

# 2022 ■ AFRICA DIGITAL HEALTH SUMMIT

(ADHS)



Date:  
**23RD &  
24TH**  
June, 2022

# REPORT

Marriot Hotel Ikeja GRA, Lagos Nigeria

Hosted as a Hybrid event (Physical/In-person and Virtual)



## ACKNOWLEDGEMENT

Africa Digital Health Summit 2022 was made possible through the contributions of the partners to which the organizers are very grateful.

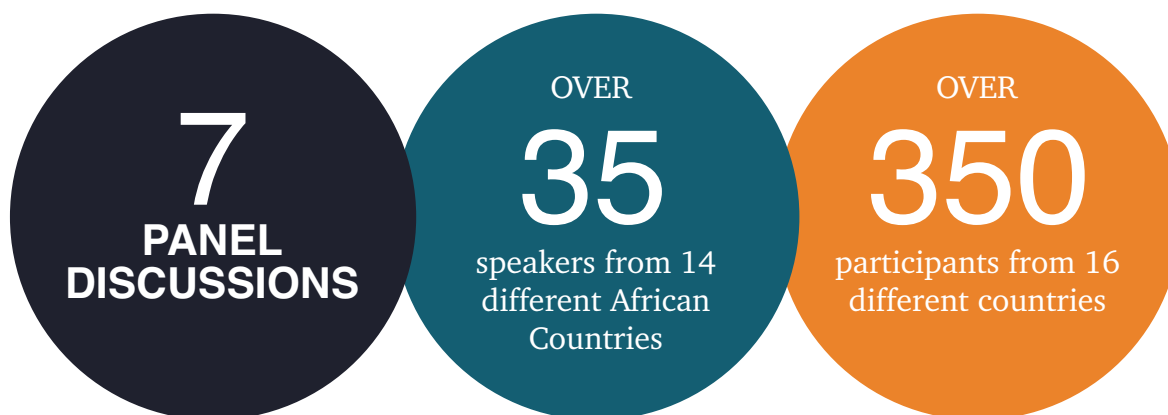


## OVERVIEW

The 2022 Africa Digital Health Summit, is the third edition which was a 2-day event held as a Hybrid event on the 23rd and 24th June 2022. The event was sponsored by Premier Medical Systems, a digital health company leveraging on technology to increase access to quality and affordable care.

The theme for this edition was: FROM RHETORIC TO ACTION: LEVERAGING TECHNOLOGY TO DEMOCRATISE HEALTHCARE. The democratization of healthcare implies accessibility, affordability, availability, and accountability. It involves patient-centered care and empowering patients to become more responsible for their own care. This shift towards more personalized and convenient care is being driven by evolving patient expectations, new and advancing health technology, and the covid-19 pandemic.

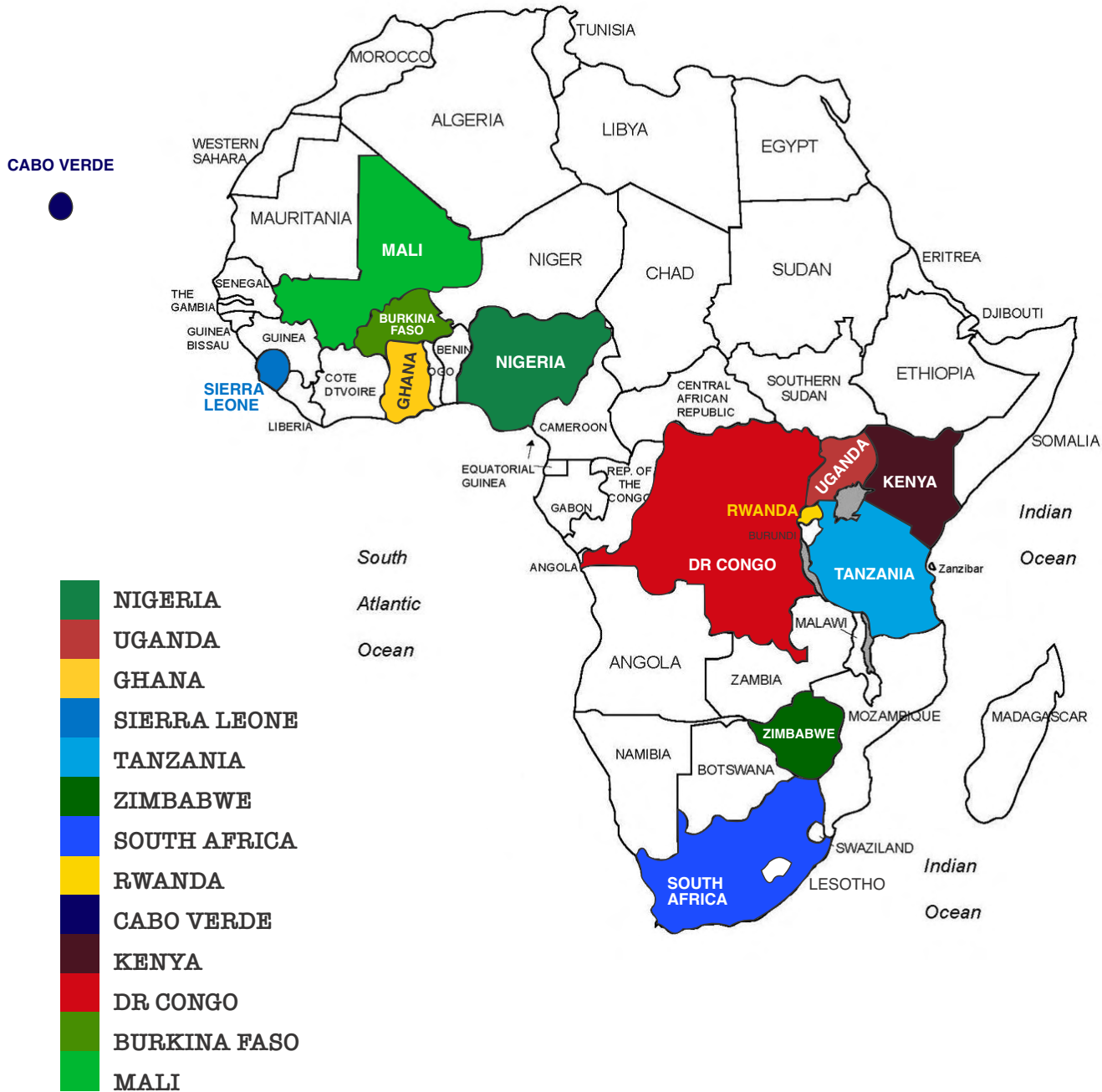
The 2022 edition brought together high-profile speakers and participants from 15 different countries.





