Mali

Routine Health Information System
MALARIA REPORTING STRUCTURES
Current as of: May 2019

RHIS Profile: This document outlines the reporting structures of the routine health information systems (RHIS) that include malaria data. In Mali, the RHIS was established in 1998. It encompasses three sub-systems: the Système Local d'Information Sanitaire (SLIS, local health information system), the Système d'Information Hospitalier (hospital information system), and the Système d'Alerte Épidémiologique (SAE, integrated disease surveillance and response system). As of August 2016, these sub-systems have been integrated into the DHIS2 platform. Prior to DHIS2, SLIS data were collected quarterly at the district level, in an Access-supported-platform called Développement Sanitaire du Mali (DESAM). Data were collected for four malaria indicators. To better address the need for data on malaria, the National Malaria Control Program (NMCP) launched in 2008 a complementary paper-based data collection system in the Centre de Santé Communautaire (CSCom). In 2010, MEASURE Evaluation initiated the electronic collection and transmission of malaria data by phone, which subsequently covered the regions of Ségou and Mopti, and the District of Bamako. With the introduction of DHIS2 in 2016, the RHIS data compilation and entry starts at the CSCom level, after data extraction from the consultation records in the SLIS monthly activity report. Data captured in DHIS2 are directly accessible to the districts and the Directions Régionales de la Santé (DRS, Regional Health Directorates). Hospital-generated data (regional and central levels) are submitted to the Cellule de Planification et de Statistique (CPS, the Planning and Statistics Unit).

Acronyms:
CHW: community health worker
CSRef: centre de santé de référence
DNS: Direction Nationale de la Santé
M&E: monitoring and evaluation
MOH: Ministry of Health
RMA: Rapport Mensuel d'Activités

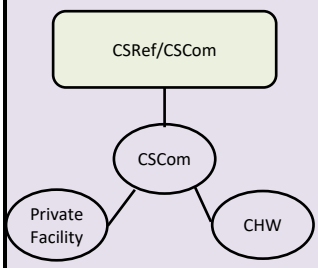
	SLIS	SAE
	When started: 2016 on DHIS2 (1993 on paper) **Scale-up status:** National; deployment in all the CSComs completed	**When started:** 2016 national level and all CSComs for DHIS2 (1987 on paper) **Scale-up status:** National deployment but reporting limited to 5 regions
National	**Reporting format/platform:** DHIS2 **Managed by:** DNS, Division of Health Information and Planning **Dissemination:** Annual health statistics **Key tasks:** Coordination, data analysis and decision making, reporting, commodity forecasting and distribution, evaluation and planning; quarterly feedback to the lower levels	**Reporting format/platform:** DHIS2 **Managed by:** DNS, Disease Surveillance Unit in Division of Disease Prevention and Control **Dissemination:** Annual statistics, weekly report to MOH senior staff/posted to MOH website **Key tasks:** Coordination, data analysis, epidemic detection, preparedness and response, decision making; quarterly feedback to lower levels
Regional • 11 regions • Average of 7 districts per region • Regional hospitals (2nd referral level)	**Reporting format/platform:** DHIS2 **Managed by:** Regional health data manager **Reported to:** DNS (regional hospitals report to CPS) **Reporting frequency:** Monthly (data validation 3 weeks after the end of the month) **Key tasks:** Supervision, training, semiannual data review meetings, decision making	**Reporting format/platform:** DHIS2 **Managed by:** Regional health disease surveillance point person **Reported to:** DNS **Reporting frequency:** Weekly (each Friday) **Key tasks**: Monitoring of epidemic-prone diseases and epidemic detection, M&E and data quality control
District • 74 districts • Average of 18 CSComs per district • CSRef (1st referral level)	**Reporting format/platform:** DHIS2 **Managed by:** District data manager **Reported to:** Regional health office **Reporting frequency:** Monthly (data validation 2 weeks after the end of the month) **Key tasks:** Supervision, quarterly data review meetings, data entry for reports, data analysis	**Reporting format/platform:** DHIS2 **Managed by:** District health disease surveillance focal person **Reported to:** Regional health office **Reporting frequency:** Weekly (each Friday) **Key tasks:** Monitoring of epidemic-prone diseases and epidemic detection, data entry of paper-based reports, data analysis
Facility Level • 1,362 CSComs 	**Reporting format/platform:** Data are compiled in the 28-page paper RMA before entry into DHIS2. Nearly all CSComs have the capability to enter RMA data into DHIS2; a few CSComs from northern Mali (kidal) continue to send paper reports to the district for data entry. **Managed by:** CSCom Technical Director **Reported to:** District health office **Reporting frequency:** Monthly (1 week after the end of the month) **Other:** CHWs and private health facilities use a paper-based system to report data to the CSCom. **Key tasks:** Data collection and verification; data used for planning and management	**Reporting format/platform:** Most CSComs use DHIS2 to report surveillance data for priority diseases (northern regions started using DHIS2 for weekly reporting of surveillance data in 2018). **Managed by** CSCom Technical Director **Reported to:** District health office **Reporting frequency:** Weekly (each Friday), priority diseases cases notified daily **Key tasks:** Data collection, verification, and transmission; suspected disease outbreaks notified to the district and the region, and to DNS by phone

