

DHIS2 Metadata Toolkit for Malaria Elimination: Building Capacity through Technology

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WHO Toolkit for Routine HIS

Global normative guidance

Metadata packages installed in integrated HMIS

Flexible Multi-level Analysis



- 60+ countries use DHIS2 as national HMIS
- Scales from community to facility to district & national levels
- Supports data quality and core functionality for routine data management

- Analyze at any level (national, district, facility catchment area, community depending on nat'l system structure)
- Cross-program
- Integrated or disaggregated community & health facility data

Global adoption of WHO metadata packages



● WHO Packages: 64

- | | | | | | | |
|------------------------|-------------------|-------------------|--------------|-------------------------|---------------|------------|
| Afghanistan ⓘ | Chad | Indonesia ⓘ | Malawi ⓘ | Norway | Somaliland | Vietnam |
| Angola ⓘ | Dem. Rep. Congo ⓘ | Ivory Coast ⓘ | Mali ⓘ | Pakistan ⓘ | South Africa | Yemen |
| Bangladesh ⓘ | Djibouti ⓘ | Jammu and Kashmir | Mauritania ⓘ | Palestine ⓘ | South Sudan ⓘ | Zambia ⓘ |
| Benin ⓘ | East Timor | Kenya ⓘ | Mauritius ⓘ | Republic of the Congo ⓘ | Sri Lanka | Zimbabwe ⓘ |
| Botswana | Eritrea | Kyrgyzstan ⓘ | Mizoram | Rwanda ⓘ | Sudan ⓘ | |
| Burkina Faso ⓘ | Ethiopia ⓘ | Laos ⓘ | Mozambique ⓘ | Sao Tome ⓘ | Tanzania ⓘ | |
| Burundi ⓘ | Ghana ⓘ | Lebanon | Myanmar ⓘ | Senegal ⓘ | The Gambia ⓘ | |
| Cameroon ⓘ | Guinea ⓘ | Lesotho ⓘ | Namibia | Sierra Leone ⓘ | Togo ⓘ | |
| Cape Verde | Guinea Bissau ⓘ | Liberia ⓘ | Niger ⓘ | Solomon Islands ⓘ | Uganda ⓘ | |
| Central African Rep. ⓘ | Haiti ⓘ | Madagascar ⓘ | Nigeria ⓘ | Somalia | Vanuatu | |

60+ countries use DHIS2 as national scale HMIS

64+ countries adopted standard packages (e.g. immunization, TB, HIV, malaria)

55 countries rapidly deployed packages for COVID-19 surveillance and/or vaccination

77 countries use DHIS2 tracker

36 countries use DHIS2 Android App



WHO standards-based toolkit: Malaria

A framework for malaria elimination

1. Guidance manual

Surveillance in burden reduction and elimination settings

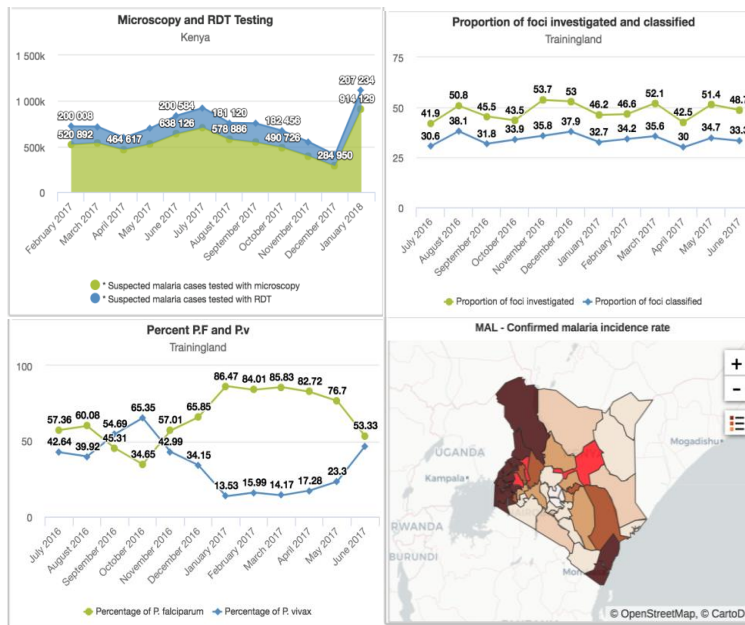
- Burden reduction
 - Morbidity, mortality
 - Prevention
 - Treatment
- Elimination
 - Case investigation and classification
 - Foci investigation and classification