# 2022

## AFRICA DIGITAL HEALTH SUMMIT (ADHS)



The Africa Digital Health summit extended to more African countries this year. The participation cut across academia, innovators, practitioners, government, NGOs, and development partners.



## SCIENTIFIC SESSIONS

Each day of the summit kicked off with scientific sessions moderated by Dr Sunny Ibeneme MD Ph.D (Chairman Scientific Committee) and Dr. Arogundade (Digital Health specialist). 11 oral presentations and 3 poster presentations were approved and presented during the summit.



## WELCOME ADDRESS AND KEYNOTE ADDRESS

In his welcome address, the convener, Dr. Niyi Osamiluyi, said Africa Digital Health Summit was birthed from the desire to create a platform, for innovators, academics, researchers, entrepreneurs, regulators, policymakers, and development partners to share knowledge and best practices in Digital Health around the continent. He further said that poor access to care, predominantly out of pocket, and lack of accountability continue to be the common healthcare problems across Africa's Landscape.

Technology wields the power to remove the obstacles and frictions which prevent access to healthcare for all. It is important for Africans working in Digital Health to also have a platform to share knowledge and expertise.

The democratization of healthcare implies accessibility, affordability, availability and accountability. If you are a researcher, innovator, entrepreneur or NGO you are encouraged to submit an abstract for review or take a booth to showcase your work next year. Development partners involved in digital health interventions are invited to talk to us as we prepare for the 2023 Africa Digital Health Summit.

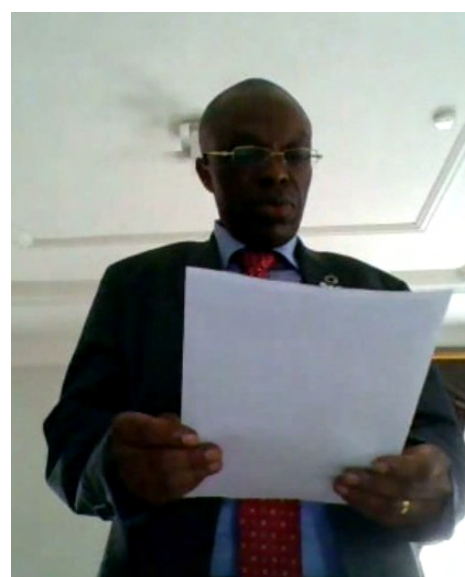


## Keynote by Dr. Walter Kazadi Mulombo (WHO Rep. to Nigeria)

In his keynote address, Dr. Walter Kazadi Mulombo of WHO stated the fact that covid19 has reshaped how providers, patients, and stakeholders approach healthcare. From disease surveillance to detection, treatment, and care, healthcare has evolved with technology; digitization of healthcare is improving access for all.

Harnessing the power of digital technologies is essential for achieving sustainable development goals, including Universal Health Coverage (UHC). The World Health Assembly resolution on Digital Health unanimously approved by Member State in May 2018 demonstrated a collective recognition of the value of digital technology to contribute to advancing Universal Health Coverage and other health aims of the sustainable development goals.

As he concludes his address, he also reiterated that technology possesses the power to remove the obstacles which prevent access to healthcare.





## FIRESIDE CHAT AND PANEL DISCUSSIONS

WITH PROF. AKIN ABAYOMI

Prof. Akin Abayomi Honourable Commissioner of Health, Lagos State talked extensively on how technology was deployed during the covid19 pandemic.



