eHealth Toolkit

A LOCALLY OWNED SOLUTION TO SUPPORT FEBRILE ILLNESS MANAGEMENT AT PRIMARY CARE

ENABLING HEALTH WORKERS

Health workers in resource-poor settings make complex clinical decisions every day. Without diagnostics and clinical guidelines to support patient management decisions, including treatment, health workers are almost flying blind. Providing quality healthcare relies on access to point of care tools for simple and rapid testing and effective treatment of patients.

To answer this challenge, health programmes can build their own eHealth Toolkit, an integrated solution to support febrile illness management at primary care. The toolkit is created by combining in a simple box locally available disease relevant point of care diagnostics, basic medicines, consumables and a mobile application providing clinical decision support.

The use of the clinical decision support app with the point of care tools aims to support complex health worker tasks such as assessing and differentiating signs and symptoms and their severity, interpreting rapid diagnostic test results and combining clinical data to make treatment and patient management decisions, that can save lives.

The kit is not a fixed, commercially available tool, rather a guide on how to leverage existing tools and combine them in a practical way to support use, stock keeping and access at the healthcare facilities.

FIND
Because diagnosis matters

Assembling the eHealth Toolkit

By leveraging existing tools, including locally available products, health programmes can assemble their toolkit in a simple box to improve access to point-of-care tools that will enable health workers to use diagnostics and better manager their patients.

Simple box

Locally procurable box with stackable compartments to organise toolkit components in one central location, enabling stock keeping

35 cm

70 cm

40 cm
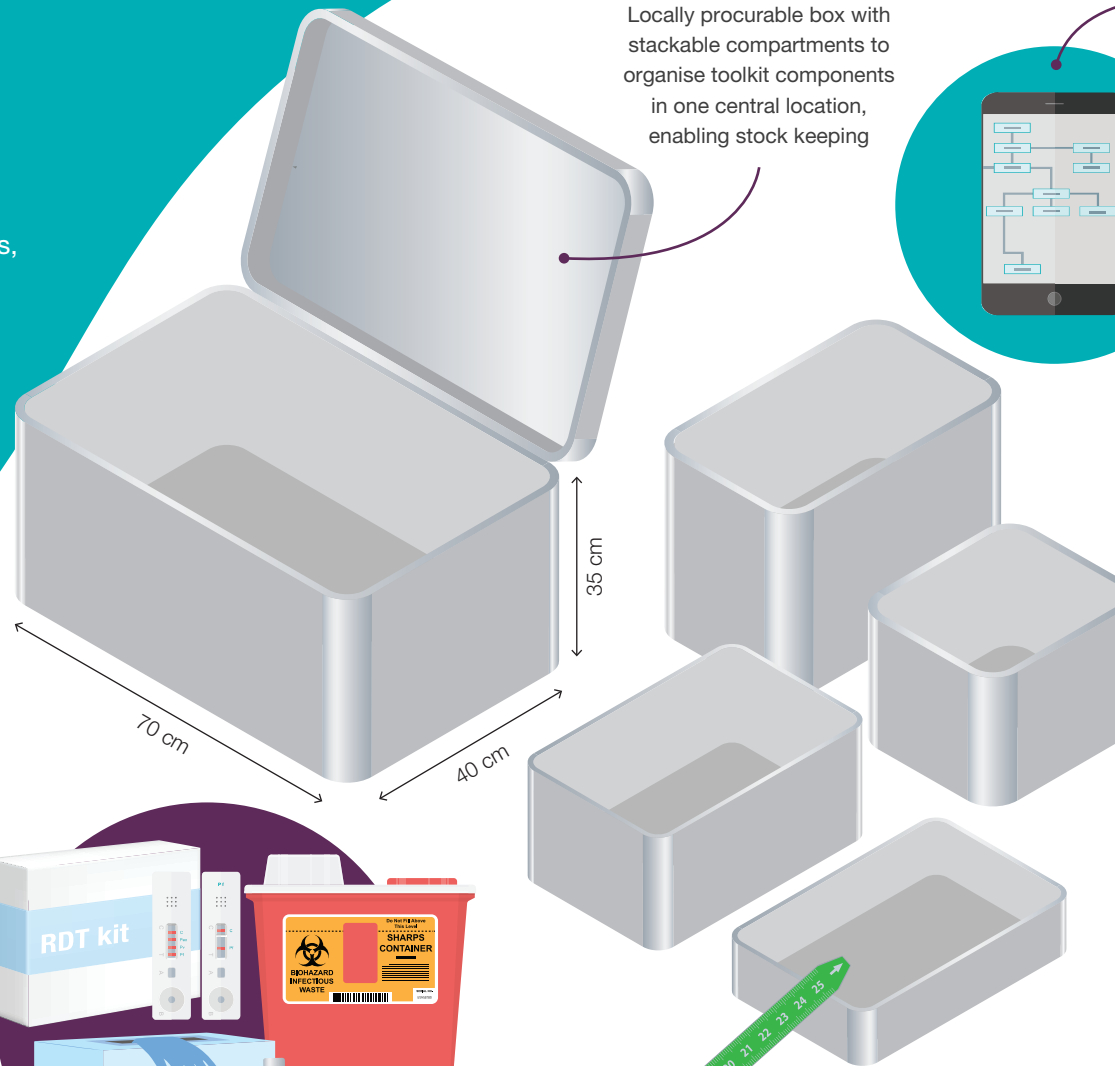
Mobile device and clinical decision support algorithms

