Medic Mobile & the Community Health Toolkit COVID-19 Response

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Medic Mobile: Mission and Vision

Medic Mobile is a non-profit organization on a mission to **advance good health and human flourishing** for and with the hardest-to-reach communities.

We build and deploy **open-source technology** that helps health workers deliver equitable care.

We envision **a more just world** in which health workers are supported as they provide care for their neighbors, **universal health coverage is a reality**, and **health is a secured human right.**
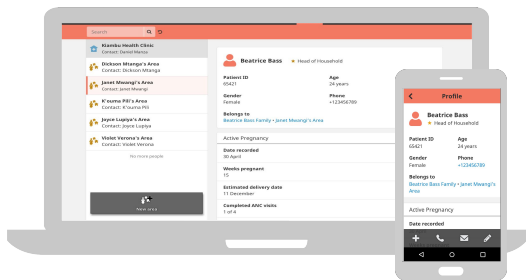
Community Health Toolkit

The [Community Health Toolkit](#) (CHT) is **open-source software** and a community of people advancing global health equity. Medic Mobile serves as the technical steward for the CHT, which includes:

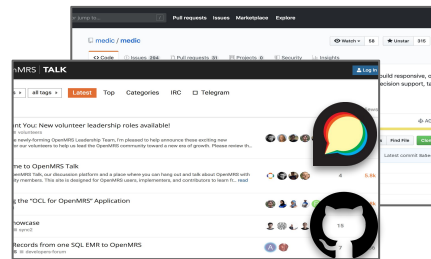## Tools

Open source software frameworks and applications

Resources

Guides to help you design and use the framework

Community

An active community for collaboration and support

Medic and CHT's Reach

Medic Mobile works with Ministries of Health, local governments, community health implementers, and technical partners in 12 countries in Africa and Asia to design, build and deploy CHT-powered apps.

Ministries of Health in Kenya, Nepal, Mali and Zanzibar have adopted the CHT as their national digital community health platform, and Medic is supporting these governments to deploy and scale CHT alongside implementing and technical partners. CHW networks are also using apps built on the CHT in Burundi, Ghana, Ethiopia, India, Indonesia, Malawi, Tanzania, Togo, Uganda, and Zimbabwe.

CHT Principles

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.

The Core Framework

CHT's [Core Framework](#) developed and maintained by Medic Mobile is highly configurable and makes it easier to **build scalable digital health apps**. It runs offline, works on multiple devices, supports multiple hierarchies and users in a health system with integrated care workflows, and is interoperable with other digital health systems.

Apps powered by the Community Health Toolkit currently support over 27,000 frontline health workers in Asia and Africa, as they provide over 1 million home visits a month to community members.

Community health workers

Nurses & health facility staff

Managers
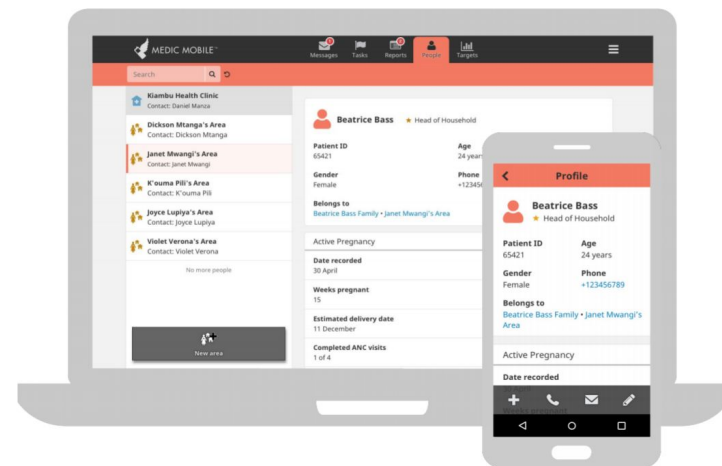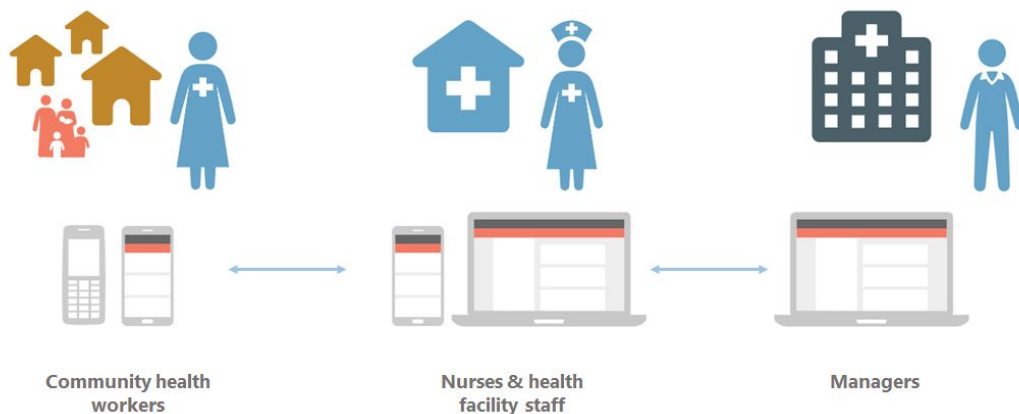
CHT for COVID-19 Response

