

April 2021 Volume 43 Number 2

Africa HEALTH

JOURNAL

Financing for Universal Health Coverage in Africa

The National Health Insurance Scheme in Ghana

A call for compassion for front-line health workers

Community engagement for Universal Health Coverage

Childhood stunting: the countdown to 2025



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



Published four times a year by the

African Centre for Global Health and Social Transformation

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

www.africa-health.com

Publisher
Francis Omaswa

Accounts Manager
Josephine Amuron

Editor/Production Manager
Elsie Kiguli-Malwadde

Consulting Editor
Bryan Pearson

Business Development Director
David Okello

Layout
Aaron Griffiths

Website Managers
Charles Imalingat
Abraham Okoine

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



Africa Centre for Global Health and Social Transformation

All contents are © 2021

ISSN 0141-9536 (print)

ISSN 2053-4760 (online)

Contents

Vol 43 No 2 April 2021



Editorial

03 Focus on health financing

Opinion

07 Financing health for all

Francis Omaswa argues that universal health coverage is something that all nations can achieve

Conferences

08 State of UHC in Africa Commission report launched

Carol Natukunda reports on the Africa Health Agenda International Conference 2021

09 Partnerships in the time of COVID-19

Carol Natukunda reports on a conference hosted by THET-UK, ACHES and the Esther Alliance

Features

10 The case for increased domestic financing in Uganda

A Uganda National Academy of Sciences Consensus Study Report calls for mindset shifts towards greater ownership of national development

13 The National Health Insurance Scheme in Ghana

Veteran health system experts Delanyo Dovlo and Chris Atim review Ghana's NHIS

16 Radiology equipment resources in Africa

Elsie Kiguli-Malwadde looks at the relation between the distribution of Radiology Equipment to achievement of Universal Health Coverage

18 Financing the health workforce in Uganda

A team from ACHES and Wemos share their work on health workforce financing in Uganda

21 Towards an African Institute of Public Health

A bold proposal for a new virtual institute for health policy, advocacy, research and education

23 Financing Universal Health Coverage in Africa

Sam Agatre Okuonzi discusses how to finance UHC in Africa

26 A call for compassion for front-line health workers

Dr David Okello looks at a neglected aspect of health workforce motivation amid the COVID-19 crisis

27 Community engagement for Universal Health Coverage

Francis Omaswa, Ama Fenny, and Shabir Moosa expound on the role of engage people and communities in achieving UHC

30 Childhood stunting: the countdown to 2025

Prof Rachel Musoke highlights the global nutrition targets in relation to childhood stunting

Medicine Digest

35 Abstracts from world-renowned journals

Covid-19, general, MCH

Obituary

39 Professor James Hakim

Elsie Kiguli-Malwadde pays tribute to a colleague who will be fondly remembered by all who interacted with him

CPD Challenge

40 Test yourself

Below are our Publishing Partners. Each organisation has demonstrated its commitment to health in Africa by supporting this publication throughout the year.



Premium Quality
Affordable Prices



www.hmdhealthcare.com

When you are **being injected**,
make sure you are not being
infected.



Insist on
Auto Disable Syringe
for assurance
and safe injections.



**KOJAK
SAFETY BOX**
For Collection of Sharps-used
syringes/needles/blades, 5L/10L

HMD
www.hmdhealthcare.com

YOUR DEFENCE AGAINST AIDS/HEPATITIS

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

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

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

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

For additional information,
please email CRVSinfo@vitalstrategies.org

SUPPORTED BY

Bloomberg
Philanthropies

 **DATA FOR
HEALTH INITIATIVE**

 **Vital
Strategies**



Subscription information

For those who wish to guarantee receipt of each issue
of the journal, there is a two-tier subscription price
structure:

1. For Africa-based readers, and
2. For readers outside the continent of Africa

As digital technology develops so payment methods have
become much easier than the now rather old-fashioned
option of sending a cheque or making a formal (and
expensive) bank transfer.

For those in the first category, copies will be airmailed to
you from the ACHEST headquarters in Kampala.

The price is \$40 a year. Email: AHJsubs@achest.org for
payment options. ACHEST is in the process of building a
network of agents who can handle subscriptions in each
country, thus making payments even simpler. Indicate
what method of payment would be easiest for you and
the ACHEST staff can respond accordingly.

For international readers the price will be \$60 per annum
(airmail). Again, please email: AHJsubs@achest.org for
payment details, which will be sent by return.

We look forward to receiving your support! Thank you.

Focus on health financing

This April 2021 issue of the *Africa Health Journal* (AHJ) has a focus on health financing, a subject described by Sam Okuonzi as the “most intractable challenge of health systems in LMICs”. His article is one of the most educative summaries on the topic of health financing that I have ever seen and should be a must-read for all. This is followed by a review of the National Health Insurance Scheme in Ghana by veteran health system experts, Delanyo Dovlo and Chris Atim. This is one of the oldest such schemes in Africa, founded in 2004 and is now a major source of financing for health care in Ghana. It was estimated to cover approximately 35.8% of the population in 2018. There are lessons here for all African countries on their respective challenging journeys towards UHC.

Health financing is dependent on capacities to raise funds from domestic sources. It is befitting that to this discussion the Uganda National Academy of Sciences has contributed a summary of a Consensus Study Report on domestic financing in Uganda. This article shines a torch on the apparent lack of people ownership of the national development agenda and the issue of capital flight from externalisation of profits and other illicit fund transfers from LMICs through much lauded direct foreign investment.

The theme on ownership is continued in a think-piece I wrote with two fellow Commissioners for the Africa Health Agenda International Commission (AHAIC) on the Status of UHC in Africa. Participation and ownership in health and development is gaining relevance in approaches to achieving the SDGs.

This is reinforced in the reports from two conferences. The 4th edition of the Africa Health Agenda International

Conference (AHAIC) was hosted virtually from March 8-10 under the theme “Decade for Action: Driving Momentum to Achieve UHC in Africa.” The launch of the AHAIC Commission report on the State of UHC in Africa took place at this conference. Opening the conference, President Kenyatta called for greater political will, collaboration and coordination among African nations to make UHC a reality, and highlighted the need for countries to focus on investment in primary health care, expand affordability and harness the innovativeness of youth to promote uptake of e-health solutions.

The second conference reported is on “Partnerships during COVID-19”, hosted by Tropical Health and Education Trust (THET), African Center for Global Health and Social Transformation (ACHEST) and ESTHER from Ireland. The take-home message is that we live in a globalised world where COVID-19 ably illustrated that a problem in one corner of the world is a problem across the world. This leaves us with no choice but to partner and ensure that the world is a better place for us all, a core message of UHC on leaving no one behind.

Returning to health financing theme, Elsie Kiguli-Malwadde relates distribution of radiology equipment to population densities and the achievement of UHC in Africa. She underscores the important role that Diagnostics Medical Imaging plays in diagnosis, treatment, and prognosis of disease pointing out that such imaging required for management of 30% of all medical conditions.

There is a bold proposal by Richard F Heller, Osita Okonkwo and colleagues to establish a new virtual institution in Africa. They argue for the need for research leadership to come from the Global South in the wake of the current debates on decolonising global health. They hope that the publication of this paper will

help to identify those who might want to be part of this development.

An authoritative article on childhood stunting by Rachel Musoke highlights the global nutrition targets and expounds on when childhood stunting occurs, what causes it and what actions need to be taken to stop it.

The article on compassion by David Okello touches a critical issue of caring for the health workforce which has been thrown into the limelight by the COVID-19 pandemic. Health workers are often taken for granted by the public as well as their employers; yet they have real needs which have to be catered for so that they can care effectively.

The obituary is of our dear colleague and friend Professor James Hakim of the University of Zimbabwe who passed on 26 January. James has been widely eulogised including in the *Lancet* among others. Among the African Forum for Research and Education in Health (AFREhealth) community, a scholarship has been named after him. We are honoured to have worked closely with him over many years.

The AHJ is available online as an open access web-based publication (Africa-health.com). This website is active daily with current affairs, social media such as Twitter, Facebook and is visited by a large audience. Those wishing to advertise are welcome to use the print and electronic channels of the AHJ using guidelines that are in the journal.



Professor Francis Omaswa

(omaswaf@achest.org)

The **Africa Health** website

The website includes:

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

Search the TRIP database for free

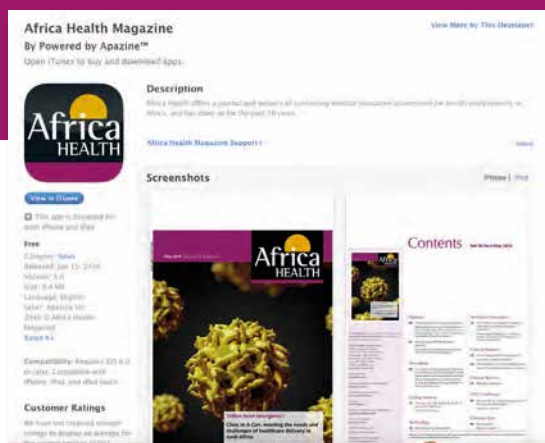
Here is a free database which gives you access to millions of articles, all indexed and uniquely ranked.

Content is entirely evidence-based and peer-reviewed, and in addition to the scientific

articles on every medical subject you can imagine; the database also includes a host of guidelines on treatment and management protocols.

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





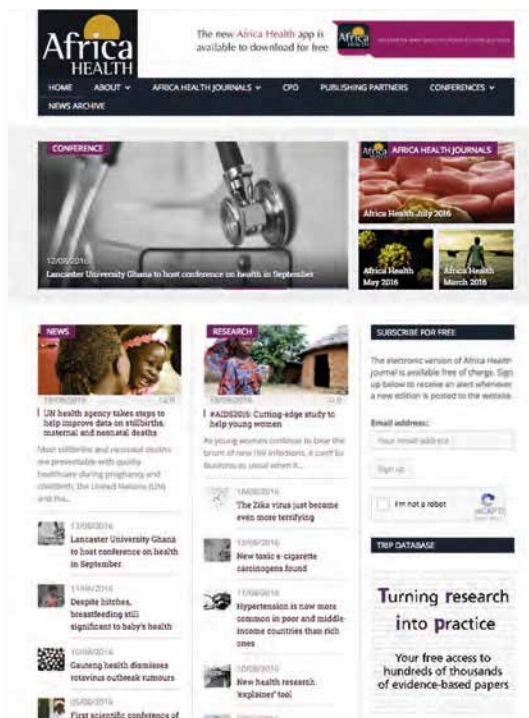
Get Africa Health on the go

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

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

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

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

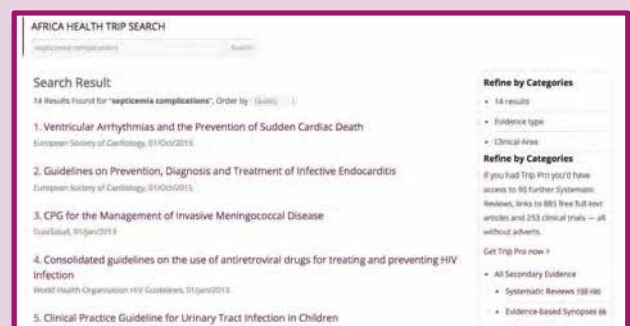


View the latest edition and back issues of the Africa Health journal

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



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



I need you here...

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



**Take a Triple a Day.
Every Day.**

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

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



Financing health for all

Francis Omaswa argues that universal health coverage is something that all nations can achieve



Budget negotiations with national parliaments are going on right now in a number of African countries. Difficult decisions are being made on which aspects of health budgets should be prioritised for funding. This issue of the AHJ has a focus on health financing, which gives us an opportunity to contribute to these budget discussions.

Health financing is “the raising, pooling and spending of financial resources with the primary intention of improving health”. Its sources are general tax, donor aid, deficit funding (or borrowing), ear-marked taxes, and social and private health insurance. This should exclude out-of-pocket spending by individuals usually at the point of receiving health care. Expenditures are made in health facilities, on community and out-reach services, pharmacies, drug shops, sanitation, nutrition, training and research. From the origins and evolution of health financing, many lessons have been learned. Today, health financing remains the most intractable challenge for the health and development globally. Indeed, some have argued that Universal Health Coverage (UHC) in poor countries cannot be funded internally.

Yet health is a precondition for people’s well-being and productive lives. The right to life is also a right to health and to a responsive health system. Our innate humanity means that the pain and suffering of one should be felt, shared and addressed collectively and “no one is left behind” to suffer alone. On top of these moral arguments is the new evidence that health is no longer perceived as a cost but is an investment with high social and economic returns. Health contributes to economic growth, employment and GDP. Indeed, the purpose of all Sustainable Development Goals (SDGs) is to contribute to the health and well-being of people and the protection of our planet. Last but not least, voters value their health, so investing in the health of the population has electoral value.

Africa made major gains in health indices during the Millennium Development Goal period. However Africa still lags far behind other regions of the world in health indices. UHC is a political choice made by governments to provide citizens with the health services that they need without financial barriers. Strong government leadership is essential to create the conditions that enable people to live healthy lives. This includes marshalling actors from all government sectors and the whole of society to deliver integrated people-centred PHC by enacting enabling laws and regulations, providing access to information, healthy food, clean water, decent housing, quality education and other resources.

Francis Omaswa, CEO, African Centre for Global Health and Social Transformation and Publisher of Africa Health Journal.

Many poor countries have proved that a country should not wait to become rich to attain good quality universal health care. Studies have shown that poor quality of health care linked to low level health financing causes more deaths than disease itself. Furthermore, the Alma Ata Declaration on Health for All states that “Primary health care is the essential health care made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development”. The WHO has recommended an annual per capita health expenditure of US\$86. Countries can therefore take immediate progressive steps towards reaching this expenditure target. The Abuja Declaration which called for 15% of national budgets need to be applied with caution and used only as a guide. Finance ministers do not often find it workable, especially if each sector claims a percentage of the budget which could all add up to over 100%.

Existing resources in any nation can be used in such a way that a reasonable package of basic health care can be provided to everyone. The illustrious examples are Costa Rica, Sri Lanka, Cuba, Kerala of India, Vietnam, Thailand and Indonesia. Rwanda is close to attaining UHC. These countries took only 20-30 years to attain UHC and achieved mortality as low as that of the wealthy nations. Good health at low cost is possible based on a political commitment to health as a social goal, a strong societal value of equity, community involvement, high-level investment in primary health care and other community-based services, universal education, especially of women, and inter-sectoral collaboration for health.

African political leaders are called upon to commit to UHC and embark on this journey resolutely starting now with available resources and growing over time along the principles of good health at low cost, moving stepwise: (1) through open national dialogue enact health financing laws, (2) reorganising the governance of the health system to provide capabilities to implement the enacted health laws effectively and efficiently; (3) agreeing a basic package of community-based promotive and curative health services based on the burden of disease and other mutually agreed criteria; (4) providing services beyond the basic package, introduce a menu of financing mechanisms including ear-marked taxes, and social and private health insurance schemes; (5) monitoring and reviewing the performance of the health system regularly and make adjustments to grow the size of the basic package over time matched with the economic growth.

State of UHC in Africa Commission report launched

Carol Natukunda reports on the Africa Health Agenda International Conference 2021

The 4th edition of the Africa Health Agenda International Conference (AHAIC) was hosted virtually from 8-10 March 2021 under the theme, “Decade for Action: Driving Momentum to Achieve UHC in Africa.”

AHAIC is an African-led biennial global health conference hosted by Amref. It attracted about 3,000 participants logging in from 98 countries across the African continent and beyond, including high profile speakers such as the President of Kenya, H.E. Uhuru Kenyatta, World Health Organization (WHO) Director General Dr Tedros Adhanom Ghebreyesus and the WHO-Afro Director Dr Matshidiso Moeti, among others.

Held against the backdrop of COVID-19 recovery efforts, AHAIC 2021 provided a platform to explore the continent’s health challenges, identify opportunities and propose sustainable solutions for and by Africa.

Conversations on the COVID-19 vaccine, health financing, health systems strengthening, technology and innovation, youth engagement and gender equity in health leadership took centre stage, with speakers repeatedly calling for a unified, pan-African approach built on stronger political will and action to drive momentum towards achieving UHC in Africa by 2030.

President Kenyatta called for greater political will, collaboration and coordination among African nations to make UHC a reality, and highlighted the need for countries to focus on investment in primary health care, expand affordability and harness the innovativeness of youth to promote the uptake of e-health solutions.

On vaccine equity, availability, affordability and delivery, stakeholders reiterated the need for Africa to urgently create its own capacity to manufacture and distribute the COVID-19 vaccine, in response to heightened nationalism that has threatened to deny lower- and middle-income countries access to the critical vaccine.

Dr Tedros: “In order to ensure vaccine equity, it is important that we build Africa’s manufacturing capacity. We have seen it with the COVID-19 pandemic, from personal protective equipment to vaccines, lack of equity in distribution is affecting many developing countries that don’t have manufacturing capacity.”

Prof Francis Omaswa, Executive Director of the African Centre for Global Health and Social Transformation (ACHEST) and AHAIC Commissioner, was a panelist at a session on leadership. He highlighted the need for social accountability and the importance of leaning into humanity to achieve social justice, which is necessary

for the attainment of UHC

Other highlights from the conference were:

- The launch of the State of the UHC in Africa report by the independent AHAIC Commission. The report highlights the progress made by African countries towards realising Health for All and details the challenges and opportunities faced by countries on their journeys to UHC. It also provides key recommendations that African countries should adopt to accelerate progress towards UHC, such as re-orienting health systems and health system priorities to respond to population health needs, and prioritising and strengthening primary health care as the foundation for UHC.
- The launch of the “Future Proofing Healthcare Africa Sustainability Index” which provides an unique overview of the status of health systems across the continent and contains a ranking of countries based on 76 different measures.
- Joint calls for the ratification of the African Medicines Agency (AMA) by African Union (AU) member states. AMA is a specialised agency of the AU charged with providing regulatory leadership to harmonise and strengthen regulatory systems which govern the regulation of medicines and medical products on the African continent. The treaty for the AMA’s formation was adopted by the AU in February 2019 but is yet to be ratified by all countries.