*“When you are dealing with logistical nightmare or a catastrophic event you deal with a lot of moving paths. What you require is real time data. We put together a modelling team even before the first index case, we chose cities like Lagos as modelling samples. Cities like Bombay, Hongkong, Singapore etc*

*“We also put up a digital platform to have the idea of the trend and to transmit information. With this we were able to know by 11pm daily the number of positive cases. This information goes to the Governor and feedback comes back by 1am which will define the management of the cases the following day. We called it 'Incident Command System*

*“Telemedicine became the only option and EKO telemedicine was launched. Disease surveillance is the key, Lagos has the capacity to detect variance.*



## ADHS PANEL DISCUSSION HIGHLIGHT



### THE ROLE OF TELEMEDICINE IN DEMOCRATISING HEALTHCARE

The discussion identified gaps across the healthcare sector in Africa and argued that telemedicine can play a major role in bridging the gap.

#### The issues identified included:

- Difficulty in accessing doctors and healthcare professionals.  
Africa only has 10% of the doctors required
- Long distant travels to healthcare facilities.
- Exposure to counterfeit medicines

#### Opportunities highlighted are that:

- Covid19 catalyzed the adoption of telemedicine and tremendously increased the use of online platforms to consult doctors in Africa
- Africa is one of the fastest growing markets in mobile technology adoption. Over 8 billion dollars are spent yearly on airtime and data subscription.
- Research shows that telemedicine can solve 60% of problems in healthcare

## HEALTHCARE SYSTEM DIGITALISATION: TRANSLATING STRATEGIES TO IMPACT

Panelists selected from the public and private sector shared their perspectives on key considerations on how digital health strategies can translate to impact.

- We have to embrace change and we need to first think about what we need and then think about the means to get it
- There must be blended financing mechanisms - bringing in third-party streams of finance. This would involve the private sector, donors, credit agencies and development partners
- There has to be a certain level of confidence and trust between the government and private sector.
- The ICT department and platform in ministries of health must be well established and empowered for it to endure even after the politicians are gone
- Public servants should be able to use developed apps for healthcare purposes

## LEVERAGING TECHNOLOGY TO ACCELERATE PROGRESS TO UNIVERSAL HEALTH COVERAGE (UHC)

This topic looked into what UHC means and suggestions were made on how technology can be used to achieve UHC

- We cannot talk about healthcare without talking about Universal Health Coverage (UHC) which involves the population, the benefits (access) and the financial protection
- Before Universal Health Coverage (UHC) can be achieved, the public must have confidence in the healthcare sector. People need to trust the system
- Decision support systems and point of care can assist in diagnosis and increase patient confidence and trust in healthcare facilities.
- There is a need for Healthcare facilities at different locations and different levels to be interconnected and to be able to share information
- Technology and digitalization will make it possible for people far away from doctors to have at least some semblance of care.
- Healthcare digitalization has the potential to accelerate progress towards Universal Health Coverage (UHC)

## FUNDING FOR DIGITAL HEALTH INTERVENTION

Leaders with expertise and experience in funding digital health initiatives offered the following key messages on accessing funding for digital health interventions

- When presenting your digital interventions for funding: have a structure in place, a good scalable business plan and ensure good corporate governance
- You must be solving a problem or providing a solution
- Understand the healthcare ecosystem
- Partner with people who are already in the ecosystem
- In delivering your pitch show results that will convince the investors that what you want to do is possible.



## LEVERAGING TECHNOLOGY AND DATA FOR EPIDEMICS AND PANDEMICS

There was never a better time to talk about a topic like this. The following points were made.

- Data important both for action
- Secondary analysis of the available data will help increase surveillance capacity to prepare for next epidemic
- Decentralizing the user and research community will be through community engagement.

## DATA PROTECTION, PRIVACY POLICIES AND REGULATION

We cannot talk about digital health without talking about data protection, privacy policy and regulation. The discussion about data protection brought about these conclusions.

- Data protection is a vital issue in our day-to-day interactions. It became more important with the reliance on technology.
- Health sector could be one of the largest processors of data at various level
- In Nigeria, the Federal Government established the Nigeria Data Protection Bureau (NDPB) on 12th February 2022 to show the importance of data protection
- If you are a data controller, there are certain obligations on you with regards to collection, processing and storage of data. You have the ethical responsibility to protect data you have in your custody.
- There must be awareness of data protection and privacy policy for digital health providers
- Data protection must be taken seriously. All digital health providers must be compliant with the policies on data protection and privacy policy

## NATIONAL/SUB-NATIONAL HEALTH INFORMATION SYSTEM

- In Lagos state, health data is now being transmitted electronically and we are able to see it real-time
- Data collection helps in decision making
- Health facilities must be on the information system platform built by the government

## MULTISTAKEHOLDER EXPERIENCES IN IMPLEMENTING NATIONAL SCALE mHEALTH SERVICE AS A PPP.

### CASE STUDIES FROM SOUTH AFRICA AND RWANDA

#### SOUTH AFRICAN PERSPECTIVE (MomConnect from South Africa)

- MomConnect is a mHealth initiative and intellectual property of the National Department of Health of South Africa aimed at improving maternal, children's and women's health services by registering all pregnant women to receive health messages via mobile phones. The following conclusions were made



- There is a lot of duplication of projects. There should be a database of what is happening in the digital health space.
- The idea is to have a single strategy by merging the eHealth and mHealth strategies because mHealth is a subset of eHealth
- We should not only be asking operators for free services but join the value creation with other service providers when it comes to digital health
- On programme funding it was suggested that one should look for risk-sharing agreements that create long-term possibilities and business models.
- Further research is needed for retrospective analysis of mHealth initiatives and forecasting of the sustainability of current and future mhealth initiatives in South Africa

#### RWANDAN PERSPECTIVE (E-HEZA DATA SOLUTION)

- We learnt that the provider-patient relationship is the cornerstone of successful primary healthcare, but poor local health system design and competing priorities strain this relationship and threaten its effectiveness.



