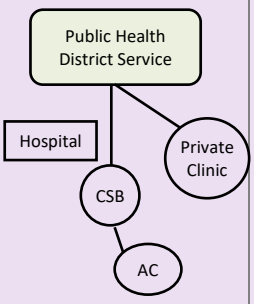
Current as of JUNE 2023

Madagascar

Routine Health Information System (RHIS) Malaria Reporting Structures

RHIS Profile: This document outlines the reporting structures of the routine health information systems (RHISs) that include malaria data. In Madagascar, the RHIS is part of the integrated health management information system, Système National d'Information Sanitaire (SNIS). The SNIS includes the health management information system (HMIS), Système d'Information Sanitaire de Routine (SISR), and the integrated disease surveillance and response system, Surveillance Intégrée de la Maladie et la Riposte (SIMR). As part of the Ministry of Public Health's RHIS reform, the monthly reporting framework used at community health centers (*centres de santé de base;* CSBs) and among community health workers (CHWs) has been integrated with all public health priority programs since 2015. Madagascar introduced DHIS 2 software in 2017 and rolled it out in 114 health districts in 2018.

	SISR/RHIS	SIMR/IDSR
	When started: 2015 **Scale-up status:** National	**When started:** 2004; electronic since 2015 **Scale-up status:** National with paper system; 51 districts use an electronic system (SMS, tablet, and smartphone).
National	**Reporting format/platform:** DHIS 2 **Managed by:** DEPSI (Directorate of Studies, Planning, and Health Information) **Dissemination:** All central directorates using the SNIS, including the National Malaria Control Program (NMCP) and malaria partners. **Key tasks:** Data import, verification, analysis, sharing, and use, and planned feedback to lower levels every quarter.	**Reporting format/platform:** Excel, with web-based reporting in some areas. **Managed by :** Direction de la Veille Sanitaire, de la Surveillance épidémiologique et Riposte (DVSSER). **Dissemination:** All central directorates doing surveillance, including the NMCP. **Key tasks:** Data compilation, verification, analysis, sharing, and use, and web consulting and planned feedback to lower levels every quarter.
Regional • 23 regions • Average of 5 districts per region • 16 Regional Hospital • 22 University Hospital	**Reporting format/platform:** DHIS 2 **Managed by:** HMIS Regional Manager **Reported to:** DEPSI **Reporting frequency:** Monthly by the 30th of each month. **Key tasks:** Data import, verification, analysis, and transmission.	**Reporting format/platform**: Excel (compilation files), with web-based reporting in some areas. **Managed by:** integrated disease response IDR regional focal point. **Reported to:** DVSSER **Key tasks:** Reception of Excel files for compilation, verification, and analysis, plus web consulting.

District • 114 districts • Average of 24 CSBs per district • 114 District Hospital	**Reporting format/platform:** DHIS 2 Managed by: HMIS District Manager **Reported to:** DEPSI and Regional Directorate for Public Health (DRSP) **Reporting frequency:** Monthly by the 27th of each month. **Key tasks:** Data verification, analysis, validation, entry into DHIS 2 and transmission to higher level (automated process through DHIS 2).	**Reporting format/platform:** Excel (for paper or SMS data), with web-based reporting in some areas **Managed by:** integrated disease response IDR district focal point **Reported to:** DVSSER, with copy to DRSP Reporting frequency: Weekly (Excel), daily (web). **Key Tasks:** Data input and compilation to Excel, verification, analysis, and transmission, plus web consulting.
Facility Level • 3590 CSBs (2775 public, 815 private)  	**Reporting format/platform:** Paper-based Monthly Activity Report for CSBs and private providers; paper-based Monthly Community Activities Report for community health workers. **Managed by**: CSB chief; community health worker (AC) **Reported to:** District Public Health Service (SDSP) **Reporting frequency:** Monthly by the 15th of each month (CSB) or the 2nd each month (AC) **Key tasks:** Data collection, verification, analysis, and transmission and feedback to ACs during monthly meetings.	**Reporting format/platform:** Paper, SMS, smartphone with web application (in some CSBs). **Managed by:** CSB chief **Reported to:** SDSP (paper, SMS) or central server (tablet, smartphone) **Reporting frequency:** Weekly (paper), daily (electronic) **Key tasks:** Data collection, verification, analysis, and transmission, plus web consulting and feedback to Acs during monthly meetings.

Acronyms:

AC = agent de santé communautaire

CSB = centre de santé de base

DEPSI = Direction des Etudes, de la Planification et Système d'Information

DRSP = Direction Régionale de Santé Publique

DVSSER = Direction de la Veille Sanitaire et de la Surveillance Epidémiologique et Riposte

MSP = Ministère de la Santé Publique

SIMR = Surveillance Intégrée de la Maladie et la Riposte

SNIS = Système National d'Information Sanitaire

SSSD = Service de la Statistique Sanitaire et Démographique

SDSP = Service de District de Santé Publique

Table 1: Key Malaria Indicators by System

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

	SNIS	SIMR
Number of malaria cases		
Suspect/fever cases	Y	Y
Tested (diagnostically)	Y	Y
Diagnostically confirmed (positive)	Y	Y
Clinical/presumed/unconfirmed	Y	Y
Outpatient	Y	Y
Inpatient	Y	Y
Uncomplicated/severe	Y/Y	Y/N
Age categories (e.g., <5, 5+) / Sex disaggregation (M, F)	Y/Y	N/N
Pregnant women	Y	N
Number of malaria deaths		
Age categories (e.g., <5, 5+) / Sex disaggregation (M, F)	Y/N	N/N
Pregnant women	Y	N
Commodities (Availability or stockout/consumption)		
Availability of RDT/ACT/Quinine or Inj Art/SP	Y/Y/N/Y	N/N/N/N
Consumption of RDT/ACT/Quinine or Inj Art/SP	Y/Y/N/Y	N/N/N/N
IPTp 1/2/3+	Y/Y/Y	N/N/N
Completeness of reporting	Y (94%)	Y (69%)

