreviewed publications, international accreditation of its programmes, and national and regional adoption of its products and services.

Innovation: The very foundation of IDI was a major innovation – a North American visionary (Merle Sande, a leading US infectious diseases specialist) convinced a major US private sector leader (Hank McKinnell, the then CEO and Chair of Pfizer Inc) to fund an institution to address HIV and other infectious diseases in Africa – with the ultimate intention of transferring ownership to Africa. Full transfer occurred within five years of inception using an innovative governance mechanism that has now become a blueprint for similar organisations within Makerere University. The concept was refined and taken forward by a distinguished group of medical academics from North America and Uganda in partnership with public and private sector entities.

A further pivotal innovation was the transfer of knowledge and expertise from the IDI core clinic in Kampala to many other districts in Uganda through the establishment of outreach services in 2008 –in partnership with local governments, Ministry of Health, and funding partners. This enabled the scale

up of HIV care programmes as well as the introduction and scale up of HIV prevention programs like medical male circumcision.

IDI is committed to being a learning organisation – never satisfied with the status quo but always looking to improve. Learning through innovations like 'Switch Meetings' which focus on specific HIV cases, side effects and adherence to therapeutic plans; and consider whether individuals should 'switch' HIV drug regimens – with participants learning about HIV care and new interventions. Other innovations include:

- partnering with private sector health facilities in circumcision and with private pharmacies in care delivery;
- integrating science into programme delivery (for example by acting as a key pharmacovigilance partner for the Ministry of Health and creating evidence for major changes in national and global care and treatment guidelines); and
- creating local capacity for alcohol-based hand rub production for infection prevention and control and creating state-of -the art infrastructure to pursue data intensive science.

In 2018, IDI formed the innovative Global Health Security programme (drawing on skill sets from existing IDI programmes) to support health systems in Africa to develop capacities to prevent, detect and respond to infectious disease outbreaks and biologic threats. Finally, the establishment, within IDI, of the Ugandan Academy for Innovation and Impact demonstrates the centrality of innovation to IDI's mission. This Academy is a public/private partnership which now accounts for over twenty projects that seek to develop, pilot and scale technology-driven innovation appropriate to the African setting.

Ultimately, innovation is understood by IDI management and staff to be key to IDI's sustainability because it gives the institution its competitive edge along with reducing risk through diversification.

Teamwork: From small research groups to Board level, the importance of teamwork has been recognised. While outstanding individual contributions are acknowledged, it is the evolving teams at IDI which have given the institution its vibrancy and strength. Such teams include, for example, the training team, the Sexual and Reproductive Health team in the HIV clinic, the grants management team, the outreach team in the West Nile

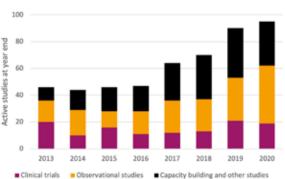


Figure 1. Example of research programme KPI

Region, the Global Health Security team, the Senior Management team, the HIV prevention research team – the list is (very) long and varied; and all are committed to achieving the IDI Strategic Plan which in turn supports the policies, priorities, and strategies of Makerere University and of the Government of Uganda. Teamwork importantly implies equity which reduces dissension.

Teamwork extends beyond IDI itself to encompass national and international project partnerships which have been critical to IDI's development – often evolving from individual connections into ongoing stable institutional linkages. Such progressions often develop from the trust established between committed individuals successfully working together into a trusting egalitarian relationship between institutions which is cemented over time and as the size of the inter-institutional team grows. For example, in the IDI Research programme, enduring inter-institutional teams have trained a succession of scientists across generations, through mentoring and supervision, co-authorship and co-innovation. Trusting in such 'institutional' teamwork, IDI has shown a capacity and willingness to be the lead (or 'prime') entity or to play a lesser role - whatever is needed for the team to be effective.

Accountability: IDI is granted a high level of autonomy which makes accountability to its owner (Makerere University) especially important. This is formally achieved by an annual report presented by the IDI Board at an annual general meeting. Management also ensures that accountability for decisions permeates all levels at IDI so that the University's trust and goodwill is maintained. The ED is accountable to the Board, especially for progress towards the objectives in the IDI Strategic Plan, and all IDI staff are accountable (mostly indirectly) to the ED; with the partial exception of internal audit. Accountability and transparency are closely linked to IDI's production of Key Performance Indicators (KPIs) (see Figure 1). Since 2005, the KPIs (evolving to stay relevant) have shown trends over time, so all levels in the organisation can see whether results are getting better or worse and thus trigger appropriate responses.

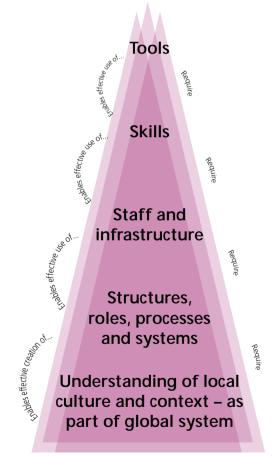
IDI fully recognises its obligation to provide transparent and timely programmatic and financial accountability to the funders of projects taking place at or through IDI, as well as to government and to the communities who are the ultimate beneficiaries.

Crosscutting themes: In addition to IDI's core values which engender trust, there are other themes which reinforce these values, including the following.

- Relevance: IDI keeps the needs and context of Uganda and Africa central to its planning and style of implementation – and supports national and regional plans and the achievement of the SDGs.
- Responsible risk-taking: IDI values and seeks out leaders who have the vision and determination to take responsible risks – as the biggest risk of all is never taking any. A sober risk management plan is periodically updated and interrogated by the IDI Board.
- Strategic planning: Since 2008, IDI has been guided by, and held accountable against, three

- locally created and locally owned five-year strategic plans (including thorough mid-term reviews).
- Building and maintaining capacities: IDI trains individuals and teams in clinical, lab, research and other skills to meet the needs of Uganda and Africa; and constantly seeks the multiplier effect through training of trainers and online courses. IDI recognises the need to strengthen both individual and organisational capacities as shown in the Capacity Pyramid⁴ (Figure 2) which has formed the basis of much of IDI's planning. Staff development, on-the-job training, multidisciplinary team training, blended learning and community development have helped to diversify this key area of IDI's identity; and short visits from international experts has been critical. IDI builds its own capacity largely to help others build theirs.
- Stable sustainability: IDI's original stability came from the classic three-legged stool of clinical,

Figure 2. Capacity pyramid



The CAPACITY PYRAMID highlights strengths and gaps in an organisation's capacities and helps in designing and monitoring plans to fill those gaps. It is an effective communication tool and has been recognised by the WHO in relation to achieving International Health Regulations and by the World Bank in relation to Global Health Security Capacity in Africa.

training and research programmes backed by an accredited lab. Extension of programmes to outreach services and Global Health Security, plus the Ugandan Academy for Innovation and Impact, has created a programmatically coherent and financially sustainable African entity.

Adherence to values engenders trust

Adherence to these values has led many stakeholders to see IDI as an institution to be trusted, and not just in terms of the bedrock values of integrity and ethics. Trusted institutions like IDI tend to attract partnerships from other high quality and trusted public/private institutions active in global health.

Trusted implies:

- that an institution's values commit it to high quality in all that it does (for example in its products, services and its management systems);
- that the institution's values project a commitment to continuity – that it operates on a sound and sustainable financial footing; and
- that the institution's values communicate a commitment to prudent management of its resources to maximise their impact in line with national plans and ultimately to achieve the SDGs.

IDI believes an institution should aspire to be trusted in terms of integrity, technical competence, resilience and impact. Continually recognising, and renewing commitment to, the institution's core values is critical to achieving and maintaining that trust – as well as the reinterpretation of those values as the institution evolves.

How can others benefit from the IDI experience?

Here we present a possible framework for developing trusted and resilient health institutions. Trust is a relational concept that can exist between people, between people and organisations, between two or more organisations, or between organisations and other events.⁵ Trust has been identified as both a behaviour and as an underlying disposition and can mitigate problems with 'social cooperation' to ensure that interdependent actions between actors can lead to mutual reflection and benefit.^{6,7}

We believe that the quality of IDI's governance and leadership, staff and volunteers, policies, strategic plans, management systems and support departments (along with a pervasive culture of transparency) has strengthened trust in IDI as a Ugandan institution that operates internationally.

Throughout IDI's development, trust shaped the way we interacted with each other, our partners and the health system. In common no doubt with many others, IDI aspires to be a 'trusted institution' - trusted for integrity, technical competence, and sustainability. Trusted by: communities served and the general public, national/local governments, Makerere University, project partners, funders and regional/global organisations, emergency responders, and also internally by staff.

Based on IDI's first 20 years, Figure 3 shows a framework of inter-connected 'essentials' that we

Figure 3. Developing Trusted Institutions

Essential features of institution trusted to be: ethical, technically competent, resilient and impactful



believe underpin IDI's progress towards being a trusted African health institution. We are aware of a range of organisational capacity assessment tools, but we feel what is now needed is a practical guide to developing trusted institutions – grounded in the African experience and contexts. The draft Developing Trusted Institutions (DTI) guide is ready for initial validation across a range of African institutions.

Conclusion

This series of three papers has explored how trust in IDI by a range of internal and external stakeholders has been built over twenty years through: i) achieving programmatic results in support of national and global strategies; ii) developing strong governance, systems, and effective business development leading to sustainability; and iii) declaring, and adhering to, values which have provided a moral framework for plans and actions.

IDI aspires to be a trusted institution in terms of enduring integrity, technical competence, resilience and impact (especially on African capacity strengthening). The DTI framework introduced above, based on experience at IDI, offers an evolving, learning foundation with potential for further collaborative development.

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Communication for Development (C4D)

A team of experts describes the enablers and barriers of ANC and IYCF practices in refugee-hosting districts of West Nile, Uganda



UNICEF Uganda, in partnership with the Government of Uganda (GoU) and the World Food Programme (WFP), has implemented the Child Sensitive Social

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Protection programme in Refugee-Hosting Districts of West Nile, Uganda funded by the Swedish International Development Agency (SIDA). This five-year integrated programme (2019-2024) aims to strengthen district health systems that address the health, nutrition needs and vulnerabilities of mothers and children in 11 districts of the West Nile sub-region, namely Adjumani, Arua, Koboko, Maracha, Moyo, Nebbi, Pakwach, Yumbe, Zombo, Madi-Okollo and Obongi in readiness for the anticipated rise in demand due to cash transfers disbursed in the programme.