## THE REGIONAL LAUNCH OF THE LANCET/FINANCIAL TIMES COMMISSION REPORT: GROWING UP IN A DIGITAL WORLD

PHARM. NJIDE NDILI, COMMISSIONER LANCET & FT COMMISSION ON DIGITAL HEALTH/AI JOINED VIRTUALLY FROM SWITZERLAND



The summit hosted the regional launch of the Lancet/Financial Times Commission report 'Growing up in a Digital World'.

The panelists for the session included Dr Abayomi Sule, CEO Carepay; Adeola Alli, Founder, One Health and Pharm. Njide Ndili, Commissioner Lancet and FT commission on Digital Health/AI who joined virtually. The session was moderated by Dr Niyi Osamiluyi, Convener, Africa Digital Health Summit (ADHS).



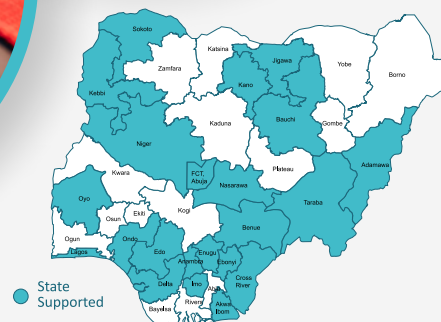
Saving lives. Improving health.  
Transforming futures.

Jhpiego is an international, non-profit health organization affiliated with The Johns Hopkins University, Baltimore, USA. For more than 45 years and in over 155 countries, Jhpiego has worked to prevent the needless deaths of women and their families

We use innovative approaches, put research into practice and develop creative solutions to improve health care services, and strengthen the capacity of countries like Nigeria to Saving Lives; Improving Health and Transforming Futures of women and their families.

### Our Footprint and Impact in Nigeria

Jhpiego started working in Nigeria in the 1970s initially by strengthening pre-service education with special focus on reproductive health in some Nigerian Universities. University College Ibadan at first and later Ahmadu Bello University, Zaria. Over the years, Jhpiego's support in Nigeria has ranged from training of frontline healthcare workers to the implementation of several successful health projects and programs.



### Technical Expertise



Family Planning  
and Reproductive  
Health



HIV/AIDS and  
Infectious  
Diseases



Digital  
Health



Quality of  
Care



Malaria  
Prevention and  
Treatment



Maternal  
Newborn and  
Child Health



Gender Equality/  
GBV Prevention  
and Response



Public Health  
Event Based  
Surveillance



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## ■ Developing a Governance Framework for Data Science Health Research

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**Introduction:** Data science health research (DSHR) has enormous potential for discovery and optimization of healthcare. Data science can be used to aggregate huge amounts of data from multiple levels of the health care system and other spheres of human activities to make discoveries and inferences. However, it raises substantial ethical, legal, and social issues (ELSI) especially in LMICs like Nigeria. Data used for DSHR may not have been preceded by explicit consent or may be regulated differently depending on its source. This raises questions about the ELSI issues related to the use of such data. The BridgeELSI Project is focused on developing novel ethical governance framework for DSHR by engaging key stakeholders in Nigeria.

**Methods:** Legal research and analysis approaches, including text analysis and case law research were used to review and assess legal rules applicable to DSHR. Primary data were sourced using Nigerian Law Report and LawPavillion Law Report. Other secondary sources were accessed using Google Scholar, Jstor, PubMed, and HeinOnline.

**Results:** Seventy-two statutes (n=32), regulations (n=28), and caselaw (n=10) were identified, thematically analysed, and categorized in line with the objectives of the study. Preliminary literature review of relevant scholarship reveals areas of consensus and gap in legal jurisprudence on consent to secondary uses of unconventional data in DSHR. Indigenous customary law jurisprudence on privacy were found to be instructive for DSHR.

**Conclusion:** There is the need for new governance frameworks incorporating existing laws but including broad stakeholders' engagement to ensure protection of participants, researchers, and their products.

**Keywords:** Data science, health research, data protection, BridgeELSI





## SmartHIV Solution: An integrated technology supporting all stakeholders, for health system strengthening, patient's empowerment, clinical decision making and management of HIV Services

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**Objectives:** In developing countries, digital health innovation (DHI) is rarely used to empower patients and support other stakeholders towards the delivery of quality health services for people living with HIV (PLWH) due to poor design. We investigated the utility of integrated DHI (SmartHIV Solution) to empower the healthcare systems and PLWH.