Eight action points

- To uphold health as a right of every person regardless of their status, gender or age.
- Political goodwill must match domestic financing and increased investments in health systems.
- African countries must strengthen emergency preparedness and health security to build back better and mitigate the adverse effects of future health emergencies.
- Strengthen Primary Health Care as a cornerstone of UHC.
- To ensure gender transformative policies and meaningful engagement of Africa’s youth for the attainment of UHC.
- That UHC requires Pan-African collaboration and collective stakeholder engagement, governed by robust frameworks for public-private partnerships.
- Harness innovation and digital technologies to strengthen access to quality health care services.
- An enabling environment for accountability must be in place to ensure that health commitments are achieved and upheld.

Carol Natukunda is a Communications Specialist at the African Center for Global Health and Social Transformation (ACHEST), Kampala, Uganda.

Partnerships in the time of COVID-19

Carol Natukunda reports on a conference hosted by THET-UK, ACHEST and the Esther Alliance

“We live in a globalised world. COVID-19 has made it evident that a problem in one corner of the world is a problem across the world. Therefore, we have no choice but to partner and ensure that the world is a better place. This is what the Sustainable Development Goals (SDGs) are about, it is what universal health coverage (UHC) is about.”

This was one of the messages from Professor Francis Omaswa as he gave concluding remarks at the second COVID-19 partnerships conference on 19 March 2021. The virtual conference was hosted by THET UK in partnership with the African Centre for Global Health and Social Transformation (ACHEST) and Esther Alliance.

It was held under the theme: “COVID-19 Partnerships in the International Year of Health and Care Workers: Protect. Invest. Together.” This is in line with the World Health Organization year-long campaign to recognise health workers for their dedication and resilience in fighting the COVID-19 pandemic.

Participants had the opportunity to reflect on what has been achieved by the health partnership community since the first conference in April 2020, and also to look into the future, recognising the immense pressure that is now falling on health workers in every country due to the pandemic. With the worrying increases in infections and the slow pace of vaccination campaigns in sub-Saharan Africa observed since the start of 2021, the conference discussed afresh how the Health Partnership community is pulling together, especially now, when solidarity is more important than ever.

Going together

“COVID-19 has been described as not only a health crisis, but an economic and social one. This conference is all about partnership and it is evident that we cannot achieve anything without partnerships. Humans are naturally inclined to feel sympathy and empathy for others. This humanity drives our partnerships,” said Prof Omaswa.

He added that “The SDGs themselves are interdependent and interconnected and we have to work as partners – through various sectors and countries – to achieve them. An African proverb says, ‘If you want to go fast, you can go alone, but if you really want to go far, go together.’ Let us not move away from partnerships, let us continue to build and

strengthen the way we work together. Partnership is a must.”

THET Director Ben Simms said, “We will never look at the world in the same way. We have been reminded about inequality, racism, about the underfunding of health services; and the effects of the pandemic continue to be felt. We need to argue that every health worker has the right to be properly equipped and supported. That every health worker, as every citizen, has the right to be vaccinated.”

The virtual conference had 412 participants from 44 countries across the globe. It also had 16 sessions and 48 speakers on wellness and compassion towards health workers, advocacy, health systems strengthening and COVID-19 response among others.

Talking about compassion, Prof Omaswa said, “What strikes me is that while health workers are taught to care about other people, we are not taught to care about ourselves. Now is time to change this. 2021 is the International Year of Health and Care Workers. Let us not let it pass without something changing, that enables us to better organise as health workers to serve the people. We cannot serve if we are not given the support, incentives, and environment that we need. We are the people that will push for this change.”

Learning

Moving forward, three points were noted:

1. Build leadership for health workers: There is need to have leadership at national, sub-national, and community levels. We must organise ourselves so that we are in touch with our communities, so that we can form a triangle that moves mountains. One corner of the triangle is what are the needs of the people? The other corner is what are the solutions to the needs of the people – these solutions are thereby generated by experts such as academics, local communities, health professionals etc. If knowledge-generators worked closely with communities to understand the needs of the people and stood alongside each other when presenting solutions to policymakers (the third corner of the triangle), politicians would feel more inclined to implement those solutions.
2. There is a need for an independent voice that can speak truth to power authoritatively and without fear on behalf of health workers
3. An action plan to initiate change will be devised.

Carol Natukunda is a Communications Specialist at the African Center for Global Health and Social Transformation (ACHEST), Kampala, Uganda.

The case for increased domestic financing in Uganda

A Uganda National Academy of Sciences Consensus Study Report calls for mindset shifts towards greater ownership of national development

Uganda is currently in a unique position. As several different national, continental, and global agendas and plans are ending and others beginning, an opportunity exists to re-examine its systems and processes of development. Uganda has recently started its third National Development Plan in 2020¹ as the continental African Union Agenda 2063² continues, and the endpoint of the Sustainable Development Goals in Agenda 2030³ is fast approaching. Historically, most discussions regarding sustainable development in Uganda have focused on technical solutions to its various challenges, whether economic, political, or social. However, the effectiveness of these solutions has consistently been impeded by their implementation. One of the more under-appreciated aspects of implementation has been a collective mindset that owns and actively participates in development. The active participation and leadership in the development process by Ugandans creates the foundation for sustainable development because individuals, communities, and institutions build the necessary confidence to pursue increasingly complex and challenging solutions to their problems.

One of the most pressing concerns underpinning the challenge of implementation is the approach to financing sustainable development. Currently, public and private resources are being leveraged towards improving development indicators, with little focus given to how those resources can stimulate mindset shifts towards greater ownership of the development process. In part, the emphasis on development indicators has been due to the substantial influence of conventional methods of analysis to assess Uganda's economic trajectory. While those methods have been instrumental in creating Uganda's current economic success, a holistic approach to sustainable national development remains widely debated.

In this report, we summarise the outcome of a study undertaken by Uganda National Academy of Sciences (UNAS) in 2020. Its aim was to expand the scope of economic trajectory analysis to consider how ownership of the development process can strengthen the impact of domestic investments. To explore how to invest domestic resources in a way that supports ownership of the development process by Ugandans, UNAS convened a committee of experts to review scientific evidence and come to consensus on recommendations for action. The Committee responded to a series of questions from stakeholders and distilled these questions into four distinct challenges in the

current financing approach to building ownership of the development process. These challenges are: (1) a focus on improving development indicators to the exclusion of mindset shifts, (2) a lack of clarity on which stakeholders should be involved in financial decision-making, (3) stricter oversight of public institutions as a means of building trust not having the desired effect, and (4) financial innovation being stifled due to the current socio-economic-political conditions.

One strategy to address these challenges is to focus on competitive advantages that create programmatic success. By capitalising on competitive advantages, leaders and participants in the development process can build the confidence necessary to pursue increasingly complex and innovative solutions to their development challenges. Competitive advantages are opportunities that capitalise on timing, scale, and responsiveness to change.

The study identified four angles from which to approach competitive advantages: finding and using existing competitive advantages; creating competitive advantages; using benefits of indirect contributors to competitive advantage; and using the successes of those advantages to create an ongoing cycle of new advantages.

The Committee focused on three areas of inquiry: institutions, taxation, domestic and external financing, and their relationships with ownership of the development process.

Institutions as trust builders

Institutions, broadly understood, are critical pieces in building a process of development that stakeholders own because they represent incremental and accumulated consensus on how decision-making processes should function. In examining the deficit of trust in government organisations, the Committee considered how public institutions lack the perception of legitimacy necessary to establish tax compliance effectively. Taxpayers are more likely to comply with tax demands if they experience tangible benefits from public spending. An absence of benefits has meant poor perceptions of government legitimacy and low tax morale. Aggressive decentralisation efforts without commensurate financial and human resources have resulted in a proliferation of districts, smaller shares of available funding, frustrating service delivery, and strict accountability measures. Other blocks to tax participation come from a lack of clarity on tax obligations and skepticism around the benefits of tax compliance by Uganda's large informal economy.



A civil society call for increased domestic financing

Based on the evidence presented in this study, the Committee recommended as follows:

1. The Government of Uganda should strengthen existing mechanisms that communicate government performance and provide citizens with opportunities to actively give feedback on service delivery. This approach would give the government a platform to win public confidence while simultaneously being responsive to citizen demands outside of elections. The Office of the Prime Minister's Baraza programme is an example.
2. The Government of Uganda should halt the creation of new administrative districts unless there is requisite financial and personnel resources to deliver on service obligations. If districts have sufficient resources in line with their obligations, failures in service delivery can more meaningfully be held to account, thereby strengthening trust in public institutions.
3. The Government of Uganda should consider centralising political and administrative oversight to regional hub districts, if resources are available to promote ownership of the development process in local communities. Centralisation in this way may reduce administrative costs while still providing local communities with forums to work with technical leadership and service delivery personnel to improve their local circumstances.
4. The Ministry of Local Government should undertake a review to examine the potential efficacy of a results-based financing policy on chief administrative officers. This review

can help determine how to keep chief administrative officers accountable while understanding the flexibility necessary for chief administrative officers to execute on their responsibilities.

Taxation in national development

Taxation is one of the most fundamental ways governments build ownership of the national development process because it is an explicit financial stake intended to provide a theoretical degree of control over certain decisions. The Committee conducted a review of the history of taxation in Uganda, identifying current tax collection issues such as low tax morale and duplication and inaccuracy in the taxpayer registry. Due to the abolition of the graduated tax in 2005, local governments lost a substantial portion of their own-source of revenue. One technical solution that has gained significant traction in recent years has been the introduction of a tax on unimproved land value that could provide a vital influx of funds to local governments. Owners would benefit directly from the provision of public services through increases to their property value, raising tax morale, and raising revenues for local governments. While there are several challenges facing the possibility of expanding property taxation, including lack of mass appraisal techniques, exemptions for owner-occupiers, exemptions for vacant lands, and legal disputes over land ownership and titleship, the direct connection between property tax and a community's development interests could strengthen ownership of such a tax's implementation.

Based on the evidence presented in this study, the Committee recommended as follows:

5. Municipal governments should stimulate behaviors on vacant land in terms of disincentivising and incentivising action through taxation. This policy approach will increase tax compliance on vacant lands and provoke economic activity in line with local priorities.
6. The Uganda Revenue Authority and Local Authorities should continue to strengthen taxpayer associations to clarify the connection between the payment of tax and service delivery. Strengthened associations could encourage compliance, understanding, and appreciation for tax and its role in community development.
7. Legal disputes over land ownership and titles should be more fully and efficiently addressed. This shift will expedite tax compliance on disputed lands.
8. The Parliament of Uganda should consider ways to provide sufficient flexibility for local governments, through the amendment of the Local Government (Rating) Act, to collect property rates on vacant lands that are contextually informed. This approach could avoid stringent one-size-fits-all policies and promote tax compliance.

Leveraging domestic resources

While financial inclusion is recognised as a core driver of economic growth and country ownership, estimates suggest 45% of Ugandans still do not access financial services. Despite progress made in outreach and access to microfinance, further gains have stalled or been reversed through unregulated expansion and commercialisation of financial services resulting in cases of exploitation and fraud. Current development planning has focused on urban areas without equal attention to rural areas. This approach has left rural areas underserved in terms of financial services. There is little incentive for individuals to engage in new or more productive forms of economic activity outside subsistence farming with limited financial services available. Domestic financial markets remain also constrained by high-interest rates and the resulting high costs of borrowing. With uneven access to formal, semi-formal, and informal financial institutions, trust in financial institutions is easily compromised and may cause Ugandans to avoid engagement with financial systems as a result.

Based on the evidence presented in this study, the Committee recommended as follows:

9. The Bank of Uganda should consider the creation of an independent platform with private sector actors such as the Uganda Bankers Association (UBA), the Uganda Cooperative Savings and Credit Union (UCSCU), microfinance institutions, and mobile money providers to build consensus on how best to provide widespread access to finance, increase financial literacy, and provide sufficient protections to creditors. A platform of this nature could build broader trust and participation in the financial system, particularly in rural areas.

Leveraging external resources

Recent discovery of substantial oil and gas reserves in Uganda presents an opportunity to bolster economic growth. However, effective exploitation of these resources will depend on foreign direct investment. By leveraging external resources in combination with focused local content policies, it will be possible to maximise Ugandan participation in oil and gas development through employment opportunities and economic linkages. Capital flight, the extraction of profits from domestic ventures to foreign investors, is a pitfall of foreign investment that has been given little attention at a policy level. Unfortunately, there is limited literature on current foreign investment, its impact on domestic growth in Uganda, and how the participation of domestic actors could be strengthened in the development process.

Based on the evidence presented in this study, the Committee recommended as follows:

10. The Government of Uganda should take a synergistic approach to oil and gas development, considering how districts can benefit one another. For example, oil and gas development in one district may be supported by ensuring that other necessary resources are catered for by nearby or surrounding districts such as agricultural produce and light-manufacturing goods such as textiles.
11. The Office of the President should establish an independent commission to review and make recommendations on policy about corporate transparency and capital flight.
12. The Ministry of Finance, Planning, and Economic Development (MoFPED) and other interested stakeholders should support further research on capital flight to collect domestic data on the movement of profits.

Conclusion

The challenges facing Uganda are significant, and an approach to domestic financing that focuses on how Ugandan leaders and citizens alike can collectively own the development process can potentially change the future of Uganda's development for the better. While conventional approaches to domestic financing have helped improve economic indicators, combining those methods with approaches that provide opportunities for Ugandans to participate in the development process can unlock new possibilities for growth. Those new possibilities will rely on institutions and their leaders playing an active role in creating those opportunities for participation and building a history of success. In doing so, Ugandans can collectively address issues of limited trust in government institutions, poor tax compliance, and investment of domestic and external resources that inclusively promotes ownership of the development process.

References

- 1 <https://www.health.go.ug/cause/third-national-development-plan-ndpii-2020-21-2024-25/>
- 2 <https://au.int/en/agenda2063>
- 3 <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

The National Health Insurance Scheme in Ghana

Veteran health system experts Delanyo Dovlo and Chris Atim review Ghana's NHIS

The Ghana Ministry of Health in 2020 developed a Roadmap for attaining Universal Health Coverage, which emphasised the importance of ensuring universal access to quality health care for all residents. The act of parliament (Act 650) that approved the National Health Insurance Scheme and Authority for Ghana was passed in 2003¹ as part of a scheme to improve financing of health services and to reduce the burden on the population occasioned by an existing policy of out-of-pocket payment for services initiated in the mid 1990s. It was revised by parliament through Act 852 in 2012.² The National Health Insurance Scheme and its managing Authority was founded in 2004 and is now fully established as a major source of financing for health care in Ghana, with funding from both premium contributions and a general NHIS levy on Value Added Tax. It was estimated to cover approximately 35.8% of the population in 2018,³ which was a decline from 2016 coverage which was reported at about 40% of the population.

The 2020 UHC Roadmap defines UHC for Ghana as: "All people in Ghana have timely access to high quality health services irrespective of ability to pay at the point of use." The NHIS assists to facilitate the "irrespective of ability to pay" aspect of access to services.

This paper is a summary review of the National Health Insurance Scheme (NHIS) of Ghana generated from presentations and discussions during recent reviews between 2015-2016 including a Presidential Review in 2016.

Objectives and structure of NHIS in Ghana

Financing for health has three main functions:⁴ (1) to generate revenue from various sources, (2) to pool this revenue, and (3) to purchase health care services from providers of care. In some situations, these functions are separated between various agencies but in some cases, this may be the function of a single entity. In Ghana, the National Health Insurance Scheme collects and pools revenue from a set of sources and procures health services from providers in both the public and private sectors.

As with many developing countries, Ghana derives its revenue for health from various sources including (1) the national budget, (2) locally generated resources at local government or facility levels, (3) resources from



NGOs and other philanthropic organizations, (4) external development partners and donor funds, (5) payroll taxes raised from employees' Social Security contributions – 2.5%, (6) an NHIS 2.5% levy on Value Added Tax (VAT) which provides about 70% of NHIS's revenue, (7) premiums paid into the NHIS fund by individuals or employers working in the informal sector, and (8) other sources including private health insurance, and out of pocket expenses. The interaction or lack thereof between all the various sources can of course lead to fragmentation and a less efficient use of the resources needed to procure health for the population as a whole. The NHIS in Ghana therefore helps to pool the revenue generated from three main sources, i.e., the VAT levy, employee social security contributions and the premiums paid by individual subscribers and it pools these into a fund that is aimed at ensuring that "All people in Ghana have timely access to high quality health services irrespective of ability to pay at the point of use" as the UHC roadmap has indicated.

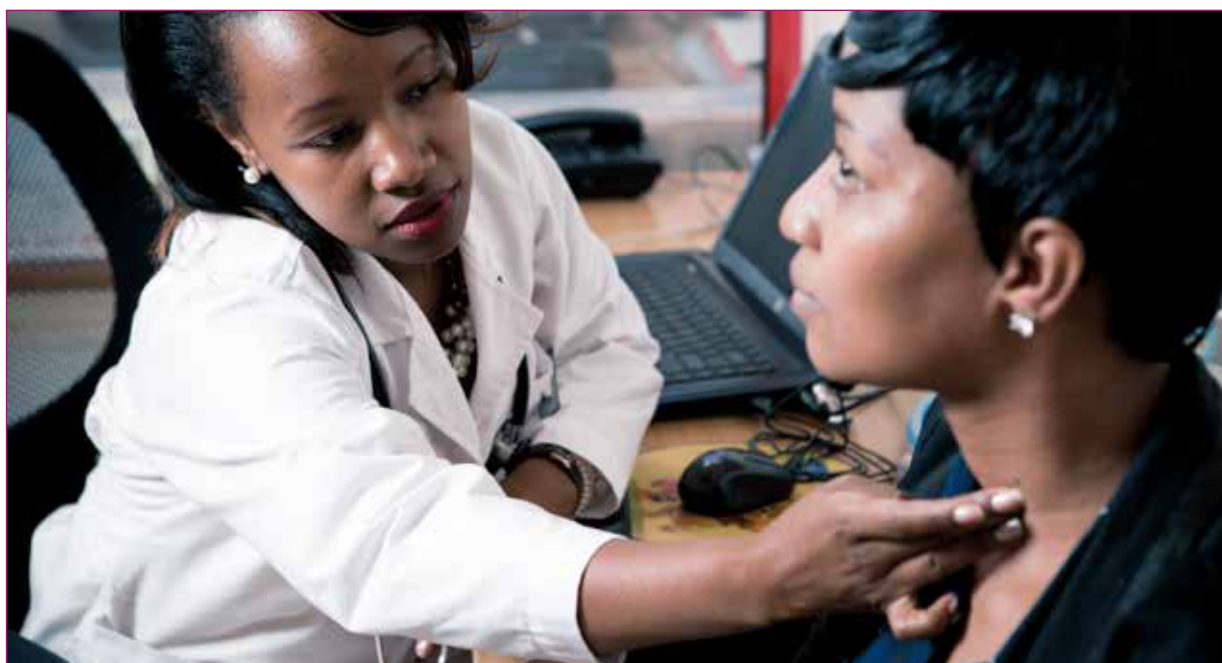
What and who is covered?