The UNICEF District Health Systems Strengthening (DHSS) model calls for a "One District Plan," in which districts work with all stakeholders in the sector to identify key bottlenecks and priority actions as well as contributions of stakeholders in resolving the bottlenecks.

The West Nile community beneficiaries are identified as critical stakeholders in the successful implementation

Table 1. Distribution of FGDs by intervention and counterfactual districts

	District		Categories of respondents				Total
			Mothers	(Grand) fathers	Adolescents	VHTs	
1	Arua	Intervention	1	-	-	-	1
2	Nebbi		1	-	-	-	1
3	Pakwach		1	1	-	-	2
4	Obongi		1	-	-	-	1
5	Moyo		-	1	1	-	2
6	Maracha		1	-	-	-	1
7	Kole	Counterfactual	7	-	-	-	7
8	Amuru		4	1	1	1	7
Total			16	3	2	1	22

of the Child Sensitive Social Protection Programme (CSSP) in the stakeholder engagement plan.

UNICEF's Communication for Development (C4D) strategy advances the C4D agenda by leveraging innovative insights from behavioural science's expanding pile of evidence, as well as partnership initiatives that will help to establish uniform standards and complementary approaches. To boost demand for and utilization of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services, social and behavioural change interventions are being implemented.

Working with the MoH, UNICEF introduced the Key Family Care Practices (KFCPs) package in to the programme to help create demand for RMNCAH services and, as a result, increase uptake. KFCPs are commonly practices household and community behaviours that have an impact on child survival, growth, and development, as well as the causes of morbidity and mortality in children. The 22 KFCPs are divided into four categories: child nutrition, growth, and development; illness prevention; appropriate home care; and care-seeking and illness response.

The most effective and preferred communication platforms used by Village Health Teams (VHTs) and health centre staff in the delivery of antenatal care (ANC) and Infant and Young Child Feeding (IYCF) information and skills to community members and pregnant mothers will be described in this study. The main barriers and enablers for putting ANC and IYCF knowledge into practice will also be identified. This study was conducted by Montrose on behalf of UNICEF Uganda.

Objectives of the study

The overall goal was to determine community perspectives of the major obstacles to and enablers of knowledge translation into ANC and IYCF practices, as well as the most effective communication channels for VHTs and health workers.

Methods of the study

The study used a phenomenology design based on qualitative data. The study area covered 11 West Nile districts and six counterfactual districts, namely Amuru, Kitgum, Nwoya, Gulu, Apac and Kole. The



Table 2. Barriers to ANC services

Access to and utilisation of ANC services	Non-involvement of partners/men in accessing ANC services	Unwillingness to trade time making money with supporting their partners was identified as a key issue during FGDs. "These men just get you pregnant and don't go for ANC, saying they are working to eradicate poverty." (Mother, Maracha district) As a result, male support is considered inconsistent and ineffective.
	Perceived opportunity cost	The West Nile region and northern Uganda are largely rural farming communities and mothers view taking time off to attend ANC and implement IYCF activities as an opportunity cost. "People prefer work that brings money, like their farming work." (FGD Mothers, Amuru District)
	Poverty	Poverty was reported to have deprived women of key resources necessary to put knowledge on ANC and IYCF into practice. The requirements for nutrition, for instance, necessitate money. "when you are poor, you are also hungry as you cannot afford to feed the way health workers advise you." (FGD Mothers, Obongi District)
	Insufficient follow-up by health workers and outreach services	Mothers blamed this on the failure to incentivize VHTs. They added that given the VHTs' vital roles in follow-up, distribution of health supplies such as deworming tablets, and door-to-door sensitization, their workload meant they spent less time with pregnant women and lactating mothers, resulting in knowledge gained during ANC remaining unutilized.
	Low staffing levels at health facilities	The ratio of health workers to clients in most health facilities was low and increased the time spent by a mother waiting to see a health worker. "In some instances, you find one nurse has to vaccinate children at the same time attend to mothers who have come for antenatal care services. Hence there is a lot of delay at the health facility." (Amuru District)
	Attitudes, beliefs, and interest in ANC	Mothers' attitudes and interests were cited as a limitation to practicing ANC recommendations, especially in counterfactual districts. Several pregnant women were reported to have followed cultural beliefs that undermined their appreciation and utilization of knowledge gained through health facilities and VHTs. High levels of alcohol consumption were a similar barrier: " it is very hard to handle people in Kululela. People like drinking too much alcohol. How can a drunk person do as they are told?" (FGD mother, Amuru District). Lack of information, coupled with attitude challenges, affected the practicability of ANC.
Transferring IYCF Knowledge	Rural farming activities and deprived hygiene and sanitation	One such barrier was the perceived inability to practice hygienic practices whilst engaging in hand hoeing. As one FGD participant in Zombo district in the West Nile region stated: "Sometimes when you are digging, they can just bring a child to you crying, you just remove your breast for the baby without washing your hands and feed the baby sometimes." Similarly, participants revealed that some homes, especially in counterfactual districts, did not have sanitation facilities, or they were dilapidated. As such, the hygiene of pregnant women and breast-feeding mothers was compromised, even when they were aware of good IYCF practices.
	Low socio- economic status	Increased dietary requirements for sick children is one of the critical KFCPs to ensure the full recovery of a convalescent child. However, economic deprivation is a key issue. "Such a kid [malnourished child] could be given soya plus milk and groundnutsbut because of poverty you only put your hope on breast milk, holding the child back." (FGD Mothers, Maracha District)

data for this paper came from the Baseline Study of Impact Evaluation of Health Systems Strengthening Interventions (HSS baseline study) in the West Nile region of Uganda executed by Montrose.

Table 1 shows the qualitative data collected in a series of Focus Group Discussions (FGDs) in December 2020 from six of the 11 intervention districts in the West Nile sub-region, as well as two of the six counterfactual districts (four in Acholi sub-region and two from Lango sub-region). The active participation of targeted community members in the health programme led to the selection of these districts.

Data management and analysis

All FGDs were recorded on tablets and transcribed in MS Word. Thematic analysis was then utilised to identify differences and similarities in the perspectives

of the participants, which were then organised into common themes.

Findings

Objective 1. Identifying barriers and enablers to ANC uptake and IYCF practices

Barriers

The use of ANC services at the community level continues to be a hurdle in Uganda's efforts to improve maternal health. The KFCP for ANC urges women to seek ANC as soon as women miss one menstrual period and to schedule eight ANC visits at a health facility with a skilled health worker over the course of the pregnancy. Various categories of community members were asked to identify the primary barriers to translating ANC knowledge into behaviour that promotes the well-being

Table 3. Enablers to ANC services

Frequent outreaches and sensitisation meetings	Participants emphasized the role of frequent outreaches and awareness sessions by VHTs and health workers in communities. "More frequent outreaches would be a motivation for mothers to use their knowledge on ANC and IYCF." (FGD Mothers, Amuru District) "Maybe even bringing the health centres [outreaches] close to us will also help with this issue [translating knowledge into practice]. It makes mothers attend ANC more frequently." (FGD Mothers, Amuru District)
Peer-to-peer learning	Testimonies of fellow mothers who emulated the good practices of model mothers led to more members following suit. "When a mother sees some other women doing something they have learned, they are also encouraged and forced to change." (FGD Adolescents, Amuru District)
Availability of and access to food items	Mothers with access to food supplements were better positioned. "Food, especially supplements for children who are breastfeeding, is key. You'll need to look for some work to make ends meet because it needs you to supplement [the child's diet] with soya and milk [so that] when you are not available, people at home can feed the baby." (FGD Mothers, Maracha District)
By-laws for sanitation and hygiene promotion	Communities with by-laws on sanitation and hygiene assets, like compost pits, racks for drying utensils, and hanging wires, were likely to enable women to put knowledge on ANC and IYCF into practice. "I think we should put up by-laws that will force people to implement this knowledge that they receive." (VHTs, Amuru District)

of mothers and their children as part of research. In both intervention and counterfactual districts, eight barriers were found to be the most significant (see Table 2).

Enablers

Participants in the community were asked what enablers supported the translation of ANC and IYCF knowledge into healthy behaviours that benefited mothers and their children's well-being. Across intervention and control districts, the enablers were similar (see Table 3).

Objective 2: To identify the most effective and preferred communication platforms used by VHTs and health centre staff to pass on ANC and IYCF knowledge and skills

Three communication platforms were recognized as the most effective and preferred by participants.

Village health teams were praised for their effectiveness in interpersonal communication and door-to-door house visits. However, in other districts, particularly in Moyo, the role of VHTs in promoting ANC at health facilities was underappreciated. "Our village health teams do not refer pregnant women to the health facility for antenatal care" (FGD Fathers, Moyo District).

Radio broadcasting was also an effective and favoured method of disseminating information and knowledge. "It's more effective to listen to the radio. The community is informed about numerous health issues, including as ANC, infant feeding, Seasonal Malaria Chemoprevention (SMC), and training, over the radio. The information we've gotten over the radio has been really beneficial," said mothers in Kole District.

Thirdly, health workers, particularly VHTs, were found to have used community events to discuss ANC and IYCF practices, such as community training and distribution of Mama-kits and mosquito nets. Community members also valued other channels, such as church leaders, marketplaces, and funerals.

Discussion

Community health workers are included in the UNICEF District Health Systems Strengthening Monitoring and Evaluation Tool as part of the human resource required for a resilient system. Without adequate support, the quality of their health service delivery could be jeopardised. Peer-to-peer learning was also important in encouraging positive nutrition behaviours, according to the mid-term review of UNICEF's nutrition governance intervention. UNICEF and the Ministry of Gender, Labour and Social Development are working together to empower communication champions at the grassroots level. More crucially, during the COVID-19 situation, multiple communication channels played a critical role in consistently supporting community initiatives, such as VHT facilitation, to minimise the constraints of in-person practices.

The UNICEF CSSP programme aims to promote early ANC uptake and male involvement, but this study found that lack of male involvement throughout the ANC period due to income-generating activities was a substantial barrier to behaviour change. This stumbling block can be overcome by increasing household income.

