Virtual Hospitals Africa

Problem

1

Health care delivery in Subsaharan Africa is inefficient.

Rural clinics close to patients lack connectivity, leaving them in isolation when supplies are low or there are cases requiring escalation.

Hospitals offer a greater range of services, but are overwhelmed as many patients opt to go to the hospital for problems that could be dealt with at the clinic.

There is no easy way for health workers to monitor patients, receive diagnostic support, and refer patients to the care they need.

Solution 2

A cloud telemedicine platform connecting nurses at rural health facilities with a global network of virtual hospitals to:

1. **Save time & money**: by solving more problems at the local clinic
2. **Improve quality**: as doctors can collaboratively review cases remotely
3. **Improve outcomes**: as problems are diagnosed and treated earlier

Validation

Rural clinics are rarely staffed with doctors, have little software support, and are interested in our solution[1]

91.7%
rural clinics with a doctor present less than a few times per month

68.5%
health facilities using primarily pen & paper for medical records

89.7%
health workers interested in using Virtual Hospitals Africa

73.1%
doctors willing to provide pro bono or discounted services

[1] Survey conducted by Virtual Hospitals Africa of 92 African health workers

Addressable Population 4

With full penetration, Virtual Hospitals Africa could support remote review of over **18 million** patient cases in Zimbabwe alone with potential to scale across the continent

1122 clinics in Zimbabwe[1]

× **101** average patient cases per clinic per day[2]

× **44.4%** patient cases that could be handled remotely[2]

≈ **50,314** patient cases reviewed by a remote doctor per day in Zimbabwe

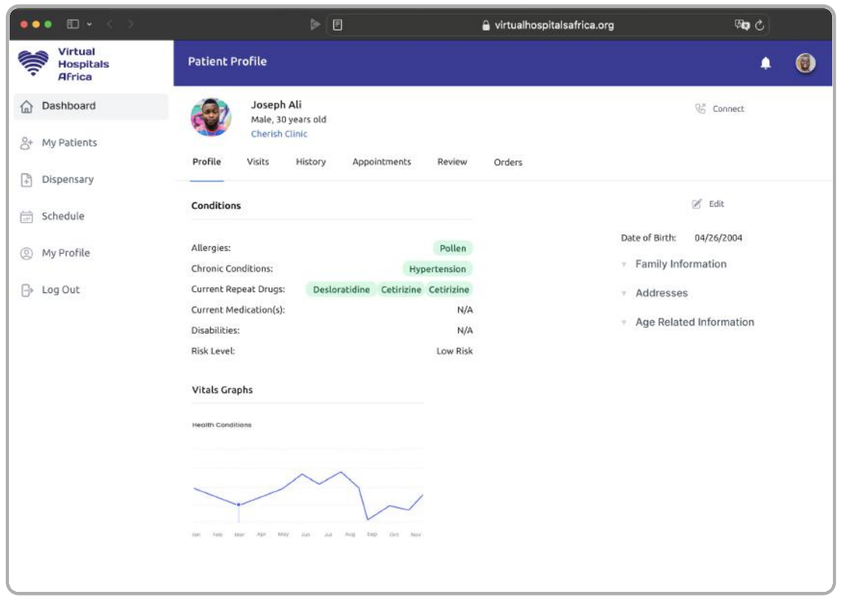
[1] Ministry of Health and Child Care. The National Health Strategy for Zimbabwe 2016–2020

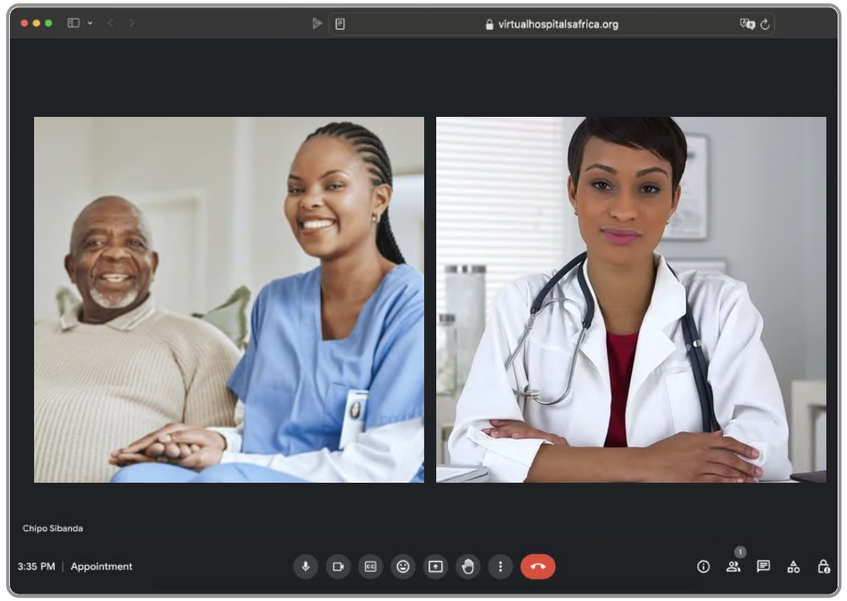
[2] Survey conducted by Virtual Hospitals Africa of 92 African health workers