The scheme has covered an ever-increasing scope of conditions estimated to cover over 95% of disease conditions and services in the country.⁵ But it also carries the burden of some 60% of its members who are exempted from premium payments and contributions for various reasons.

The NHIS benefits package covers outpatient services; inpatient services; oral health; eye care; maternity; emergencies. It excludes cosmetic surgery and aesthetic care; HIV retroviral drugs; assisted reproduction; echocardiography; angiography; dialysis for chronic renal failure; heart and brain surgery other than those resulting from accidents; cancer treatment other than cervical and breast cancer; organ transplants and also conditions requiring diagnosis and treatment abroad.⁶

The persons exempted from paying premiums are also well laid out and includes contributors to the Social Security and National Insurance Trust (SSNIT) who do

Dr Delanyo Dovlo is a Health Systems Consultant and Chair, Faculty of Public Health, Ghana College of Physicians and Surgeons and Dr Chris Atim is a Senior Executive Program Director, R4D; and Executive Director, African Health Economics and Policy Association.



not directly pay to join the scheme but do contribute indirectly via 2.5% SSNIT contributions taken from their payroll. Others completely exempted are children up until 18 years of age; the elderly above 70 years of age; indigents and pregnant women.⁵

The NHIS purchases services from primary preventive and care services to tertiary care levels as indicated in the scope of coverage and the exemptions schedules mentioned above. Care is procured from both public and private service providers at all levels of services delivery. An assessment of coverage indicates that some level of equity in health insurance coverage has been achieved between the different wealth quintiles in the country since its inception.⁷

Utilisation of health services are estimated to have quadrupled between 2003 to 2016 from 0.4 per capita to 1.6 per capita in most regions [6] and Out of Pocket expenditure on health (OOPs) is said to have reduced by 50% for curative care and 44% for deliveries! The Health Information System (DHIMS2 data for 2008 – 2015) assessed that some 83% of OPD attendees have been insured.⁸

It must be noted that the Government of Ghana also contributes to the financing of health through four channels i.e., payment of health worker salaries, investing in health infrastructure and in procuring various goods and services in support of the sector.

What works and how well?

The Ghana NHIS has had certain design advantages that have been recognized as good prospects for the scheme. These include the fact that the key sources of revenue (VAT, SSNIT and premiums) are effectively pooled under the scheme and thus reduces fragmentation in the purchasing of health care. It also has the advantage of having its main source of revenue coming from general public resources (taxes, levies) and not from individuals' premiums (which constitute only small proportion of NHIS revenue) and this is in line with

WHO advice on publicly financed social health insurance principles. This helps to at least aim at obtaining an equitable benefit package for all members. Purchasing of services also comes from this revenue pool and is the responsibility of the same organisation.

At 35-40% coverage of the population more could be desired but for a 16-year-old scheme this is quite an achievement, though it is rather worrying that the membership has stagnated at that around that figure for some years now, or even declined slightly recently and annual Membership renewal has been an identified challenge. Linked to this is the over 80% of OPD users that are found to be covered and also the apparent impact it has had on OOPs in Ghana and on utilisation rates as indicated in the introductory section of this paper.

What issues and challenges are currently being faced by the NHIS?

There have been calls in the recent past for a review of the NHIS amid increasing media criticism that resulted in a review initiated by the presidency to assess the scheme in 2015/16.⁸ This arose from a variety of concerns and their likely political implications and included issues from the providers side of operations such as unauthorized charges or illicit 'co-payments' at point of services; difficulties and long waiting lines for registration to join the scheme; suspicions of fraud and abuse in the claims system; dissatisfaction of providers with the NHIS tariff levels and thus the amount of reimbursements providers received. Additionally, there has been serious provider dissatisfaction with much delayed payments with reimbursements sometimes being received as much as 8-10 months after submitting claims. There have been issues of the effective identification of clients and in avoiding impersonation by ineligible persons.

On the part of the National Health Insurance authority, there are issues with procuring health services as its potential for "strategic purchasing" appears under-utilised though its role as a 'single purchaser' is partly

undermined by the fragmentation from the other health system financing sources outside its ambit.

It has been felt that services procurement skews unfavorably towards hospitals and clinical care with preventive and promotive care less prioritized. A recent Ghana Health Service (GHS) Primary Health Care (PHC) Strategic Implementation Plan document indicates that primary care CHPS zones are challenged in meeting core accreditation criteria which tends to favor clinical care services.⁹

The scheme tended to offer higher levels of reimbursements for private providers than public ones, not only because, unlike public providers, the private ones required to be compensated for their staff salaries as well, but also because the latter are better able to meet some technology and equipment gradings in accreditation. This also raises issues of how to target incentives to providers to not only focus on equipment but also on quality of care and outcomes to clients.

For the clientele, there are broader issues of provider quality across the country and at different levels of care as well as how clients' interests can factor into the incentives given to providers for a good delivery of care. It is also unclear (sometimes to both provider and clients) under the broad areas of benefits covered as to what will be paid and what will not be paid for.

The divesting of public health worker salaries to another source may also influence how well the insurance scheme can influence incentives.

Engaging on preventive and promotion services has been a challenge even as non-communicable conditions have become a major component of the burden of disease alongside the existing infectious diseases but without commensurate efforts at health prevention and promotion coverage.

The National Health Insurance Authority (NHIA) indicates that 10% of its funding goes directly to the Ministry of Health to support Public Health and preventive actions and it is unclear how the results of these are defined and accounted for.

The relatively high overhead costs, combined with rather low premium collection, has also been raised as an issue with examples from various countries showing that operating expenses of similar schemes ranged from 1% (Estonia) to 4.4% (South Korea) either legally restricted or as part of efficiency measures.⁶

While an estimated 95% of services are covered, it is clear that service scope and quality are not evenly distributed across the country and therefore the question arises as to whether the expected benefits are received in full everywhere and of the same quality. In addition, the SDG Tracker that tracks global progress towards UHC shows Ghana as having a service coverage index of less than 50%, at 47% in 2017 (World Health Statistics, 2019).

The way forward

The reviews of the NHIS raises some issues of sustainability some of which are positive. The 2.5% VAT as a major funding source has allowed NHIS revenues to grow broadly in line with economic growth though this may affect sustainability as the linkage to expenditures

and membership growth is not clear.

The health sector has also gradually expanded its reliance on the NHIS as the major funding source with possible erosion in the other complementary sources e.g., government budget. For example, it was estimated that the ratio between MoH expenditure and NHIF expenditure had decreased from 2.9 in 2012 to 1.7 in 2014.⁷

The NHIS also shall need to deal with various inefficiencies and certain processes that need to be tightened to close loopholes. The year-round voluntary enrolment designed around individuals and not the family may favour adverse selection (though a one-month waiting period is required).

Subscribers to the scheme seemed to have been little empowered to play roles and to demand efficient operations and are not incentivised to behave responsibly and feel ownership of the NHIS, including a lack of adequate information and efforts to show the consequences of certain health related behaviours including diet and lifestyle choices that may result in a drain on resources. NHIS may therefore be essentially paying for consequences of under-performance of the country's public health preventive and promotive programs and the lack of investments to tackle the causes of infectious diseases and NCDs as well as a high maternal and child morbidity and mortality.

There is a need to reduce operational inefficiencies of the purchaser and have more effort made at strategic purchasing and reduce a susceptibility to fraud and abuse. Expansion in the use of technology has started and needs to be enhanced in enrolling subscribers, processing claims and managing expenditures more effectively.

There is a major need for continuous public information and awareness building, and to expand coverage to the remaining 60% of the population and in so doing, also try and do the politically difficult task of implementing budget-neutral payment mechanisms (such as capitation and global budgets) to constrain NHIS expenditures and promote efficiency, potentially involving some form of rationing of non-emergency, and especially elective, care.

References

1. Republic of Ghana. (2003). National Health Insurance Act, 2003, Act 650.
2. Republic of Ghana. (2012). National Health Insurance Act, 2012: Act 852.
3. Ministry of Health. (2020). Ghana's Roadmap for Attaining Universal Health Coverage 2020-2030. Accra, Ghana: Ministry of Health.
4. Kutzin, J. (2008). Health Financing Policy: A Guide for Decision-Makers. WHO/EURO.
5. National Health Insurance Authority. (2021). Benefits Package. Accra: NHIS. Retrieved April 6, 2021, from <http://www.nhis.gov.gh/benefits.aspx>
6. Atim, C., & Amporfu, E. (2016). Review of the Ghanaian NHIS: What Lessons Have We Learned? 4th Conference of the African Health Economics and Policy Association (AfHEA). 26th - 29th September 2016. Rabat, Morocco: AfHEA.
7. World Bank. (2016). Ghana Social Protection Assessment and Public Expenditure Review. Washington DC: World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/26379>
8. National Health Insurance Authority. (2016). National Health Insurance Scheme Technical Review. Accra, Ghana: National Health Insurance Authority.
9. Ghana Health Service. (2019). A Strategic Implementation Plan for Primary Health Care in Ghana. Accra, Ghana: GHS.

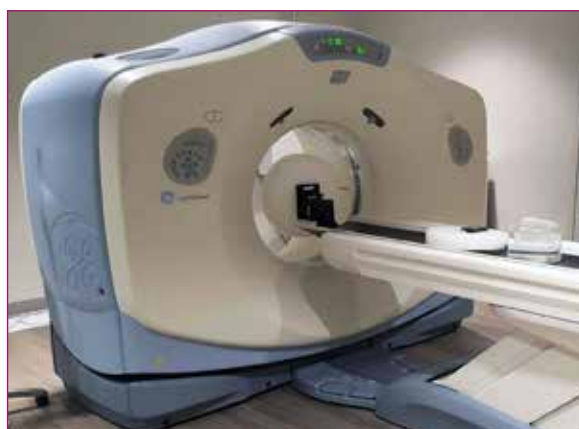
Radiology equipment resources in Africa

Elsie Kiguli-Malwadde looks at the relation between the distribution of Radiology Equipment to achievement of Universal Health Coverage

Diagnostics Medical Imaging plays an important role in diagnosis, treatment, and prognosis of disease, with imaging required for 30% of all medical conditions.¹ For imaging to be performed, radiology equipment has to be available. Imaging is an important part of Universal Health Coverage (UHC). Despite the growth in medical imaging there remains considerable global inequality in access to it. The United Nations 2030 Agenda for Sustainable Development calls for unified global action to address the economic, social and environmental priorities reflected in the 17 Sustainable Development Goals (SDGs).² Healthcare is particularly addressed in SDG3 – Good Health and Wellbeing. This goal has 13 targets, covering all major health imperatives, including UHC. The vision of UHC is to provide all people with quality essential health services. This is especially important for the African countries where most are far from achieving UHC.

Developing countries account for 84% of global population, 90% of the global disease burden, and 20% of global Gross Domestic Product (GDP), but only 12% of global health spending. At the same time, low-income countries (LICs) are struggling with a large burden of communicable diseases, while also confronting increases in the prevalence of non-communicable diseases and injuries, a trend that is likely to continue for some time.³ The availability of resources to meet these numerous health needs is limited. Africa is the world's second fastest-growing region, experiencing average annual GDP growth of 4.6% for the period from 2000 and 2016. For the current five-year period until 2022, Africa's real GDP is projected to grow at 3.9% annually. Despite sustained economic growth and impressive income poverty reduction in Africa, most countries in Africa are in the low-income bracket, as described by the World Bank.⁴

Healthcare technology, including diagnostic imaging, is acknowledged as an essential component of any healthcare system. Basic medical diagnostic imaging services, such as plain X-rays and ultrasound, are required for effective primary care of patients.⁵ Access to these basic imaging modalities should be seen as integral to achieving UHC. The World Health Organization (WHO) has postulated that 90% of all imaging requirements in low- and middle-income countries (LMICs) can be met by the provision of one X-ray unit and a single ultrasound machine for every 50,000



people, or 20 units per million people.² This figure may serve as the yardstick for evaluating access to basic imaging at country level. Robust country-level data are thus required to assess the extent to which countries meet basic imaging resource targets. In May 2007, the 60th UN World Health Assembly adopted Resolution 60.29, urging member states to “collect, verify, update and exchange information on health technologies, in particular medical devices, as an aid to their prioritization of needs and allocation of resources”.⁶

There is little published work on in-country imaging resources globally, less still in Africa. This information is important to inform health planning in the countries, but is not currently available. The drivers and determinants of these resources remain poorly understood. Furthermore, the relationship between national healthcare expenditure, national health indicators and in-country access to diagnostic imaging has not been rigorously assessed. There are individual studies regarding availability in Africa, but for relatively few countries. Studies have been done in Uganda, South Africa, Tanzania and Zimbabwe.⁷ All except for South Africa show that the number of radiography units is lower than the WHO-recommended minimum; South Africa is reported to have a higher average level of availability, exceeding the WHO minimum recommendations, but access for the poor is limited by disparity by region and between public and private sectors.⁷

In Uganda it was reported that there were 15.5 units of equipment per one million people, which is less than the WHO recommendation of 20 units per one million. It is also less than what has been reported from South Africa and Zimbabwe, but better than what has been reported from Tanzania. The good indicators reported from South Africa and Zimbabwe might possibly be

Elsie Kiguli-Malwadde is the Director Health Workforce Education and Development at the African Center for Global Health and Social Transformation (ACHEST).

due to the fact that those countries are putting in more resources to cater for radiology equipment for their population since their health expenditure per capita is more than that of Uganda and Tanzania.

However, the fact that the radiology equipment distribution per population in Uganda, Tanzania and Zimbabwe is still below the recommended WHO number is a point of concern. If these countries are to satisfactorily attain SDG3, the amount of equipment per million population needs to increase through provision of the different radiology equipment across the country. This calls on the Ministries of Health of respective countries to work together with other stakeholders to increase funding if these countries are to attain the WHO recommended figure.

A country's official national registry of diagnostic radiology equipment can assist in defining health coverage. Diagnostic imaging equipment that uses ionizing radiation is generally licensed for use in a specific location. Such locations have typically been formally evaluated and found to meet the infrastructural requirements for safe operation, such as adequate radiation shielding and appropriate electrical supply. Relocation of radiology equipment typically requires re-licensing and infrastructural development. Furthermore, imaging equipment using ionising radiation are only operated by a registered radiation worker. An inventory of licensed imaging equipment thus provides robust data on the number and distribution of units, as well as broader insights into the so-called imaging enterprise. Nonetheless, there appears to be scant global recognition of the potential role of registered diagnostic imaging equipment in reflecting country-level health coverage.

Conducting an audit is important for planning purposes for the health care system if the number, type and functional status of the equipment is to be known. Findings from such audits are potentially useful to the Ministries of Health and also provide a basis for such audits in other developing countries.

It is well documented that radiology equipment distribution is linked to provision of efficient Primary Health Care which is important for meeting SDG 3 targets and consequently attaining Universal Health Coverage.

These few studies conducted in sub-Saharan bring to light several issues that might potentially be applicable across different low-resource settings. The first issue relates to the equipment to population ratio which is below the WHO recommended ratio for three out of four countries. Attaining the WHO recommended numbers may require deliberate policy formulation and planning, together with strengthening the public-private-partnerships. Allocation of more funding to radiology and imaging across the countries is a factor that needs to be brought to light for policy makers.

Therefore, despite the challenges with financing and maldistribution of radiology equipment, some improvements are still needed. For example, there is need to find ways of how to effectively utilize the available limited supply of imaging equipment for impacting patient management and improve treatment outcomes.



This calls for evidence-based planning and purchasing of equipment. The disease burden within communities and at health facilities dictate on the type, level of technological sophistication and number of equipment to be purchased. Use of evidence-based clinical imaging guidelines is also likely to improve appropriateness of imaging decisions and supposedly influencing management and treatment decisions, and hopefully impacting treatment outcomes.

Such studies are important for the region and would be even better if key stakeholders responsible for purchasing, financing and planning for this equipment are interviewed as key informant interviews. This would provide a richer holistic picture and explanation for some of the findings in the four countries.

Conclusion

Africa still lags behind in UHC and there is evidence that it equally lags behind in population access to and distribution of Radiology Equipment which consequently affects the implementation of primary health care. It is imperative that African countries look at their equipment distribution and assess how they can improve it as this is likely to impact their achievements in meeting the SDG targets.

