Health System Challenges & Opportunities for CHT
Health systems, as they are set up today, exclude people from care.

At least **half the world’s population** still cannot obtain **basic health services**

In the poorest and most remote communities, only **1% of families receive care when they are sick**

Less than **4% of families receive a home visit during pregnancy** from a health worker.
The Community Health Toolkit supports a new model of primary health care, and a new design for the health system that:

➢ Starts in communities and homes
➢ Integrates services for the family
➢ Provides coverage for everyone, removes fees
➢ Emphasizes continuous training and coaching
➢ Guidance for health workers and teams
OPPORTUNITY

The Community Health Toolkit supports a new model of primary care for healthcare systems that will lower disease burdens by focusing on:

- Care that starts in communities and homes and integrates services for the family
- Continuous training for CHWs, including e-learning
- Minimizing CHW reporting burdens and facilitating data collection and collation
- Enable health system staff to effectively to manage mhealth teams
WHO guideline on health policy and system support to optimize community health worker programmes
OPPORTUNITY

The Community Health Toolkit provides you with resources to design, build, and deploy the digital tools community health workers need to reach the poorest and most marginalized.

By rethinking who health workers are, where care is delivered, and what makes up a healthcare system, we can create a new model of care that brings health services to everyone.
CHALLENGE

It can be difficult to maintain quality and consistency of care with a remote workforce.

“CHWs providing care is a good idea, but they have minimal training and they're on their own.”

“I want to know how my health system is performing, but now that care extends beyond facilities it's harder for me to see and understand.”

“I think everyone's doing what they’re supposed to do, but I don't really know.”
OPPORTUNITY

The technologies and resources in the Community Health Toolkit have been co-designed with local health teams to support a remote workforce.

Resources that support quality & consistency of care include:

- Diagnostics & decision support workflows
- Targets, performance tracking & analytics
- Tasks & calendars
- Static messaging & SMS scheduling
CHALLENGE

Scaling up programs quickly is difficult. There are many examples of difficulties replicating “outlier” results.

Examples:
Scale-up of iCCM
Coverage for ACTs in Africa

Most governments are looking at results from 100-1,000 HWs, planning to scale to 10,000+ HWs
OPPORTUNITY

Harness technology to ensure **fidelity** to design and plans during scale-ups

- Home visits are happening
- Supervisory visits are happening
- Referrals are completed
- Stock levels are maintained
- Ratios make sense
- Workload is monitored
- Payments are processed
- etc.
CHALLENGE

Building a digital community health initiative from scratch takes time, and patients in need can’t wait.

“We know digital tools would help our health system, but we just don’t have the technical resources to build an app from the ground up.”

“Some of the design decisions are overwhelming. How can we be sure we’re making the right calls?”

“I wish I could talk to someone who had deployed a digital tool before, and ask ‘How did you do it? What worked for you?’”
OPPORTUNITY

With the Community Health Toolkit, you don’t have to start from scratch.

Reference applications
Reusable workflows
Open icon library
Suggested integrations
Performance metrics for community health
Online community of support
The global need is immense, and organizations face limitations of scale.

It is impossible for a single organization to directly support the millions of health workers and hundreds of millions of patients who could benefit from their technologies.

This limitation of scale causes fragmentation of the technical landscape, inefficient use of philanthropic investment, and poorer experiences for patients and health workers alike.
OPPORTUNITY

The Community Health Toolkit and its Community of Practice represent viable pathways to immense scale at remarkably low cost.

By combining open source software, open access design, and community committed to learning together, the Community Health Toolkit allows governments, health systems, community health workers and citizens to collaborate on a new model of health care.
What is the Community Health Toolkit?
WHAT IS THE COMMUNITY HEALTH TOOLKIT?

The Community Health Toolkit provides you with resources to design, build, deploy, and monitor digital tools for community health.

**Tools**
Open source software frameworks and applications

**Resources**
Guides to help you design and use the framework

**Community**
An active community for collaboration and support
WHAT CAN YOU BUILD WITH THE COMMUNITY HEALTH TOOLKIT?

The Community Health Application Framework enables you to build digital health apps that equip health workers to provide better care in their communities.

It is flexible and powerful enough to support a wide range of integrated community health services including:

<table>
<thead>
<tr>
<th>Maternal Health:</th>
<th>Child Health:</th>
<th>Infectious Disease:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care</td>
<td>Malnutrition</td>
<td>HIV / Aids</td>
</tr>
<tr>
<td>Postnatal care</td>
<td>Immunizations</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Family planning</td>
<td>ICCM</td>
<td>Malaria</td>
</tr>
</tbody>
</table>
Community Principles

CHT community members have come together in order to:

**Advance universal health coverage**
Work towards integrated care and Universal Health Coverage (UHC) as the new status quo, so that care reaches everyone when and where they need it.

**Build open-source software**
Open-source advances accountability, encourages local ownership and adaptation, and supports standards that enable collaboration and efficient data sharing.

**Invest in open access resources**
Share resources for designers, implementers, and system owners to support open access care delivery models that lower barriers to scale, reach, and sustained impact.