Conclusions

In the West Nile sub-region of Uganda, this study identified important barriers and enablers of ANC and IYCF practices. Gender stereotypes and poverty are deeply rooted issues at the community level, while improving access to hygiene and sanitation facilities for farming members, as well as continuing VHT outreach services with proper communication platforms, are critical in influencing ANC-seeking behaviour and IYCF practices in communities, in the end interventions aimed at raising household incomes are likely to succeed in encouraging access and utilisation of ANC services. This implies a multisectoral approach to create synergies with other actors.

The use of partographs to monitor labour in West Nile, Uganda

The team describes the use of partographs and the association between the prevalence of perinatal deaths and use of a partograph

The quality of intrapartum care is crucial for reducing the high maternal mortality rates (MMR) and stagnant perinatal mortality in Uganda. The UNICEF-led Child Sensitive Social Protection Programme in refugee-hosting districts of West Nile, Uganda implemented in partnership with the Government of Uganda (GoU) and the World Food Programme (WFP) and funded by the Swedish International Development Agency (SIDA), aims to improve intrapartum care quality and integrate it into pre-service curricula. ²

The GoU and UNICEF endorse use of a Partograph in managing active labour for monitoring maternal and fetal health. It has the potential to minimise morbidity and mortality associated with prolonged labour. Despite widespread global evidence of its benefits, partograph use is still low in Sub-Saharan Africa, especially Uganda. The need to increase the use of partographs in Uganda is indisputable, given that haemorrhage and prolonged labour, both of which are signs of poor intrapartum care, remain among the leading causes of maternal death.^{3,4}

This paper aims to contribute to a better understanding of the key challenges to partograph use, by comparing the prevalence of and factors related with its use in intervention and counterfactual districts. This study was conducted by Montrose on behalf of UNICEF Uganda.

Study design

The study used mixed-method concurrent and analytical cross-sectional approaches.

The data for this paper came from the Baseline Study of Impact Evaluation of Health Systems Strengthening Interventions (HSS baseline study) in the West Nile region of Uganda executed by Montrose.

This study was conducted in 11 intervention districts of West Nile (Adjumani, Arua, Koboko, Maracha, Moyo, Nebbi, Pakwach, Yumbe, Zombo, Madi-Okollo and Obongi) and six counterfactual districts in the Acholi

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(Gulu, Kitgum, Nwoya and Amuru) and Lango (Apac and Kole) regions.

The study covered all eligible health facilities that were part of the HSS baseline study. A total of 182 facilities were included in the study, including 109 from West Nile and 73 from Acholi and Lango regions. The provision of delivery services in the baseline assessment in 2019 was recorded.

Study approach by specific objective

Objective 1: Determine the level of partograph use Midwives were asked to provide partographs for a randomly selected number of completed deliveries reported in the integrated maternity register for the preceding quarter to determine the proportion of deliveries utilising partographs (July-September 2019). The enumerators then selected 10 completed deliveries at health facilities at random. They also reviewed the partographs for completeness based on nine parameters, noting that partographs are only opened at 4cm and at least one parameter should be filled if women are in the second stage of labour. When partographs were missing or incomplete, the midwife was asked to explain the

Table 1. Overall distribution of health facilities by level

,				
Study arm	Level of care	Number of health facilities assessed	Number and % of HFs eligible for partographs assessment	
	Regional Referral Hospital (RRH)	1	1 (100%)	
	Hospital	12	12 (100%)	
West Nile	IV	13	13 (100%)	
	III	54	54 (100%)	
	II	56	29 (52%)	
	Grand Total	136	109 (80%)	
	RRH	1	1 (100%)	
	Hospital	7	7 (100%)	
Counterfactual	IV	5	5 (100%)	
	III	35	35 (100%)	
	II	42	25 (60%)	
	Grand Total	90	73 (81%)	

Table 2. Distribution of partograph use

Study arm	Level of care	Number of eligible HFs	Percent of HFs where a partograph was available/used	Number of partographs expected*	Number of partographs reported	Percent completed
	RRH	1	100%	10	10	100%
	Hospital	12	33%	123	34	26%
Intervention	HCIV	13	46%	130	27	21%
intervention	HCIII	54	67%	400	274	53%
	HCII	29	16%	105	35	20%
	Overall	136	51%	768	380	37%
	RRH	1	100%	10	0	0%
	Hospital	7	29%	71	21	29%
Counterfactual	HCIV	5	40%	50	20	40%
Counterractual	III	35	60%	266	191	57%
	II	42	31%	144	105	48%
	Overall	73	53%	541	337	46%

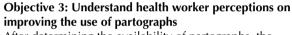
^{* (}accounting for over-reporting in some facilities esp HC IIs and IIIs)

challenges and make recommendations for changes at the health facility, district, and national levels.

Objective 2: Establish the factors associated with the use of partographs

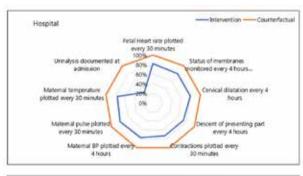
In the regression analysis for the use of partograph for completed deliveries during the previous quarter, the following explanatory factors were considered: intervention or counterfactual district; level of health facility; and provision of standard obstetric and newborn care.

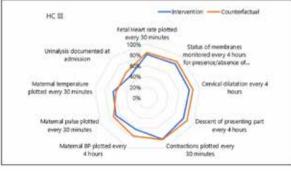
Figure 1. Percentage of partographs filled

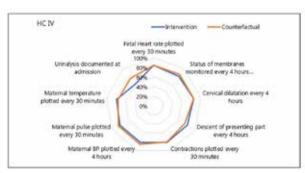


After determining the availability of partographs, the most senior midwife present on the day was asked about the obstacles she had encountered when filling the partographs and what she needed to do to improve the filling. A total of 229 midwives were interviewed.

Objective 4: Establish the association between the use of partographs and the prevalence of perinatal deaths







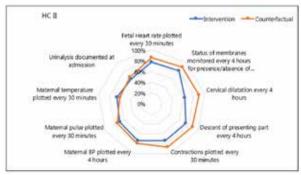
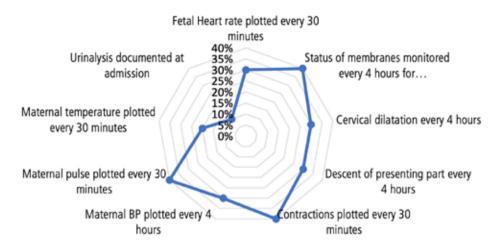


Figure 2. Percentage of filled partographs in the intervention arm



Data on the reported numbers of perinatal deaths were extracted from the District Health Information Systems Version 2 (DHIS2). Completed partographs, incomplete partographs, and no partograph use were the key

explanatory factors evaluated in the regression analysis. Intervention and counterfactual districts, as well as the level of health facility, were also considered.

Table 3. Binary regression for use of partographs and health system factors

Covariate	Presence of partographs at the health facilities		
	AOR	95% CI	
Availability of ser Ref = <50	vices (Obstetric, and N	lewborn care):	
50%-69%	1.362	0.44 - 4.25	
70%-89%	3.138	1.02 - 9.67*	
90% and above	1.740	0.52 - 5.84	
Availability of cor care): Ref = <50	nmodities (Obstetric,	and Newborn	
50%-69%	2.188	0.79 - 6.08	
70%-89%	2.822	1.07 - 7.45*	
90% and above	0.863	0.36 - 2.05	
Availability of equ Newborn care): Re	uipment (laboratory, 0 ef = <50%	Obstetric, and	
50%-69%	2.821	1.02 - 7.78*	
70%-89%	4.143	1.18 - 14.53*	
90% and above	2.170	0.56 - 8.39	
Level of care: Ref	= HC II		
HC III	1.282	0.50 - 3.30	
HC IV	0.606	0.15 - 2.45	
Hospital	0.324	0.08 - 1.29	
RRH	1 (empty)		
Study arm: Ref = I	ntervention		
Counterfactual	0.953	0.47 - 1.92	

Table 4. Factors determining the quality of completion of partographs

ovariate Filled vs. Incompletely filled				
	AOR	95% CI		
Coverage of service Ref = <50	es (Obstetric, and N	ewborn care):		
50%-69%	0.498	0.22 - 1.11		
70%-89%	1.795	0.89 - 3.63		
90% and above	0.645	0.30 - 1.39		
Coverage of comm care): Ref = <50	nodities (Obstetric, a	nd Newborn		
50%-69%	4.092	2.42 - 6.91*		
70%-89%	3.24	2.00 - 5.23*		
90% and above	2.694	1.70 - 4.27*		
Coverage of equip Newborn care): Re	ment (laboratory, O f = <50%	bstetric, and		
50%-69%	1.287	0.75 - 2.19		
70%-89%	0.812	0.46 - 1.45		
90% and above	1.136	0.59 - 2.20		
Level of care: Ref	= HC II			
HC III	2.127	1.27 - 3.56*		
HC IV	3.69	1.56 - 8.72*		
Hospital	3.682	1.58 - 8.56*		
RRH	0.881	0.09 - 8.79		
Study arm: Ref = II	ntervention			
Counterfactual	3.144	2.13 - 4.64*		

Results

Objective 1

Only 95 (52%) of the qualified health facilities reported using partographs. In terms of cases with partographs, 37 per cent of the expected partographs were available in the intervention compared to 46% in the counterfactual facilities. For both intervention and counterfactual Health Centre (HC) Ills, completion of the projected partographs was above 50%.

Figures 1 and 2 show the partograph components with the most gaps. In the intervention districts, the spider diagram revealed that urinalysis documentation at admission was the least finished, while fetal heart rate charting every 30 minutes was the most completed. In the counterfactual districts, there are no differences in completion rates by component. Both intervention and counterfactual districts show the same pattern for HCIV and HCIII. In comparison to the intervention districts, HCIIs in the counterfactual districts had more components completed. The spidergram only captures information for the intervention health facilities because the RRH in the counterfactual arm did not have any completed partographs.

Objective 2

The findings, which were obtained using a binary regression model, demonstrated that the level of care and study arm had no significant relationship with the usage of partographs. With the use of partographs, however, there was a dose-related response, with higher coverage of services, commodities, and equipment for obstetric and newborn care.