**Methods:** SmartHIV Solution has four distinct modules: BSmart Chart App (BSC), SmartHIV:- Clinician, Manager and Auditlytics and Trialist. Correspondingly, each module has unique functions: patients' disease management, clinical decision-making, simulation-based solution for management of hospitals and program monitoring and evaluation. We deployed BSC among 93 PLWH in Nigeria and Kenya. Data was gathered using a structured questionnaire. SmartHIV manager was used to explore the potential impact of BSC as an intervention.

**Findings:** There were more participants from Nigeria (89.2%) than Kenya (10.8%), and more females (71.0%) than males (29.0%). Majority (81.71%) are aged 25-54 years. Results for BSC revealed desirable features with high satisfactory coefficients which include medication and appointment reminder (85.0%), monitoring regular outcomes (viral load suppression) (84.0%), support for daily management of HIV (80.0%), data security and privacy (83.0%), real-time connection with health professional (81.0%), information on food, HIV-drugs and co-medication (84.0%) and credible information about HIV (83.0%). Evaluation of scenario in SmartHIV manager with attention to delivering lab-results via BSC, reduce frequent visits to clinics and community pharmacy dispensing, we achieved reduction in frequency of visits (14.0%), doctors (39.0%), nurse's workload (42.0%) and save 3.0% of total cost after accounting for cost of BSC intervention and mobile phone acquisition expenses. According to data amongst regular BSC users, 87% reported currently suppressed.



**Conclusion:** The SmartHIV Solution represents an integrated DHI that empowers PLWH, supports clinicians, health managers and policy makers in treatment, management and efficient utilisation of resources to end the HIV epidemic.

**Keywords:** DHI, SmartHIV Solution, HIV, PLWH, Stakeholders, Developing Countries

## ■ Social media use for health communication in a pandemic: implications for public health agencies in Africa

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**Introduction:** The wide reach of social media (SM) has stimulated the interest of public health agencies (PHAs) to use the platforms for dissemination of relevant health messages in a pandemic. The growing value and relevance of SM to research and management of public health emergencies by PHAs was demonstrated.

**Objectives:** This literature review explores the potentials and benefits of SM in public health emergencies in eliciting desirable societal behaviour responses.

**Methods:** Seven academic database searches were conducted on 12 March 2022 for a scoping review of published articles since the advent of SM with relevant keywords. Study inclusion criteria were articles that (i) examined/evaluated messages from PHAs posted on SM for impact on respondents/public/society, (ii) focused on the use of SM platforms for healthcare messaging of acute communicable diseases of pandemic proportion, (iii) used data sourced through SM. A content analysis of the selected papers followed.

**Results:** Eighty-five papers were identified. The results revealed that 62 focused on PHAs of single countries (19), with no African country receiving attention. Eighteen others examined PHAs in multiples countries (40), including 23 sub-Saharan countries. Publication started in 2015, but the majority from 2020. COVID-19 dominated focus; others included Ebola (11), Zika (6) and MERS (1). Research was done with data from 7 SM platforms: Twitter (49), Facebook (27), Instagram (7), YouTube (6), Weibo (4), TikTok (3) and WeChat (2).

**Conclusion:** Increasing numbers of people are connecting with SM channels of PHAs for first-hand updates. The SM activities of PHAs also encourage people to share such posts with others in their network as they consider them to be authentic and reliable. Findings revealed paucity of studies on Africa's PHAs, however. Stakeholders in Africa's health sector should channel resources to cover the gaps in research to enhance the practice and policy of SM health communication.

**Keywords:** Social media, public health messages, public health agencies, public health emergencies, Africa.



# Making Health Markets Work in Nigeria...

## PharmAccess: A Proven Integrated Approach

We passionately believe that more access to quality healthcare is achievable by simultaneously addressing supply and demand constraints and consistent technological innovation.

At PharmAccess Nigeria, we aim to innovate and catalyze practical changes that can be scaled to enable more access to better healthcare services for all Nigerians. These interventions include improvements in innovative financing mechanisms such as health insurance, quality standards for quality improvement and quality assurance in the healthcare delivery system using our ISQua accredited standards SafeCare. In addition, the Medical Credit Fund (MCF) has a strong presence in Nigeria to enable access to finance for the healthcare sector. MCF is a blended financing vehicle that collaborates with local financial institutions to provide access to credit in the private health sector.

PharmAccess Nigeria works closely with both private and international development partners to achieve universal health coverage by 2030 through strategic partnerships and collaborations including the Health Federation of Nigeria (HFN), a coalition of Nigerian private healthcare sector stakeholders that advocates for the health sector in Nigeria.

### Our activities include:

- ✓ Regulatory support to the state provider accreditation & empanelment agency
- ✓ Demand-side financing activities
- ✓ Provider assessment and capacity building of state quality assurance teams
- ✓ Access to Finance framework to encourage private sector participation in the management of government-owned primary healthcare centers.

Our goal is to provide technical assistance to states seeking to operationalize their mandatory health insurance law; deepen engagements with federal and state Ministries of Health and primary healthcare development agencies to scale SafeCare methodology in Nigeria, leverage on the digital and mobile technology innovations to achieve scale, work with the state government to design and roll out the Access to Finance Scheme for Health SMEs under a Public-Private Partnership (PPP) arrangement.