**Practice human-centered design**
Human-centered and participatory design is crucial in building, scaling, and studying new technologies and strategies. Organizations and featured resources are included on the basis of their contribution to concrete implementations and shared learning.

CHT community members also participate in the Design for Health community, and we support the Principles for Digital Development and the Principles of Donor Alignment for Digital Health.
Community Principles

CTH community members have come together in order to:

Advance universal health coverage
Work towards integrated care and Universal Health Coverage (UHC) as the new status quo, so that care reaches everyone when and where they need it.

Build open-source software
Open-source advances accountability, encourages local ownership and adaptation, and supports standards that enable collaboration and efficient data sharing.

Invest in open access resources
Share resources for designers, implementers, and system owners to support open access care delivery models that lower barriers to scale, reach, and sustained impact.

Practice human-centered design
Human-centered and participatory design is crucial in building, scaling, and studying new technologies and strategies. Organizations and featured resources are included on the basis of their contribution to concrete implementations and shared learning.

CTH community members also participate in the Design for Health community, and we support the Principles for Digital Development and the Principles of Donor Alignment for Digital Health.
The Community Health Application Framework enables you to build full-featured, scalable digital health apps that equip health workers to provide better care in their communities. Key user groups include community health workers, supervisors, nurses, health system managers, and even patients and caregivers.

Tasks tab
A list of upcoming visits, follow-ups, or other required tasks
OppiaMobile App

by Digital Campus

OppiaMobile is an open source mobile learning platform specially designed for delivering learning content, multimedia and quizzes in low-broadband settings.
by UbiComp Lab and Muso

The RDT image scanner is an external application that has been integrated into the form workflow. It helps CHWs to take a high quality photo of the RDT result and attach that photo to the assessment report.

The scanner assesses image quality across four areas: position/size, sharpness, brightness, and the presence of shadows. A photo is not taken until all four conditions are acceptably met.

This RDT scanner prototype was co-designed by the UbiComp lab at the University of Washington, Muso, and Medic Mobile, for prototyping within the Muso-led community health innovation network in Mali.
WHAT CAN YOU BUILD WITH THE COMMUNITY HEALTH TOOLKIT?

More than 24,000 health workers already use these tools to support over one million home visits every month.

Together, we can work towards a world where primary health care is equitable, accessible, and delivered by people who are trusted in their communities.

What will you build?
Building Apps With The Community Health Toolkit
HOW TO BUILD YOUR OWN APP

Our tools allow developers to build a customized community health app without starting from scratch

The Community Health Application Framework is a software architecture that makes it faster to create apps by giving developers a foundation on which they can build. Working with the Framework decreases the time and resources required to build an app, and allows developers to concentrate on configuring the tool to their own communities unique needs..

To build applications with the Framework, the follow skills are helpful, ordered by importance:

- Javascript code and expressions
- JSON format used to specify configuration
- XLSForms to setup actions and contacts
APP INTEGRATIONS

The Community Health Toolkit software integrates with the broader digital health ecosystem to support coordinated proactive care.

Integration and interoperability within the digital health ecosystem are core priorities of the Community Health Toolkit. In 2019, we plan to release resources and documentation for integrations with electronic health records and health information management systems such as OpenMRS and DHIS2.

Want to propose or build an integration? Please reach out!
Contributing Partners

Day in and day out, hundreds of people are already contributing to the CHT as designers, developers, researchers, data scientists, health policy experts, community health system implementers, and frontline health workers. We are affiliated with a range of global health NGOs, technical organizations, governments, and research institutions.
How You Can Get Involved
BECOME A PARTNER

A diverse group of organizations have come together to collaborate on a shared toolkit to advance universal health coverage.

Some are building new apps with the Community Health Application Framework, while others are deploying them in the field. Still others have provided our Community of Practice their expertise and guidance by hosting a discussion or training.

How Will You Get Involved?
JOIN OUR ONLINE COMMUNITY

We’ll be launching an online community for collaboration and support in 2019.

Do you have experience deploying digital health tools in the field? Are you interested in the experiences of those who have? Our online forum is a place to share knowledge, provide technical assistance, and explore new opportunities for shared learning and collaboration.

HOST OR ATTEND EDUCATIONAL CALLS & WORKSHOPS

We’ll also host group educational calls and in-person workshops and meetups.

Do you have a unique area of expertise? We welcome proposals for workshops, and more!
CONCLUSION

Today, we have an unprecedented opportunity to address key challenges faced by health workers delivering care.

Plans for redesigned community health systems are underway and organizations focused on community health are growing. We see an unprecedented opportunity to support and scale a shared, open-source toolkit that addresses key challenges faced by health workers delivering care.

Together, we can equip governments and a growing community of implementers to own, scale, and extend these digital community health tools themselves.
WANT TO LEARN MORE?

If you’re interested in joining or contributing to the Community Health Toolkit, please get in touch:

Chris Lukolyo  |  chris@medicmobile.org

Brian Ssennoga |  brian@medicmobile.org  | @bssennoga (CC Uganda)

Josh Nesbit  |  josh@medicmobile.org

Francesca Garrett  |  francesca@medicmobile.org