Community health workers and teams serve a pivotal role in fighting COVID-19 as the frontlines of care. Technology and data must be harnessed to support them as they:

➔   **prevent** the spread of COVID-19 disease,

➔   **protect** those who are most vulnerable,

➔   **provide care** for those affected by the pandemic, and

➔   **preserve** routine primary care.

We've designed our COVID-19 response to **onboard, train, task,** and **communicate** with health workers and remote care teams for **an end-to-end response** that is both **empathetic and effective.**

CHT for COVID-19 Response

Based on the virus's timeline, partner priorities and global best practices, we're designing and deploying a set of modular tools powered by CHT for COVID-19 preparedness, surveillance, and response. These tools work together as an **integrated platform**, and can be **rapidly configured for specific partner needs**.

→ **Protecting and Supporting Community Health Workers**
PPE Projections, Daily Health Checks, Remote Onboarding, Health Education, and Mental Health Support

→ **Surveillance and Detection**
Port of Entry Screening, Event-Based Surveillance, Contact Tracing, and Participatory Surveillance

→ **Patient Care for COVID-19**
CHW-Guided Symptom Screening, Rapid Diagnostic Testing, Referrals to Care, and Self-Isolation Messaging

→ **Primary Health Care Workflow Adaptations**
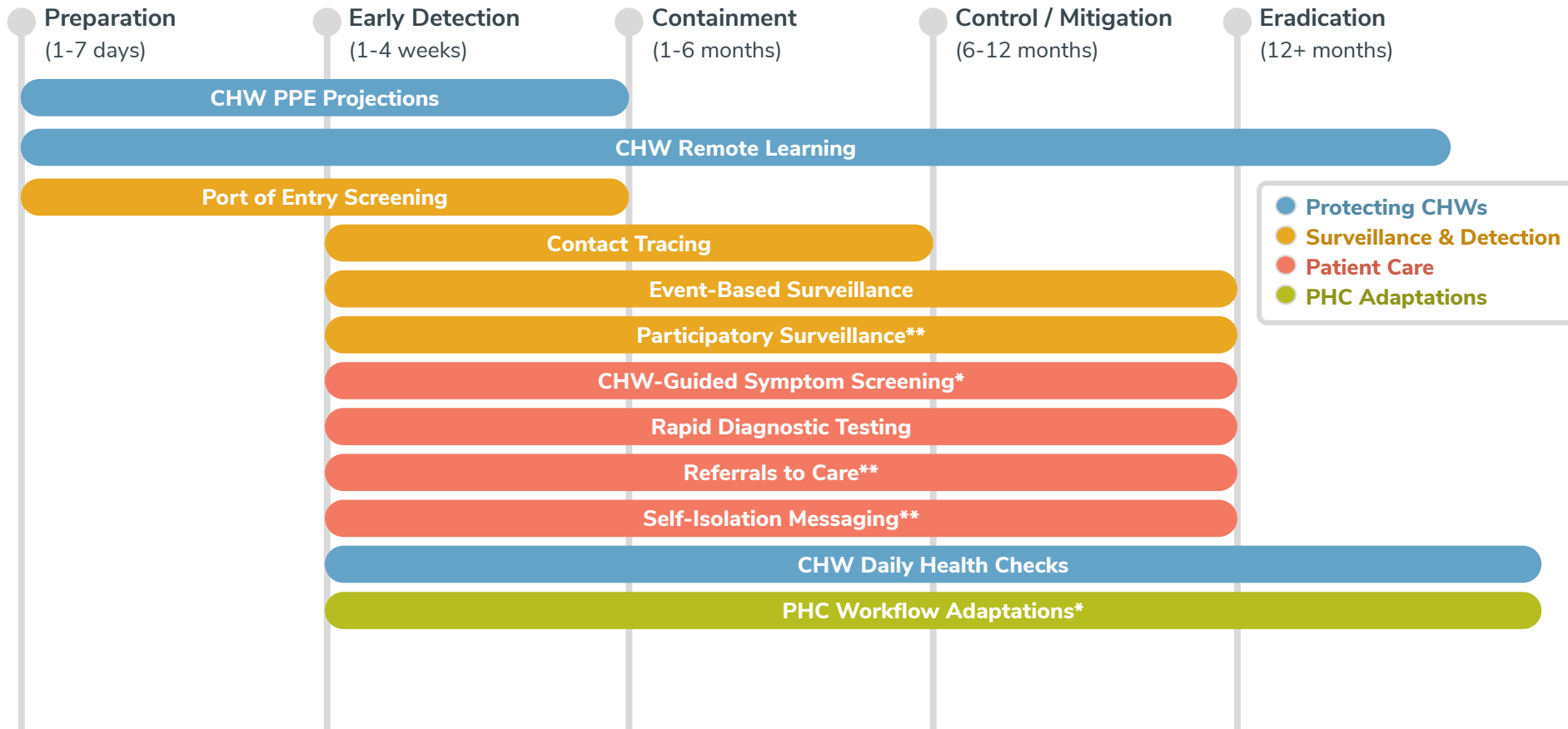ANC, PNC, iCCM, Malnutrition, Immunization, Family Planning