References

- 1 Welling RD, Azene EM, Kalia V, Pongpirul K, Starikovskiy A, Sydnor R, et al. White Paper Report of the 2010 RAD-AID Conference on International Radiology for Developing Countries: Identifying sustainable strategies for imaging services in the developing world. *J Am Coll Radiol* 2011;8:556–62.
- 2 United Nations. Transforming our World. The 2030 Agenda for sustainable development. A/RES/70/1. <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>. Accessed 16 June 2019
- 3 World Bank. Health Transitions, disease burdens, and health expenditure patterns. 2005. Accessed 02 March 2021
- 4 <https://www.odi.org/events/4592-africas-economic-growth-new-global-context> Accessed March 2021
- 5 Health Sector Development Plan 2015/16 - 2019/20. <http://health.go.ug/content/health-sector-development-plan-2015/16-2019/20>. Accessed 16 September 2019
- 6 World Health Organization. Local production and technology transfer to increase access to medical devices: addressing the barriers and challenges in low- and middle-income countries. http://www.who.int/medical_devices/1240EHT_final.pdf. Accessed March 2021.
- 7 Elsie Kiguli-Malwadde, Rosemary Byanyima, Michael Grace Kawooya, Aloysius Gonzaga Mubuuke, Roy Clark Basimwa, Richard Pitcher: An audit of registered Ugandan radiology equipment resources *Pan African Medical Journal*. 2020;37:295. Published on 02 Dec 2020.

Financing the health workforce in Uganda

A team from ACHEST and Wemos share their work on health workforce financing in Uganda

Health workers play a critical role in the provision of health care and represent the single largest cost element in providing health services in low-income countries; from health promotion to prevention, treatment, rehabilitation and palliative care. Many of the poorest countries in the world lack the resources, both human and financial, to meet the pressing health needs of their populations. Millions of people die prematurely, or suffer from illness or disability unnecessarily, because appropriate Human Resources for Health (HRH) to provide care are not available or accessible to them.¹

Staffing unmatched by population growth

Like most sub-Saharan countries, the shortage of health workers in Uganda persists despite efforts by government and development partners to ameliorate the situation. At the time of the last revision of staffing norms in 1999 the population of Uganda stood at just over 21 million, nearly doubling in 20 years to 40 million in 2019.² Although the absolute numbers of filled positions between 2010 and 2019 increased, the health worker to population ratio remained static over the same period. The WHO has recommended that in order to realise Universal Health Coverage (UHC) as part of the Sustainable Development Goals (SDGs), a country needs at least 4.45 professional health workers for every 1,000 inhabitants.¹

A 2019 report on conducted by ACHEST and the Dutch medical foundation WEMOS showcased the situation of the health workforce in Uganda, particularly focusing on financing the public health workforce and how shortages contribute to the unacceptably high maternal mortality rates and poor health outcomes in general. The study revealed at the time a ratio of approximately one employed professional health worker per 1,000 inhabitants.³ The total number of skilled health workers required for the Ugandan population in 2019 was 167,765, however, the available number (i.e. of doctors, midwives and nurses) in post stood at just 27,761 revealing a catastrophic staffing gap. Insufficient funding and poor management of the funds are impeding factors for improvement in the recruitment and retention of health workers.

The report advances policy recommendations for the Government of Uganda, development partners and international financial institutions to work towards:

- adjusting the health workforce needs to the current population, taking into account population size, health needs and life expectancy;
- stepping up levels of and effective management of domestic and;
- better mobilisation and utilisation of development assistance for health.

The report underscores the need to invest in health workers in Uganda to achieve UHC and the SDGs.

The investment case for HRH

Investing in the Health workforce not only promotes but also protects and sustains the population's health. A health workforce adds economic value because economic growth and development depend on a healthy population. About one-quarter of economic growth in low- and middle- income countries (LMICs) between 2000 and 2011 resulted from improvements in health.⁴ There is an enormous payoff from investing in health. Improved health contributes importantly to income growth in LMICs, as measured using traditional national income accounting (based on gross domestic product). But while GDP captures the benefits that result from improved economic productivity (the so-called instrumental value of better health), it fails to capture the intrinsic value of better health – the value of health in and of itself. Global Health 2035⁵ reports a more comprehensive understanding of the returns to investing in health by estimating this intrinsic value using “full income” approaches. Full income approaches suggest that the intrinsic value of better health is likely to be a multiple of its instrumental value. These results provide planning ministries in LMICs, as well as donor agencies, with a strong new rationale for increasing health spending.

Pro-poor pathways to UHC, such as publicly financed insurance, would provide financial protection and essential health-care interventions to everyone – ensuring high-quality, low-cost services at the point of care. And the returns on investing in health, based on methods that include both the benefits of improved economic productivity and the intrinsic value of health, would far exceed the costs.

Better health can stimulate economic development through different pathways; first of all, it improves labour productivity, because healthy children attend school and receive improved education. Healthy citizens are more likely to invest in the economy and healthier populations can attract foreign investment. The workers-to-dependents ratio increases and the demographic dividend can be harnessed. Moreover, investing

R Odedo¹, M Koutsoumpa², A Banda², M Meurs², C Hinlopen², K Kramer², M Bemelmans², F Omaswa¹, V Ojome¹, E Kiguli-Malwadde¹ (1. ACHEST, 2. Wemos).



in decent jobs in the health sector contributes to social protection and social cohesion. The health sector is an important source of jobs for women, youth, and in rural areas, where other sectors do not invest. Investing in health employment can tackle the twin crisis of youth unemployment and the global shortage of health workers, and contribute to gender equality.⁶

Health sector funding

Despite the growth in Uganda's GDP between 2007 and 2016, the public health sector has not been able to attract an adequate share of resources. The government's health budget has been on the decline as a proportion both of GDP and of general government expenditure. In monetary terms and according to the WHO, total health expenditure per capita has fallen, after peaking at US\$63 per capita in 2010, to \$38 per capita in 2016. Of the latter figure, only \$6 came from the government's domestic budget.⁷

The National Health Accounts 2015/16 report itself paints a different picture of the health expenditure in Uganda. According to this report, the total health expenditure per capita in 2016 stood at \$51 per capita, out of which only \$8 came from the government's domestic budget.⁸

Nevertheless, even if these figures are higher than the ones provided by the WHO, they are still below international recommendations and it is still notable that health expenditure derives more from external and domestic private resources than from the domestic government budget. Between the financial years 2017/2018 and 2018/2019, the government domestic budget for the health sector decreased from \$492 million to \$334 mil-

lion. The health budget for the FY 2019/2020 was even lower at \$323 million, which equals \$8 per capita. In the National Budget Framework 2019/20-2023/24, the budget allocation to the health sector was 8.9% of the general government expenditure which saw a decline in 2020/21 to 5.9% of the national budget which despite the outbreak of the Corona pandemic.

Domestic prioritisation of health is important, but not sufficient. If Uganda allocated 5% of its GDP to health, that would amount to \$1,169 million, which would mean only \$29 per capita in 2019. This last fact also explains the importance of a combination of an absolute and relative target for health spending, as proposed by McIntyre et al⁹ and the need for both domestic and international resources to contribute to the health sector.

As a comparison, the transport sector, which is considered to be central to Uganda's economic development was allocated USD 1,237 million in 2017/2018, representing 20.8% of the total government budget, for 2019/20, this budget rose to \$1,435 million.¹⁰ Notably, between 2018/19 and 2019/20, the health sector saw a decrease of 1.5% in its budget, whereas the transport sector saw an increase of 2%.

The health sector wage bill

The wage bill of the health sector has seen an increase, from \$108 million in 2017/2018 to \$160 million in 2018/2019, in part as a result of industrial action by the health workers. However, these extra funds were spent on higher salaries, not on filling more staff positions. The wage bill for the sector remained largely unchanged for the Financial Year 2019/2020.¹¹

Out-of-pocket expenditure

'OOP' spending on health in Uganda has been around 40% of total health expenditure during the last decade, even if the absolute OOP per capita has decreased. But lower absolute OOP spending does not necessarily mean lower financial barriers, as it can also be explained by no access to healthcare exactly due to inability to pay. One of the targets of the Health Sector Development Plan 2015/16-2019/20 was to bring this percentage down to 30% by the end of 2020.

According to the National Health Accounts 2015/16, household OOP represented the 95.6% of the overall private health expenditure, while employer-based insurance, (compulsory and voluntary) and community-based insurance together stayed under 5%.¹² Uganda currently has 5% of the population covered under health insurance and only 11% of persons aged over 15 years are even aware of health insurance.¹³

Health insurance

There is no operational national health insurance scheme (NHIS) in Uganda. This is one of the end term targets for the completion of the HSDP. The NHIS Bill has been presented to Cabinet and the Parliament for approval. The scheme is expected to reduce OOP and ensure affordability of health services for individuals under both formal and informal employment.

In early March 2021, the Minister of Health withdrew the NHIS Bill from the floor of parliament for further review following objections from some stakeholders reversing gains arising from a protracted campaign championed by civil society for the enacting into law an instrument providing for affordable health insurance.

If the NHIS bill is eventually ratified, Uganda will join Kenya and Rwanda as countries in the East African region that have implemented such a scheme. Notably, the NHIS Bill has been waiting for approval since 2007, when it was initially drafted, whereas the plans to launch a compulsory public social health insurance scheme started back in 2002.

Conclusion

HRH demand and supply in Uganda is based on staffing norms that should be revised on a regular basis to respond to population and disease burden dynamics. The MoH is preparing a WISN report, which will configure the national need. The current ratio of approximately one employed professional health worker per 1,000 inhabitants is clearly too low. At the present time, the health workforce is not keeping up with the population growth, nor the epidemiologic changes and demographic trends, including increased life expectancy. Paradoxically, this is a case of a shortage in the middle of plenty, as there is a large pool of qualified and licensed health professionals, who remain unabsorbed and out of the labour market. Notably though, even if all the unemployed health professionals were absorbed, Uganda would be still far from the international requirements for UHC. In addition, brain drain – qualified health workers migrating abroad – is enlarging the existing gap. The

remaining health workers have to deal daily with a heavy workload and lack of essential medicine, equipment and basic infrastructure, especially in hard-to-reach rural areas. According to the leadership of the Ugandan Medical Association, health workers regard the inadequate working conditions as more crucial than low salaries.

The problems and gaps of the Ugandan health workforce are persisting due to insufficient financial allocation and poor management of HRH and existing funds. Weak technical leadership for HRH at the MoH, mismatching of training to health needs, and decentralised recruitment and management are major contributing factors. There is an irony in the high donor investment and declining government investment in health amid Uganda's economic growth. Total health expenditure has been decreasing in the last decade; as a percentage of the total government expenditure, as a percentage of the GDP, and per capita. Since 2007, increases in external financing have been accompanied by decreases in domestic government financing.

Why is the public health sector not able to attract a greater share of resources, or at least retain their share of government funding? The complex political economy of the budget allocation process explains why the public sector has consistently not been prioritised. The prioritisation instead of the transport and infrastructure sector, which contributes to the development of the nascent oil sector of the country, is a political decision of the Government of Uganda. The question is whether this is in the best interest of the population and their health.

References

1. Financing and economic aspects of health workforce scale-up and improvement: framework paper: Alliance financing task force, October 2008. World Health Organisation ISBN 978 92 4 159828 6
2. Uganda Bureau of Statistics. Population Projections 2018 [Internet]. Population & Censuses. 2019 [cited 2019 Mar 10]. Available from: <https://www.ubos.org/explorestatistics/>
3. ACHES and Wemos; Health Work Force Financing In Uganda: Challenges And Opportunities; Country Report Uganda, October 2019
4. Jamison DT, Summers LH, Alleyne G, Arrow KJ, Berkley S, Bi-nagwaho A, et al. GlobalHealth 2035: A World Converging within a Generation. *Lancet* [Internet]. 2013;382(9908):1898–955. Available from: [http://dx.doi.org/10.1016/S0140-6736\(13\)62105-4](http://dx.doi.org/10.1016/S0140-6736(13)62105-4)
5. Ibid
6. High-Level Commission on Health Employment And Economic Growth. Working Forhealth and Growth: Investing In The Health Workforce. Geneva; 2016.
7. World Health Organization. Global Health Expenditure Database [Internet]. 2018 [cited 2019 Mar 8]. Available from: <http://apps.who.int/nha/database/ViewData/Indicators/en>
8. Ministry of Health. Uganda Health Accounts, National Health Expenditure, Financial Years 2014/15 and 2015/16. Kampala; 2016.
9. McIntyre D, Meheus F, Rottingen JA. What level of domestic government health expenditure should we aspire to for universal health coverage? *Heal Econ Policy Law*. 2017;12(2):125–37.
10. Op Cit, Ministry of Finance Planning and Economic Development. National Budget Framework Paper FY 2019/20-FY 2023/24. 2018.
11. Ministry of Planning Finance and Economic Development. Background To the Budget Fiscal Year 2018/19: Industrialization for job creation and shared prosperity. Kampala; 2018.
12. Ministry of Health. Uganda Health Accounts, National Health Expenditure, Financial Years 2014/15 and 2015/16. Kampala; 2016.
13. Uganda Bureau of Statistics. Uganda National Household Survey 2016/2017. (September 2017): http://www.ubos.org/onlinefiles/uploads/ubos/pdfdocuments/UNHS_VI_2017_Version_I_27th-September_2017.pdf

Towards an African Institute of Public Health

A bold proposal for a new virtual institute for health policy, advocacy, research and education

African countries, as with other countries in the Global South, have major public health problems with an insufficient trained workforce and research leadership to respond to these problems. While African healthcare in general suffers from a lack of sufficient human resource in the health sector,¹ there is also a particular lack of research capacity to address the health challenges.² Part of this is due to over reliance on the Global North for research leadership, and a resulting failure to develop research which is appropriate to the local context. Reidpath and Allotey identify a need to “engage more effectively with the growing, if disempowered, talent in the Global South to support the building of enabling environments to raise the leadership, quality and volume of home grown, contextually driven and sustainable solutions”.² A paper in Times Higher Education ‘Are research links with the developing world still a one-way street?’ demonstrates the need for research leadership to come from the Global South.³

At the same time, African populations have many potential resources to deal with the public health problems they face. There are a number of MPH programmes which produce well-trained graduates.⁴ Of relevance to this paper is the experience of the People’s Open Access Education Initiative (or Peoples-uni) towards capacity building in Africa and other low- to middle-income settings, which “shows the feasibility of affordable, high quality online education and that there is scope for accelerating capacity building programmes through partnerships with higher education institutions and health(care) organisations”.⁵ An external evaluation of Peoples-uni concludes with the challenge “to see how to take full advantage of the current, and future, graduates to turn this from an education programme into a capacity-building



programme with real impact”.⁶

While many may argue that infrastructural challenges constitute a significant barrier to online education in Africa, there appears to be a growing IT infrastructure to support research and infrastructure in Africa.⁷

These themes lead to the idea to leverage the strengths of African alumni from international and local online and face-to-face MPH courses. Many of these alumni are based in frontline and policy organisations in Africa, and could join with others to build and lead an African Institute of Public Health. The National Research and Education Networks which provide affordable IT infrastructure for Africa would be key partners, including the West and Central African Research and Education Network (WACREN – www.wacren.net) and UbuntuNet Alliance, the regional research and education networking organisation for Eastern and Southern Africa (www.ubuntunet.net). Inspiration for this initiative comes from the African Economic Research Collaboration (<http://aercafrica.org>).

The goals of this institute will include:

1. An alumni-led identification and prioritisation of problems that need to be addressed by the African and the global public health communities through research and evidence;
2. Creating “spaces” (forums, etc) with African policy makers to support and spread the buy-in from governing organisations of the prioritised problems;
3. Building connections with leading Public Health academics (and academic organisations) to develop a research agenda around the prioritised problems;

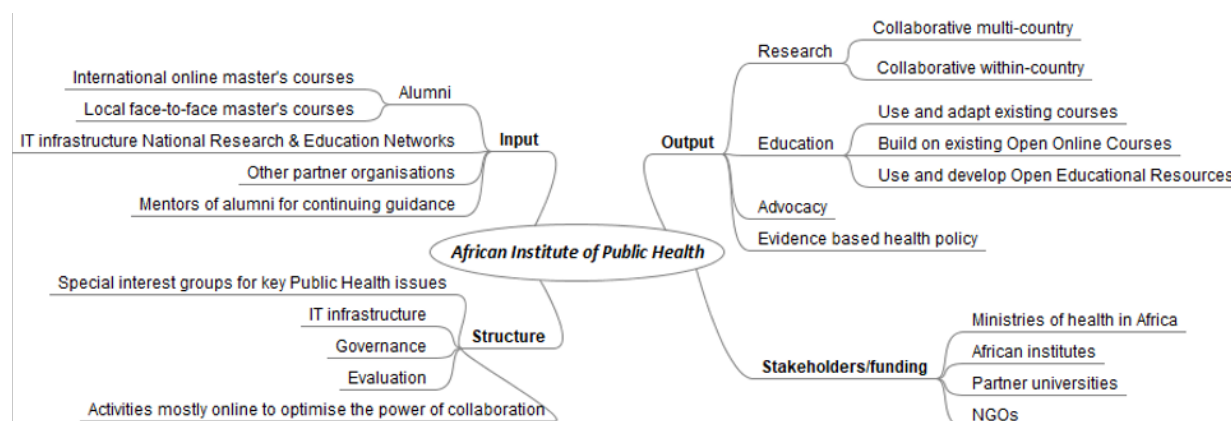
Richard F Heller MD FRCP FFPH. Emeritus Professor, Universities of Manchester UK, and Newcastle Australia. rfheller4@gmail.com.

Osita Okonkwo MD MPH FPHP&M FRSPH. Initiative for Improved Population Health Access and Empowerment (iphAE), Enugu, Nigeria. osita@iphae.org.

Pasipanodya Ian Machingura MPH DPhil PhD. Department of Laboratory Diagnostic and Investigative Sciences, Faculty of Medicine and Health Sciences, University of Zimbabwe imachingura@yahoo.co.uk.

Sanjeev Sridharan PhD. The Evaluation Centre for Complex Health Interventions, Dalla Lana School of Public Health, University of Toronto. SanjeevSridharan@msn.com
Omo Oaiya Bpharm. West and Central African Research and Education Network, Accra, Ghana. kodion@gmail.com

Figure 1: Components of an African Institute of Public Health



4. Using the social capital of the alumni network and the invited policy and academic network members to develop actions and strategies around the prioritised areas for action;
5. Education – building on the expertise of the Alumni (and similar) to ‘snowball’ capacity building through online courses. This would include hybrid courses with face-to-face components, and short courses;
6. Research – performing collaborative research among the members of the Institute and partners to tackle the prioritised problems.