The relevance of the parameters measured against the quality of completion of the partographs is shown in the table below. The binary response variable in the model is entirely filled vs. incompletely filled, and it is compared to a set of explanatory factors. The findings demonstrated that the availability of obstetric and newborn care services and equipment was not substantially related to the quality of partograph completion. The possibility of completing all of the components of the partographs grew dramatically as commodity supply increased. Apart from Regional Referral Hospitals (RRHs), which had no significant relationship with the quality of completing partographs about HC IIs, the data showed that higher levels of care were related with a higher likelihood of fully completing the partograph. The partographs were three times more likely to be completed in counterfactual health facilities than in intervention facilities.

Objective 3

A total of 229 key informant interviews (KIIs) were conducted, one at an RRH, 16 at general hospitals, 21 at HCIVs, 91 at HCIIIs, and 100 at HCIIs, to identify the obstacles in completing partographs.

The difficulties encountered by intervention and counterfactual districts were generally the same, albeit to varied degrees. Mothers reporting in the second stage of labour, a lack of staff/heavy workload, and a lack of information on how to fill out partographs were the top three issues identified in intervention districts. The issues

Table 5. Actions suggested by health workers to address the issues impacting the filling of partographs

1 0 0	0 - 1) - I
Actions	Intervention	Counterfactual
Staff training / continuous medical education / on-site mentorship	32%	22%
Increase the number of staff/midwives at facilities	22%	16%
Provision of more equipment / lab reagents / supplies	11%	10%
Improve on records management - storage	9%	18%
Education of mothers / pregnant women, their partners and community members on labour	8%	4%
Improve transport facilities for mothers / Ambulances	6%	6%
Motivation of staff – remuneration, housing and general welfare	2%	10%
Provide examination light in delivery rooms	1%	6%
More monitoring of pregnant women by VHTs	1%	4%
Increase in maternity admission for mothers	1%	2%
Improve on documentation/filing system	2%	0%
Improve health facility infrastructure – maternity	2%	0%
Improve the supply of partographs	1%	0%
Support HClls to provide maternity services to curb long distances	1%	0%

in the counterfactual districts were: a lack of understanding of how to fill out the partograph; late reporting by mothers; and missing papers. Limited equipment, a paucity of partographs, and insufficient illumination were among the others.

Heavy staff workloads, late reporting by mothers, and the emergency nature of cases received were highlighted as the principal hindrances to filling out partographs by midwives at higher-level facilities, RRH, general hospitals, and HCIV. Staff at lower-level facilities, on the other hand, could see a lack of skills and knowledge as their main impediment, though late reporting of mothers was highlighted more at HCIIs in



Judith examines a pregnant mother during an antenatal care visit within the maternity ward. Judith Candiru, is an Assistant Nursing Officer who passionately delivers health services at Midigo Health Center IV and within the community of Midigo subcounty, Yumbe District.

intervention districts.

Regardless of whether they had complete or imperfect partographs, health facilities faced similar issues, but to differing degrees. Limited knowledge on how to fill out partographs and late reporting by mothers for delivery services were still major issues, affecting roughly a third of health facilities (32%) with completed partographs and a quarter (27%) with incomplete partographs.

Objective 4

In 2019, the DHIS2 reported institutional stillbirths and perinatal deaths per 1,000 deliveries, as shown in Table 6 below. The significance of the factors that determine positive perinatal outcomes is shown in the table below. If perinatal fatalities were less than or equal to 11, the binary response variable was set to 1, and if they were greater than 11, it was set to 0. The median number of

Table 6

Study arm	Level of care	Fresh stillbirths	Macerated stillbirths	Newborn deaths 07days	Perinatal deaths
	RRH	20.3	16.7	0.3	37.3
	Hospital	15.9	17.6	12.7	46.1
Intervention	HCIV	4.5	6.3	3.2	14.1
	HCIII	3.6	5.9	3.7	13.2
	HCII	4.4	2.6	1.5	8.6
	RRH	5.8	11.3	3.2	20.3
	Hospital	16.2	19.5	14.4	50.1
Counterfactual	HCIV	9.5	7.1	22.5	39.1
	HCIII	6	5.1	3.3	14.4
	HCII	5.2	2.6	5.7	13.5

Table 7. Factors determining positive perinatal outcomes (1 if perinatal deaths/1,000 are less or equal to 11, and 0 if greater than 11)

Covariate	ovariate Positive perinatal outcomes			
	AOR	95% CI		
Use of pargograp	hs: Ref = Below !	50%		
Above 50%	0.5	0.265 - 0.944*		
Coverage of servi Ref = <50	ces (Obstetric, ar	nd Newborn care):		
50%-69%	4.744	1.625 - 13.846*		
70%-89%	3.104	1.031 - 9.347*		
90% and above	1.664	0.489 - 5.655		
Coverage of common care): Ref = <50	nodities (Obsteti	ric, and Newborn		
50%-69%	1.128	0.448 - 2.841		
70%-89%	1.771	0.749 - 4.188		
90% and above	0.99	0.435 - 2.252		
Coverage of equip Newborn care): Re	•	ry, Obstetric, and		
50%-69%	1.233	0.453 - 3.361		
70%-89%	4.013	1.113 - 14.463*		
90% and above	4.895	1.160 - 20.664*		
Level of care: Ref	= HC II			
HC III	0.502	0.188 - 1.339		
HC IV	0.054	0.010 - 0.300*		
Hospital	0.063	0.012 - 0.325*		
RRH	1	(empty		
Study arm: Ref = I	ntervention			
Counterfactual	1.227	0.645 - 2.33		

fatalities was 11, which influenced the choice of 11 as a perinatal outcome benchmark for both positive and poor outcomes. A zero would be perfect. After controlling for other variables, the availability of commodities and study arm were found to have no significant relationship with beneficial perinatal outcomes. When comparing health facilities with 50 per cent or more use of partographs to those with less than 50 per cent utilization, improved perinatal outcomes were half as likely. Fewer perinatal deaths were linked to increased availability of services and equipment/laboratory for obstetric and newborn care.

Discussion

The data shows that overall partograph use is low, with counterfactual (46%) districts having more than intervention (37%) districts. Even when partographs are filled in, most parameters are not fulfilled, according to the study, with the main cause being a lack of resources required to perform the specific task. This study demonstrated that the prevalence of perinatal deaths was not associated with the usage of partographs. Therefore, the use of partograph on their own is not enough if the

equipment and/or resources you need to respond to the situation are not available. Given the overall low level of intrapartum monitoring, this is to be expected. However, the DFID NU Health programme found a clear correlation between the usage of partographs and perinatal fatalities. The programme provided financial and technical assistance, as well as penalties for failure to follow national intrapartum care standards, which included the use of partographs. The advocacy over poor maternal and perinatal outcomes has instilled fear among health personnel, who have gone so far as to alter documentation to hide any evidence that would show a lack of adherence to standards. Similar anomalies have been discovered in the nationwide Uganda Reproductive Maternal Child Health Services Improvement Project's (URMCHIP) independent validation reports. This study's randomisation helps to remove this bias, and as a result, the prevalence of partographs is more likely to reflect reality. The URMCHIP programme's independent verification revealed that not only partographs, but also the fourth stage of labour, are usually not monitored or documented for mother-baby pairs. In comparison to similar counterfactual districts, the HSS baseline study found that the West Nile region had reduced coverage of essential commodities and medicines. The limited use of partographs in West Nile is attributable to this relative deprivation.

Conclusions

The majority of the causes for partograph non-use and/ or completion can be addressed by assuring the availability of essential commodities, enhancing skills, and promoting social and behavioural change among mothers and their partners. Effective and continuous supportive supervision by in-house professionals, particularly DHTs, is essential in linking partograph use to improved maternal and perinatal outcomes. Maternal and Perinatal Death Surveillance and Response should also guarantee that perinatal deaths are specifically linked to how intrapartum and postpartum care was documented, with active supportive feedback to build short-term quality improvement cycles.

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The Health Insurance Bill in Uganda

Carol Natukunda reports on civil society engagement towards the enactment of this important legislation

Health insurance is a contract that requires an insurer to pay some or all of a person's healthcare costs in exchange for a premium. More specifically, health insurance typically pays for medical, surgical, prescription drug, and sometimes dental expenses incurred by the insured. Health insurance can reimburse the insured for expenses incurred from illness or injury, or pay the care provider directly.¹

Health insurance is intended to reduce the financial burden of purchasing health care by pooling funds and sharing the risk of unexpected health events. Risk sharing mechanisms are particularly important in Sub-Saharan Africa where most countries dedicate insufficient resources to health services and health care, including medicines, is mostly financed through out-of-pocket expenditures.² In Uganda there are many social, private, and community-based health insurance schemes emerging and expanding, however there is currently no National Health Insurance scheme.

The process of developing the National Health Insurance Scheme (NHIS) in Uganda has been an incremental one, characterised by gradual changes and repeated adjustments through various stakeholder engagements during the five phases of development: from 1995 to 1999; 2000 to 2005; 2006 to 2011; 2018 to 2021 and 2022 to onwards.

Despite the political will by the government of Uganda as expressed in the Health Strategic Plans and Health Financing Strategy, progress towards enactment of the NHIS Bill has been slow.

The goal of the HFS 2015-2025 goal is "To facilitate the attainment of Universal Health Coverage (UHC) in Uganda by enabling the effective/efficient delivery of and access to the essential package of health services while reducing exposure to financial risk, by 2025."³ To actualise this agenda, the government embarked on steps to introduce a national health insurance scheme as its major health financing reform toward the achievement of UHC.

Although Parliament had passed the NHIS Bill in March 2021, the Ministry of Health (MOH) later requested to withdraw the Bill in order to ensure more consultations needed to be done.