Data Quality Activities

SNIS:

- The World Bank's PAUSENS Project established a data quality improvement mechanism in 18 districts in 2016. At the end of each month, district teams meet to verify data from monthly reports (using an error checking guide) before entering into Access. The NMCP conducted preparatory workshops, group reviews with hospital managers, and CSB visits (to check records and monthly reports) in a sample of districts in 2015 for the routine data quality assessment (DQA). Directorate of Studies and Planning (DSP) does not carry out supervision, but NMCP conducts integrated supervision in 11 regions per semester. With the support of PMI/USAID MEASURE Evaluation, a quarterly meeting on the quality of malaria data is organized by the NMCP with the participation of all partners involved in M&E (NMCP, DVSSE, DEP, Institute Pasteur de Madagascar, and NGOs). In 2019, DEPSI in collaboration with MEASURE Evaluation and other implementing partners conducted supervision visits in 53 districts and 10 regions to monitor the use of DHIS 2 and verify data quality and conducted DQAs in 60 health facilities (CSBs), 20 districts, and 5 regions. In 2021, DEPSI in collaboration with PMI Measure Malaria conducted supervision visits in 3 regions and 15 districts and performed DQAs in 16 health facilities (CSBs) located in 2 regions and 5 districts.

SIMR:

- No systematic data quality verification. DVSSER carries out supervision when funding is available from WHO's CERF Project.
- CSB chiefs in supported areas and community health partners meet regularly at the township level. Regular monitoring and data verification meetings are held at the district level. At the central and regional levels, the meetings mostly focus on program review.

Malaria report:

- There is no current monthly report on malaria, but since 2017 to date, NMCP with the support from PMI Measure Malaria has issued a quarterly malaria bulletin. Also, DVSSER publishes weekly electronic reports on general disease surveillance (most recent edition February 2019). PMM has supported DVSSER to develop a monthly IDSR bulletin since 2017. In addition, NMCP shares a weekly malaria epidemiological profile with key partners (SITREP), which has now become a regular exercise. An annual malaria activities report has been conducted by NMCP, supported by WHO and PMI Measure Malaria, since 2018.

Data availability:

- SNIS: The NMCP team has direct access to the data stored in DHIS 2. At the district level, focal points and partners can access data using their DHIS 2 credentials, which allows data visualization and imports. Malaria report completeness and promptness can be assessed directly from the DHIS 2 by the NMCP team.
- SIMR: NMCP has direct access to the data, via the DVSSER web platform. District focal points can access data through paper reports and the DVSSER web portal. Key partners can request access to the database or can have direct access via personal login. Quarterly meetings to discuss IDSR data with PMI's key implementing partners have been set up with support from MEASURE Malaria through DVSSER leadership since 2017 and are still regularly conducted through PMM support.

Data use:

- SNIS: NMCP uses data to review strategies, plan activities, and manage health inputs. CSBs analyze their data and generate charts for display.
- SIMR: DVSSER analyzes data and informs the directorates concerned accordingly, directly, in its newsletter or via its webpage. The lowest level of data analysis is at the CSBs.

Additional Context

- SNIS: Routine malaria data needs are addressed by the SNIS. The main challenges are the timely availability of high-quality, reliable, and comprehensive health information; the uptake of data from the private sector and the hospital sector; and the culture of sending, analyzing, and using data for decision making. The latter is often attributed to the lack of systematic feedback and resulting perceived uselessness of reporting and SNIS in general. There are also challenges in completeness of reporting in the community system in areas not supported by U.S. government-backed community health projects. Another challenge emerging with the advent of the electronic data collection system is interoperability: both between SNIS and SIMR and between the MSP and other partners' systems. With the deployment of DHIS 2 in 2018, discussion about systems interoperability between DHIS 2, the DVSSER electronic surveillance system, and NGOs' health platforms are led by DEPSI.
- Partners involved in strengthening SNIS are: World Bank/PARN Project, UNICEF USAID (ACCESS/ PMI Measure Malaria, IMPACT/PSI), WHO, UNFPA, and Global Fund. Partner support focuses on strengthening the technical platform. However, the coordination of this aid requires leadership, vision, and good governance from the MSP. Currently, the MSP has validated a roadmap for HMIS strengthening, which has not been updated yet.
- SIMR: The use of electronic surveillance via web has improved the availability of timely data and might be expanded, pending the MSP's vision, accounting for technical feasibility, geographic coverage, and, above all, sustainability by providing for the gradual withdrawal of donors. The main partners in SIMR are WHO and the Indian Ocean Commission. As with SNIS, the main

challenges are data completeness, timeliness, and quality; integration; and implementation of other surveillance components (hospital, mortality, and biological). A plan to scale up electronic disease surveillance is under planning at DVSSER level; however, this currently faces challenges in supplying tablets and training health staff. Only 59 districts are covered.

Recent updates

Please use this space to note any changes to routine reporting in response to gaps identified from the previous versions of the RHIS profile. This may include initiatives to address data quality, reporting structures and timeliness of reporting, or supervision.

Examples:

- DHIS 2 rollout at private health sector after training
- Deployment of national University and Regional hospital DHIS 2 and community-based DHIS 2.
- Extension of the use of malaria score cards and dashboard at health center level.
- Effort to improve the reporting rate of private health facilities' data into the national HIS (DHIS 2).
- Introduction of malaria Routine data quality assessment (mRDQA) in five health regions since 2021

PMI Measure Malaria

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