Strengthen aggregate and case-based data

- Improve data quality
- Improve data analysis and use
- Data driven decision making

WHO malaria recommendations: standard data elements and indicators built into DHIS2 for the national HMIS

2. Analytic Dashboards



3. Training materials



- Guidance
 - English/French
- Exercises
 - Tutors' Guide
 - Learner's Guide

DHIS2 Toolkit for Malaria Programmes



Rapid data-driven response

Malaria Surveillance Dashboards

Data Quality Dashboard for Malaria Programmes

HMIS module:
Burden
Reduction

HMIS module:
Elimination
Settings

Case-based
Surveillance &
Foci
Investigation

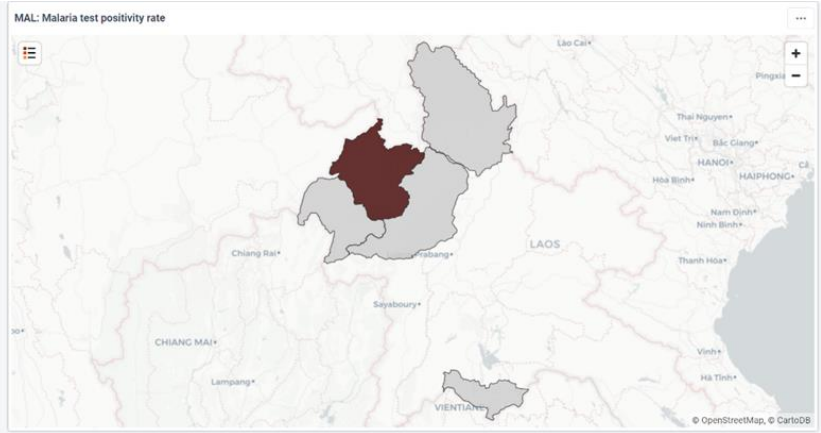
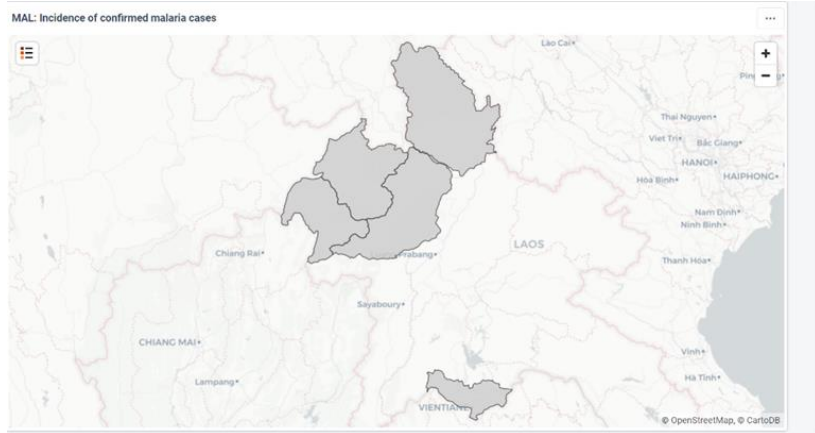
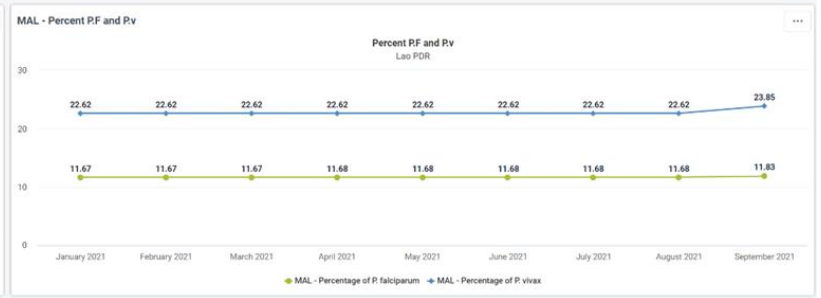
Stock Integration
Module