The NHIS is currently at re-submission stage, getting stakeholders inputs, re-drafting the Bill and tabling the Bill to Cabinet and Parliament. As in

Carol Natukunda is a Communications Specialist at the African Center for Global Health and Social Transformation, Kampala, Uganda. previous attempts, the bottlenecks in passing the Bill include varied stakeholder interests with little or no compromise, political economy of the NHIS (majority with less voice vs few powerful ones), unwillingness and ability to pay or contribute, subsidises needed and/or lack of innovations in resource mobilisation, and low level of awareness on the benefits of NHIS. These concerns were reported at a civil society engagement meeting held on 22 February 2022 to discuss the National Health Insurance Bill in Uganda. The event was organized by the Reproductive Maternal, Newborn, Child and Adolescent Health (RMNCAH) platform.

Why the national health insurance?

Civil society organisations (CSOs) stated that "NHIS is a pathway to pivotal health systems reform that can support the pursuit to UHC. Progress towards Universal Health Coverage (UHC) depends on three critical dimensions: extending **coverage** to more people, provision of **priority services**, and **pooling resources** to avoid catastrophic out-of-pocket expenditures. Effective NHIS should facilitate the provision of efficient, equitable, accessible, affordable and quality health care to all. It should also improve health-seeking-behaviors due to timely use of services."

Uganda's expenditure on health is currently driven by three key contributions: out-of-pocket expenditure (41.4%), contributions by donors (41.4%) and contributions by the Government (17.2%). The high out-of-pocket expenditure remains a barrier to access to services and a major contributor to household poverty.

Among other issues, the RMNCAH CSO platform strongly reiterated the need to fast-track the enactment of a NHIS Bill in Uganda. Such a Bill should be able to incorporate a wide range of RMNCAH services in the proposed healthcare benefits package and should also consider alternative innovative financing strategies, such as donations, investments, sin-taxes and increased government financing for the health budget.

Nature of NHIS

The CSOs noted that the NHIS is multifaceted and should consider multiform reforms, including financing, social, Health system and economic reforms that promotes investment in health, as well as financial risk protection. The meeting highlighted strategic interventions, implementation arrangements for pooling resources and purchasing, and the proposed roadmap for the government tax and public budget. It noted that there are many NHIS stakeholders including: government and public actors such as parliament, cabinet



and line ministries like Finance and Labour and Public Service; the pensions sector; private sector, civil society, donors and consumers. Each of these entities have their interest and roles and it was acknowledged that the use of stakeholder analysis on the NHIS policy proposals is an effective strategy for avoiding potential pitfalls and obstacles in policy implementation.

The role of the private sector

The private sector representatives at the meeting raised the following concerns:

- Effect on NHIS on the cost of employment given the proposal to make a percentage contribution through salary deductions and employer contributions
- Identification and definition of indigents to be catered for
- Whether to create one pool or pool funds based on contributors,
- Accreditation of facilities
- Mechanisms for sustainability
- How will the model blend, accommodate and operate alongside Community Health and Private Insurance?
- Implementation risks, including: insufficient data to inform sustainable pricing, skilling of health workers, lack of health information systems to automate the scheme, fluctuating prices of essential medicines, inconsistent supplies and

counterfeits, financing and poor leadership and governance, and regulation issues among others.

Steps listed by the MOH towards achievement of success:

- Financial analyses to inform choices on premiums
- Develop strategic framework for NHIS management/operations
- Prioritise developments in the supply side
- Infrastructure that supports Health System & NHIS
- Upgrades, construction, equipment in Underserved areas.
- Digitisation of health and patient records
- Staffing levels restructuring for adequate specialists and PHC cadres
- Strengthening health governance structures
- Public awareness, advocacy, national dialogue and partnerships

In conclusion, Uganda is getting closer to passing the NHIS Bill and engagements of this nature are important in moving forward with the process.

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- http://library.health.go.ug/publications/healthfinancing-accounting/health-financing-strategy-201516-%E2%80%93-202425

Distribution platforms as the backbone of affordable community health

Angelique "Lika" Dioguardi and Joost van Engen explain how the Healthy Entrepreneur distribution model works in Uganda

In Uganda, as well as many other sub-Saharan countries in the world a rural family may spend over 350,000UGX on healthcare costs a year, yet over half (190,000 UGX) is used for transport and only 160,000 UGX for the actual treatment. The cost of bodas (motorcycle taxis) or bicycles to the health facilities whether public or private can be high. On arrival, there is no guarantee for consultation or access to free medicine. In many cases, the medicine is out of stock and not available. Often pharmacies are profit oriented and can take advantage of the health facility stockouts, thereby increasing the price of the medicines. This is a common picture in districts and rural areas.

Healthy Entrepreneurs (HE) is a not-for-profit social enterprise that is solving the distribution challenge. Started in 2012, it opened a Kampala office in 2016 with the goal of upending one of the most difficult global health care challenges: consistent, reliable and affordable distribution of health care to the last mile.

Two key assumptions were made in the model:

- 1. Healthcare should be affordable not for free
- 2. If transport costs are taken out of the picture there is money available for treatment.

These assumptions have laid the groundwork for a market-based approach that compliments the government health structures. As of February 2022, approximately 6,300 Village Health Team members were trained with a 90% retention rate.

Tackling the problem

"Why can you find a bottle of soda in remote villages, but not paracetamol?"

Healthy Entrepreneurs is tackling the most expensive and difficult part of health care conundrum – the distribution of services and products to rural areas. By addressing the core issue – a costly and heavy distribution chain – affordable community health is realised. With a distributor's perspective, co-founder Joost van Engen utilised experience as a commercial and pharmaceutical distributor to build a cost-effective and efficient distribution model. This private sector approach has enabled the market to become more demand-driven based on the primary motivator: affordable prices for doctoral services, basic medicines and preventative products that are close to home!

Angelique "Lika" Dioguardi, lika@healthyentrepreneurs.nl is the Country Director and Joost van Engen, joost@healthyenterpreneurs.nl is Co-Founder of Healthy Entrepreneur distribution



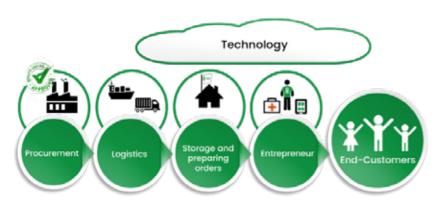
A community health worker in the village

Strengthening the supply chain

Licensed by the National Drug Authority, Healthy Entrepreneur distribution model is centralised and data driven. The business's lean operation sustains a profitable organisation that is scalable and eligible for investments. The driver of HE's sustainability and value proposition is the integrated supply chain, with full control of products and avoidance of unnecessary markups along the chain of supply. This low-cost operation enables HE to provide Community Health Enterpreneurs (CHEs) with high-quality products at lower prices than elsewhere. Access to a medical staff via the call center gives direct patient support to CHEs while bringing comfort to patients of quality.

How its done: Stages of the CHE Training

Endorsed by the Ministry of Health and Minister Dr. Diane Atwine and the commissioner of Community Health, Dr. Upyentho, becoming a Community Health Entrepreneur is a simple.



End-to-end supply chain management

- Memorandum of Understanding is signed with the District Health Team and a 4-day training is given to selected Village Health Teams (VHTs).
- The training requires a commitment of 70,000UGX (20USD). A basic starter kit worth 140,000 UGX (40USD) of health products are given, including an apron, government reporting tools, basic medicines, nutritional products, reproductive health and hygiene products.
- The training includes business and financial management and planning, customer care, product management and use and HE applications.
- VHTs are supplied with new stock every two weeks during VHT cluster meetings
- VHTs receive refresh trainings every two months by HE staff
- Toll-free access to medical consultants 15 hrs/ day at 7 days/week for community members,

bringing comfort and better answers to the patient.

• Toll-free access to customer support representatives for stock and financial management

Guaranteed sustainability

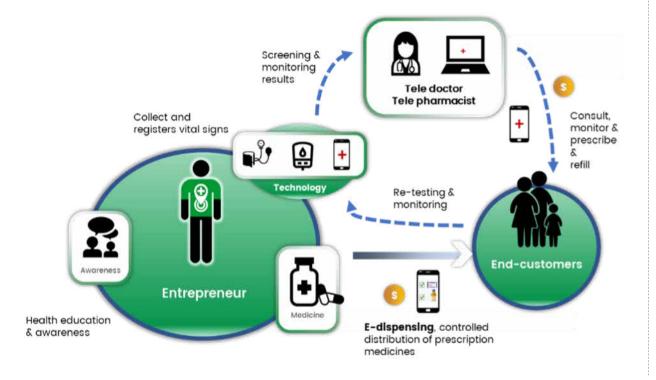
The Community Health Entrepreneurship (CHE) model strives to motivate voluntarily Community Health Workers (CHWs) by introducing profit as an incentive

During routine house to house visits, the "CHW" can identify health needs and provide them from their small cache of healthcare products and even access to medical officers via the phone.

This natural breakdown, allows, households to all benefits of health care close to home, less time consuming and affordable for routine illnesses and health issues. Referrals to health clinics and medical centers is still part of standard practice beyond basic problems.

The risk of overselling medication is mitigated through close supervision and social controls from the community. Since our entrepreneurs have already been working as CHWs/VHTs for several years, they have a reputation to keep, and are interestingly motivated to support their community.

The product assortment, which constitutes of several medicines, self-care, reproductive health, and nutrition products are immediately available, often at prices 10% to 15% below wholesale. Suggested retail prices or patient prices are approximately 35% over purchase price from HE, allowing the CHE to earn an income from her





sales. The defrayed rate is affordable for most community members and the "VHT" has an income source. Complicated cases are always referred to health centers for in person visits.

Valuing the Ugandan VHTs as community members and partners

Community health team volunteers (VHTs) have been front line responders of the Government of Uganda for decades. It is well accepted that VHTs are valued and trusted members of rural communities though VHTs are not consistently paid for their time and efforts to improve their communities. While many are proud to be a driving force for community health they cannot give unlimited unpaid time to the task. The World Health Organization and even the Ministry of Health recognizes the need to create an incentive to these dedicated first responders, in short, the VHT responsibility should be matched with an incentive or pay scheme. The Community Health Entrepreneurship (CHE) model strives to motivate voluntarily CHWs by introducing profit as a incentive Through the HE model, VHTs are earning by selling directly to community members, they are fulfilling the role given to them by the Government and are gresponding to the community needs. Through the HE model, VHTs are earning by selling directly to community members and gresponding to health needs. All within onee affordable management system.