- Clinical decision support algorithms for febrile disease diagnosis and patient management provided in an offline-enabled app on a mobile device
- Clinical algorithms are based on clinical guidelines and protocols such as the Integrated Management of Childhood Illness
- Digital forms for simplified case notification and sample tracking to support syndromic surveillance and molecular surveillance
- Dashboards to track clinical and operational indicators at the facility and central level
- Tutorials for diagnostic testing
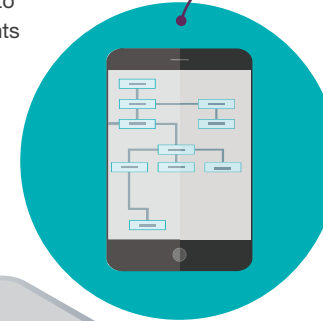
Basic medicines to treat common illnesses

Antipyretic, analgesics, antimalarials (ACTs)

Simple, rapid diagnostics and associated consumables

- Rapid diagnostic test kits for target diseases such as malaria, dengue, streptococcus group A
- Consumables to perform these diagnostic tests (e.g. examination gloves, timer, sharps disposal)

RDT kit

BIOHAZARD INFECTIOUS WASTE

SHARPS CONTAINER

Do Not Fill Above This Level

Tools to assess vital signs and health status

- Thermometer to objectively assess fever
- Middle Upper Arm Circumference (MUAC) tape to assess malnutrition in young children
- Pulse oximeter for oxygen saturation (SpO2) measurement
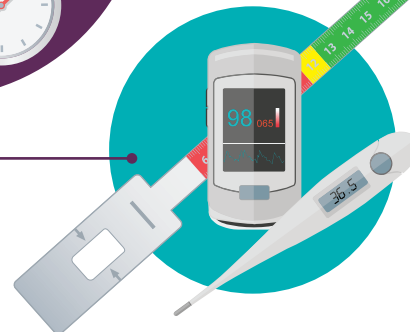
Other consumables for confirmatory testing and to support disease surveillance

- Vacutainer
- Needle with holder
- Tourniquet
- Cotton wool
- Isopropyl alcohol

Why use an eHealth Toolkit at primary care?

A connected clinical guidance solution

Mobile apps deliver electronic algorithms that facilitate implementation of clinical guidelines on diagnosis using simple rapid diagnostic tools, followed by appropriate management and treatment. Digital data can be used to support administrative and programmatic activities for overall strengthening of the healthcare system.

Context specific diagnostics and medical supplies

The box and its compartments, point-of-care diagnostics, medical supplies and other kit components can be locally procured and replenished. Heath programmes can consult their national Essential Diagnostics List and Essential Medicine List to determine which diagnostics and medicines are recommended by the Ministry of Health for in-country use.

A modular solution

The toolkit can be optimized for different settings using already available clinical guidelines, as well as for specific settings using new algorithms developed by healthcare programmes. Development of new algorithms can support the integration of other use cases, such as diagnosing additional diseases by including additional diagnostic components to the toolkit.

An offline-enabled solution

Even when there is no network connectivity, healthcare workers can use the app to support evidence-based clinical decision-making.

Benefits of creating and implementing your eHealth Toolkit

There are several kind of benefits to creating and implementing an eHealth toolkit at primary care

Clinical:
- Targeted and appropriate use of diagnostic tests
- The right treatments provided to the right patients
- Increased adherence to clinical guidelines and protocols

Operational:
- Empowerment of healthcare workers
- Reduced manual reporting and time away from patients
- Automated tracking of key healthcare indicators
- Offline enabled app – can work in low-connectivity areas

Public health:
- Reduction in unnecessary use of antimicrobials
- Primary care digital data to strengthen healthcare systems
- Data informing policy decisions

Economic:
- Collection of data on resources used at the facility to inform management decisions
- Toolkit components can be packaged in a box of choice procured locally
- Procurement of supplies through local tenders, supporting local economies