Migrant &
Mobile
Populations
Module

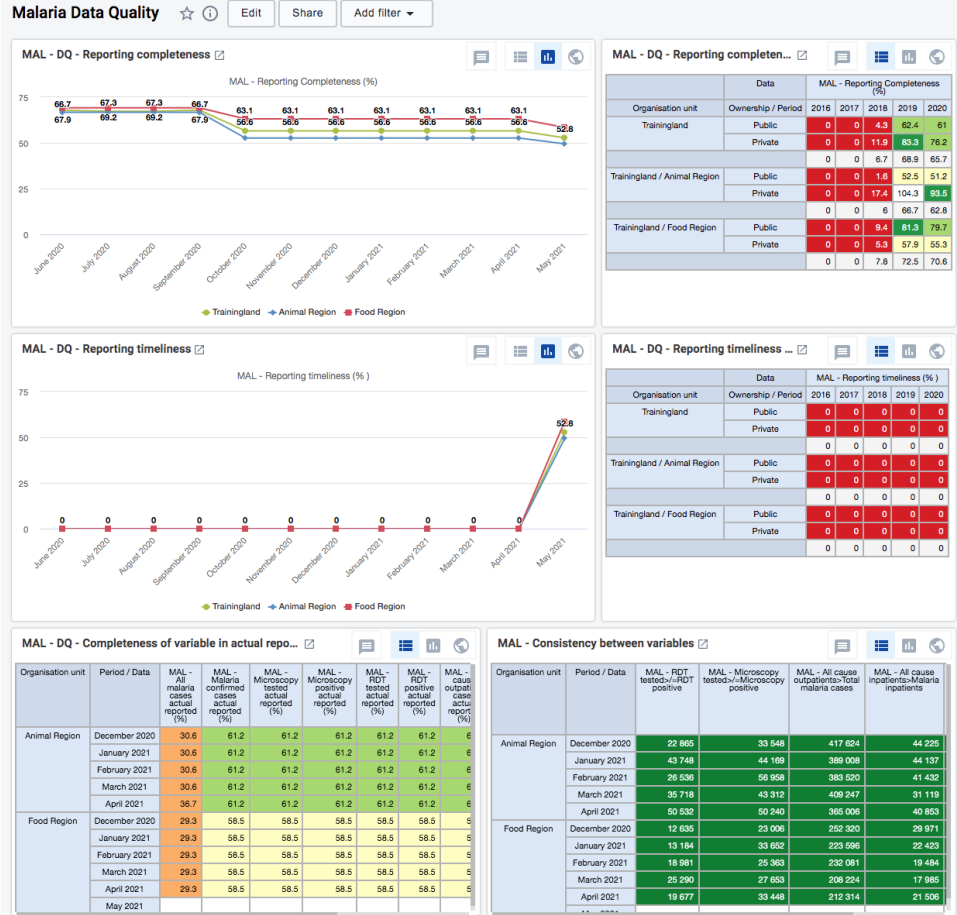
Optimized data collection and field-based workflows