Integration of social entrepreneurship can support the existing VHT model, and fill in gaps where the current VHT model is lacking. With its combination of social value creation and entrepreneurship, a social entrepreneurship holds the potential to strengthen the CHW market and help avoid future market failures. Due to their social mission they usually offer products for a fair price and have more of an incentive to deliver good quality products

Connecting VHTs and technology for support

Healthy Entrepreneurs makes use of digital innovations to check and supervise the performance of the VHTs. Our technology enables low-cost tracking, management of supplies and review of the model. A call center and two HE developed mobile applications are the backbone of our monitoring system, allowing deep analysis of the supplies and the market. A HE Health app, uses triage questions to give guidance on healthcare issues and family planning. It contains a prevention checklists, education and prevention videos. The HE Product app

allows CHEs to request for new supplies. Purchases are paid with mobile money or cash on delivery. Deliveries are made bi-weekly, minimising the need for long-term planning.

Independent evidence of the model

A study conducted (2015 – 2018) by Erasmus University Rotterdam and the Makerere University Kampala found a significant improvement in knowledge and access to basic care in Uganda:

- 1. 1Households reached by CHEs have twice the odds of using modern contraceptives and were observed to possess 46% more comprehensive knowledge of HIV, STIs and other basic health topics(n = 1250).
- 2. 2CHEs have significantly better availability of essential generic medicine (80%) and basic equipment, were more motivated, referred twice as many patients, spend more time on health work and followed more refresher training and doubled their income. After 2 years more than 85% are still active.
- 3. The motivation of a CHE was positively affected by the opportunity to generate an income, the substantially better availability of generic medicine and the organisational structure. The entrepreneurial approach provides CHEs with the incentives, products and equipment that improve and sustain their functioning'

The way forward

This proven model is ready for further scaling, replication and institutionalisation or formalisation as part of the national health policy and strategy. By 2030, Healthy Entrepreneurs hopes to be the leading company specialised in reliable healthcare service provision in hard-to-reach and remote areas.

Currently 6,300 Community Health Entrepreneurs are active in 33 districts. By December there will be 10,000 CHEs to be serving in around 50 districts and 20,000 in 90 districts by the end of 2023. In The first quarter of this year, CHEs sold an average of 280,000,000 UGX of curative and preventative products to their communities with over 6,000 orders. Uganda is proudly the flagship operation with expanding operations in Kenya, Burundi, Tanzania and Burkina Faso. They say "money speaks". There is no doubt that the Community Health Entrepreneur is responding to community health needs successfully and sustainably.

Supporting paediatric surgery in South Sudan

Emma Lourie describes how Scottish surgical colleges have joined forces in a charitable endeavour

Two of Scotland's most historic and prestigious surgical institutions are collaborating to support the work of leading global healthcare charity Kids Operating Room (KidsOR). The Royal College of Surgeons of Edinburgh and the Royal College of Physicians and Surgeons of Glasgow have come together to raise funds to support a first-ever paediatric surgeon in South Sudan.

The Colleges, which boast a combined membership of more than 45,000 from all around the world, have joined forces to raise funding for KidsOR's scholarship programme in South Sudan, which aims to support the scholarship and training of the country's first paediatric surgeon and for a period of at least five years. Each college will be looking to raise £6,500, given that £13,000 supports a trainee surgeon through one year of training.

Michael Stitt, Director of Partnerships at The Royal College of Surgeons of Edinburgh, said: "The Global Surgery Foundation exists in order to help to build sustainable surgical capacity in communities suffering from a chronic shortage of care. It provides vital services to children who might not have otherwise had access to the healthcare they need."

Alison Lannigan, Chair at HOPE Foundation, said: "The fellows and members of the Royal College of Physicians and Surgeons of Glasgow and those of the Royal College of Surgeons of Edinburgh have contributed successfully for many years to the training and education of surgeons both in the UK and overseas. We are delighted to have the opportunity through Kids OR to take this further and collaborate in the funding of the Paediatric Surgical Scholarship Programme in South Sudan. At RCPSG, our members recognise the need to improve surgical care on a global scale and are delighted to award funding from the Hope Foundation to this worthy endeavour."

Prof George Youngson, CBE trustee of Kids OR said: "Developing surgical services for children in a difficult part of the world, needs careful planning, commitment and resources particularly at a time when health services in our own country are being greatly stretched. The two surgical colleges in Scotland have come together and looked beyond our own immediate challenges and taken an initiative that will provide treatment for a huge number of children in need of care elsewhere in the world."

While the pandemic has a global perspective, so does the lack of access to surgical treatment for children in parts of the world like South Sudan where external aid is hard to penetrate. This makes the investment in

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assisting and developing local solutions provided by local surgeons and carers all the more precious.

David Cunningham, CEO of KidsOR, said: "We would like to thank the Royal Colleges for supporting our work in South Sudan. Despite being a country of 11 million – over half of whom are children – South Sudan lacks a single paediatric surgeon. The country also lacks the infrastructure with no paediatric Operating Room. This is reflected in the fact the country has one of the highest infant mortality rates in the world (58.6 per 1,000 live births) and an alarmingly high under-fives mortality rate (89.8/1,000)."

Since 2018, the KidsOR Scholarship Program has worked with a number of partners to both fund the scholarships programme and to develop the infrastructure and networks needed to train paediatric surgeons across Africa. The first of the 120 KidOR surgical scholars are just now beginning to graduate.

One such graduate surgeon is Dr Alicia Messenga, who is based at Bugando Medical Centre, in Mwanza, Tanzania – a hospital that provides services to a population of almost 17 million (one third of the total population of the country). She said: "Successful completion of my studies has benefitted our community as paediatric patients get the specialist care they need. As Bugando Medical Centre is also a university teaching hospital, surgical students get exposure to paediatric surgery now that we have a paediatric surgery unit in the hospital thanks to KidsOR and Smile Train."

Later this year, KidsOR will begin training South Sudan's first paediatric surgeons. The two scholars are Dr Betty Arkangalo Yuggu Phillimona and Dr Bidali James Sebit Nzira. The Royal Colleges' funding will be supporting the training of Dr Betty Arkangalo Yuggu Phillimona.

KidsOR is a charity tackling the global crisis in children's surgery. You can donate to their lifesaving work by visiting www.kidsor.org.

COVID-19

Duration of COVID-19 vaccines protection

It is widely known that COVID19 vaccines' effectiveness will wane over time. As the COVID19 vaccinations in LMIC continue to rise, it's essential to know just how long their protection lasts. A team of researchers in England, through a case-control study design estimated ChAdOx1-S and BNT162b2 vaccines' effectiveness against symptomatic COVID19, its related hospitalisation, and death. It was noted that vaccine effectiveness peaks a few weeks after the second dose, but fell by 20 weeks. The researchers also noted that waning was greater in persons 65 years or older, or those with comorbidities, than in healthy adults. They, therefore, concluded that there was limited waning in COVID19 vaccine effectiveness with two doses of

Andrews N, Tessier E, et al. Duration of Protection against Mild and Severe Disease by Covid-19 Vaccines. N Engl J Med. 2022 Jan 27;386(4):340-350. doi: 10.1056/ NEJMoa2115481. Epub 2022 Jan 12. PMID: 35021002: PMCID: PMC8781262.

High dose ivermectin in the early treatment of COVID-19

Ivermectin has been fronted as one of the therapies in the treatment of COVID-19. Its safety and efficacy are however still debatable. A randomised controlled trial was conducted to assess the safety and efficacy of high-dose ivermectin in reducing viral load in individuals with early SARS-CoV-2 infection. Participants were randomly assigned to any of the three arms i.e placebo, single-dose ivermectin 600 µg/ kg plus placebo for 5 days, or singledose ivermectin 1200 µg/kg for 5 days. Primary endpoints were serious adverse drug reactions (SADRs) as well as viral load change on day 7. At termination, the study had registered no SADRs and there were no significant differences in viral load reduction. The researchers concluded that high-dose ivermectin was safe but wasn't efficacious.

Dora Buonfrate, Fabio Chesini, et al. High-dose ivermectin for early treatment of COVID-19 (COVER study): a randomised, double-blind, multicentre, phase II, dose-finding, proof-of-concept clinical trial. International Journal of Antimicrobial Agents, Volume 59, Issue 2, 2022, 106516, ISSN 0924-8579, https://doi.org/10.1016/j.ijantimicag.2021.106516.

SARS-CoV-2 positivity in offspring and timing of mother-to-child transmission

Coronavirus and viral fragments can be detected in maternal blood, placenta, and amniotic fluid and, breast milk of pregnant mothers with SAR-CoV-2 infection. It's been however unclear to what extent mother-tochild transmission of SARS-CoV-2 happens. A systematic review and meta-analysis of major databases were conducted. The review included cohort studies, case series, and case reports of pregnant and recently pregnant women with a diagnosis of SAR-CoV-2 infection. Overall, 1.8% of babies born to SARS-Cov-2 infected mothers were found positive for Covid-19. The researchers also confirmed mother-to-child transmission in utero. intrapartum, and early postpartum but vertical transmission was rare; and the severity of maternal covid19 disease appeared to be associated with SARS-CoV-2 positivity in offspring.

Allotey J, Chatterjeé S, et al. SARS-CoV-2 positivity in offspring and timing of motherto-child transmission: living systematic review and meta-analysis. BMJ. 2022 Mar 16;376:e067696. doi: 10.1136/bmj-2021-067696. PMID: 35296519; PMCID: PMC8924705.

Proning in moderate hypoxaemia due to COVID-19

Prone positioning of patients with severe acute respiratory distress is considered a gold standard of care. Whether this strategy could also ameliorate outcomes in less critical patients remains to be ascertained. Researchers set out to assess the effectiveness of prone positioning in patients with moderate hypoxemia. Two hundred fifty-seven patients were equally randomised to either proning or standard of care (no instruction to prone). The outcome measures were inhospital death, mechanical ventilation, or worsening failure. It was noted that the median time spent proning in the first 72 hours was only 6 in the intervention arm, versus 0 hours in the standard-of-care with no differences in outcomes. The researchers recommended works to improve adherence to this potentially beneficial strategy of prone positioning. Fralick M, Colacci M, et al. Prone positioning

of patients with moderate hypoxaemia due to covid-19: multicentre pragmatic randomised trial (COVID-PRONE). BMJ. 2022 Mar 23;376:e068585. doi: 10.1136/bmj-2021-068585. PMID: 35321918; PMCID: PMC8941343.