Evaluation

A key component of all of this work will be a monitoring, learning and evaluation system that will be developmental – this focus will inform what needs to be done to reach its goals. A second focus will be navigational – clear performance metrics will also be developed to assess progress towards goals. As part of developing the theory of change of this initiative, one key focus will be context mapping that will attempt to link this initiative to other initiatives that are focused on building Public Health capacities in Africa.

Structure

Figure 1 shows various components of an African Institute of Public Health: inputs are provided by the alumni of master’s courses, their mentors and infrastructure from National Research and Education Networks; outputs include research, education, advocacy and evidence-based health policy. The components of the structure to govern and run such an Institute and the potential stakeholders are also identified in the figure

Critical questions that guide this include: Would a core infrastructure support group be helpful? Would the development of country-level sub-groupings be useful and if so what form might they take and how supported? What type of funding support should be sought? How do we define the type of work – is it more in line with ‘think tank’ type activities than NIH type research projects? How does the group engage policy makers and the group’s activities best lead to change?

Getting started

In order to realise the concept, an African led steering group has been formed, and a URL has been reserved: publichealth.africa.org. Early stage projects are planned as proof of concept, and all are invited to join and help evolve both the concept and details of emerging projects. We hope that in this way an idea of how such an Institute might evolve could derive from those who are prepared to become involved.

Collaborations

Key to the success of this venture will be the ability to attract partners. We hope that the publication of this paper will help to identify those who might want to be part of this development. We welcome all comments and suggestions, as well as offers to partner or advise. Please contact any of the authors for more information or interest in collaboration.

References

1. Oleribe OO, Momoh J, Uzochukwu BSC, Mbofana F, Adebisi A, Barbera T, Williams R, Taylor-Robinson SD. Identifying Key Challenges Facing Healthcare Systems In Africa And Potential Solutions. *Int J Gen Med*. 2019;12:395-403 <https://doi.org/10.2147/IJGM.S223882>
2. Reidpath DD, Allotey P. 2019. ‘The Problem of “Trickle-down Science” from the Global North to the Global South’. *BMJ Global Health* 4: e001719. <https://doi.org/10.1136/bmjgh-2019-001719>.
3. Baker S, Thompson A. Are research links with the developing world still a one-way street? *Times Higher Education*, January 2020. <https://www.timeshighereducation.com/features/are-research-links-developing-world-still-one-way-street> (Accessed 18/01/2020)
4. Dlungwane T, Voce A, Searle R, Stevens F. Master of Public Health programmes in South Africa: issues and challenges. *Public Health Rev*. 2017;38:5. doi: 10.1186/s40985-017-0052-9.
5. Heller RF, Strobl J, Madhok R. Online Education for Public Health Capacity Building in Low- to Middle-Income Countries: The Peoples-uni Experience. *IRRODL [Internet]*. 2019: <http://www.irrodl.org/index.php/irrodl/article/view/3927>
6. Sridharan S, Bondy M, Nakaima A et al. The potential of an online educational platform to contribute to achieving sustainable development goals: a mixed-methods evaluation of the Peoples-uni online platform. *Health Res Policy Sys* 16, 106 (2018). <https://doi.org/10.1186/s12961-018-0381-2>
7. Foley, M. 2016. The Role and Status of National Research and Education Networks in Africa. *SABER-ICT Technical Paper Series*. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/26258> License: CC BY 3.0 IGO. (Accessed 18/01/2021).

Financing Universal Health Coverage in Africa

Sam Agatre Okuonzi discusses how to finance UHC in Africa

Health financing is the raising and spending of financial resources with the primary intention of improving health. Typically, the sources of health financing are general taxation, donor aid, deficit funding (or borrowing), ear-marked taxation, and social and private health insurance. Expenditures are made in health facilities, on community and out-reach services, pharmacies, drug shops, sanitation, nutrition, training and research.¹ From the origins and evolution of health financing, a lot of difficulties have been faced and many lessons learned.

Evolution of health financing

Health financing has gone through major changes. Family or household in-kind payment for healing and spiritual care has been the main mode of health “funding” for thousands of years. When hospitals were established in Europe, they became an integral part of monasteries and convents. They were owned and run by churches.² Later, it was charities that funded hospitals. In 1890, Sweden made hospitals a function and responsibility of local authorities. There was a clear association between the poor and the development of health systems. In Britain the Poor Law and in other European countries the Social Assistance Laws enabled the poor to get free health care provided by salaried government doctors and midwives. This practice spread throughout Europe and beyond. Home nursing developed as a distinct charitable movement to help the poor. Later, nursing homes began to be subsidised by local authorities.

Another wave of health financing was the voluntary health insurance movement. This involved salaried workers and miners, who made regular contributions for health care from their salary. In 1863, Chancellor Bismarck of Germany introduced a law to make health insurance compulsory, and the practice spread quickly to other countries. But compulsory health insurance excluded many people, notably farmers and fishermen. Therefore, countries endeavoured to extend healthcare coverage by reducing insurance premiums and by subsidising health care costs.

Additional mechanisms were devised to cover the poor, the aged and the disabled. In this way, industrialised countries managed to achieve universal health coverage, starting with Russia in 1938, Britain in 1948, Scandinavia in the 1960s, Canada in 1970, Italy in 1980, and South Korea and Malaysia in the 1990s.¹ The

only high-income country that has refused to adopt the universal approach is USA. There are estimated 80 million people who have no access to health care in USA, caused by negative and racist attitudes to the poor and the association of poverty with blacks and immigrants.³

Many poor countries have proved that a country should not wait to become rich to attain universal health care. Existing resources in any nation can be used in such a way that a reasonable package of basic health care can be provided to everyone. The illustrious examples of the poor countries are Costa Rica, Sri Lanka, Cuba, Kerala of India, Vietnam, Thailand, Indonesia and Mauritius. Rwanda is close to attaining universal health care. These countries took only 20-30 years to attain universal health care and reduced their mortality to as low as that of the wealthy nations.⁴

But many low-income countries, including in Africa, have failed to achieve universal health care. Health care expenditure has risen exponentially due to increasing demand for health care arising from increased awareness, better knowledge, aging populations, and changing disease patterns. This was exacerbated by the global economic crisis of 1970s and 1980s, when health systems in poor countries began to deteriorate. In 1990s, these countries had reached health care “cost explosion”.

The Primary Health Care (PHC) approach had been introduced partly to address health financing. But the introduction and practice of PHC did not stop the downward spiral of health services due to lack of financing. In the 1990s, health reforms were introduced to try and raise health financing, mainly through user fees and insurance schemes. After nearly 20 years with no positive results, people finally became disillusioned with financing reforms. Today, health financing remains the most intractable challenge for the health sector. Some have argued and concluded that UHC in poor countries cannot be funded internally. This is why SDGs (and MDGs before them) have a component on global compact for financing health care.

Difficulties

A national health system is built on the framework and foundation of a sound health financing. The overwhelming difficulty with health financing in a poor country is that the available funding dedicated to health care is far too low for a basic health care universal coverage. The option of user fees to augment health finance is self-defeating, as it discourages service utilisation and reduces overall health benefits.² Neither is health insurance particularly viable in poor

Sam Agatre Okuonzi is a public health physician and academic. His current work and scholarship is in global health and health systems development. He chairs Arua Regional Referral Hospital Board and several NGO Boards in Uganda.



countries. Sachs 2005 compared health insurance performance of different countries. He concluded that a country with a gross domestic product (GDP) below US\$500 per capita would not benefit at all from health insurance. He advocated donor funding of UHC of a basic health care package.

However, officials of ministries of finance argued that donor aid for health increases local expenditure in form of counter-part funding, thus starving expenditure on industry and investment and disrupting macro-economic stability by increasing inflation.⁵ They further contend that donor aid has problems of absorption capacity and with the cohesion of national programs.

Macro-economic stability – the balance between the national budget, the internal debt, the balance of payment, and the debt burden – is the single most important priority of governments. It has three components: fiscal (taxation and expenditure), monetary (money supply and interest rate) and financial (mobilising savings and other resources for investment, employment and social services).

This macro-economic dilemma was addressed by the WHO's Macro-Economics and Health Commission report of 2001. The commission advised that: 1) donor aid be scaled up, 2) domestic health financing be scaled up, 3) countries use a basic package approach, 4) countries establish the cost of the package, and 5) countries use part of health financing for global health goods, including disease surveillance, data dissemination, and on drugs for neglected tropical diseases.

Apart very low per capita health expenditure, the other critical health financing difficulties are low health budget share, low capacity to mobilise resources for health, a large share of out-of-pocket payments for health care, widespread inefficiencies and inequalities in the health system, and the stagnation and even reversal of development assistance. Corruption in the health sector has emerged as a major issue for health financing.

Strategies

Health spending is no longer just consumption.⁶ Studies have shown that poor quality health care linked to low level health financing causes more deaths than disease itself.⁷ The new approach to health financing is therefore the high-performance health financing (HPHF) approach. HPHF is the adequate, sustainable and resilient health funding system, with pooling of funds that allows financial risk of ill-health to be spread throughout the population, and where spending is efficient and equitable to ensure quality of health care and financial protection for all people.

HPHF benefits the economy in six ways: 1) building human capital; 2) providing skills, jobs, labour mobility and formalisation of labour force; 3) reducing poverty and equity, by avoiding out-of-pocket payments; 4) improving efficiency and financial discipline through pooling and bulk purchasing, and fostering consumption and purchasing power in the economy as people get relief from crippling health care costs; and 6) strengthening health security through disease surveillance, community health workers, public health laboratory networks, and information systems.

Closing the health funding gap in poor countries will require a mixed approach of domestic and international funding. The general roadmap is to (a) scale up what works, (b) focus of the big picture (whole-of-government approach), and (c) strengthen health financing leadership, governance and organisation. Raising tax revenue remains the most reliable determinant of progress towards UHC.⁸ It leads to many additional benefits. In practical terms, there is a wide scope for raising tax in low-income countries without raising the already high common taxes. For significant progress to be made to UHC, it is estimated that \$41 per capita of health spending be made in addition to what is already being spent.⁹ Seventy-five percent of this spending has to go to building the health system. Another study by Mark W. Moses (2016) estimates a minimum of \$71 per



capita total health spending in low-income countries to achieve UHC.

There are unacceptable trade-offs that policy makers must desist from on the path to UHC.¹⁰ These unacceptable trade-offs are: (1) expanding coverage of low priority services before everyone has access to the basic priority package; (2) including in the UHC package only those who can pay, excluding those in informal economy and the poor, even if it is easier to do so; (3) giving high priority to very costly services whose coverage will provide substantial financial protection but with very limited overall health benefits; (4) expanding coverage for the well-off before doing so for the worse-off groups when the costs and benefits are not vastly different; and (5) shifting from out-of-pocket payment to some kind of mandatory prepayment (e.g. health insurance) in a way that makes health financing less progressive (i.e. that excludes the poor).

Conclusion

Health financing remains the most intractable challenge for poor countries. And yet as a function of ministries of health it is a relatively neglected function, often overshadowed. It is less focused on. The struggle with health financing is littered with many failures. But there are many good lessons too. The key message is the need to innovate health financing within the local and national

context so as to attain and expand UHC, with an eye on equity, efficiency, effectiveness, quality, sustainability and resilience. In particular, it will be critical to build a corruption-free health financing system.

References

1. Abel-Smith B 1994 Introduction to health policy, planning and financing Longman, London
2. Deininger K and Mpuga P 2004 Economic and welfare impact of the abolition of health user-fees: Evidence from Uganda; World Bank, Washington DC
3. Halvorson G C 1993 Strong medicine New York, Random House
4. World Bank 1993 World Development Report: Investing in health Oxford University Press
5. Brownebridge M 2004 Financing the millennium development goals: is more public spending the best way to meet poverty reduction targets? *Health Policy and Development* 2: 40-47
6. World Bank 2019 High performance health financing of universal health coverage: driving sustainable, inclusive growth in 21st century. The World Bank, IBRD 1818, H Street, NW, Washington DC
7. Kruk M E et al 2018 Mortality due to low quality health systems in UHC era: a systematic analysis of amenable deaths in 137 countries: *Lancet* 2018: 392: 2203-12 online Sept 5, 2018
8. Reeves A et al 2015 Financing universal health coverage: effects of alternative tax structures on public health systems: cross-national modeling in 89 low income and middle-income countries: *Lancet* 2015: 386: 274-80, May 2017
9. Stenberg K et al 2017 Financing transformative health systems towards achievement of SDGs: a model for projected resource needs in 67 low- and middle-income countries: *Lancet Global Health* 2017: 5: 875-87 July 17, 2017
10. Norheim O F 2015 Ethical perspectives: Five unacceptable trade-offs on the path to Universal Health Coverage *Int J Health Policy Manag* 2015, 4(11) 711-714

A call for compassion for front-line health workers

Dr David Okello looks at a neglected aspect of health workforce motivation amid the COVID-19 crisis

2021 has been designated by WHO as the International Year of Health and Care Workers in appreciation and gratitude for their unwavering dedication in the fight against COVID-19 pandemic. In order for it to be beneficial, this year-long campaign must explore ways of how healthcare workers can be more intentional about self-compassion while striving to show compassion to others. In this article, we discuss the critical issues in

compassion for healthcare workers, highlighting what could be done to help them cope with the challenges they face in line of duty.

The definition of compassion encompasses the recognition of the suffering of others and the need to act to help. It embodies a tangible expression of our humanity of love for those who are suffering, and a desire to alleviate the distress of others. It is the knowledge that there can never be any peace and joy for me until there is peace and joy for you too. Lack of understanding of how to handle colleagues who are working under very stressful conditions can have major consequences on the psychological wellbeing and the performance of healthcare workers. Supporting their psychological wellbeing must continue to be a priority for health systems managers and the general public.

Experience from the field in Uganda

The COVID-19 pandemic has challenged and exceeded the capacity of hospitals and intensive care units (ICUs) in all countries. Healthcare workers have continued to provide care for patients despite exhaustion, personal risk of infection, and fear of transmission to family members, illness or death of friends and colleagues, and the loss of many patients. Sadly, healthcare workers have also faced many additional sources of stress and anxiety: long shifts combined with unprecedented population restrictions and personal isolation, which have affected their ability to cope.

David Okello is the Director Health Systems at the African Center for Global Health and Social Transformation (ACHEST).



Front-line healthcare workers dealing with COVID-19 have expressed serious concerns regarding the conditions of services and the level of support they get from their managers. They complain about inadequate supply of personal protection equipment (PPE), and limitations in the infrastructure for ICUs which make them vulnerable to contracting the infection at the workplace.

During the lockdown, some of them were reassigned to work in units with long working hours, exerting emotional stress and physical exhaustion.

Insufficient resources and the absence of specific treatments for COVID-19 added to the challenges of managing severely ill patients. The fear of transmitting COVID-19 to loved ones led many to self-isolate from their families for months. Above all, they felt neglected from lack of a caring attitude from managers.

What can be done?

We need to display greater kindness and empathy towards colleagues. Employers should love the people they lead and win their trust; feel for each other and share their pains. Front-line healthcare workers should be given sufficient rest, time off and provided with basic tools to do their work.

Building leadership capacity and awareness on issues of compassion among supervisors and leaders at all levels is critical. We should also raise population and community awareness about the issues faced by health workers. We can take lessons from a recent event in the UK. People across the country took part in mass applause for nurses and other front-line NHS staff, in praise of their work during the COVID-19 pandemic. The 'Clap for Our Carers' initiative saw residents applauding from their doorsteps, windows and balconies, and motorists joining in by hooting their horns. Such simple acts of appreciation will go a long way to boost the morale of health workers.

What can we all do to raise awareness about compassion for healthcare workers?

Community engagement for Universal Health Coverage

Francis Omaswa, Ama Fenny, and Shabir Moosa expound on the role of people and communities in achieving UHC

The relevance and need to engage people and communities in health development is undisputed and well documented. However, there are few countries in Africa where clearly, visible actions have been taken to build community health systems (CHS) in which people own and drive the agenda. CHS is a subset of the national health system, defined by the World Health Organization (WHO) in simplified form as “all the activities whose primary purpose is to promote, restore and/or maintain health”. In other words, health systems are “the arrangements that society makes to take care of the health of its people”. Community is defined for the purposes of this discussion as “a group of people living together in a catchment area and geographic location within a larger region or country”.

Despite the time pressure to achieve the Sustainable Development Goals (SDGs), the repeated calls from WHO Director-General Dr Tedros Adhanom Ghebreyesus and the adoption of the African Union’s Health Strategy 2016-2030, there is no palpable movement in Africa towards translating this vision of people participation into reality. This lack of commitment and action to engage communities and people in health development at national, regional and global level is illustrated by the fact that there is not a single indicator, goal or target among the Universal Health Coverage (UHC) Indicators that measures the level of people engagement and participation in achieving UHC.

Today, what is visible is advocacy on COVID-19 for people to follow Standard Operating Procedures (SOPs), such as hand washing, social distancing, and for governments to provide oxygen and pulmonary ventilators. There are, regrettably, no public education messages reflecting the challenges people face in accessing water and soap for washing hands. “If health development does not happen in African communities, it will not happen in African nations,”

Foundations of participation

The starting point is that 94% of human beings are born completely normal and healthy and can live in good health until old age without losing their health. This is because the human body is capable, on its own, of making highly informed choices on how to maintain well-being and defend itself from health risks. In physiology, we learn about homeostasis, by which the body’s internal environment is maintained in a steady

state through tightly regulated feedback mechanisms. For example, when it is hot, we sweat, which evaporates so that it cools us; when we are short on water, we feel thirst; and the kidneys produce urine to get rid of excess water. Throughout the life cycle, the body’s state of health and well-being is maintained through these in-built mechanisms.