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## ■ Experiences from developing strategic recommendations to enhance the adoption and implementation of digital health in African countries

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**Introduction:** Across the Africa, e-health is emerging as a powerful strategy to help transform the health system and improve the health of communities. E-health holds potential for advancing health equity through better collection, use, and sharing of information. Adopting and using eHealth services and applications requires major organizational changes. The BETTEReHEALTH project assesses the human, technical and public policy factors from four African countries, Ghana, Ethiopia, Tunisia and Malawi, to identify the set of eHealth components that should be prioritized on the national eHealth vision.

**Methods:** Using the National eHealth Strategy Toolkit introduced by WHO and ITU, we established the strategic context, which describes the priority health system goals and challenges that eHealth could help to address across the building blocks defined in the toolkit. Internal assessment and consultation with relevant stakeholders are approaches employed to gather the knowledge of the eHealth components and current eHealth environment assessment of opportunities, gaps, and potential risks and barriers from the four African countries.

**Results:** The result shows that Ghana, Ethiopia, Tunisia and Malawi have similar national eHealth visions. Countries have similar risks and barriers for eHealth implementations which gives the opportunity to develop strategic recommendations across the common eHealth components.

**Conclusion:** Strategic recommendations provide a starting point and a path forward for the priority settings for adoption and implementation of eHealth in African countries. Even though there are differences among the African countries in their particular challenges in adopting and using eHealth, these recommendations can direct the Ministry of Health of African countries to develop their strategic eHealth implementation plan and monitoring and evaluation framework.

**Keywords:** eHealth, recommendations, African countries, BETTEReHEALTH



## ■ Effect of Training Primary Healthcare Workers for Remote Consulting with Patients in Ibadan, Nigeria – the REaCH Trial.

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**Introduction:** The COVID-19 pandemic focused attention on Remote Consulting (RC) in healthcare delivery as a way to reduce risks of disease transmission and keep health systems functioning. High-income countries rapidly deployed RC while low/middle-income countries (LMIC) have had more limited success in doing so, although digital and telecommunication infrastructure exist for delivering RC in LMICs and could boost the low level of universal health coverage. This study assessed the effect of training primary health care workers to deploy RC in Ibadan, Oyo State, Nigeria.

**Methodology:** The REaCH trial was a stepped-wedge cluster randomised trial of RC training, conducted over 18 months in 35 selected Ibadan primary healthcare centres (PHCs) grouped into 20 clusters. Two clusters of PHCs were randomised to receive REaCH training sequentially each month over 10 months. Training was delivered remotely, in two tiers, using Moodle and WhatsApp to 115 healthcare workers. The trial data were obtained through telephone structured interviews among patients (15 per cluster) who had consulted remotely and/or face-to-face for the trial period. The feasibility of REaCH intervention was measured using Feasibility of Intervention measure (FIM) among the HCW.

**Findings:** A total of 115 healthcare workers (20 Tier 1; 95 Tier 2) were trained. There was a four-fold increase in the rate of RC across all clusters included in the study after training ( $RR=4.44$ ,  $p=0.01$ ), without any adverse effect on prescribing ( $RR=1.05$ ,  $CI: 0.60, 1.14$ ), and patients' trust (mean difference of 0.05,  $CI: -0.45, 0.42$ ) in the healthcare system. The feasibility of REaCH training is high (mean of 17.53 of 20). REaCH training also increased the health workers' confidence, esteem and job satisfaction.

**Conclusion:** Tanzania, University of Warwick, United Kingdom, \* emetheodora@gmail.com; +2348055304266 REaCH training provides a viable curriculum for training Nigerian healthcare workers in RC. The REaCH trial confirms that remote consultations for delivering care at primary healthcare level in Nigeria is feasible.





## Local community digital health pilot

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**Introduction:** Company: We are a Google- backed Ivoirian Health-Tech startup addressing the very urgent need to increase access to essential healthcare in low-income communities. Our mission is simple; make access to preventive health services the norm for exactly 100% of the world's population.

**Mission:** Our mission is to normalize access to quality care across low to middle income countries by introducing software applications that are truly inclusive, despite financial or technological barriers.

**Objectives:** Address the challenge of poor data management which is linked to increased medical errors & high mortality rates.

Low doctor-patient ratio linked to diminished quality of care and health worker burnout

Cash fraud in billing, drugs supply chain and the insurance claims process linked to loss of revenue

Avoidable deaths and poverty linked to a lack of patient access & preventive care services.

**Methods:** EMR/Telehealth Tool; Our EMR app will be used on-site and community health staff to:

connect with people needing care

manage health data efficiently

seamlessly handoff of acute/chronic cases to regional, referral hospitals for continuous care

extract anonymized data for reporting on # of patients seen; common symptoms; reason for the visits, lab test summaries etc.