Pre-hospitalisation Proton pump inhibitors (PPIs) on COVID-19 outcomes

Research shows that COVID-19 can also present with gastrointestinal symptoms, which could be managed by PPIs in pre-hospital settings. The ensuing hypochlorhydria could aid the escape of inactivation of the coronavirus by gastric acid. Researchers sought to ascertain the association between prehospital PPIs use and clinical outcomes in hospitalised COVID-19 patients. A total of 295 patients were enrolled, 15.6% were on PPIs at home. Mortality among the PPIs-users was 2.3 times higher than non-users, and 2.3 times higher risk of acute respiratory distress syndrome. The researchers hence confirmed that prehospitalisation PPIs exposure was associated with worse clinical outcomes.

Ramachandran P, Perisetti A, et al. Prehospitalization proton pump inhibitor use and clinical outcomes in COVID-19. Eur J Gastroenterol Hepatol. 2022 Feb 1;34(2):137-141. doi: 10.1097/MEG.00000000000002013. PMID: 33252418

General

Single-dose liposomal amphotericin B in cryptococcal meningitis

Amphotericin B, the backbone of treatment for Cryptococcal meningitis a leading cause of HIV-related death is notorious for its toxicity, highly dependent on the length of exposure. It's been unclear if a single-dose amphotericin B is efficacious. A total of 844 participants in 5 African countries were randomised to either receive a single high dose of liposomal amphotericin B on day 1 plus 14 days of flucytosine and fluconazole or the WHO-recommended treatment i.e amphotericin B deoxycholate plus flucytosine followed by fluconazole. Researchers observed the outcome (all-cause death) in 101 participants in the intervention arm compared to 117 in the control arm, and no differences in fungal clearance from cerebrospinal fluid. Single-dose liposomal amphotericin was found non-inferior to the WHO-recommended standard, and has fewer adverse events.

Jarvis JN, Lawrence DS, Meya DB, et al. Single-Dose Liposomal Amphotericin B Treatment for Cryptococcal Meningitis. N Engl J Med. 2022 Mar 24;386(12):1109-1120. doi: 10.1056/ NEJMoa2111904. PMID: 35320642.

Alternative to prophylactic antibiotics for recurrent urinary tract infections

In the current era of antibiotic stewardship, alternatives to their use are being sought after. In this study, researchers compared the efficacy of methenamine hippurate with low-dose prophylactic antibiotics in the prevention of recurrent urinary tract infections (UTIs). Adult women requiring prophylactic treatment were randomised to either group and followed up for 12 months. Incidence of symptomatic, antibiotic-treated UTIs was measured during treatment. The researchers found no difference in the incidence of UTIs between the methenamine hippurate arm and antibiotic arm i.e 0.89 Vs 1.38 episodes per personyear, or adverse events. The researchers concluded that methenamine hippurate was non-inferior as a non-antibiotic alternative to recurrent UTIs.

Harding C, Mossop H, et al. Alternative to prophylactic antibiotics for the treatment of recurrent urinary tract infections in women: multicentre, open label, randomised, noninferiority trial. BMJ. 2022 Mar 9;376:e068229. doi: 10.1136/bmj-2021-0068229. PMID: 35264408: PMCID: PMC8905684.

Social and health factors associated with adverse treatment outcome of MDR-TB in Sierra Leone

Multi-drug resistant TB is a public health threat. Understanding factors related to its treatment outcomes would go a long way to reducing its burden. In this national (Sierra Leone) cohort study, researchers evaluated MDR-TB treatment outcomes and factors associated with adverse outcomes. A total of 365 persons were eligible for study participation. The median age was 35 years, 72% (263) were male, 19% (71) were HIV-positive, 35% (127) were severely underweight. Age 45-64 years, severe underweight, untreated HIV, chronic lung disease, previously unsuccessful drugsensitive TB retreatment, and a long regimen were associated with adverse outcomes. The findings highlighted the need to integrate TB, HIV, and noncommunicable disease services along with nutritional and socioeconomic support for MDR-TB patients. Kamara RE Saunders MI et al. Social and health

factors associated with adverse treatment outcomes among people with multidrug-resistant tuberculosis in Sierra Leone: a national, retrospective cohort study. Lancet Glob Health. 2022 Apr;10(4):e543-e554. doi: 10.1016/S2214-109X(22)00004-3. PMID: 35303463; PMCID: PMC8938764.

Secondary prophylaxis reduces the risk of latent Rheumatic heart disease progression

Rheumatic heart disease (RHD) when identified early and progression halted prevents related deaths. Secondary prophylaxis is the cornerstone of managing RHD, but whether it prevents disease progression is unclear. A large study conducted in Uganda involved 916 children and adolescents, participants were randomised either to receive injections of penicillin G benzathine, 4-weekly for 2 years or no prophylaxis. Echocardiography was obtained at baseline and 2 years after randomisation. The primary outcome was an echocardiographic progression of latent RHD at 2 years. The researchers found 3 (0.8%) participants in the prophylaxis group with the primary outcome compared to 33 (8.2%) in the control group. The study confirmed that secondary prophylaxis indeed reduced the risk of latent RHD progression.

Beaton A, Okello E, et al. Secondary Antibiotic Prophylaxis for Latent Rheumatic Heart Disease. N Engl J Med. 2022 Jan 20;386(3):230-240. doi: 10.1056/NEJMoa2102074. Epub 2021 Nov 13. PMID: 34767321.

Impact of Antihypertensive Drug Class on Outcomes

This study included a secondary analysis of the SPRINT (Systolic Blood Pressure Intervention Trial) and aimed to investigate if greater exposure to any major antihypertensive drug class had an impact on primary outcome events. A total of 9252 participants were included in the analysis. Exposure for 1 year or greater to thiazidetype diuretics or renin-angiotensin system (RAS) blockers was associated with fewer primary events than less exposure, unlike beta-blockers whose greater exposure to, increased the primary events. The scientists also found that thiazide-type diuretics and RAS blockers were associated with a reduction in heart failure. and myocardial infarction events respectively. The researchers concluded that greater exposure to thiazide-type diuretics and RAS blockers reduced adverse cardiovascular events where betablockers increased the events.

DeCarolis DD, Gravely A, Olney CM, Ishani A. Impact of Antihypertensive Drug Class on Outcomes in SPRINT. Hypertension. 2022 May;79(5):1112-1121. doi: 10.1161/ HYPERTENSIONAHA.121.18369. Epub 2022 Mar 9. PMID: 35259925.

Effects of intensive systolic blood pressure lowering in patients with low baseline diastolic blood pressure on the risk of stroke

Targets of intensive blood pressure (BP) control are a systolic BP of less than 130mmHg. There's a concern however that reducing the blood pressure this low in patients with a low baseline diastolic blood pressure could increase the risk of stroke. Researchers conducted a secondary analysis of the Secondary Prevention of Small Subcortical Strokes trial that randomised participants with a history of small subcortical strokes to either intensive (<130mmHg) or standard systolic targets (130-149mmHg) and the effects of blood pressure intervention on stroke examined across a range of baseline diastolic blood pressures. The study found the risk of strokes or cardiovascular events in both arms similar. The researchers hence concluded that intensive systolic control doesn't increase the risk of stroke with low baseline diastolic pressure.

Shihab S, Boucher RE, et al. Influence of Baseline Diastolic Blood Pressure on the Effects of Intensive Systolic Blood Pressure Lowering on the Risk of Stroke. Hypertension. 2022 Apr;79(4):785-793. doi: 10.1161/ HYPERTENSIONAHA.121.18172. Epub 2022 Feb 4. PMID: 35114798; PMCID: PMC8917090.

Effect of Sleep Extension on Energy Intake among Adults with Overweight in Real-life Settings

With evidence showing that inadequate sleep increases the risk for obesity, it is not clear if extending sleep duration may lessen the risk. Researchers, through a randomised controlled trial with 80 participants, studied effects of a sleep extension intervention (individualised sleep hygiene counseling session intended to extend sleep duration to 8.5 hours) on objectively assessed energy intake, energy expenditure, and body weight in real-life settings among adults with overweight who usually slept for less than 6.5 hours per night. Sleep duration increased by about 1.2 hours per night in the intervention group vs the control group. This increased sleep duration inversely correlated with change in energy intake with a reduction of about 270kcal in the intervention group compared to the control group. There was no significant change in total energy expenditure. Consistent healthy sleep duration may play a role in obesity prevention and treatment.

Tasali E, Wroblewski K, et al. Effect of Sleep Extension on Objectively Assessed Energy Intake Among Adults With Overweight in Reallife Settings: A Randomized Clinical Trial. JAMA Intern Med. 2022 Apr 1;182(4):365-374. doi: 10.1001/jamainternmed.2021.8098. PMID: 35129580; PMCID: PMC8822469.

Risk factors for physician burnout: a perspective from Tanzania

Physician burnout is a growing concern but there is paucity of information on the underlying factors among physicians in lower income countries. A recent cross-sectional study in Tanzania assessed for physician burnout and the contributing factors among two cohorts: 1) Emergency Medicine (EM) trained physicians in Tanzania and; 2) specialists at Bugando Medical Centre. They reported burnout in 67% of the EM providers and in 70% of the specialists. Contributory factors in EM physicians included dissatisfaction with career choice, considering switching institutions, working in an urban setting, inadequate coverage for emergencies/leave, and financial housing responsibilities. Important factors among the specialists included; unnecessary administrative paperwork, working overnight shifts, pressure to achieve patient satisfaction or decrease length of stay, meaningful mentorship, and not having a close friend/family member die. The researchers concluded that targeting these risk factors may provide opportunities to boost physician

Shweta lyer et al. Risk factors for physician burnout: a perspective from Tanzania. Pan African Medical Journal. 2022;41:298. [doi: 10.11604/ pamj.2022.41.298.31055] Available online at: https://www.panafrican-med-journal.com/ content/article/41/298/full

MCH

Optimising the management of uncomplicated acute malnutrition in under 5s

Acute malnutrition treatment is not only complicated but its access also low. This is contributed by different programmes using different products to manage severe or moderate acute malnutrition differently. This large study conducted in Congo aimed to assess if a single-strategy for both severe and moderate acute malnutrition using one product ready-to-use therapeutic food (RUTF) at a decreasing dose as MUAC and weight increased, wasn't inferior to

the standard strategies. A total of 912 children were equally randomised and followed up for a favorable outcome at 6 months. In both analyses: intention-to-treat and per protocol, researchers found a single strategy was superior to the control i.e. 72% Vs 63% and 74% Vs 61% respectively; a strategy with greater potential to improve access to malnutrition treatment.