Table 1: Key Malaria Indicators by System

Indicate Y or N for each reporting element captured by the system.

Indicators	System	
	SLIS	SAE
Number of malaria cases		
Suspect or fever cases	Y	Y
Suspected cases tested (diagnostically)	Y	N
Diagnostically confirmed (positive)	Y	Y
Clinical or presumed or unconfirmed	N	N
Outpatient/inpatient	Y/Y	N/N
Uncomplicated/severe	Y/Y	Y/Y
Age categories (e.g., <5, 5+)/Sex disaggregation (M, F)	Y/Y	Y/Y
Pregnant women	Y	N
Number of malaria deaths		
Age categories (e.g., <5, 5+)/Sex disaggregation (M, F)	Y/Y	Y/Y
Pregnant women	Y	N
Commodities (Availability or stockout/Consumption)		
RDT	Y/Y	Y/Y
ACT	Y/Y	Y/Y
Severe malaria treatment	Y/Y	Y/Y
SP	Y/Y	Y/Y
IPTp 1/2/3(+)	Y	N
Completeness of reporting	Y	Y

Data Quality Activities:

Routine data quality reviews/audits: Data reviews are conducted monthly by CSComs, quarterly by districts, and semiannually by regions. The district-level data review process is conducted by the CSCom staff and the health region. They are tasked to review, identify, and correct inconsistencies, and validate data. District and NMCP representatives participate in the regional reviews. NMCP conducts data reviews during supportive supervision visits in selected districts and CSComs (all regions are targeted), depending on the availability of resources. In addition, with support from the Global Fund, Population Services International (PSI) Mali, and MEASURE Evaluation, routine data quality assessments (DQAs) took place in Mopti, Segou, Sikasso, Kayes, and Koulikoro regions as well as Bamako district from 2015 to 2017. Supportive supervision and DQA activities were supported by various partners, including MEASURE Evaluation, the Global Fund through PSI, and Malaria Care. DQA-related activities are funded by the United States Agency for International Development (USAID)/President's Malaria Initiative (PMI) and the Global Fund.

Monthly or quarterly malaria bulletin: NMCP is currently producing monthly bulletins. Malaria data are also published in NMCP malaria annual reports. The bulletins are electronically disseminated to the regions, districts, and partners. The most recent malaria bulletin was produced in April 2019 to report on March 2019 data. The most recent malaria annual report (for 2018) was published in 2019.

Data availability: A code is required to access DHIS2. NCMP (senior staff and M&E team), regional and district data managers, and malaria point persons have direct access to malaria data in DHIS2. Key partners can have access to malaria data. Data are available as soon as data entry and consistency control have been completed by the CSCom.

Data use: Malaria data are used by the NMCP and other partners for management, reporting, commodity forecasting and distribution, program performance evaluation, strategic decision making, and writing grant proposals. Other partners use malaria data for reporting and proposal writing. The CSCom is the lowest level where data are routinely analyzed.

Additional Context:

SLIS data reporting frequency changed from quarterly to monthly in 2016, when DHIS2 was introduced to replace the DESAM and the complementary paper and electronic versions of the malaria reporting system. Before the introduction of DHIS2 in Mali, a mobile phone reporting system was established for routine malaria data (2011) in 20 districts and surveillance data (2013) in 2 districts with USAID/MEASURE Evaluation support.

Key challenges: Recent introduction of DHIS2 in the northern regions, internet connectivity, access to a power source, data quality, use and dissemination, maintenance of the equipment, human resources, and security issues

Key partners and stakeholders: USAID/PMI and Global Health Security Agenda, the Global Fund, PSI, World Health Organization, UNICEF, Direction Nationale de la Santé, Cellule de Planification et de Statistiques

Priorities: Integration of private health facility data and expanding the reporting system to the community level

Malaria surveillance is part of the national integrated disease surveillance and response (IDSR) strategy, and IDSR/epidemic surveillance includes all regions regardless of the malaria epidemiology.

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