Malaria Elimination Dashboard

Malaria Elimination ☆ Add filter ... More



Malaria Data Quality Dashboard



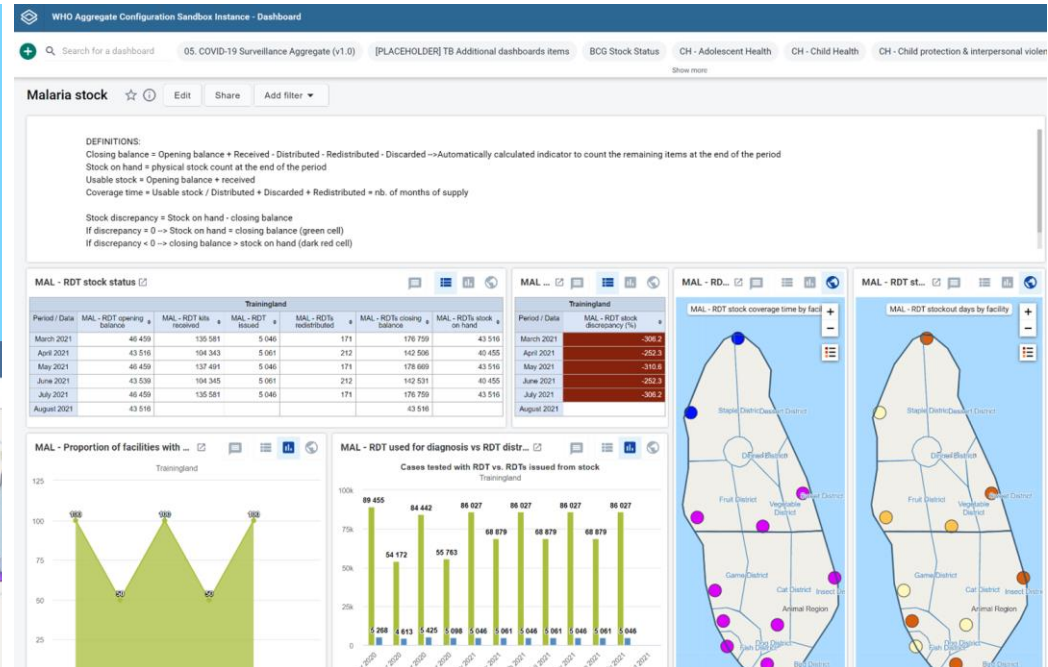
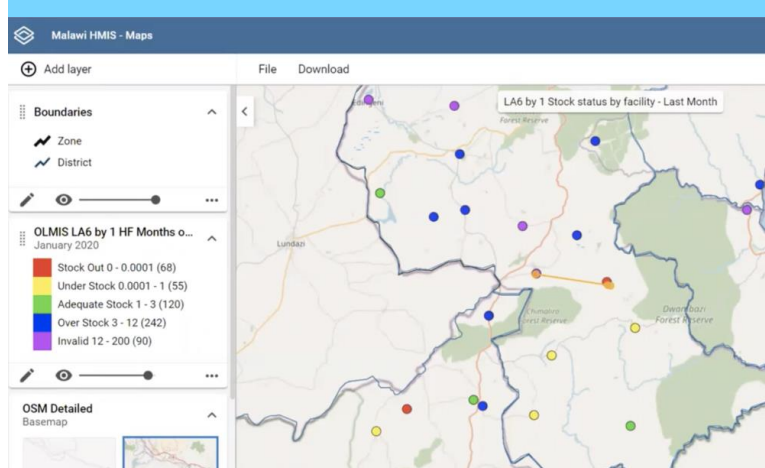
Objectives of DQ Dashboard

- Bring key data quality metrics to the users routinely through use of DHIS2 dashboards to facilitate data quality improvement activities;
- Monitor completeness and timeliness of reporting malaria data;
- Monitor completeness of reporting of core malaria data variables in the monthly health facility reporting form;
- Monitor internal consistency between variables to detect inconsistencies for quality improvements;
- Compare trends of key malaria indicators at the various reporting levels and rapidly detect anomalies as red flags for poor data quality.

