Empowering HCV patients to engage in care and treatment
Supporting adherence to treatment and linkage to care

“With iThemba Life, my health is in my hands.”

Samanta Lalla-Edward, PhD
Head: Research Development
Ezintsha, a division of Wits Health Consortium, South Africa
slallaedward@ezintsha.org OR dana.duncan@roche.com
Challenges to meeting HCV disease elimination goals

- **Lack of awareness of HCV infection, diagnosis and treatment**
  - Providing education and information on HCV disease, treatment availability and adherence support

- **Linkage to care and access to qualified health services**
  - Supporting patients in their diagnosis and treatment journeys, enabling coordination among labs, clinics, patients and engagement community programs

- **Complex cascade of care leads to loss-to-follow up**
  - Simplifying the diagnostic algorithm, reducing unnecessary visits and facilitating counseling is key to reducing the loss between diagnosis and treatment initiation

- **DAA’s effectiveness depend on adherence to treatment and completion**
  - Supporting medication adherence and tracking and documenting treatment completion
Eliminating HCV requires coordination

The chain of impact links stakeholders together

Innovative solutions are needed to increase access to testing and treatment

**Government, donors**
Limited visibility of program performance to drive decision and allocate resources

**Laboratories**
Run millions of tests with highest quality and efficiency, minimize TAT and link back to clinics and patients

**Clinics, HCPs**
Limited and inefficient infrastructures intensify issues of linkage to care and loss to follow-up

**Patients**
Delayed result delivery and lack of adherence support can cause loss to follow-up and poor treatment outcomes
iThemba Life mHealth solution
A digital solution to empower patients to engage in care

iThemba Life is a health management solution designed to support goals of high disease burden elimination programs in LMICs*

The iThemba Life mHealth solution is composed of a mobile app for patients, and aggregated dashboards for healthcare professionals and program managers

Initial focus was on HIV. Now expanding to MTB, HPV, HCV, HBV to support multi-disease testing to achieve program efficiencies and improve health outcomes

*LMIC=Low Middle Income Countries
iThemba Life components

Supporting multiple stakeholders in the value chain

- **Patients’ app***
  Drives patient empowerment and behavior change

- **Implementation web tool***
  Enables MoH to run iThemba from the lab and drive program implementation

- **Healthcare Professionals’ reporting solution**
  Enables nurses and physicians to manage iThemba patients and target interventions

- **Program dashboard**
  Provides visibility on program value outcomes to drive decisions

* Currently available on Android. ** Not currently available. 2021 Design goals for iThemba Life.
Framework of the iThemba Life solution

*Patient app designed to address healthcare infrastructure limitations*

- **Open interoperable platform** to provide access for all patients in need, *diagnostic platform agnostic*
- Designed for **older, less expensive Android smartphones** to ensure access to the intervention*
- **Flexibility** to support multiple languages and varying lab-clinic workflows
- **Privacy and security:** connects user to test request barcode (no ID needed) ensuring privacy within a data framework optimized for security

*iOS targeted design goal by end of 2021*
Simplifying the cascade of care for patients through timely delivery of test results

Increasing knowledge and engagement in care with increased awareness of HCV infection risk behavior, diagnosis, care and treatment

Supporting successful treatment initiation and completion by facilitating medication compliance

Streamlining clinical care and patient management allowing for efficient elimination program scale-up & progress monitoring

iThemba Life HCV empowers users through direct result delivery, education, medication and appointment reminders while streamlining clinical management
1) iThemba Life for patients

**General workflow**

1. User downloads app to Android smartphone
2. Sample collected & user scans or enters sample barcode
3. Sample tested in central laboratory or POC
4. Notification sent that result ready
5. Result viewed in app

*Screen shots are for illustrative purposes only. The language displayed will be contextualized for the intended users.*
1) iThemba Life for patients

*Drive empowerment and engagement in care*

- Targeted educational content
- Appointment reminders
- Longitudinal follow-up
- Adherence to treatment support: gamified behavioral incentives, daily medication reminders and tracker, medication dashboard

| Screen shots are for illustrative purposes only. The language displayed will be contextualized for the intended users. |
1) iThemba Life for patients

*Usability, program adoption and sustainability, multi-disease management*

- Supports Differentiated Service Delivery
- Multi disease approach possible: HIV, HPV, MTB, HCV, HBV
- Surveys: symptoms, quality of care and pharmacovigilance

*Screen shots are for illustrative purposes only. The language displayed will be contextualized for the intended users.*
2) iThemba Life for Labs: Implementation tool

Simple functionalities to manage and edit user profiles

- View patient details
- Edit patient details
- Suspend patient details
- Add barcode manually to patient details
- View all results based on barcode
- Filter all results
- Download results file

(Screen shots are for illustrative purposes only. The language displayed will be contextualized for the intended users.)
3) iThemba Life’s healthcare professional reporting solution*  

Comprehensive reports focused on actionable populations

1. Delayed follow-up
2. DSD candidates
3. At a new clinic
4. All results
5. Barcode scans from the past 14 days with no results yet
4) iThemba Life’s program dashboard*
Visualization of program metrics and insights

*iThemba Life will partner with program leaders to enable the development of population health insights to drive program interventions, allocate resources and achieve programmatic goals efficiently

Main indicators and insights under development based on aggregated data

- Population research questions (e.g. correlations between behavioral factors and outcome data)
- Program support and monitoring (e.g. DSD)
- Quality of care (e.g. patient satisfaction indicators)
- Supply chain efficiency
- Pharmacovigilance
- Clinic program support
- Appointment adherence rate
- Med pickup rate
- Testing schedule monitoring
- Retention in care
- Education engagement

| *In development. Design goals | Screens shown are for illustration purpose only. Final screen configuration and messaging to be tailored with country teams.
4) iThemba Life’s program dashboard*  
Visualization of program metrics and insights

**WHY**  
Significant progress is still required to build and access reliable data to fully understand populations served, respond to crucial program needs, and correlate interventions to outcomes.

iThemba Life leverages clinical outcomes, patient behavior, and bi-directional feedback to provide aggregated data insights supporting program level decision making (i.e. resource allocation)**.

**WHO**  
The iThemba Life programmatic dashboard is intended to be used by program managers at healthcare organizations (e.g. MoH or provincial DoH, laboratory network) and authorized stakeholders (e.g funding NGOs, policy makers, etc).

**HOW**  
iThemba Life will focus on the unique value it can generate and work with existing available dashboards when possible. iThemba Life will not incorporate instrument specific operational indicators but will focus on population health insights.

---

| **The iThemba Life program dashboard is intended for aggregated operational analysis, it is not intended for individual clinical follow-up** |
| **In development. Design goals.** |
Global Access Program Expansion

Delivering access to high burden diseases

- Continued efforts on HIV and reaching UNAIDS 95:95:95 goals
- Focus on End TB Strategy and adopted the UN Sustainable Development Goals (SDG’s) which aims to “end the global TB epidemic” 95:90:100
- Contribute to Hepatitis Elimination Goals 90:65:80
- Focus on global call for action to prevent cervical cancer 90:70:90 goals