It is evident that the primary responsibility, ownership and accountability for maintaining uninterrupted healthy life throughout the life course rests on the shoulders of individuals, households, families and communities. Each individual should be encouraged and supported to collaborate with their body’s internal homeostatic mechanisms and ensure that their healthy status is maintained. The primary role of the health system is to ensure that individuals continue to remain healthy, do not lose their health and will not need avoidable health care. This is achieved by promoting health seeking behaviour in the population, highlighting health risks, removing them and creating environments that favour health. It is for this reason that the definition of health by WHO and the UN Declaration on Human Rights is broader than absence of disease. It is about well-being, mental, physical and social; including access to basics of life such as food, shelter, security and medical care.

Health promotion and disease prevention

The pressures to pay more attention to the needs of repairing lost health are stronger than those to promote and protect existing health. For example, an injured person or a convulsing child have to be immediately attended to and rushed to a health facility. As a result, the drama of providing health care is the more visible face of the health system receiving more attention and more resources than promoting and maintaining individual and population health.

Community Health Systems

In order to get the balance right in health system development, there is need for the people together with their government and other partners to build CHS with clearly defined roles for each player. There are entry points for governments and other actors in support of the protection and maintenance of individual and community health. Even when individuals know what to do, they still need access to healthy food, clean water, housing, education and other determinants of health which only governments can provide. Governments are legitimately called upon to shoulder the ultimate responsibility for assuring the conditions in which people can be

Francis Omaswa, African Center for Global Health and Social Transformation, Ama Fenny, University of Ghana and Shabir Moosa, World Family doctors. Caring for People (WONCA).



as healthy as possible. This is achieved by building - in partnership with the people - responsive, integrated people-centred national and sub-national CHS.

The need for responsive health systems has two foundations. First, the health of people is a precondition for their well-being and for living productive lives. The right to life is also a right to health and to a responsive health system. The second foundation is our innate humanity of feeling for each other so that the pain and suffering of one is shared and addressed collectively so that “no one is left behind” to suffer alone. On top of these moral arguments comes new evidence that shows that health is no longer perceived just as a cost but is an investment with high economic returns. The health economy on its own contributes to economic growth, employment and Gross Domestic Product (GDP). This is evidence that investing in population health is the best investment. The purpose of all Sustainable Development Goals (SDGs) is to contribute to the health and well-being of people and the protection of our planet. Last but not least, voters value their health and investing in the health and well-being of the population has political implications.

Guiding principles for building CHS

UHC is a political choice made by governments to provide citizens with the health services that they need without financial embarrassment. Strong government leadership is essential to create the conditions that enable people to maintain inborn health. This includes marshalling actors from across all sectors of government and the whole of society to deliver integrated people-centred PHC by enacting enabling laws and regulations, providing access to information, healthy food, clean water, decent housing, quality education and resources, among others.

The key elements needed for building sustainable integrated people-centred PHC are:

1. Local health committees that meet regularly for open community dialogue and governance. These should be led by recognized administrative cadres to ensure government leadership, and have elected representatives from the community, cultural and religious leaders, representatives of relevant government sectors and Community Health Workers (CHW) as their members.
2. A defined package of health services to be provided derived from a community diagnosis together with financing arrangements.
3. Skilled, motivated and supported CHWs who can deliver the defined package of services by visiting

households and keeping health records, distributing health commodities and information with digital tools, and linking households with the nearest health facilities and the community health committee. CHWs achieve their best results when the CHS is led through an integrated whole-of-government and whole-of-society approach which empowers and legitimises their technical work.

Conclusion

The global movement on UHC is gaining momentum. COVID-19 has shown how CHS are critical to outbreak control. The Elders Forum has issued a report calling for accelerated action, and the message that “Health is made at home and repaired in hospitals” is being popularised. Africa needs a dedicated movement on CHS, inspired and accelerated by initiatives such as the AHAIC Commission Report. This will ensure that every person in every village in Africa has the support to maintain the inborn health as well as to access the quality health services that they need. The African Union and its organs, regional economic communities, financing institutions, professional associations, CSOs, the private sector, the WHO, UNICEF and the UN should work urgently and cohesively with national governments to make this happen by 2030.

Acknowledgement: this is a think piece from the Amref AHAIC Commission on the State of UHC in Africa.

References

1. WHO Health System definition, accessed at: <https://www.who.int/whr/2003/en/Chapter7.pdf>
2. Francis Omaswa; Africa Health Journal, April 2020.
3. Indicators for measuring Universal Health Coverage; accessed at: <https://www.hfgproject.org/wp-content/uploads/2015/02/>
4. Francis Omaswa and Nigel Crisp; African Health Leaders; making change and claiming the future, OUP, 2014
5. Frederic L. Holmes; Claude Bernard, The “Milieu Interieur”, and Regulatory Physiology; accessed at <https://www.jstor.org/stable/23328847>
6. Constitution of the World Health Organization; accessed at: https://www.who.int/governance/eb/who_constitution_en.pdf
7. UN Declaration on Human Rights; accessed at: <https://www.un.org/en/universal-declaration-human-rights/>
8. UN High Level Commission on Health Employment and Economic Growth; accessed at: https://www.who.int/hrh/com-heeg/hrh_heeg_news/en/
9. Universal Health Coverage definition; accessed at: <https://www.who.int/health-topics/universal-health-coverage>
10. The Elders Forum Report; Strengthen global health security by investing in UHC; accessed at: <https://theelders.org/news/strengthen-global-health-security-investing-universal-health-coverage>
11. Francis Omaswa and Nigel Crisp; African Health Leaders, making change and claiming the future; Nigel Crisp, Health is made at home; hospitals are for repair.

Novel Coronavirus COVID-19

FOR: HEALTHCARE WORKERS

Protecting yourself at work from COVID-19



Follow the guidance of your healthcare facility management and talk to your colleagues about agreed COVID-19 safety procedures



When entering a room with a suspected or confirmed COVID-19 patient, put on:

- disposable gloves
- a clean, long-sleeve gown
- medical mask that covers your mouth and nose
- eye protection such as goggles

Remember

Personal protective equipment should be changed between use and for each different patient. If utilizing single-use personal protective equipment (e.g. single-use masks, gloves, face shields) dispose in a waste bin with a lid and wash your hands thoroughly. Anything single-use cannot be reused or sterilized!



If performing an aerosol-generating procedure, such as intubation, use a particulate respirator such as an N95 – **do a seal check!**



Boots and coverall suits are not required

Remember

Don't touch your eyes, nose or mouth with gloves or bare hands until proper hand hygiene has been performed



If you start coughing, sneezing or develop fever after you have provided care, report your illness immediately to the concerned authority and follow their advice



My 5 Moments for Hand Hygiene

Use alcohol-based hand rub or wash hands with soap and water:

1. Before touching a patient
2. Before engaging in clean/aseptic procedures
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings



World Health Organization
Western Pacific Region



WHO COVID-19 infographics for health workers and administrators

See more at www.who.int/teams/risk-communication/health-workers-and-administrators



Novel Coronavirus COVID-19

FOR: HEALTHCARE FACILITY MANAGEMENT

Managing patients with suspected or confirmed COVID-19 at your healthcare facility

Staff should wear appropriate personal protective equipment when screening patients at the triage station. Provide medical masks to all patients presenting with flu-like symptoms or reporting possible COVID-19 infection. Remind all patients to use good respiratory and hand hygiene.

Managing Placement



- Immediately isolate suspected and confirmed cases
- To reduce stress and anxiety, explain to patients what you do and why you do it
- If possible, place patients in single rooms
- Suspected and confirmed cases should be kept separate
- Maintain at least 1-metre distance between all patients
- Do not put more than one patient in a single hospital bed

Managing the Environment



- Limit the movement of patients within the health center to reduce potential infection throughout the healthcare facility
- If a patient needs to be moved, plan the move ahead: all staff and visitors who come into direct contact with the patient should wear personal protective equipment
- Perform regular environmental cleaning and disinfection
- Maintain good ventilation – if possible open doors and windows

Managing Visitors



- Limit the number of visitors per patient
- All visitors should wear the required personal protective equipment and their visits should be recorded



World Health Organization
Western Pacific Region



Novel Coronavirus COVID-19

FOR: HEALTHCARE FACILITY MANAGEMENT

Preparing for COVID-19 at your healthcare facility

Have a triage station at the healthcare facility entrance, prior to any waiting area, to screen patients for COVID-19. This limits potential infection throughout the health care center.

Post information, like posters and flyers, that remind patients and visitors to practice good respiratory and hand hygiene.



Have alcohol-based hand rub or soap and water handwashing stations readily available for the use of healthcare workers, patients and visitors.

Be alert for anyone that may have symptoms such as cough, fever, shortness of breath, and difficulty breathing.

Protect your workforce

Be ready! Ensure your healthcare and triage workers:

- Are trained on the importance, selection and proper use of personal protective equipment
- Are trained to spot symptoms of a potential COVID-19 infection and offer a medical mask to suspected cases
- Know the case definition and have a decision flow diagram available and accessible for reference at the triage station
- Isolate a suspected case promptly
- Perform hand hygiene frequently



World Health Organization
Western Pacific Region



Childhood stunting: the countdown to 2025

Prof Rachel Musoke highlights the global nutrition targets in relation to childhood stunting

We have less than four years to the year 2025 when the global nutrition targets adopted by the World Health Assembly in 2012 are to be achieved.¹ These include:

1. 40% reduction in the number of children under five who are stunted
2. 50% reduction of anaemia in women of reproductive age
3. 30% reduction in low birth weight
4. No increase in childhood overweight in children under 5
5. Increase the rate of exclusive breastfeeding in the first six months up to at least 50%
6. Reduce childhood wasting to less than 5%.

Targets 2, 3, 5, and 6 are closely related to target 1, which is the subject of the present review. These were ambitious targets which meant a yearly reduction of stunting of 3.9%. These are now embedded into the 2030 Sustainable Development Goals.²

A child is stunted if they are too short for their age. More precisely, this is a child whose length/height for age is more than two standard deviations below the World Health Organization (WHO) Child Growth Standards median, i.e. Z-score is below minus 2.³

This is not to be confused with linear growth retardation, which is defined as a failure to reach linear growth potential but not necessarily stunted.⁴ It is also important to remember that there is a fraction of children who are genetically short but not stunted. There are also children who have linear growth retardation or stunted but are above the cut off Z-score of minus 2.

When does stunting occur?

Children across all geographical regions have similar growth from conception to age of 5 years provided their mothers are healthy, and the environment is secure.^{5,6} This has made it easy to make comparisons as well plan for programmes that affect this group.

It's important to remember that stunting is a chronic problem. The period from conception to 24 months is the most crucial. This is referred to as the 1,000 days and is seen as the window of opportunity largely because if recognised in this period it can be preventable. The new Lancet series on the subject give a worrying picture that stunting is highest during the first six months, including about 10% who are stunted at birth.⁷ This could be related to inadequate feeding as exclusive breastfeeding is low.

Why the concern?

In a nutshell, stunting affects a large number of children and has short and long-term effects, but it is also reversible. In the short-term, children who are stunted have increased morbidity and mortality most likely due to impaired immunity leading to recurrent infections. Most brain growth occurs in the period from conception to age of 24 months. By this time a child has about 80% of his/her adult brain size. If there is growth restriction during this period, there is also impaired brain development which subsequently affects cognitive function, school performance and later earning capacity. There can be a 16% risk of repeating a grade in school for stunted children.⁸ An Ethiopian longitudinal study by Woldehanna et al also reported a 16% less score in the Peabody Picture Vocabulary test among stunted children.⁹

McGovern et al report an increase of 4-6% in earning for each increase of 1cm of height in men and women.¹⁰ According to Bloem, adults who were stunted in childhood earn 20% less than those who were not stunted.¹¹

There is also evidence that these children will have a higher risk suffering from non-communicable metabolic diseases (NCDs) as adults. This is often referred to as metabolic programming or developmental origin of adult disease initially put forward by Barker and colleagues.¹² Rapid weight gain after the two-year period of stunting is also linked to NCD.¹³ Changes occur in gene expression, organs such kidneys and pancreas are affected.

Women who were stunted as children will also have reproductive problems. They are more likely to have low birth weight babies and/or difficult deliveries due to obstructed labour. Stunting can be intergenerational if no preventive actions are taken.

Contributing or determinant factors

There are challenges in interpretation as many of these factors are interrelated. It should be seen at the outset that stunting is not solely a nutrition problem.^{14,15,16}

A conceptual framework was proposed by the World Health Organization (WHO) giving several contributing factors.¹⁷ On a national level, several government sections are involved. These include political will, availability of resources, food, education, health care, and environment (water and sanitation). Then there are social, cultural and family factors which include parental size, care practices, household income.¹⁸ Environmental enteropathy, a chronic gut inflammation that leads to

Rachel N Musoke is a professor of paediatrics with specialisation in neonatology. She has over 45 year of experience in Paediatrics. She is a member of the consulting arm of ACHES.



stunting is one entity that is difficult to study but may be a significant factor in childhood stunting.^{19,20}

Where are we?

The global target talks of reduction of the number of stunted children rather than prevalence of stunting. In many countries the prevalence has reduced but due to population increases the numbers have not. In 2010, the starting point for the global targets, about 165 million children below 5 years of age were stunted. A systematic review by Vaivada et al report a decline of stunting to a figure of 144 million in 2019 despite the complexity of programmes to reduce stunting. Progress was uneven and, in some countries, there were increases.²¹ In the same year, WHO/UNICEF/World Bank give a figure of 149 million with an increase in Africa region.²² There is concern that the COVID-19 pandemic has made matters worse as many of the child health programmes were interrupted throughout 2020.⁷

Programmes and actions

As can be seen in the causes/contributing or determinant factors, tackling the problem of stunting has to be multi-sectoral. Regional bodies like the Africa Regional Nutrition Strategy 2015-2025 includes the African Region Initiative for Stunting Elimination (ARISE).²³ United Nations bodies (WHO, UNICEF, FAO) and World Bank are active supporters for these activities. Scaling up nutrition (SUN) movement through connecting governments with private sector and civil societies seeks to accelerate country-led efforts to combat malnutrition. A SUN strategy for 2021-2025 is already out.²⁴ However, each member state has to own these strategies. There has to be a well national coordinated programme

that helps the varied sectors to implement the actions outlined.

Since we have a multi-causal problem, programmes to reduce stunting require a multi-sectoral response. They require a build-up of political momentum to galvanise change, and action in many different sectors:

- food systems
- health systems
- water and sanitation
- infrastructure
- social protection and the overall status of women in society
- maternity protection and labour laws
- protect families from poverty.

Implementers

This section is mainly addressing the health system.

1. Fill the health worker gap!

Health workers are vital in delivering the direct interventions effective. The numbers of health workers per population served is crucial. Basic training of most health workers does not equip them to manage these varied issues so capacity building needs to be addressed.

2. Maternal health and nutrition

- Policy to make maternal health and nutrition visible through regular monitoring and evaluation
- When do we see mothers at health facilities?
- Antenatal contacts (Besides iron & folate supplements address other health/nutrition issues that lead to intrauterine growth restriction and low birth weight)

- Child immunisation and growth monitoring
- Family planning clinics

The last two points of contact are useful to address pre-pregnancy nutrition and any other condition that may affect future pregnancies.

3. Opportunities to address child stunting

Stunting is invisible until the child's length/height is taken.

- It should be a practice for all health facilities.
- Availability of stadiometers at health facility as well as training on how to measure children is important.
- Measure, plot on the growth curve and interpret.
- Take appropriate action.
- Monitoring and evaluation:
- Is this a requirement of returns to the central body, e.g. district/county?
- If so, how often and are there mechanisms to act?
- At national level we should not wait for DHS which are usually too far apart

Stunting may be an underlying cause of death, but it does not appear on death certificates!

4. Working with communities to reduce stunting

We may not achieve much if we do not work with communities. The final implementers are the parents of the children we see at health facilities. We need to understand the communities where the children are reared. Feeding, care and stimulation, and home environment all depend on parents' culture and beliefs and practices.

Many countries have community strategies and working with community health workers/volunteers. It is possible that this group of workers are as overwhelmed as the workers at health facilities.

Each government needs to address these questions

1. How much community education and support are we offering?
2. Do we have a robust system of supportive supervision programme?
3. If not paid for this work, how do volunteers make a living for themselves as well as looking after their own families?
4. How much time do we expect them to spend on the affairs of the community?
5. Many of the success programmes in maternal and child nutrition have depended on supplements. On a national scale it may not be possible to do this. Is there a way to improve family diets without supplements?

Conclusion

Keats and colleagues report that "no country is ready to meet the 2025 nutrition targets" and offer a revised framework for nutrition actions.²⁵ All countries especially low- and middle-income ones need to urgently relook at what they can do. If not able to meet the 2025 targets, will we be able to meet the 2030 goal 2.2 of the Sustainable Development Goals?