Healthcare system strengthening through connectivity and data

By providing simple-to-use connectivity, the eHealth toolkit can be integrated with local and national healthcare IT systems, strengthening decision making and management.
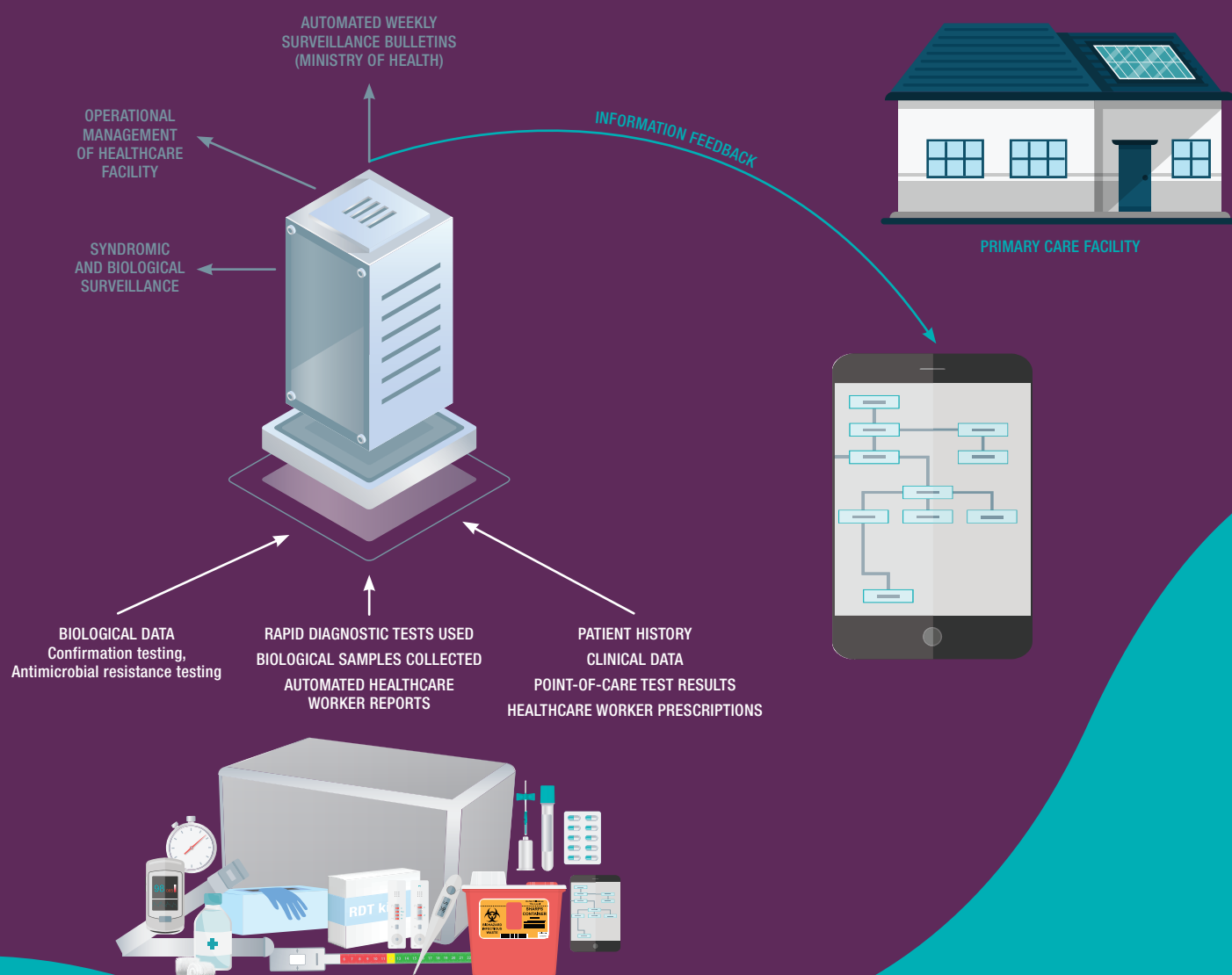
At the health facility level

Administrators can monitor facility data through dashboards available on mobile devices or via an online platform. These can support stock management for diagnostic tests and medicines, help forecast facility case volumes, assess staff performance, and detect anomalies in aggregated clinical data, prompting preventative measures for outbreaks.

At the national level

Data from primary care sites can flow to centralized health information systems, facilitating routine tracking of national indicators and supporting surveillance using parameters, such as clinical diagnosis and test results.

CONNECTED DATA TO STRENGTHEN HEALTHCARE SYSTEMS

AUTOMATED WEEKLY
SURVEILLANCE BULLETINS
(MINISTRY OF HEALTH)

OPERATIONAL
MANAGEMENT
OF HEALTHCARE
FACILITY

SYNDROMIC
AND BIOLOGICAL
SURVEILLANCE

INFORMATION FEEDBACK

PRIMARY CARE FACILITY

BIOLOGICAL DATA
Confirmation testing,
Antimicrobial resistance testing

RAPID DIAGNOSTIC TESTS USED
BIOLOGICAL SAMPLES COLLECTED
AUTOMATED HEALTHCARE
WORKER REPORTS

PATIENT HISTORY
CLINICAL DATA
POINT-OF-CARE TEST RESULTS
HEALTHCARE WORKER PRESCRIPTIONS

ABOUT FIND

FIND is a global non-profit organization that drives innovation in the development and delivery of diagnostics to combat major diseases affecting the world's poorest populations. Since 2003, we have been instrumental in the development of new diagnostic tools used in 150 low- and middle-income countries. A WHO Collaborating Centre, FIND works with more than 200 academic, industry, governmental, and civil society partners worldwide, on over 70 active projects across six priority disease areas. We are committed to a future in which diagnostics underpin treatment decisions and provide the foundation for disease prevention, surveillance and control.

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