Stock Integration Module

Logistics data package for DHIS2

- Cross-cuts vertical health programs
- Facility & last-mile reporting
- Integrated analysis of stock & service delivery data
- Programme-agnostic logistics data framework with programme-specific analysis



Coming soon: Case-based Surveillance

Case notification, investigation & response

Back < > MAL-CS- Malaria Case notification, investigation and response

Enrollment

Owned by: Lao PDR

Enrolling organisation unit

Enrollment date

Complete

Deactivate



Delete

Indicators

MAL-CS Malaria age current (years)

36

Malaria species type

PV

Preliminary case classification

Induced

Malaria test performed

MICROSCOPY

Timeline Data Entry



Date of diagnosis *

Date of diagnosis

Case Detection

Foci investigation, classification & response

Back < > MAL-FOCI- Malaria foci investigation

Enrollment

Owned by: Lao PDR

Enrolling organisation unit

Date of Foci Registration

Complete

Deactivate



Delete

Indicators

Foci classification

RESIDUAL_NON-ACTIVE

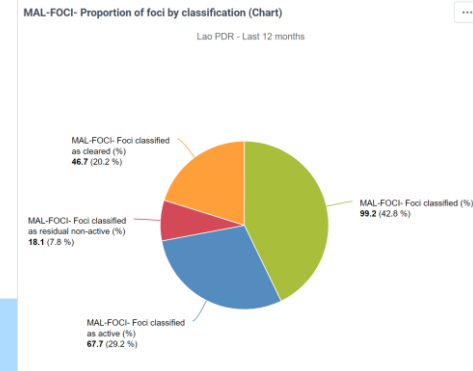
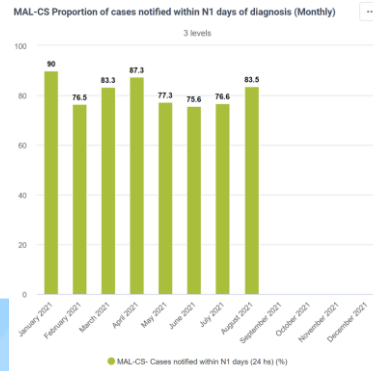
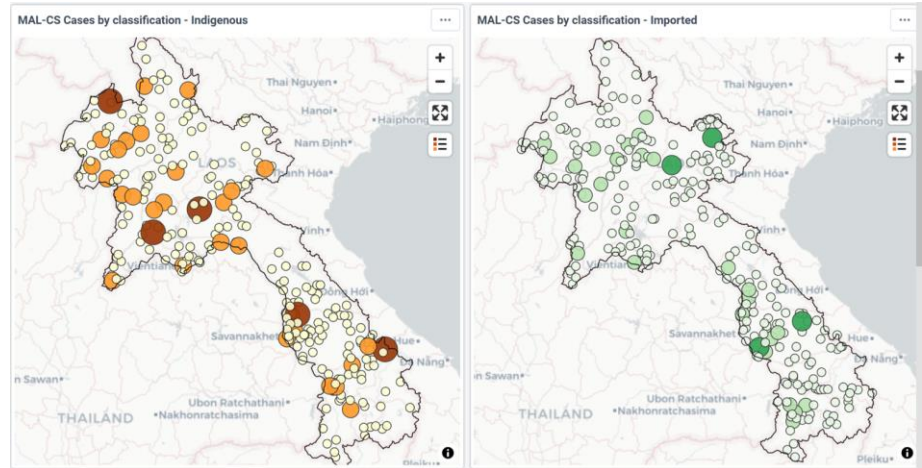
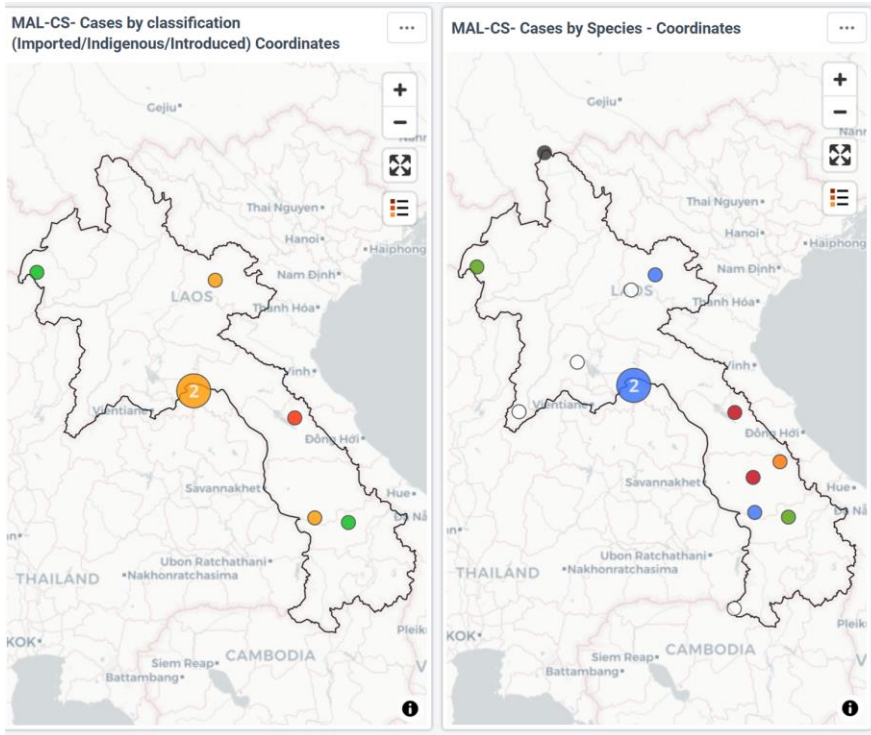
Timeline Data Entry