### Patient Recruitment tool

With WhatsApp integration, we empower community to reach the healthcare teams for first contact & follow-ups

High level project outline

1 week of clinical assessment (learn clinical workflows, interviewing key stakeholders, capture benchmarks, define expected KPIs)



3 weeks; onboard users, 1 day training, shadow & support

1 week of data consolidation and verification, including presentation of results to key stakeholders

### Results (expected):

PATIENT RECRUITMENT – 34%

Increase patient access to your services using accessible and commonly used technologies

HEALTH OUTCOMES – 67%

Improve average patient intake and encounter times with frictionless digital clinical workflows

REVENUE OPTIMIZATION – 44%

Reduce revenue loss by introducing transparency & efficiency in your billing and claims processes

### Conclusions:

**Digitize:** Optimize the management of health data within clinical settings to improve the quality and accuracy of care delivery.

**Connect:** Bridge the gap between care recipients & the healthcare network, particularly within remote regions.

**Standardize:** Introduce transparency and predictability across all data exchanges to combat loss in revenue, fraud & data loss.

Maximum of 5-6 keywords

[#socialimpact](#)

[#digitalhealth](#)

[#preventivehealthcare](#)

[#betatesting](#)

[#primarycare](#)

[#communitydevelopment](#)



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## ■ Digitizing trainings: experience from the mobile Family Life and HIV Education training study among teachers in Oyo state, Nigeria

1\* 1,2 1,2 3 Adebayo Emmanuel , Olaniyan Halimat, Adesola Olumide, Ogunniyi Adesola, Fawzi Wafaie

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Trainings within healthcare systems are usually costly and difficult to keep up with especially in low resource settings. Despite the existence of digital and telecommunication infrastructure that can aid the delivery of training, very few curriculum-based interventions have successfully used mobile technology in training delivery. This study was developed to improve the capacity of teachers to teach Family Life and HIV Education (FLHE) through mobile application software. The purpose of the mobile app was to serve as an interface for accessing curriculums, taking assessments, and communications between the participants and moderators.

The process followed two major steps: 1) Formative evaluation and 2) Technical evaluation. In-depth interviews were conducted among teachers, state officers and proponents of FLHE within Oyo State, to determine the status of FLHE training within the state. The mobile app was developed by a software developer using information obtained in step one. The app was then tested among a selected group of teachers and adjustments were made following suggestions from the pilot. A process evaluation was conducted after the intervention period to evaluate the mobile application. Data collection is ongoing, therefore preliminary qualitative data is being presented here. However, we should have more data before the conference.

A total of 50 teachers (40% Males) were included in the mobile application group of the study. Most of the teachers were happy with the platform and commented that they preferred the mobile application as compared to the face-to-face interactions. Participants mostly preferred the mobile application because it afforded them the opportunity of participating at their pace and within their free time.

Conclusively, mobile application was widely accepted by the teachers and the school authorities. Participants had little to no problems interacting with the mobile app interface. We believe that our data will prove that digitisation of trainings does not reduce the quality of information gained.

Keywords: mhealth, ehealth, HIV prevention, adolescents, FLHE, CSE



## Developing the BETTEReHEALTH registry for eHealth policies and solutions in Africa

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**Introduction:** The potential of ICTs to make healthcare more accessible, affordable, and effective has led to a proliferation of innovative ideas which are being implemented in LMICs. Many countries do not have repositories of these systems, consequently it is hard to know when efforts are duplicated by different innovations. There are also cases where different countries would start developing, from scratch, an innovation that already exists in another country. BETTEReHEALTH is currently developing an eHealth registry with information about eHealth solutions and policies in Africa. The registry will assist in: identifying best practices and lessons learned; preparing capacity-building for researchers; facilitating decision making for policy makers and implementers; helping countries to know which innovations exist.

**Objective:** Develop an eHealth registry to collect and share information related to the implementation of eHealth solutions and policies. The registry supports learning from existing experiences, and exchanging knowledge within and across nations.

**Methods:** The registry is being developed using mixed methods involving both BETTEReHEALTH partners, and external actors like the Ministry of Health in various African countries, through discussions in video meetings, digital workshops, webinar and prototyping. The registry data is being collected using desk research/review, in-person data collection and crowdsourcing. The data is being checked for quality issues through a review process by the BETTEReHEALTH partners.

**Results:** Information about 167 eHealth solutions and 72 eHealth policies have been collected so far, however the access to data has been cumbersome, and the data collected is therefore sparse. In addition to the BETTEReHEALTH registry there exist different international repositories, such as the WHO Digital Health Atlas, as well as local registries in some countries covering different information needs for different types of users.

**Conclusion:** Registries of eHealth solutions seems to be an important resource for improving the quality and the sustainability of eHealth in African LMICs. In addition, our eHealth policy register is unique, and we expect that it will also contribute to better eHealth. Finally, we see a lot of potential in understanding better the needs of different users of eHealth registries and in coordinating better the data exchange across registries.

**Keywords:** eHealth solutions, eHealth policies, ICT for development, digital public good.



## Experiences from developing strategic recommendations to enhance the adoption and implementation of digital health in African countries

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**Introduction:** Across the Africa, e-health is emerging as a powerful strategy to help transform the health system and improve the health of communities. E-health holds potential for advancing health equity through better collection, use, and sharing of information. Adopting and using eHealth services and applications requires major organizational changes. The BETTEReHEALTH project assesses the human, technical and public policy factors from four African countries, Ghana, Ethiopia, Tunisia and Malawi, to identify the set of eHealth components that should be prioritized on the national eHealth vision.