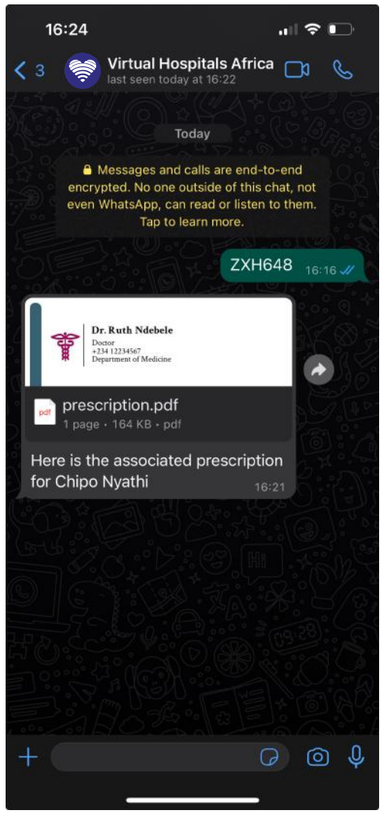
How it works 5

1. Rural clinics are equipped and trained to use Virtual Hospitals Africa
2. Nurses intake patient medical information
3. Doctors check patient records remotely
4. Doctors can see the patient in a video appointment
5. Doctors can securely send prescriptions or make appointments with other clinics, pharmacies, and specialists

Application 6







Review patient information → Connect on video → Send prescriptions

Supported Conditions 7

A generalized platform supporting health workers to diagnose and monitor:

- Non Communicable Diseases
- Mother and Newborn Health
- Post Trauma and Post Surgical Care
- HIV, Malaria and Tuberculosis
- Mental Health
- Cancers
- Rare and Neglected Tropical Diseases
- Other Infectious Diseases

Competitive Advantages 8

Connecting to a global network will unlock many capabilities for clinics

System of Record	Paper & Pencil	Existing hospital admin tools	Virtual Hospitals Africa
Storage of medical records	✅	✅	✅
Easy setup	✅		✅
Easy to use	✅		✅
Global medical network			✅
Inventory management		✅	✅
Booking system		✅	✅
Low marginal cost	✅		✅
Seamless patient follow-up			✅
Video appointments			✅
Pharmacist chatbot			✅
Patient chatbot			✅
Interoperability			✅

Pilot Model

We are in the development stage having established initial interest among 82 Africa health workers and a signed memorandum of understanding with the Zimbabwean Ministry of Health and Child Care.

We plan to partner with **5 rural clinics** in the same district.

They will escalate cases to doctors at a **virtual hospital**.

Clinics will require:

- Reliable internet and power access
- Tablets with the Virtual Hospitals Africa application installed
- Medical devices and associated consumables

Costs

As a cloud native platform, Virtual Hospitals Africa will be **low cost**, even at the pilot stage — costing ~$4.49 per patient per year

Fixed Costs	Software Development, HQ Staffing	$652,000/year
Tier 1 Clinic Support	Access to VHA Platform	$422/clinic; $11/clinic year
Tier 2 Clinic Support	Internet Access, Tablets, Training	$10,120/clinic; $4,204/clinic year
Tier 3 Clinic Support	Basic Medical Devices, Tests, & Consumables, Allowances	$18,962/clinic; $33,206/clinic year
Tier 4 Clinic Support	Advanced Medical Devices, Tests, & Consumables	$81,962/clinic; $42,811/clinic year
Virtual Hospital	Access to VHA, Allowances	$21,600/doctor year; $8,400/nurse year;
Pharmacist Chatbot	Access to Pharmacist Chatbot	$0.0363/pharmacist conversation (WhatsApp)
Pilot Total	4 clinics with Tier 3 support 1 clinic with Tier 4 support 1 virtual hospital 5 doctors 5 pharmacists 184,325 patients being monitored	$157,810 fixed + $828,304/year

At Scale

Earned revenue can fund Virtual Hospitals Africa sustainably as it grows. By charging a modest $3 per patient referral to a doctor and $5 per patient being supervised long term in a virtual ward, VHA would earn $3.4MM per year if present in 30% of Zimbabwean clinics.

Patient Referral Fee	$3.00		**Facility Type**	**Count**	**Average Patient Encounters (Month)**	**Total Monthly Encounters**	**Total Monthly Encounters at VHA Facilities**	**Projected Patient Referrals To Virtual Hospitals (Month)**	**Projected Patients in Virtual Wards at Virtual Hospitals (Month)**	**Projected Revenue (Month)**	**Revenue per Category (Annual)**
Virtual Ward Fee	$5.00		Government Rural Hospitals	62	1100	68200	20460	4092	613.8	$15,345.00	$184,140
VHA Penetration	30%		Municipal Poly Clinics	15	5500	82500	24750	4950	742.5	$18,562.50	$222,750
Patients requiring referrals	20%		Private Clinics	69	660	45540	13662	2732.4	409.86	$10,246.50	$122,958
Referrals requiring supervision in Virtual Ward	15%		Mission Clinics	25	440	11000	3300	660	99	$2,475.00	$29,700
			Local Authority Clinics	1122	770	863940	259182	51836.4	7775.46	$194,386.50	$2,332,638
			Urban Council/Municipal Clinics/FHS	96	880	84480	25344	5068.8	760.32	$19,008.00	$228,096
			Government Rural Health Centre	307	330	101310	30393	6078.6	911.79	$22,794.75	$273,537
			Total	1696	9680	1256970	377091	75418.2	11312.73	$282,818.25	$3,393,819

Team

We bring 45 years of combined experience in bringing technology solutions into resource poor settings, challenging deeply held assumptions about what is possible.

Jonathan Tagarisa

Chief Executive Officer

Jonathan is a board member of several non-profit organizations, including Health Gateway Africa Trust where is the founding trustee.

Will Weiss

Chief Technology Officer

Founder at More Human Internet, Will works extensively with volunteers contributing their expertise to maximize the impact of international causes.

Dr. Sikhululiwe Ngwenya

Chief Medical Officer

Sikhululiwe Ngwenya is a medical doctor and digital health leader with comprehensive experience in clinical care, research, and health promotion, and community education in rural settings.