Leveraging Technology in Healthcare Provision for Developing Countries
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Leveraging Technology in Healthcare Provision for Developing Countries

- Background
- Trends
- Mobihealth’s MODEL
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- Conclusion/Recommendations
**The Problems:**

- 95% of 1.2bn people lack access to basic healthcare
- 25% global disease burden
- Only 3% world's doctors
- ~300k women die pa from pregnancy related Dx. 2/3 are from Sub Sahara Africa
- Doctor: People 1:25,000 vs 1:60 West
- Poor healthcare infrastructures
- Counterfeit medicines
- High cost of treatments
- >95% lack health insurance

**Mobihealth’s Solution:**

- Mobihealth’s Integrated telemedicine app
- >100k multilingual doctors globally
- 24/7 access via smart phone/telehealth clinics
- Low cost subscription plans- all inclusive cost
- Telehealth clinics for rural areas
- Treatment speed up 6x, Waiting time down 99.8%
- Counterfeit medicine detector- RxAll
- POCT and Physical Exam
- Health education, local capacity building
- Free data

**The Opportunity:**

- Explosive Mobile adoption
- ½ billion mobile users
- >300M smart phone users, 700m by 2025
- Nigeria: Spends $8.8bn pa on airtime/data
- $1.3bn pa on medical tourism
- High unmet need, untapped market
The Guardian

Nigeria to import doctors from Europe, United States

Plan will curb medical tourism, says minister

Nigeria writes off $1.2 billion of African debt

Nnamdi Kanu released with incautious conditions

Behind the Scene

Doctor's exodus now more alarming, says NMA

60 doctors dump Lagos hospitals every six months – NMA
700 doctors leave Nigeria annually, says 1st Vice-President
All my mates have left Nigeria – United States-based doctor
Trends
Latest Advances in Health Tech

- Artificial Intelligence (AI) and Machine Learning (ML).
- Internet of Medical Things (IoMT)
- Augmented Reality (AR) and Virtual Reality (VR)
- Blockchain and data security
- Health-tracking apps
- Therapeutic apps
- Smart hospitals
- Robotics
- Electronic Health Records (EHR)
- Telehealth

- Technology can help accelerate attainment of UHC for resource poor settings; start-ups identifying these challenges are creating solutions.
- There are 25K to 40K mobile applications currently being deployed or being worked on in Africa.
- From drones to apps and computer-controlled vending machines — technology is helping to break down barriers and provide access to medical care and vital medicines for many more people.
Health-tech Landscape in Africa: Flying Medical Aid

A. **Flying Doctors**: 1st indigenous Air Ambulance in West Africa. 10yrs, 20 Aircrafts, 47 staff, 44 are medics.

A. **Zipline**: California based start up started delivering blood and vaccines using drones in Rwanda since 2016. Expanded to Ghana in April. Reached 13mn people globally, plan to reach 700m in the next 5years. 30mins delivery timeline.

A. **South African National Blood Service (SANBS)** to begin using drones to transport blood to tackle the high mortality rate among women during childbirth across the continent.
Diagnostics & Remote care

- **MobihealthConsult (Nigeria-Global)** is Africa’s 1st fully integrated App addresses multiple pain points.

- **Peek (Kenya):** a smart-phone based portable eye examination kit for comprehensive eye examinations in even the remotest of settings.

- **Babylon Health (UK, Rwanda):** Telemedicine Within 1year 2m subscribers. Local Patient to local doctors. 1500 doctors 12m people.

- **Hello Doctor** a South African app, provides essential healthcare information, access to advice and a call back from a doctor. $5/m

- **Omomi (Nigeria)** helps pregnant women and mothers in Nigeria monitor their children’s health and chat with doctors on a pay-as-you-go or subscription basis. $5/m

- **Matibabu (Uganda):** App based malaria diagnosing tool. It clips on a finger, and by shining a red beam of light on the skin it can detect Plasmodium 83% Accuracy.