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CHT for Child Health During COVID-19

➔ A focus on the **health and wellbeing of children** during the pandemic is critical

➔ Children of all ages are **susceptible** to COVID-19, with more cases being reported in younger children and infants, and **more research** is required to understand the role of children in community transmission

➔ Children's health will not only be impacted directly by the virus, but also indirectly through **disruptions in PHC** provision and economic consequences of the pandemic

➔ The CHT can support not just COVID-19 response but also create more **robust & resilient health systems** optimized for equity, coverage, quality and speed.

COVID-19 Use Cases & Timeline

Preparation (1-7 days)	Early Detection (1-4 weeks)	Containment (1-6 months)	Control / Mitigation (6-12 months)	Eradication (12+ months)

CHW PPE Projections

CHW Remote Learning

Port of Entry Screening

Contact Tracing

Event-Based Surveillance

Participatory Surveillance**

CHW-Guided Symptom Screening*

Rapid Diagnostic Testing

Referrals to Care**

Self-Isolation Messaging**

CHW Daily Health Checks

PHC Workflow Adaptations*

Legend:
- Protecting CHWs
- Surveillance & Detection
- Patient Care
- PHC Adaptations

* In development | ** Embedded within other workflows

Making *remote* work for CHWs

Medic Mobile's Remote Work Priorities

Our efforts around remote work are focused on providing health workers and teams with:

1. Remote onboarding to digital tools, including SMS and care Apps

2. Remote training on Covid-19, response support, and care continuation

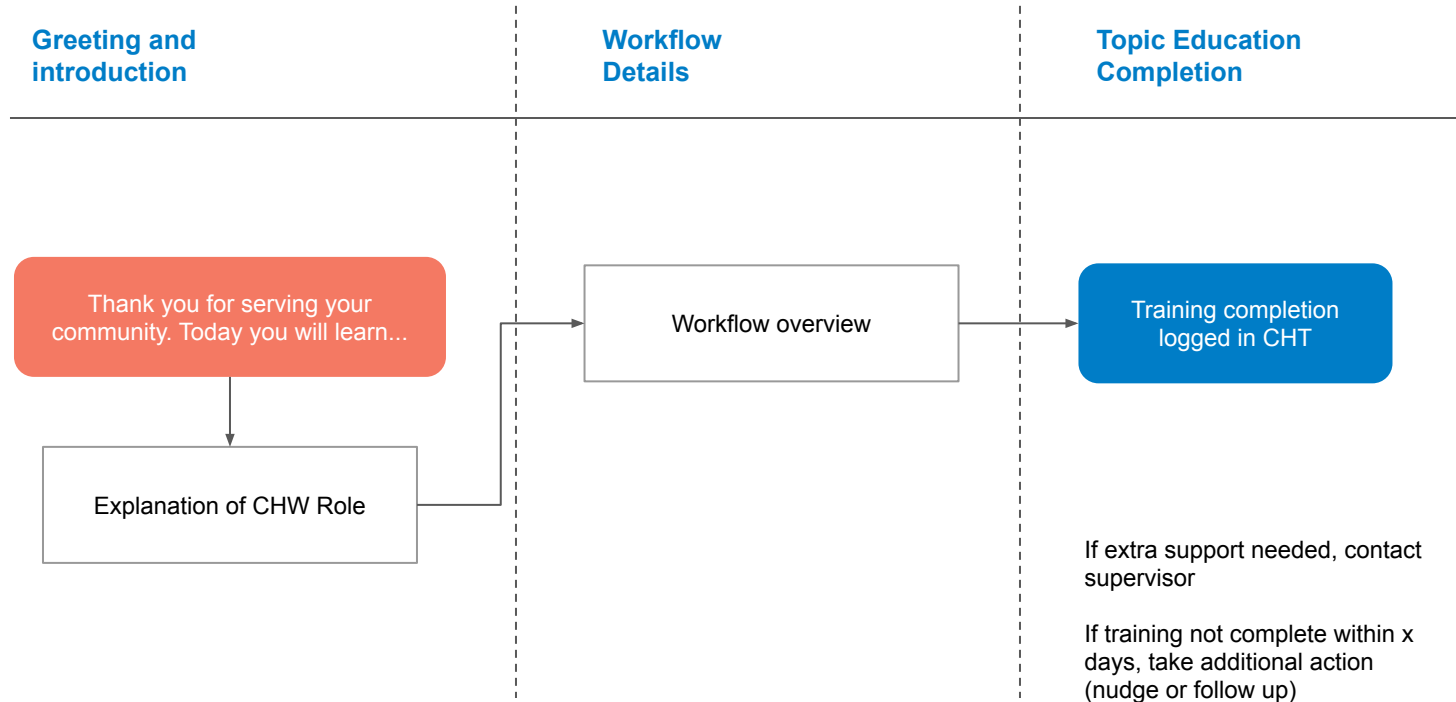3. Remote updates to new and modified workflows and care protocols

We're designing and developing remote learning tools to ensure:

➔ **Safety**: Best possible option when in-person trainings are not allowed

➔ **Speed**: Time is a critical factor for COVID-19

➔ **Scalability**: Enables a large number of CHWs to be onboarded quickly

➔ **Measurability**: Track completion rates and provide support where needed

➔ **Adaptability**: Functions based on the technology, infrastructure and ecosystem already at hand, and in support of MoH protocols, and approved content and messaging.

Users, Devices & Hierarchy

Users	Location	Devices	Details
National Officials	Central Offices		Laptops, desktops, smartphones to monitor analytics
County Teams	District Offices		Laptop, desktop, smartphone to monitor analytics (**app**)
Sub-County Teams	Facilities or Local Office		Smartphone (**app**)
CHW Supervisors	Lives at community level, based at facilities		Smartphone (**app**) and personal phone
CHWs	Lives and works at community level		Most CHVs will have basic phones (**SMS**); some smartphones (**app**)

CHW Remote SMS Training: Workflow

Greeting and introduction

Workflow Details

Topic Education Completion

Thank you for serving your community. Today you will learn...

Explanation of CHW Role

Workflow overview

Training completion logged in CHT

If extra support needed, contact supervisor

If training not complete within x days, take additional action (nudge or follow up)

CHW Remote SMS Training: Example

Greeting and introduction

Welcome to Community Health Volunteers' learning and reporting platform.

To continue in English text "1", to continue in Swahili text "2".

The MOH is asking all CHVs to play an important role in identifying and reporting issues of public health concern within their communities

Workflow Details

For each issue you will see the definition and the reporting code. Please look for the following in your communities:

Two or more people are sick with similar signs and symptoms in a community within a week.

Reporting code: 1

Topic Education Completion

To confirm you have received and understood this message, please respond with Y.