**Methods:** Using the National eHealth Strategy Toolkit introduced by WHO and ITU, we established the strategic context, which describes the priority health system goals and challenges that eHealth could help to address across the building blocks defined in the toolkit. Internal assessment and consultation with relevant stakeholders are approaches employed to gather the knowledge of the eHealth components and current eHealth environment assessment of opportunities, gaps, and potential risks and barriers from the four African countries.

**Results:** The result shows that Ghana, Ethiopia, Tunisia and Malawi have similar national eHealth visions. Countries have similar risks and barriers for eHealth implementations which gives the opportunity to develop strategic recommendations across the common eHealth components.

**Conclusion:** Strategic recommendations provide a starting point and a path forward for the priority settings for adoption and implementation of eHealth in African countries. Even though there are differences among the African countries in their particular challenges in adopting and using eHealth, these recommendations can direct the Ministry of Health of African countries to develop their strategic eHealth implementation plan and monitoring and evaluation framework.

**Keywords:** eHealth, recommendations, African countries, BETTEReHEALTH





## KEY COMMENTS AND OBSERVATIONS

- Digital health technology is the way forward; it has come to stay, and we must embrace the change. First, we need to think about what we need and then agree on the means to get it.
- Public servants should be able to use developed apps for healthcare strategy and care delivery purposes.
- We cannot talk about healthcare without talking about Universal Health Coverage (UHC) which involves the population, the benefits (access) and the financial protection. However, before Universal Health Coverage (UHC) can be achieved, the public must have confidence in the healthcare sector and people need to trust the system. Technology and digitalization will make it possible for people far away from doctors to have at least some semblance of care. Healthcare digitalization has the potential to accelerate progress towards Universal Health Coverage (UHC).
- When presenting your digital interventions for funding: have a structure in place, a good scalable business plan and ensure good corporate governance. For program funding, entrepreneurs must look for risk-sharing agreements that create long-term possibilities and business models.
- Digital interventions need to be solving a problem or providing a solution to an existing problem to be viable for funding.
- Entrepreneurs must understand the healthcare ecosystem and partner with people who are already in the ecosystem. In delivering pitches, they must show results that will convince the investors that what they want to do is possible.
- In the management of epidemics and pandemics, data is important both for action and information. Secondary analysis of the available data will help increase surveillance capacity to prepare for new outbreaks.
- Data protection is a vital issue in our day-to-day interactions. It became more important with the reliance on technology. Decentralizing the user and research community will be through community engagement.
- The Health sector should be one of the largest processors of data at all the various levels.
- In Nigeria, the Federal Government established the Nigeria Data Protection Bureau (NDPB) on 12th February 2022 to show the importance of data protection. Data controllers must be made aware of the obligations on them with regards to collection, processing, and storage of data. They have the ethical responsibility to protect data in their custody.



## ACTION STEPS AND RECOMMENDATIONS

- There must be blended financing mechanisms - bringing in third-party streams of finance. We must involve the private sector, donors, credit agencies and development partners.
- There must be a certain level of confidence and trust between the government and the private sector. The ICT department and platform in ministries of health must be well established and empowered for technology to endure well after the politicians are gone.
- Decision support systems and point of care can assist in diagnosis and increase patient confidence and trust in healthcare facilities. There is a need for healthcare facilities at different locations and different levels to be interconnected and to be able to share information.
- There must be awareness of data protection and privacy policy for digital health providers. Data protection must be taken seriously. All digital health providers must be compliant with the policies on data protection and privacy policy.
- There is a lot of duplication of projects. There should be a database of what is happening in the digital health space. The idea is to have a single strategy by merging the eHealth and mHealth strategies because mHealth is a subset of eHealth.
- Further research is needed for retrospective analysis of mHealth initiatives and forecasting of the sustainability of current and future mhealth initiatives in Africa.
- The provider-patient relationship is the cornerstone of successful primary healthcare, but poor local health system design and competing priorities strain this relationship and threaten its effectiveness. Strategies need to be deployed to strengthen this relationship for optimal outcomes.
- There needs to be active efforts amongst stakeholders in the digital health space in Africa on ways to learn, grow and collaborate with one another, leveraging on existing digital interventions as the way forward for maximising the direct application of technology for healthcare solutions. Let us start the conversation and push the African agenda now!!!!





## PHOTO GALLERY DAY ONE





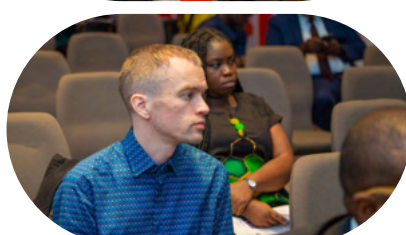
## PHOTO GALLERY DAY ONE





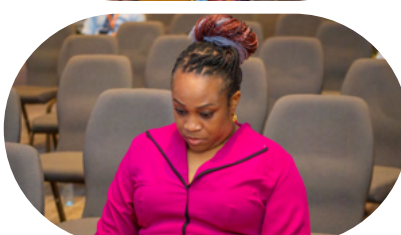
## PHOTO GALLERY

DAY TWO





## PHOTO GALLERY DAY TWO



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