Date of foci investigation *

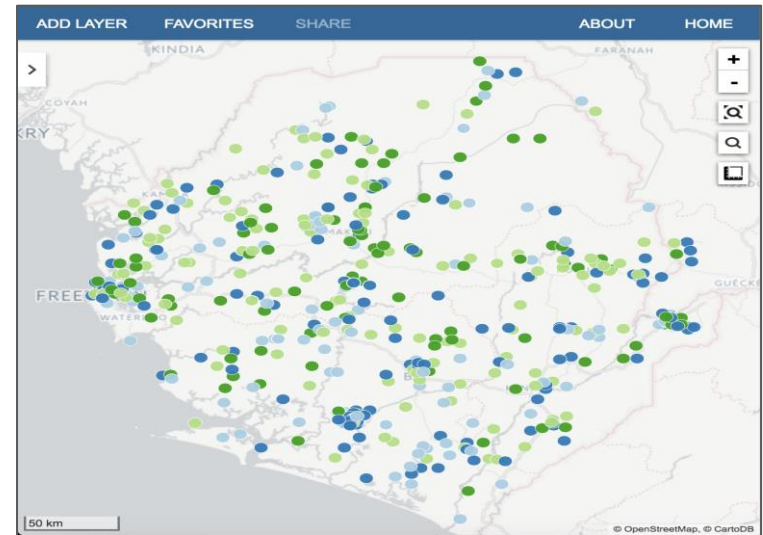
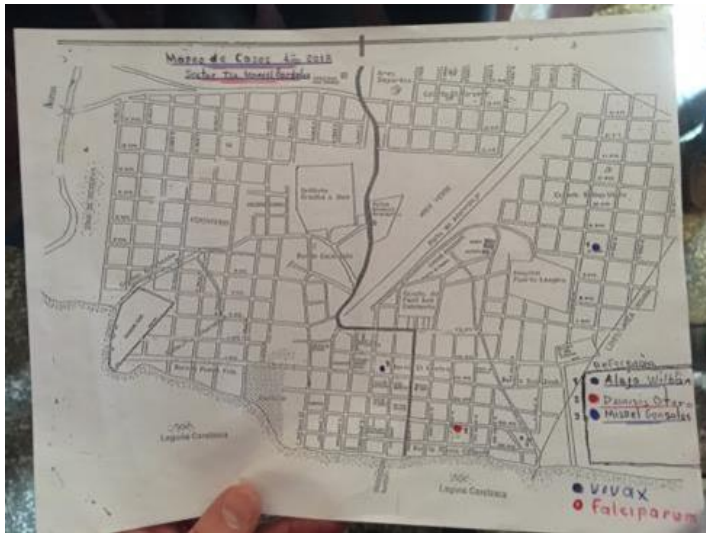
Event point