References

1. World Health Organization. Global Targets 2025 to Improve Maternal, Infant and Young Child Nutrition. Available online: <https://www.who.int/nutrition/global-target-2025/en/>
2. United Nations. Sustainable Development Goals. Available online: <https://sustainabledevelopment.un.org/?menu=1300>
3. de Onis M., Dewey K.G., Borghi E., Onyango A.W., Blössner M., Daelmans B. et al. The World Health Organization's global target for reducing childhood stunting by 2025: rationale and proposed actions. *Maternal & Child Nutrition*. 2013; 9 (S2):6–26
4. Leroy JL, Frongillo EA. Perspective: What Does Stunting Really Mean? A Critical Review of the Evidence. *Adv Nutr* 2019;10:196–204; doi: <https://doi.org/10.1093/advances/nmy101>
5. World Health Organization. The WHO Child Growth Standards (<http://www.who.int/childgrowth/en/>)
6. Villar J, Cheikh Ismail L, Victora CG, et al. International standards for newborn weight, length, and head circumference by gestational age and sex: the newborn cross-sectional study of the INTERGROWTH-21st Project. *Lancet* 2014; 384: 857–68.
7. Victora CG, Christian P, Vdaletti LP, Gatica-Domínguez G, Menon P, Black RE. Maternal and Child Undernutrition Progress 1: Revisiting maternal and child undernutrition in low-income and middle-income countries: variable progress towards an unfinished agenda. *Lancet* March 7, 2021 [https://doi.org/10.1016/S0140-6736\(21\)00394-9](https://doi.org/10.1016/S0140-6736(21)00394-9)
8. Dewey KG, and K. Begum K. Long-term consequences of stunting in early life. *Maternal and Child Nutrition* 2011; 7 (S 3): 5–18
9. Woldehanna T, Behrman JR, Araya MW. The effect of early childhood stunting on children's cognitive achievements: Evidence from young lives Ethiopia. *Ethiop J Health Dev*. 2017; 31(2): 75–84
10. McGovern ME, Krishna A, Aguayo VM, Subramanian SV. A review of the evidence linking child stunting to economic outcomes. *International Journal of Epidemiology*, 2017, 1171–1191 doi: 10.1093/ije/dyx017
11. Bloem M. Preventing stunting: why it matters, what it takes. In: Eggersdorfer M, Kraemer K, Ruel M, Biesalski HK, Bloem M et al., editors. *The road to good nutrition*. Basel: Karger; 2013:13–24 (http://www.karger.com/ProdukteDB/Katalogteile/isbn3_318/_025/_49/road_04.pdf)
12. Barker DJP, and Thornburg KL. The Obstetric Origins of Health for a Lifetime. *Clinical obstetrics and gynecology* 2013; 56 (3): 511–519
13. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M, et al.; the Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013;371:243–60. doi:10.1016/S0140-6736(13)60937-X.
14. Raitlen DJ, and Andrew A. Bremer AA. Exploring the Nutritional Ecology of Stunting: New Approaches to an Old Problem. *Nutrients* 2020, 12, 371; doi:10.3390/nu12020371
15. Prendergast AJ, Humphrey JH The stunting syndrome in developing countries. *Paediatrics and International Child Health* 2014; 34(4): 250–265
16. Perumal N, Bassani DG, and Roth DE. Use and Misuse of Stunting as a Measure of Child Health. *J Nutr* 2018;148:311–315.
17. Conceptual framework on Childhood Stunting: Context, causes and consequences summary 2013 presented by Stewart et al. (with ref to): Stewart C., Iannotti L., Dewey K.D., Michaelsen K.F. & Onyango A.W. (2013) Contextualizing complementary feeding in a broader framework for stunting prevention. *Maternal & Child Nutrition* 9 (Suppl. 2), 27–45
18. Li Z, Kim R, Vollmer S, Subramanian SV. Factors Associated With Child Stunting, Wasting, and Underweight in 35 Low- and Middle-Income Countries. *JAMA Network Open*. 2020;3(4):e203386. doi:10.1001/jamanetworkopen.2020.3386
19. Alia A, Najeeha T, Iqbal NT, and Sadiqa K. Environmental enteropathy. *Curr Opin Gastroenterol* 2016, 32:000–000 DOI:10.1097/MOG.0000000000000226
20. Harper KM, Mutasa M, Prendergast AJ, Humphrey J, Manges AR. Environmental enteric dysfunction pathways and child stunting: A systematic review. *PLoS Negl Trop Dis* 12(1): e0006205. <https://doi.org/10.1371/journal.pntd.0006205>
21. Vaivada T, Akseer N, Akseer S, Somaskandan A, et al. Stunting in childhood: an overview of global burden, trends, determinants, and drivers of decline. *Am J Clin Nutr* 2020;112(Suppl):777S–791S
22. UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates Levels and trends in child malnutrition: Key findings of the 2019 edition WHO/NMH/NHD/19.20
23. Africa Regional Nutrition Strategy 2016–2025 page 19–20
24. SUN strategy 3.0, 2021–2025

Africa Health Journal
celebrates

World Health Day 2021

7 April

*Building a fairer,
healthier world*

Read more about the
WHO's call to action at:

[www.who.int/publications/m/item/
health-equity-and-its-determinants](http://www.who.int/publications/m/item/health-equity-and-its-determinants)

hello world

**we must make covid-19
vaccines tests and
treatments available to all**

**it's time to build a fairer
healthier world for
everyone everywhere**



hello world

**we must get health
services to all
communities**

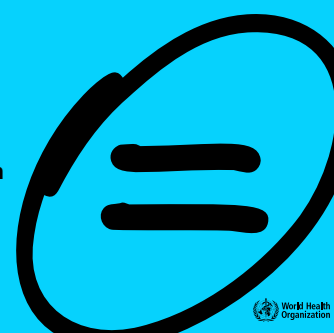
**it's time to build a fairer
healthier world for
everyone everywhere**



hello world

**we must end discrimination
and exclusion**

**it's time to build a fairer
healthier world for
everyone everywhere**



hello world

**we agree that
health is a right not
a privilege**

**it's time to build a fairer
healthier world for
everyone everywhere**



hello world

**covid-19 has shown us
that no one is safe until
everyone is safe**

**it's time to build a fairer
healthier world for
everyone everywhere**





WORLD
HEALTH
SUMMIT

REGIONAL MEETING
AFRICA
KAMPALA, UGANDA
JUNE 27-30, 2021



Covid-19

Does steam Inhalation inactivate the SARS-CoV-2 Virus?

In the heat of the Coronavirus pandemic, many treatments have been and continue to be tried even as vaccines development is underway; including steam inhalation. Researchers hypothesized that steam inhalation could reduce or block the replication of the virus in the upper airway by denaturing its external protein structure. A small trial of ten SARS-CoV-2 infected participants was conducted. Participants' airway mucosae were exposed to humidified steam through inhalation for at least 20 minutes. The primary outcome was a reduction of viral shedding after four days. Cycles of steam inhalation were found beneficial in halting SARS-CoV-2 virus infection in the upper airway mucosae during the initial stages of infection. The researchers, however, noted that these findings would need confirmation in a larger controlled trial.

la Marca G, Barp J, Frenos S, Mugelli A, Galli L, Calistri E, Biasucci G, De Masi S, Guerrini R. Thermal inactivation of SARS COVID-2 virus: Are steam inhalations a potential treatment? Life Sci. 2021 Jan 15;265:118801. doi: 10.1016/j.lfs.2020.118801. Epub 2020 Nov 21. PMID: 33232690; PMCID: PMC7680040.

Protection against reinfection with SARS-CoV-2

The extent of protection conferred by SARS-CoV-2 infection against reinfection is unknown. A large population-level study was conducted in Denmark to assess this. During the country's second surge of SARS-CoV-2 infection, researchers compared infection rates among those who had tested PCR-positive with who tested PCR negative during the first surge. Of the 525,339 eligible for follow-up in the second surge, 11068 (2.11%) had tested positive during the first surge: of these, 72 (0.65%) tested positive again during the second surge compared with 16819 (3.27%) who tested negative during the first surge. Protection against repeat infection was 80.5%, though it was much lower in older patients (47.1%). No difference in protection by sex or time since the infection was observed. These findings will inform vaccination program implementation.

Hansen CH, Michlmayr D, Gubbels SM, Mølbak K, Ethelberg S. Assessment of protection against reinfection with SARS-CoV-2 among 4 million PCR-tested individuals in Denmark in 2020: a

population-level observational study. Lancet. 2021 Mar 27;397(10280):1204-1212. doi: 10.1016/S0140-6736(21)00575-4. Epub 2021 Mar 17. PMID: 33743221; PMCID: PMC7969130.

Single high dose Vitamin D3 supplementation in moderate to severe COVID-19

The efficacy of Vitamin D3 in COVID-19 has been unclear. Through a multicenter trial in Brazil, the effect of a single high dose of Vitamin D3 compared to placebo on the duration of hospital stay as well as other outcome parameters in patients with moderate to severe COVID-19 was evaluated. Of the 237 participants included in the primary analysis, there was no significant difference in length of stay, in-hospital mortality, admission to the intensive care unit, or need for mechanical ventilation between the two groups. The findings didn't support the use of high dose Vitamin D3 for treatment of moderate to severe COVID-19.

Murai IH, Fernandes AL, Sales LP, et al. Effect of a Single High Dose of Vitamin D3 on Hospital Length of Stay in Patients With Moderate to Severe COVID-19: A Randomized Clinical Trial. JAMA. 2021 Mar 16;325(11):1053-1060. doi: 10.1001/jama.2020.26848. PMID: 33595634; PMCID: PMC7890452.

Dexamethasone in Hospitalised Patients with COVID-19

COVID-19 is associated with diffuse lung damage. Dexamethasone may modulate inflammation-mediated lung injury and thereby reduce progression to respiratory failure and death. A large trial to evaluate the efficacy of dexamethasone in hospitalised COVID-19 patients was conducted; patients were assigned to receive dexamethasone (2104 patients), or usual care alone (4321 patients), the primary outcome being 28-day mortality. At analysis, the difference in mortality between groups varied according to the level of respiratory support that the patients were receiving at the time of randomization. The study found that the use of dexamethasone resulted in lower 28-day mortality among those who were receiving either invasive mechanical ventilation or oxygen alone at randomization but not among those receiving no respiratory support.

RECOVERY Collaborative Group, Horby P, Lim WS, et al. Dexamethasone in Hospitalized Patients with Covid-19. N Engl J Med. 2021 Feb 25;384(8):693-704. doi: 10.1056/NEJMoa2021436. Epub 2020 Jul 17. PMID: 32678530; PMCID: PMC7383595.

Early plasma therapy to prevent progression of COVID-19 in older adults

Therapies to halt the progression of early COVID-19 remain elusive. Convalescent plasma administered to hospitalized patients has been unsuccessful, maybe because antibodies should be administered earlier in the course of treatment. In a clinical trial, 160 older adult patients were randomized to receive convalescent plasma with high IgG titers against SARS-CoV-2 within 72 hours after the onset of mild COVID-19 symptoms or a placebo. The primary end-point was severe respiratory disease. Severe respiratory disease developed in fewer patients that received convalescent plasma (16%) as compared to 31% who received placebo, with a relative risk reduction of 48%. The researchers concluded that early administration of high-titer convalescent plasma against SARS-CoV-2 to mildly ill infected older adults reduced the progression of COVID-19.

Libster R, Pérez Marc G, et al. Early High-Titer Plasma Therapy to Prevent Severe Covid-19 in Older Adults. N Engl J Med. 2021 Feb 18;384(7):610-618. doi: 10.1056/NEJMoa2033700. Epub 2021 Jan 6. PMID: 33406353; PMCID: PMC7793608.

Chest computed tomography findings in asymptomatic patients with COVID-19.

There is paucity of literature on the damage to the respiratory system among asymptomatic patients with coronavirus disease (COVID-19). Researchers at a University teaching hospital in South Korea evaluated the findings of chest computed tomography (CT) and radiography in patients with COVID-19 who had no symptoms. They retrospectively analysed chest CT and radiographic findings of asymptomatic patients who had been admitted with a confirmed diagnosis of COVID-19. They found that all patients (100%) had ground-glass opacity (GGO) on chest CT. The GGO lesions were predominantly distributed peripherally and posteriorly in all the patients. In 90% (9/10) of the patients, the GGO lesions were combined with reticular opacity. Air bronchograms were observed in 8 patients (80%). The lung lesions were dominant on the right side in all patients. They concluded that there was a need to expand the indications of COVID-19 testing to cater for asymptomatic cases.

Chang MC, Lee W, Hur J, Park D. Chest Computed Tomography Findings in Asymptomatic Patients

with COVID-19. Respiration. 2020;99(9):748-754. doi: 10.1159/000509334. Epub 2020 Sep 7. PMID: 32894853; PMCID: PMC7573893.

General

Short or long antibiotic therapy for diabetic foot osteomyelitis: Any difference in outcomes?

The optimal duration of antibiotic therapy for diabetic foot osteomyelitis (DFO) post-debridement remains unclear. In a recent randomized non-inferiority pilot trial with 93 participants, researchers compared outcomes and adverse effects in patients receiving either a short (3-weeks) or a long (6-weeks) course of systemic antibiotic therapy in DFO post-debridement. Remission occurred in 37 (84%) of the patients in the 3-weeks arm compared to 36 (73%) in the 6-week arm. This difference was not statistically significant. The incidence of adverse events was also similar in the two groups. The researchers concluded that a 3-week course of systemic antibiotic therapy post-debridement gave similar results as a 6-week course.

Gariani K, Pham TT, et al. Three versus six weeks of antibiotic therapy for diabetic foot osteomyelitis: A prospective, randomized, non-inferiority pilot trial. Clin Infect Dis. 2020 Nov 26;ciaa1758. doi: 10.1093/cid/ciaa1758. Epub ahead of print. PMID: 33242083.

Once-weekly Semaglutide in adults with overweight or obesity

Despite obesity being of major public health importance, few pharmacological options exist. Researchers sought to confirm if once-weekly Semaglutide as an adjunct to lifestyle intervention could achieve weight loss. 1961 adults with a body-mass index of 30 or greater without diabetes were assigned to treatment with subcutaneous Semaglutide or placebo for 68 weeks. The endpoints were percentage change in body weight and weight reduction of at least 5%. The findings were significant: a greater change in body weight was seen in the semaglutide group as compared to the placebo (-14.9% Vs. -2.4%) and more patients achieved at least 5% weight reduction (86.4% Vs. 31.5%). Once-weekly semaglutide was associated with a sustained, clinically relevant reduction in body weight in patients with overweight or obesity.

Wilding JPH, Batterham RL, et al. Once-Weekly Semaglutide in Adults with Overweight or Obesity. N Engl J Med. 2021 Mar 18;384(11):989. doi: 10.1056/NEJMoa2032183. Epub 2021 Feb 10. PMID: 33567185.

Subclinical atherosclerosis is associated with poor cardiovascular health

Cardiovascular diseases are a rising burden in sub-Saharan Africa (SSA). Using the cardiovascular health index (CVHI): a tool for monitoring cardiovascular health, a team of researchers sought to expand the evidence for its use in under-studied populations in SSA, by determining its association with common carotid intima-media thickness (CINT). A multi-centric cross-sectional study involving 9011 participants was conducted, results of which were significant of an inverse association between CVHI and common CINT. Smoking, physical activity, and hyperglycemia were related to CINT in women only, while blood pressure and obesity were related to CINT in both women and men. This study confirmed CVHI as a strong marker of subclinical atherosclerosis and primary prevention should target physical activity, smoking, obesity, hypertension, and hyperglycemia.

Nonterah, E.A., Crowther, N.J., Odoro, A. et al. Poor cardiovascular health is associated with subclinical atherosclerosis in apparently healthy sub-Saharan African populations: an H3Africa AWI-Gen study. BMC Med 19, 30 (2021). <https://doi.org/10.1186/s12916-021-01909-6>

Regional differences in health worker behaviours regarding influenza vaccination

The World Health Organization vaccination targets for seasonal influenza for patients over 65 years old are not always met. In the 2013/2014, vaccination rates in Germany ranged between 14 and 65%. Researchers compared attitudes, personal characteristics and vaccination behaviors of general practitioners (GPs) in regions with high and low vaccination rates in Germany. They sent a questionnaire to 1594 GPs practicing in 16 districts with the highest and the lowest vaccination rates in Western and Eastern Germany. GPs ranked their attitudes towards vaccination in general and vaccination against influenza as mostly 'very positive' (80%, n = 352 and 65%, n = 288, respectively). GPs who practiced in regions with low vaccination rates reported their attitudes more negatively than those from regions with high vaccination rates. The strongest predictors of vaccination behavior belonged to external influences and information resources. The researchers concluded that "The results of this study suggest

a correlation between GPs' attitudes and regional vaccination rates. Beneath GPs' individual attitudes, the regional attitude patterns of patients, colleagues and medical assistants surrounding those GPs seem decisive and should be integrated into future campaigns to increase vaccination rates at a regional level".

Arlt J, Flaegel K, Goetz K, Steinhäuser J. Regional differences in general practitioners' behaviours regarding influenza vaccination: a cross-sectional study. BMC Health Serv Res. 2021 Mar 4;21(1):197. doi: 10.1186/s12913-021-06177-x. PMID: 33663449; PMCID: PMC7934451.

Impact of multiple cardiovascular medications on mortality after an ischemic stroke or transient ischemic attack

Although patients with stroke receive multiple cardiovascular medications, data on an optimum combination of these remains lacking. Data of 52,619 patients aged 45 and above with an incident stroke event were analyzed. Compared with patients prescribed monotherapy only, the hazard ratios (HRs) of mortality were 0.82 for 2 medications, 0.65 for 3 medications, 0.61 for 4 medications, 0.60 for 5 medications, and 0.66 for more than 6 medications. Patients with any four classes of antiplatelet agents, lipid-regulating medications, angiotensin-converting enzyme inhibitor/angiotensin receptor blockers, beta-blockers, diuretics, and calcium channel blockers had the lowest risk of mortality (HR 0.51), versus any one class. The conclusion was that combination therapy of four or five cardiovascular medications may be optimal to improve long-term survival post-stroke.

Ma TT, Wong ICK, et al. Impact of multiple cardiovascular medications on mortality after an incidence of ischemic stroke or transient ischemic attack. BMC Med. 2021 Feb 3;19(1):24. doi: 10.1186/s12916-021-01900-1. PMID: 33530992; PMCID: PMC7856718.

Dexamethasone in Chronic Subdural Hematoma

Chronic Subdural Hematoma (SDH) is a common neurological disorder in elderly patients. Dexamethasone is usually used in this patient group but its effect on outcomes hasn't been well studied. Researchers conducted a large trial involving 748 patients with symptomatic SDH, assigned to receive a 2-week tapering course of oral dexamethasone or placebo. The primary outcome was a score of 0 to 3, representing a favorable outcome on the modified Rankin scale at 6 months after randomization. Find-

ings showed fewer favorable outcomes in the dexamethasone group (83.9%) compared to the placebo (90.3%) at 6 months. Fewer repeat operations were however noted in the dexamethasone group (1.7%) as compared to the placebo (7.1%).