Cazes C, Phelan K, et al. Simplifying and optimising management of acute malnutrition in children aged 6 to 59 months: study protocol for a community-based individually randomised controlled trial in Kasaï, Democratic Republic of Congo. BMJ Open. 2020 Dec 2;10(12):e041213. doi: 10.1136/bmjopen-2020-041213. PMID: 33268424; PMCID: PMC7713214.

Residual mother-to-child transmission risk of Hepatitis-B virus

Receipt of Hepatitis-B virus (HBV) birth-dose vaccines in Sub-Saharan Africa remains sub-optimal. It has been suggested that perhaps additional measures e.g peripartum antiviral prophylaxis be employed. Scientists through this longitudinal observational study sought to estimate the residual risk of mother-to-child transmission of HBV at a single centre in Cameroon. Over a period of 8 years, 3901 (17 5%) of mothers that accepted antenatal HBV screening were HBsAg positive. Half of the children born to these mothers received the HBV birth-dose vaccine. Researchers found a high prevalence of HBV in children even with birth-dose vaccines. A positive HBV e antigen and high viral load were strongly associated with HBV transmission. Researchers suggested that on top of HBV birthdose vaccination, peripartum antiviral prophylaxis could be beneficial.

Yusuke Shimakawa, Pascal Veillon, et al. Residual risk of mother-to-child transmission of hepatitis B virus infection despite timely birth-dose vaccination in Cameroon (ANRS 12303): a single-centre, longitudinal observational study. https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00026-2/fulltext

Mosquito net use and survival to adulthood

The role of insecticide-treated mosquito nets (ITNs) in malaria control can't be underestimated. There is however debate about the long-term impact of their use, some studies suggesting it might skew deaths to adulthood due to a delay in acquisition of functional immunity. This prospective study in rural Tanzania sought to estimate the association between early-life ITNs-use and survival to adulthood. Of the

6706 children enrolled, the vital status of 89% was verified at follow-up. Researchers found that participants who reported to have used ITNs at half the early life visits or more had a hazard ratio (HR) for death of 0.57, with a corresponding HR between 5 years and adulthood as 0.93. It was concluded that the survival benefit of ITNs persisted to adulthood.

Fink G, Mrema S, et al. Mosquito Net Use in Early Childhood and Survival to Adulthood in Tanzania. N Engl J Med. 2022 Feb 3;386(5):428-436. doi: 10.1056/ NEJMoa2112524. PMID: 35108469.

Shorter treatment for non-severe TB in children

Pediatric TB treatment is a challenge due to the long treatment course. In this study conducted in India and 3 African countries, including Uganda, researchers evaluated the efficacy of a 4-month regimen as compared to the current 6-month regimen. A total of 1204 children (under 16 years of age) were equally randomised to either arm. The outcome measure was a composite of treatment failure, loss to follow-up, or death by 72 weeks. The median age of participants was 3.5 years, 52% were male, 11% had HIV, and 14% had bacteriologically confirmed TB. There was a similar incidence of the primary outcome event in both arms which is 3%. The researchers concluded that the 4-month regimen was non-inferior to the 6-month regimen in children with

Turkova A, Wills GH, Wobudeya E, et al. Shorter Treatment for Nonsevere Tuberculosis in African and Indian Children. N Engl J Med. 2022 Mar 10;386(10):911-922. doi: 10.1056/ NEJMoa2104535. PMID: 35263517; PMCID: PMC7612496

Evaluation of zinc in blood, semen and their relationship to sperm quality among males attending infertility clinic

Male infertility, a clinically significant problem is not well studied. Researchers from the Kenyatta National Hospital Infertility clinic, contributed to the body of evidence through a recent study. Through a cross-sectional study, they studied the relationship between the concentration of zinc in semen and in blood serum and sperm quality of 277 randomly selected men who attended the infertility clinic. They found a positive correlation between zinc concentration in blood and semen with sperm motility, normal sperm morphology, sperm count and volume. The researchers recommended that

Zinc assay be considered as a routine test in management of male infertility especially when there are abnormalities in sperm motility, morphology and concentration and in semen volume. They also highlighted the need to pay attention to micronutrient malnutrition especially Zinc among men.

Ö. Onono, G. Orinda, L. Munga. Evaluation of zinc in blood, semen and their relationship to sperm quality among males attending infertility clinic in Kenyatta National Hospital. East Africa Medical Journal, https://www.ajol.info/index. php/eami/article/view/220119

Factors associated with readiness to start antiretroviral therapy (ART) among young people in Uganda

Despite the availability of efficacious ART, HIV care for young people is still very challenging and the HIV burden in this group continues to rise. Researchers in Uganda, through a cross-sectional study evaluated the demographic and psychosocial factors associated with readiness to start ART among newly diagnosed HIV positive young people aged 15-24 years at 4 HIV clinics at Mulago Hospital. They found that the majority (53.3%) were very ready and

very motivated (51.1%) to start ART. Female sex, thinking that ART cures HIV, history of having unprotected sex, anticipating negative HIV results, internalised stigma and knowledge of positive ART effects for others were associated with higher treatment readiness. They concluded that understanding the factors associated with ART readiness among young people could guide the strategies for their care.

Nkalubo J, Mugaba M, et al. Factors associated with readiness to start antiretroviral therapy (ART) among young people (15-24 years) at four HIV clinics in Mulago Hospital, Uganda. Afri Health Sci. 2021;21(4):1603-14. https://dx.doi. org/10.4314/ahs.v21i4.14

Assessment and management of venous thromboembolism (VTE) risk during pregnancy and puerperium: An experience from South Africa

Pregnancy and puerperium are a documented risk factor for VTE and there is a need for evidence on VTE assessment and thromboprophylaxis use during this period. Researchers in South Africa, through a cross-sectional study evaluated the local practice of

VTE risk stratification among pregnant women and senior doctors' attitudes to VTE prophylaxis. 104/127 (81.9%) of the women identified as at risk of VTE received some form of VTE prophylaxis. Of those who received pharmacological treatment, 15/15 received low-molecular-weight heparin during pregnancy and before delivery and 87/100 during the puerperium. Thirty-four patients received thromboprophylaxis for only 5 - 10 days after caesarean delivery, and 2 received mechanical thromboprophylaxis during pregnancy. The researchers concluded that pharmacological thromboprophylaxis was the most commonly used intervention and mechanical thromboprophylaxis was underutilised. There was poor adherence to VTE guidelines, specifically on duration of thromboprophylaxis.

P Naidoo, R Mothilál, L.C. Snyman.
Assessment and management of venous thromboembolism risk during pregnancy and the puerperium (SAVE): The South African cohort. South African Medical Journal, https://www.ajol.info/index.php/samj/article/view/184361



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CPD Challenge

Questions

1. Which of the following statements are TRUE or FALSE concerning what is known about COVID-19 pandemic?

- a. While mother-to-child transmission of COVID-19 can occur in utero, intrapartum and in early postpartum period, vertical transmission is rare.
- b. COVID-19 vaccine effectiveness peaks a few weeks after the 2nd dose but will fall by 20 weeks.
- Although Ivermectin has been fronted as one of the therapies in the treatment of COVID-19, its officiousness has not yet been fully established.
- d. While prone positioning of patients with severe acute respiratory distress is considered a gold standard of care, the role of this strategy in ameliorating outcomes in less critical patients remains unclear.
- e. All TRUE

Please indicate which of the following are TRUE or FALSE regarding the appropriate treatment of cryptococcal meningitis.

- a. Amphotericin B remains the backbone of treatment of cryptococcal meningitis.
- Standard treatment of cryptococcal meningitis is amphotericin B deoxycholate plus flucytosine, followed by fluconazole.
- Single-dose liposomal amphotericin B is superior to WHO recommended standard treatment of cryptococcal meningitis.
- d. Although amphotericin B is efficacies for the treatment of cryptococcal meningitis, it remains notorious for its toxicity, and highly dependent on the length of exposure.
- e. All TRUE

3. Which of the following are TRUE or FALSE regarding the things to consider in the management of high blood pressure?

 Greater exposure to thiazide-type diuretics and reninangiotensin system (RAS) blockers are associated with

- a reduction in adverse cardiovascular events such as heart failure and myocardial infarction.
- b. The targets for intensive blood pressure control are a systolic BP of less than 130 mmHg.
- Intensive systolic pressure control does not increase the risk of stroke.
- d. There is always a risk of stroke with aggressive reduction of systolic pressure to less than 130 mmHg.
- e. To avoid any risk of stroke is recommended to always aim to systolic targets between 130-149 mmHg.

Which of the following statements are TRUE or FALSE concerning use of mosquito nets in malaria control.

- a. Although insecticide-treated mosquito nets (ITNs) are known to play a major role in malaria control, there is still debate about the long long-term impact of their use.
- b. There is a strong association between early-life ITNs-use and survival to adulthood.
- Survival benefit of ITNs does not persist to adulthood.
- d. Long-term survival benefit of ITNs improves when used for at least 5 years.
- e. All TRUE

5. What is TRUE or FALSE concerning the effect of sleep extension on energy intake among adults with overweight in real-life settings?

- a. There is now enough scientific evidence showing that inadequate sleep increases the risk for obesity.
- b. Consistent healthy sleep duration may play a role in obesity prevention and treatment.
- c. It is not clear if extending sleep duration may lessen the risk for obesity.
- d. Sleep duration is inversely correlated with change in energy intake.
- e. All TRUE.

1. True: all. 2. True: a, b, d. False: c, e. 3. True; a, b, d, e. False: c, e. 3. True: a, b, d, e. False: c. 3. True: a, b, d, e. False: c.





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