- **Ilara Health (Kenya):** Making low cost AI and tech-powered diagnostic test available to millions of people across Africa for common blood tests.
Medication Apps

- **RxAll**: World 1st counterfeit medicine detector
- **Medsaf (Nigeria)**: Enterprise medication supply chain solution to fight counterfeits and reduce cost.
- **Sehatuk (Morocco)**: Provides huge database of drugs available in Morocco, dosages and prices. Useful info on calling for ambulance service and medical insurance.
- **Pelebox (SA)**: A smart locker system that dispenses medicine to patients with chronic illnesses. SMS with a unique code opens the locker. x13 machines operating in Gauteng, South Africa. Plan to scale to 50, to reach 1,000 communities over the next five years.

Educational Apps

- The community tablet – is focused on five key areas: public health, digital access, family planning, banking and voting.
- Runs on up to six large, solar-powered LCD screens and is transported on a trailer, can be attached to anything from a car to a donkey, enabling it to reach even the most remote or isolated rural communities.
- 1m across 90 communities since 2015.
TELEMEDICINE:
A $130bn Global Market Opportunity

MOBIHEALTH LAUNCHES REVOLUTIONARY TELEMEDICINE APP IN AFRICA

VIDEO CONSULTATION
ANYTIME, ANYWHERE

For more information
Contact us via email at info@mobihealthinternational.com
or call +447753656688
• **Game changer in Telemedicine**: Africa’s 1st fully Integrated Tele health company providing one stop portal to all user’s healthcare needs.

• **Addressing multiple pain points**: Shortages of doctors and brain drain, exposure to counterfeits/unqualified personnel, lack of health insurance, high treatment cost, lack of infrastructure, distance and language barriers.

• **Increasing healthcare access** to millions of people with medical experts globally through mobile phones and telehealth clinics 24/7.

• **Offering On demand Consultations** – Access to >100k board certified multi lingual medical Specialists worldwide especially from Western Countries 24/7 as easy as they do mobile banking an flight bookings

• **Offering fast and secure** exchange of health records for better clinical outcomes

• Offering **Telehealth Walk-in clinics** to complement virtual services

• **Mobile and telehealth clinics** to serve those in rural, hard to reach areas

• Pharmaceutical chains and other value ads within 2nd year of operation.

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**Winner- Zenith Global Health Award 2019**

**Mission**

Our mission is to provide people in developing countries timely access to quality healthcare services from around the world when they need it in the most cost effective way through telemedicine!
Mobihealth’s Integrated App

- Video Consultation
- Diagnostics
- Prescription
- Referrals
- Follow up
- Home Health
- Home delivery of medications
- Health Education resources; Primary and Secondary Prevention.
- Local Capacity Building
Mobihealth’s integrated telehealth for resource poor settings

✓ One stop solution

✓ Cloud enabled remote comprehensive physical Exam Tools (Tytocare, Medwand) allows a doctor to obtain comprehensive Physical exam data remotely.

✓ Point of Care Testing, POCT: AI + blockchain powered diagnostic equipment. USS, Colposcope.

✓ Disease screening and Surveillance

✓ Counterfeit Medicine detector: RX All, MedSaf

✓ SMS Reminders for maternal and child health

✓ Drug Inventory monitor

✓ ALL Inclusive low cost subscription plans

✓ Robotic Pharmacy chain

✓ R&D
MOBILE CLINICS & TELEHEALTH UNITS FOR RURAL AREAS

Equipped with app compatible remote physical examination devices such as stethoscope, otoscope, general examination camera, dermoscope, an ultrasound and or colposcope.

Women, infants, and children, nutrition programs, management of NCDs.

Immunization, health screenings, health education.

Maternal-fetal medicine specialist for women with high-risk pregnancies. Reduce preterm labor rates.

Referral to local specialty services if needed.