Hutchinson PJ, Edlmann E, et al. Trial of Dexamethasone for Chronic Subdural Hematoma. *N Engl J Med*. 2020 Dec 31;383(27):2616-2627. doi: 10.1056/NEJMoa2020473. Epub 2020 Dec 16. PMID: 33326713.

A randomised trial of Albumin Infusions in hospitalised patients with cirrhosis

Preliminary studies support albumin in patients with decompensated cirrhosis, but large studies to confirm this has been lacking. A large trial involving 777 patients was conducted, patients randomly assigned to receive either albumin infusions for up to 14 days or until discharge, whichever came first, or standard care. The primary endpoint was a composite of a new infection, kidney dysfunction, or death between days 3 and 15 after the initiation of treatment. The percentage of patients with a primary end-point event did not differ significantly between the albumin group (29.7%) and the standard-care group (30.2%). More adverse events occurred in the albumin group than the standard-care group. In conclusion, albumin infusions weren't found more beneficial than standard care.

China L, Freemantle N, et al. A Randomized Trial of Albumin Infusions in Hospitalized Patients with Cirrhosis. *N Engl J Med*. 2021 Mar 4;384(9):808-817. doi: 10.1056/NEJMoa2022166. PMID: 33657293.

HIV Vaccine (ALVAC-HIV and Bivalent Subtype C gp120-MF59) Efficacy Updates

The development of an HIV vaccine has continued to be a challenge. A recently concluded vaccine trial in South Africa is a case in point. 5404 adults without HIV were assigned to receive the vaccine (ALVAC-gp120 regimen) or placebo. The primary efficacy outcome was the occurrence of HIV-1 infection from randomization to 24 months. Prespecified criteria for non-efficacy were met on an interim analysis and further vaccinations were subsequently halted. The incidence of adverse events was similar in the vaccine and placebo groups. During the 24-month follow-up, HIV-1 infection was diagnosed in 138 participants in the vaccine group and 133 in the placebo group. In conclusion, the vaccine didn't prevent HIV-1

infection despite previous evidence of immunogenicity.

Gray GE, Bekker LG, et al. Vaccine Efficacy of ALVAC-HIV and Bivalent Subtype C gp120-MF59 in Adults. *N Engl J Med*. 2021 Mar 25;384(12):1089-1100. doi: 10.1056/NEJMoa2031499. PMID: 33761206; PMCID: PMC7888373.

MCH

Levonorgestrel vs. Copper intrauterine devices for emergency contraception

Emergency contraception is an essential component of family planning. A variety of methods to reduce the risk of unintended pregnancy exist including oral contraceptive pills as well as Intrauterine devices (IUDs). Only copper-IUDs are currently being used by clinicians in emergency contraception because data on the efficacy of the Levonorgestrel-IUDs are lacking. A large trial involving 355 participants from six clinics in Utah was conducted to compare the two IUDs. Participants were randomly assigned to receive a Levonorgestrel 52-mg IUD or a copper T380A IUD. The primary outcome was pregnancy at 1 month after IUD insertion. The Levonorgestrel-IUD was found to be non-inferior to the copper IUD for emergency contraception.

Levonorgestrel vs. Copper Intrauterine Devices for Emergency Contraception. *N Engl J Med*. 2021 Jan 28;384(4):335-344. DK Turok, A Gero, RG Simmons, JE Kaiser, GJ Stoddard, CD Sexsmith, LM Gawron, JN Sanders

Effects of maternal folic acid supplementation throughout pregnancy on neurocognitive development in the child

Maternal folic acid (FA) supplementation is known to prevent neural tube defects. It's been uncertain whether continuing FA after the first trimester is beneficial. Researchers evaluated the effect of FA supplementation throughout pregnancy on cognitive performance and brain function in 11-year-old children of mothers who had participated in a trial; one group received FA Supplementation throughout pregnancy while another received a placebo from the 14th gestational week. Both cognitive performance and neuronal function were assessed. Children of mothers randomized to FA, compared with placebo scored significantly higher in two processing Speed tests and had more efficient semantic processing of language.

In conclusion, continued FA supplementation beyond the first trimester can benefit the neurocognitive development of the child.

Caffrey A, McNulty H, Rollins M, et al. Effects of maternal folic acid supplementation during the second and third trimesters of pregnancy on neurocognitive development in the child: an 11-year follow-up from a randomised controlled trial. *BMC Med*. 2021 Mar 10;19(1):73. doi: 10.1186/s12916-021-01914-9. PMID: 33750355; PMCID: PMC7945668.

Higher or lower Hemoglobin Transfusion Thresholds for Pre-term Infants

Preliminary data suggest that higher hemoglobin transfusion thresholds for preterm infants with anemia may reduce the risk of cognitive delay. A total of 1824 infants participated in a large multicenter trial in which pre-term babies were randomly assigned within 48 hours after delivery to receive red-cell transfusions at higher or lower hemoglobin thresholds until 36 weeks of postmenstrual age or discharge, whichever came first. The primary outcome was a composite of death or neurodevelopmental impairment at 2 years of age. There was no significant difference in the outcomes between the two groups. It was hence concluded that a higher hemoglobin threshold for red-cell transfusion did not improve survival without neurodevelopmental impairment at 2 years.

Kirpalani H, Bell EF, Hintz SR, Tan S, Schmidt B, Chaudhary AS, Johnson KJ, Crawford MM, Newman JE, Vohr BR, Carlo WA, D'Angio CT, Kennedy KA, Ohls RK, Poindexter BB, Schibler K, Whyte RK, Widness JA, Zupancic JAF, Wyckoff MH, Truog WE, Walsh MC, Chock VY, Laptook AR, Sokol GM, Yoder BA, Patel RM, Cotten CM, Carmen MF, Devaskar U, Chawla S, Seabrook R, Higgins RD, Das A; Eunice Kennedy Shriver NICHD Neonatal Research Network. Higher or Lower Hemoglobin Transfusion Thresholds for Preterm Infants. *N Engl J Med*. 2020 Dec 31;383(27):2639-2651. doi: 10.1056/NEJMoa2020248. PMID: 33382931.

Maternal Body Mass Index is positively associated with human milk fat

Maternal obesity is a common public health concern and a risk factor for childhood obesity. Evidence on the influence of maternal body mass index (BMI) on human-milk nutrient composition is limited and inconclusive. In a recent meta-analysis that included 69 studies, researchers studied the relation between maternal BMI and human-milk energy, fat, and/or total protein. They assessed human-milk energy (kcal/L), fat (g/L), and total protein (g/L) from mothers 1 to 6 months postpartum. They

found a positive association between maternal BMI and human-milk fat but no significant association between maternal BMI and human-milk energy or total protein. The certainty of evidence, however, was low for human-milk energy and very low for fat and protein. In conclusion the researchers recommended future studies to confirm the relation between maternal BMI and variations in human milk energy, fat, and protein content and the implications for child growth and development

Daniel AI, Shama S, et. al. Maternal BMI is positively associated with human milk fat: a systematic review and meta-regression analysis. *Am J Clin Nutr.* 2021 Apr 6;113(4):1009-1022. doi: 10.1093/ajcn/nqaa410. PMID: 33675341.

Vaginal transmission of cancer from mothers with cervical cancer to infants

Transmission of maternal cancer to their offspring is possible, albeit extremely rare. It occurs in about 1 infant in 500,000 mothers with cancer even though 1 in 1000 live births includes a mother with cancer. Researchers in Japan recently reported two cases of pediatric lung cancer (in 23-month-old and 6-year-old boys) that resulted from mother-to-infant transmission of uterine cervical tumors. The diagnosis was made incidentally during routine

next-generation sequencing of paired samples of tumor and normal tissue. Some lesions in the 23-month-old child spontaneously regressed and slow growth of the tumor mass was observed in the second child, suggesting the existence of alloimmune responses against the transmitted tumors. Immune inhibitor therapy with Nivolumab was administered to the 23-month-old child and all remaining tumors regressed. The researchers concluded that next-generation sequencing of paired samples of tumor and normal tissue may play a major role in diagnosing cancer that is transmitted from mothers to infants.

Arakawa A, Ichikawa H, Kubo T, et al. Vaginal transmission of cancer from mothers with cervical cancer to infants. *N Engl J Med.* 2021;384(1):42-50. doi:10.1056/NEJ-Moa2030391

COVID-19 vaccine acceptance among pregnant women and mothers of young children: a multinational survey

Data on COVID-19 vaccination distribution and uptake is still insufficient and estimates of global vaccine acceptance among pregnant women and mothers of young children are unknown. Researchers administered an online survey and assessed acceptance

of COVID-19 vaccination among pregnant women and mothers of children younger than 18-years-old, plus potential predictors for acceptability. 17,871 survey responses were received from 16 countries (14 with a high incidence and 2 with low incidence) between October 28 and November 18, 2020. Assuming a 90% COVID-19 vaccine efficacy, 52.0% of pregnant women and 73.4% of non-pregnant women indicated an intention to get vaccinated. 69.2% of women, both pregnant and non-pregnant, indicated an intention to have their children vaccinated. Vaccine acceptance varied by country. Confidence in vaccine safety or effectiveness, worrying about COVID-19, belief in the importance of vaccines to their own country, compliance to mask guidelines, trust of public health agencies/health science, as well as attitudes towards routine vaccines were the strongest predictors of vaccine acceptance. The researchers concluded that "Vaccination campaigns for women and children should be specific for each country in order to attain the largest impact".

Skjette M, Ngirbabul M, et. al. COVID-19 vaccine acceptance among pregnant women and mothers of young children: results of a survey in 16 countries. *Eur J Epidemiol.* 2021 Feb;36(2):197-211. doi: 10.1007/s10654-021-00728-6. Epub 2021 Mar 1. PMID: 33649879; PMCID: PMC7920402.



Guidelines for authors and contributors

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

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

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

photographs. Images taken from websites are of a low resolution and not suitable for print.

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

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

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

www.africa-health.com
africahealth@achest.org
+256 414 237 225

Professor James Hakim

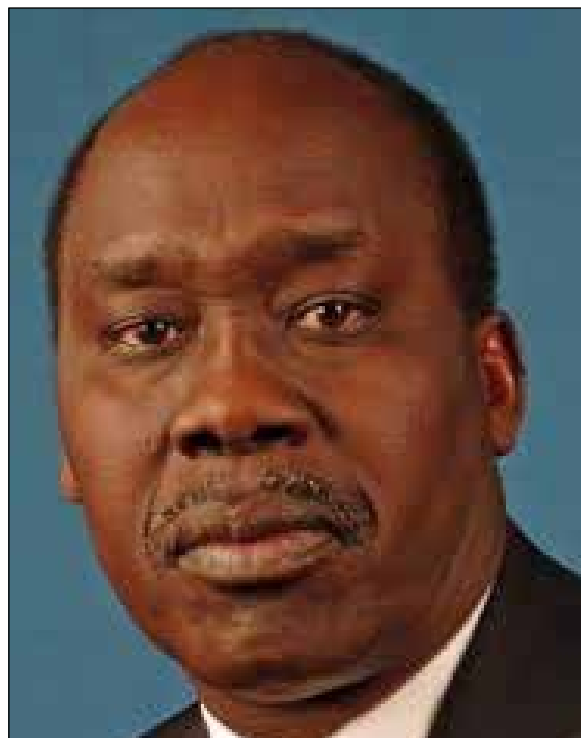
Elsie Kiguli-Malwadde pays tribute to a colleague who will be fondly remembered by all who interacted with him

Professor James Hakim passed away on 26 January 2021. He is survived by a wife and four children. He was a first-class physician, top academic, teacher and mentor, evolutionary innovator, an epitome of humility and an avid health researcher, as described by Professor Midion Chidzondga, a colleague who worked with him for many years at the University of Zimbabwe.

Hakim was an eminent Professor of Medicine (specialised in Cardiology) and past Chairman of the Department of Medicine at the University of Zimbabwe College of Health Sciences (now Faculty of Medicine and Health Sciences), an adjunct Professor of Medicine at the University of Colorado Denver, a Director of the University of Zimbabwe Clinical Research Centre, Site Leader of the Milton Park Clinical Research Site, Principal Investigator of the Zimbabwe Medical Education Partnership Initiative (MEPI) and Junior Faculty Research Training awards, member of the AFREhealth Governing Council. He sat on several health boards in the university. At the African Centre for Global Health and Social Transformation (ACHEST), he is remembered for his leadership of MEPI as part of the governing council. He always gave his opinion in a gentle and humble manner yet his comments were always filled with wisdom. ACHEST was the African Coordinating Centre for the MEPI project which was funded by PEPFAR for 13 medical schools in sub-Saharan Africa to improve medical education in the region. One of the schools was the University of Zimbabwe, where Hakim was the Principal Investigator. Many times, Professor Francis Omaswa, the Executive Director of ACHEST and other members of the team made site visits to University of Zimbabwe and were impressed by his work. Hakim was one of the founding members of the African Forum for Research and Education in Health (AFREhealth) which was birthed out of MEPI, and he contributed greatly to its growth. Through MEPI and subsequent sub-awards he transformed health professions education at the University of Zimbabwe through the establishment of the Research Support Centre, Department of Health Professions Education and Faculty Development programs. At the time of his death he was working towards introducing interprofessional education. One of his research grants culminated in the establishment of a stroke unit concept which is now be rolled out in the country. To date, results show an improved management and care for patients with stroke in Zimbabwe.

James Hakim studied medicine at Makerere University, Uganda and went on to specialise in internal

Dr Elsie Kiguli-Malwadde, Vice President, African Forum for Research and Education in Health (AFREhealth).



medicine at the University of Nairobi, Kenya and the Royal Colleges of Physicians, UK. He went on for further specialisation in Aachen, Germany; Newcastle, Australia and the University of Cape Town. He was an active clinician with interest in HIV/AIDS preventive and therapeutic research including co-infections. He was a member of the Conference on Retroviruses and Opportunistic Infections committee and was a committee member of the Glasgow HIV Therapy Conference, International Conference on AIDS and STIs in Africa and HIV Interest Conference. He was a member of the Governing Council of the International AIDS Society. He maintained successful collaborations with US, UK, Continental European and African partners in research and capacity development. He had more than 150 publications and international refereed journals.

He was a PI in several NIH research capacity building grants in which his mentorship skills remain much valued by both junior and senior faculty in the University of Zimbabwe. An excellent teacher at both undergraduate and postgraduate. He held a postgraduate diploma in health professions education from the University of Cape Town, South Africa.

Fare thee well James Hakim, you are dearly missed by all those you worked with in the different arenas of medicine.

CPD Challenge

Questions

1. Which of the following statements are TRUE or FALSE regarding Maternal Obesity?

- Maternal obesity is a common public health concern and a risk factor for childhood obesity.
- There is a positive association between maternal BMI and human-milk fat but no significant association between maternal BMI and human-milk energy or total protein.
- There is no strong evidence confirming the relation between maternal BMI and variations in human milk energy, fat, and protein content, which have the implications for child growth and development.
- ALL TRUE
- ALL FALSE

2. Indicate which of the following statements are TRUE or FALSE concerning COVID-19 care.

- The use of dexamethasone lowers mortality among those who receive either invasive mechanical ventilation or oxygen alone.
- Early administration of high-titer convalescent plasma against SARS-CoV-2 to mildly ill infected older adults reduces the progression of Covid-19.
- There is now enough empirical evidence to support the use of high dose Vitamin D3 for treatment of moderate to severe COVID-19.
- There is no evidence to show that steam inhalation is beneficial in halting SARS-CoV-2 virus infection in the upper airway mucosae during the initial stages of infection.
- There is no protection conferred by SARS-CoV-2 infection against reinfection.

3. Indicate what is TRUE or FALSE concerning pregnant mothers and their infants.

- Transmission of maternal cancer to their offspring is rare.
- Some cancers transmitted to infants spontaneously regressed, suggesting the existence of alloimmune responses against the transmitted tumors.
- Only copper-Intrauterine devices are currently being used by clinicians in emergency contraception.

- Maternal folic acid (FA) supplementation is known to prevent neural tube defects.
- Higher hemoglobin transfusion thresholds for pre-term infants with anemia may reduce the risk of cognitive delay.

4. Indicate which of the following are TRUE or FALSE concerning COVID-19 treatment.

- Convalescent plasma administered to hospitalised patients has been a very successful treatment.
- Dexamethasone may modulate inflammation-mediated lung injury and thereby reduce progression to respiratory failure and death.
- Asymptomatic COVID-19 patients may still present with massive radiographic findings on chest x-ray.
- Vaccination campaigns for women and children should be specific for each country in order to attain the largest impact.
- ALL TRUE.

5. Indicate which of the following general medicine statements are TRUE or FALSE.

- Once-weekly Semaglutide as an adjunct to lifestyle intervention is helpful in achieving a sustained, clinically relevant reduction in body weight in patients with overweight or obesity.
- Common carotid intima-media thickness is a strong marker of subclinical atherosclerosis.
- Albumin infusion does not offer any superior outcome compared to standard care in patients with decomposed liver cirrhosis.
- Patients put on multiple cardiovascular medications, including any four classes of antiplatelet agents, lipid-regulating medications, angiotensin-converting enzyme inhibitor/angiotensin receptor blockers, beta-blockers, diuretics, and calcium channel blockers with have the lowest risk of mortality, compared to any one class alone.
- HIV vaccine (ALVAC-gp120 regimen) which has been on trial in South Africa and elsewhere does not seem prevent HIV-1 infection compared to placebo trials, despite previous evidence of immunogenicity.

Answers

4. True: b, c, d. False: a, e.

5. True: a, b, c, d, e.

2. True: a, b, c, d. False: e.

3. True: a, b, d, e. False: c.



SPRINT 100

Meet the new premium transport stretcher by LINET

5 FEATURES FOR SAFETY AND COMFORT

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

1.9 million lives saved and counting...

For the past 20 years, MMV and partners have been discovering, developing and delivering new antimalarials to save lives. We will not stop until malaria is defeated.

Help us build
a healthy world
for all

Join
the fight to
end malaria

Defeating Malaria Together
www.mmv.org

MMV  **@20**
Medicines for Malaria Venture