Malaria Elimination Dashboards: with CBS

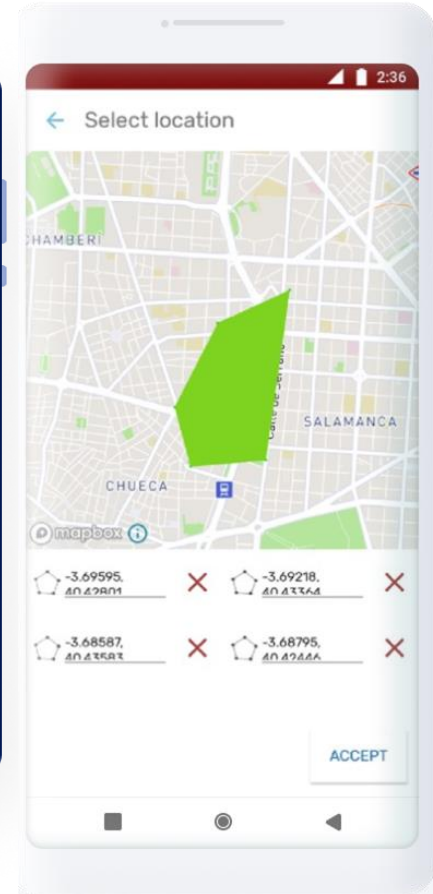
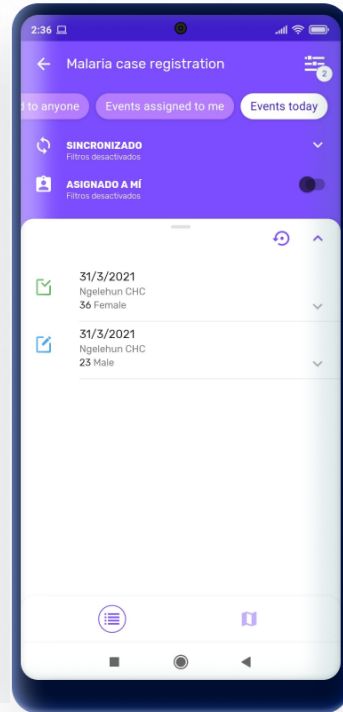
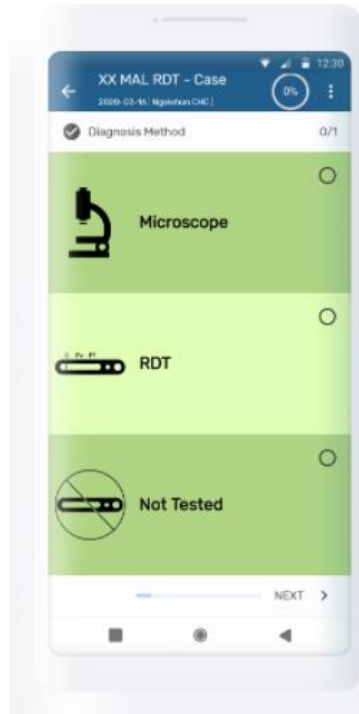


DHIS2 Feature Enhancements

Example from a map in Honduras color coding vivax vs falciparum on the left - an example from how this can look in the DHIS2 maps app on the right



DHIS2 Android Enhancements



Thank you!

Contact: Rebecca Potter (rebecca@dhis2.org)

Resources:

[https://dhis2.org/who/
docs.dhis2/metadatapackages](https://dhis2.org/who/docs.dhis2/metadatapackages)