Waiting for reply

y

Set result "Onboarding Completion" to "y"

Thank you for the time

To contact your supervisor (CHA) for support, text "S" to this number

If extra support needed, contact supervisor

If training not complete within x days, take additional action (nudge or follow up)

Remote Learning: SMS Best Practices

➔ **Allow users to select their preference for languages** before beginning the flow if applicable

➔ **Use a personalized, welcome message** before asking CHWs to take actions

➔ **Be consistent with codes** for responses (ex. 1 for yes, 2 for no versus Y for yes, N for no).

➔ **Sign the first and/or last message** with the partner's name, or MOH

➔ **Provide options for additional remote support** in the last message

➔ **Provide options to revisit key content** at the end (ex. Text EBS to receive these messages again)

➔ **Capture learning completion**, so that a supervisor may follow up where necessary

CHW Remote App Learning

SMS

Thank you for serving your community. Your CHW app has new protocols. Please sync to update and then complete the training task. If you have any issues, contact your supervisor.
- [Partner signature]

New workflow

Training

Event-Based Surv... **Due today**
Training module

No more tasks

Overview

Training

New workflow onboarding

Event-based surveillance

Thank you for serving your community with event-based surveillance.

Event-based surveillance is...

Next >

Module

Training

Module Title

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

< Prev   Next >

Assessment

Training

Assessment

Question

○ Answer
○ Answer

< Prev   Next >

Answer

Training

Assessment

Question

○ Answer
● Answer

You are correct

Details of correct answer explained in the conditional text here.

< Prev   Next >

Summary

Training

To finish, be sure to click the Submit button.

Thank you

Great job, you've completed the training for Event-Based Surveillance.

This content is available for you to review on your profile page.

If you have any additional questions or feedback, please contact your supervisor.

< Prev   Submit

Targets

Training modules completed
All-time

80%   Goal 100%

Profile

Profile

CHW Name

Medic ID   **Age**
65421   24 years

Gender   **Phone**
Female   +123456789

Belongs to
Beatrice Bass Family • Janet Mwangi's Area

Training

Protocol summary
Yes

Adapted workflow
No

Tasks

Adapted workflow
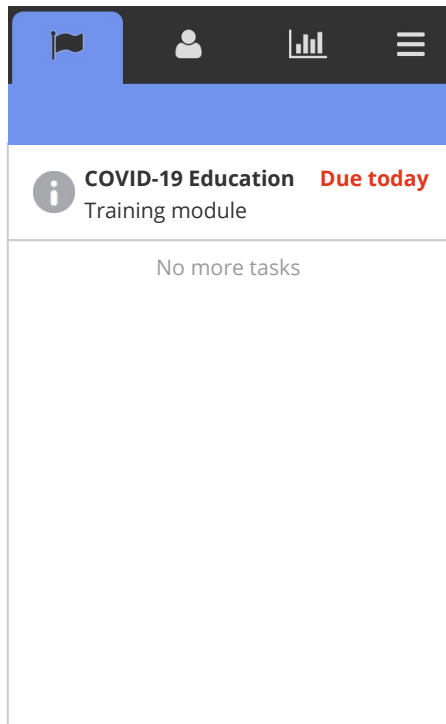Training module

Event-Based Survei...   >

CHW Remote App Learning

Alerts to review a new training module

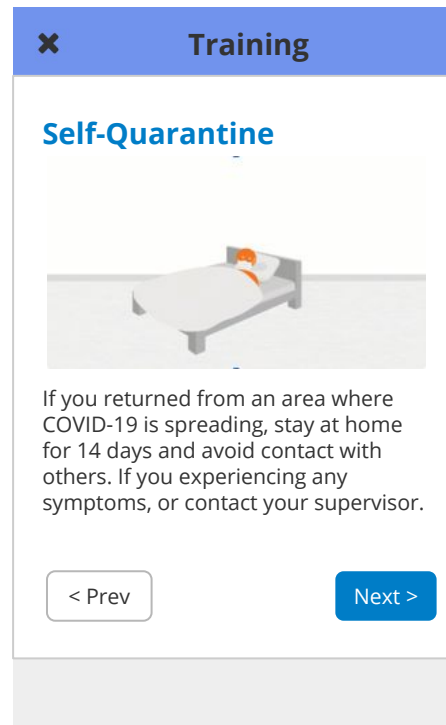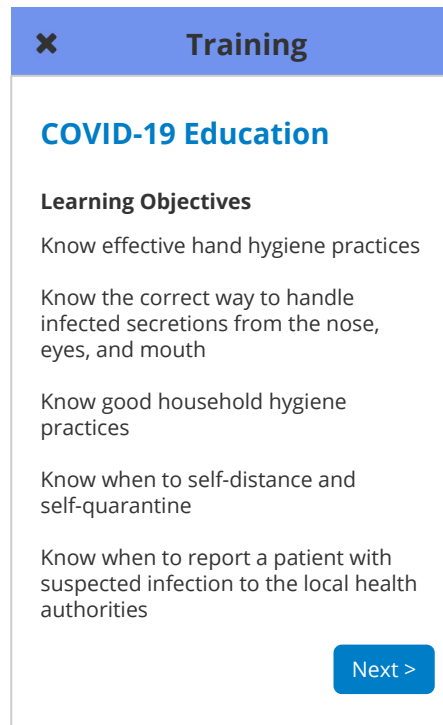Sample training modules