Local capacity building and training for sustainability.
Traction & Expansion

>12K Followers on Facebook. Survey >80% will use telemedicine.

Subscription based model, up to 6 members of a household

Africans in the diaspora: A big target market for Mobihealth. For families in Africa and personal use when travelling to Africa.

Projected 200K subscribers and 10% annual growth. Target 2M subscribers by 2021.

EOI from PHN (700+ LGA in Nigeria)

Partnership discussions at National and State levels

Pilot schemes; Prisons, Market, villages (Nov-Jan 2019)

Traction from corporate bodies MOH, SMEs, HNWI, Diaspora

Expansion into Kenya, Uganda, Sierra Leone, Ghana…other African countries, Asia, middle East.

Europe: Irregular Immigrants and other underserved population
Growing with Google
Google Digital Accelerator Programme

Rachel Fahey
Digital Strategy Consultant
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Dr Funmi Adewara is a prime example. Fifteen years ago she was one of the roughly 2,000 medical workers who leave Nigeria each year for the west. “I trained in Nigeria, and then I came to the UK – but I’m very passionate about changing this poor narrative, because I’ve experienced it first hand,” she says. “I’ve had relatives who have suffered from poor healthcare services and I’ve treated patients who...”
Challenges

- **Slow Adoption: Lack of Awareness**
- Africa is diverse; failure to recognise the unique contextual factors associated with tech deployment.
- Low internet and digital literacy especially women.
- Failure to tailor messages to local communities; cultural nuances, languages
- Poor Infrastructure - broadband, electricity, water, diagnostic centres, hospitals
- Policies - Privacy, security, Licensing
- Funding and Scalability
- Cost & Affordability
In 2018, $1.16m was invested in African start-ups (108% compared to 2017), compared with £5.5bn UK start ups in 7 months of 2019.
Innovative Healthcare Funding – for UHC and inclusive growth!

- A healthy workforce are crucial to realign economies for inclusive growth. Gross underfunding of Healthcare budgets across LMIC.
- Abuja Declaration: In 2001, Nigeria, along with all African Union countries, pledged to spend 15% of their annual budget on health care.
- 18 years after, not even close to reaching half of that goal. (Nigeria ~4.6%).
- This results in 70% of medical spending being OOP = debt or poverty.
- Nigeria needs to spend $2bn pa on health; in 2017 total spend was $920m only.
AUC need to leverage Innovative Healthcare Funding – for UHC and inclusive growth!

**Mobile Levy:** Decentralized, transparent healthcare financing model
Nigeria needs to spend $2bn pa on health!

a) Nigeria: 173m mobile users of a 200m population (87% penetration). $5 pa levy= $865m

b) $8.8bn pa spent on airtime/data. 10% deduction towards healthcare= $880m. Total $1.7bn that can be channelled towards healthcare.

**Diaspora remittances:** Africans in the diaspora remitted $84bn in 2018.
Nigerians $25bn. 20% ($5bn) was for Healthcare needs of families; Unstructured!
Recommendations

- Blueprint for the adoption of digital health in resource poor settings
- Aggressive digital education; Local content adaptation
- Africa is diverse: Need App programmed in African languages with local content adaptation to widen reach and expedite adoption
- Need to engage developers to allow integration of other apps to reduce inconvenience for patients and medics.
- Empower more Women & children with digital tools
- More investment in Infrastructure
- More investment in Female-led entrepreneurs and health tech
- Policies- Privacy, security, licensing
- Cost: AUC to consider innovative healthcare financing models
Conclusion

• Tech space....A fast moving train-not slowing down.

• Africa, 54 countries, 54 different telecoms networks, 54 different ways to pay taxes-is cumbersome!

• Cohesive, single market is the fastest route to inclusive sustainable growth!

• ...technology itself is not enough. Need innovation to drive technology adoption through business model support, process innovation and building awareness.
Join us on our mission to making quality healthcare services affordable and truly accessible to all!
Thank you for listening!