Hello CHW Jane. Thank you for serving your community. Your CHW app has an update. Please sync and then complete the training task. If you have any issues, please contact your supervisor.

- Ministry of Health

COVID-19 Education — **Due today**
Training module

No more tasks

Training

COVID-19 Education

Learning Objectives

Know effective hand hygiene practices

Know the correct way to handle infected secretions from the nose, eyes, and mouth

Know good household hygiene practices

Know when to self-distance and self-quarantine

Know when to report a patient with suspected infection to the local health authorities

Next >

Training

Self-Quarantine

If you returned from an area where COVID-19 is spreading, stay at home for 14 days and avoid contact with others. If you experiencing any symptoms, or contact your supervisor.

< Prev   Next >

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CHW Remote App Learning

Training assessment to gauge knowledge uptake

Assessment

Can COVID-19 can be prevented by washing our hands frequently with soap and running water or hand sanitizer?

○ True
○ False

[< Prev]   [Next >]

Assessment

Can COVID-19 can be prevented by washing our hands frequently with soap and running water or hand sanitizer?

● True
○ False

You are correct

Washing hands regularly is very important to protect yourself and others.

[< Prev]   [Next >]

Training summary and targets

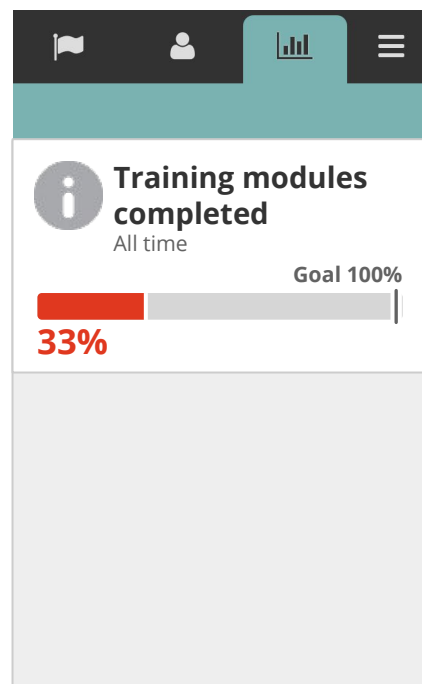**Be sure you Submit to complete this action.**

Thank you

Great job, you've completed the training for COVID-19 education.

This content is available for you to review on your profile page.

If you have any additional questions or feedback, please contact your supervisor.

[< Prev]   [Submit]

Training modules completed
All time

Goal 100%

33%

Remote Learning: App Best Practices

➔ **Use a personalized, thank you SMS signed with partner name. Include instructions** to sync and

complete the training task

➔ **Track learning task completion** via targets, notify supervisor to follow up within X days if incomplete

➔ **Use visuals in the learning modules** where possible to help CHWs understand content

➔ **Use assessments sparingly** and for longer, more complex content

➔ **Reiterate protocols in each task** when offering remote protocol updates (ex. CHW doing

assessment without PPE should be reminded to keep distance, not enter house, etc.)

Making Remote Work: Lessons Learned

➔ **Re-use existing resources and hardware** where possible. If procuring hardware at scale, have a plan in place for procurement, support, and device management.

➔ **Remote support** is critical to success. Have a support plan in place that makes sense for the context

➔ **Remote supervision** is key. CHWs thrive when they are supported and supervised and this is particularly relevant in remote settings and in moments of crisis.

➔ **Continuous learning.** Refresher trainings are critical in regular contexts, and in a pandemic, even more important. Ensure remote learning is continuously provided and accessible

➔ **Incentivize appropriately.** In most contexts, in-person training provides stipends and allowances for CHWs, and remote trainings may jeopardize these incentives. Think about other ways to incentivize CHWs, for example, extra airtime or mobile money.

➔ **Embed within existing systems** wherever possible for long-term sustainability.

➔ **Ensure government leadership and ownership** wherever possible.

CHT COVID-19 Priority Areas of Work

Surveillance and Detection

For many countries around the world, now is the time to be planning early detection and surveillance interventions to mitigate the impact of COVID-19 through proactive identification and treatment of patients before increased local transmission.

Reference apps built on the CHT for surveillance currently support:

- ➜ Port of Entry Screening
- ➜ Event-Based Surveillance
- ➜ Contact Tracing
- ➜ Participatory Surveillance**

**Embedded within Contact Tracing App*

Patient Care

As the epidemic transitions from early detection to containment, the associated digital health tools for managing the outbreak must also evolve to fit the context.

Patient care for COVID-19 requires ongoing community-level surveillance combined with CHW-guided symptom screening, testing (*if available*), and referrals to care, as well as support for those in self-isolation, isolation centers, and health facilities.

Reference apps built on the CHT for patient care support:

➔ <u>Rapid diagnostic testing</u>
➔ CHW-guided symptom assessments*
➔ Referrals to care**
➔ Isolation messaging support**

In development
**Embedded within other reference apps*

Protecting Community Health Workers

Community health workers (CHWs) are already overburdened in many countries, and may become overwhelmed as they fight on the frontlines of COVID-19. Not only are CHWs at high risk of exposure to the virus, but they are also likely to face added stresses from working and learning in no-contact environments as they perform their critical role.

Reference apps built on the CHT to protect CHWs include:

➔ CHW Remote Onboarding
➔ CHW Health Checks
➔ CHW Mental Health and Well-Being Support

The goal of these apps is to support frontline healthcare workers so they can focus on providing care to others in their communities.

Maintaining and Monitoring PHC during COVID

Adapting PHC Workflows

Even as COVID-19 continues to paralyze health systems, routine primary care services for maternal and child health, other infectious diseases, and non-communicable diseases must be maintained.

These workflows will need to be adapted for a COVID-19 context including social distancing, overburdening of facilities, wellbeing of health workers, and the limited capacity of health systems to cater to non-emergent conditions.

CHT apps currently supporting PHC workflows will be adapted with **workflow modifications, remote support, and product features** tied to care provision during COVID-19 for both direct and indirect impacts of the virus.

Examples include modifying malnutrition assessments to follow "no touch" or "visual only" reviews, transition to call/text-first protocols, and embedding COVID-19 symptom screening within PHC workflows.

Monitoring the Effect of COVID on PHC

During epidemics, the threat to human health is not just a novel virus but also, and often more deadly, **the effect of the virus on delivery of primary healthcare services** to those who need them most.

Medic's Research & Learning team has proposed a series of **Speed, Coverage & Quality** metrics that we will monitor weekly in order to understand and track the effect of COVID on the ability of our deployments to deliver PHC.

These metrics include: CHW activity, ANC, PNC, iCCM, Malnutrition & Family Planning, as well as UHC indicators.

Our PHC Monitoring Metrics

Activity	Coverage	Speed	Quality
# of Active CHWs # of CHW actions	# of HH visits % of HH w/ 1+ visits **(monthly)** # of ANC visits % of deliveries in-facility # of iCCM assessments # of malnutrition assessments # of women counseled on family planning	% of pregnancies registered in the first trimester % of iCCM assessments in 72 hours	% of iCCM follow-ups complete

These metrics capture the implications of disruptions to PHC on the health of communities - including disruptions to care targeted at children under the age of five, such as iCCM and malnutrition.

Demo:
Event-based Surveillance App

COVID-19 Event-based Surveillance App

➔ Digital surveillance system for COVID-19 at community and facility to report, verify and investigate suspect cases leveraging SMS and App

➔ Designed based on existing EBS platform deployed by MoH Kenya and CDC, revised for COVID-19 signals

➔ Can also include monitoring of other signals prioritized during the pandemic recommended by UNICEF, including neonatal tetanus, acute flaccid paralysis, and measles/ rubella

➔ Can serve as the long-term EBS for all Integrated Disease and Response signals

➔ More information and links to demo

Questions or Comments?

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bit.ly/cht-covid19