

# Democratic Republic of Congo

## Routine Health Information System (SNIS) Malaria Reporting Structures

**RHIS Profile:** This document outlines the reporting structures of routine health information systems (RHISs) that include malaria data. In the Democratic Republic of the Congo (DRC), the health management information system (*Système National d'Information Sanitaire* [SNIS]) and the integrated disease surveillance and response (IDSR) system both routinely report malaria data. The SNIS has existed in DRC since colonial times but started receiving increased financial support through a series of projects starting in 1987. Major steps toward improving its functionality occurred through a coordinated effort with the Ministry of Health in 2003, which required the national level to play a normative, regulatory, and supportive role, with the provinces being responsible for implementation and operation. The SNIS reports malaria surveillance data monthly and transitioned to DHIS 2 over a three-year period, 2015–2017. The National Malaria Control Program (NMCP) had developed a parallel system to ensure regular data flow, but it is transitioning away from that with DHIS 2 fully rolled out and works in coordination with the SNIS to collect and process malaria data on the DHIS 2 platform.

	SNIS	IDSR
	<p><b>When started:</b> 2003 with GESIS (Access). 2005: Normative policy (Access). 2014: DHIS 2.</p> <p><b>Scale-up status:</b> DHIS 2 began scaling up in 2017, when all health zones (HZs) received training and initial equipment to operate on DHIS 2, although Internet connection and computer availability are still problematic. Paper reporting tools are in all health facilities.</p>	<p><b>When started:</b> 2005 with Excel and EPI INFO.</p> <p><b>Scale-up status:</b> Since 2014, with DHIS 2 and EPI INFO. Paper tools in all health facilities, DHIS 2 in all HZs. However, DRC is piloting the electronic surveillance by using EWARS (Early Warning Alert and Response System) tool in some HZ of 5 provinces. Noted that the EWARS system is not yet interoperable with DHIS2.</p>
National	<p><b>Reporting format/platform:</b> DHIS 2</p> <p><b>Managed by:</b> SNIS office</p> <p><b>Dissemination:</b> Monthly to all actors involved (government, partners, and donors)</p> <p><b>Key tasks:</b> Coordination, configuration of DHIS 2, training on DHIS 2, monthly tabulation and analysis, current development of validation rules for data on DHIS 2, analysis and feedback to the provinces, data quality control, and analysis of standard deviations and outliers. Working with NMCP (Surveillance, M&amp;E Division) and their technical partners to develop data analysis guide and standard dashboards and visualizations for review of malaria data at the health zone provincial and national</p>	<p><b>Reporting format/platform:</b> DHIS 2 and EPI INFO</p> <p><b>Managed by:</b> Department of Epidemiological Surveillance (<i>Direction de Surveillance Epidémiologique</i>)</p> <p><b>Dissemination:</b> Weekly</p> <p><b>Key tasks:</b> Compilation, data quality control, follow-up analysis, retro information, comments, and recommendations. Declare outbreaks, monitor thresholds and trends.</p>

	levels.	
<b>Provincial</b> <ul style="list-style-type: none"> <li>• 26 provinces</li> <li>• Each province made up of 11–35 HZs</li> </ul>	<p><b>Reporting format/platform:</b> DHIS 2</p> <p><b>Managed by:</b> Health Information, Research, and Communication Office (1 head of office, 1 provincial data manager, 1 SNIS manager)</p> <p><b>Reported to:</b> National level (note that data entry is done at the zone level, and the data are directly accessible by all)</p> <p><b>Reporting frequency:</b> Depending on the frequency of forms entered at the zone level (weekly, monthly, quarterly, and annually)</p> <p><b>Key tasks:</b> Coordination, training in SNIS and DHIS 2, periodic data analysis, reviews, quality control and feedback to HZs, supervision of HZs, and quarterly and annual organization of annual reviews of the provinces.</p>	<p><b>Reporting format/platform:</b> DHIS 2 and EPI INFO</p> <p><b>Managed by:</b> Health Information, Research, and Communication Office (1 head of office, 1 provincial data manager, 1 SNIS &amp; health card manager, 1 epidemiological surveillance manager).</p> <p><b>Reported to:</b> National level (data are sent to the epidemiological surveillance department in EPI INFO format because the completeness and timeliness of the weekly report is low).</p> <p><b>Reporting frequency:</b> Weekly compilation of data obtained in parallel with DHIS 2</p> <p><b>Key tasks:</b> Compilation, analysis, validation, and feedback. Verification of thresholds and reporting of epidemics.</p>
<b>Health Zone</b> <ul style="list-style-type: none"> <li>• 519 HZs</li> <li>• Each HZ is made up of 10–30 health areas (<i>aires de santé</i>)</li> </ul>	<p><b>Reporting format/platform:</b> DHIS 2</p> <p><b>Managed by:</b> Health zone chief (MCZ)</p> <p><b>Reported to:</b> Province, but data are automatically transmitted to national level through DHIS 2</p> <p><b>Reporting frequency:</b> Depending on the periodicity of the forms (weekly, most often monthly, quarterly, and yearly)</p> <p><b>Key tasks:</b> Coordination and monitoring; compile, review, and validate data. Enter paper forms from facilities into DHIS 2. Monthly data review meetings, retro information, and supervision at health facilities and Data Quality Supervision Tool.</p>	<p><b>Reporting format/platform:</b> DHIS 2 and Excel</p> <p><b>Managed by:</b> MCZ</p> <p><b>Reported to:</b> Provincial level (two circuits are used to date because of the low completeness and promptness of the rural emergency hospital REH dataset)</p> <p><b>Reporting frequency:</b> Weekly by Monday</p> <p><b>Key tasks:</b> Compile the data transmitted either by telephone or in paper format, provide feedback to the health facilities</p>

<p><b>Facility Level</b></p> <ul style="list-style-type: none"> <li>• A cluster of health facilities are grouped together in a health area. Each configured health facility reports its own data without mixing them as was the case before.</li> </ul>	<p><b>Reporting format/platform:</b> Reporting is done using the paper form. Some health facilities equipped with computers and Internet can enter directly into DHIS 2.</p> <p><b>Managed by:</b> Head nurse (infirmier titulaire de l'aire de santé, IT)</p> <p><b>Reported to:</b> HZ</p> <p><b>Reporting frequency:</b> According to the defined frequency (weekly, monthly, quarterly, and annually)</p> <p><b>Key tasks:</b> Filling out forms, compiling data from different registers, archiving, and holding monthly data analysis meeting</p> <p><b>Community Level</b></p> <p><b>Managed by:</b> Community health worker, relais Communautaire (RECOs)</p> <p><b>Reported to:</b> Head nurse</p> <p><b>Reporting frequency:</b> Daily, weekly, or monthly, depending on the type of data</p> <p><b>Key tasks:</b> community-based care sites level, participation at the monthly data analysis meeting</p>	<p><b>Reporting format/platform:</b> Paper-based, transmitted by telephone to HZ central office. Pilot approach by using the EWARS tool (electronic surveillance system) in some Health Facilities and community level.</p> <p><b>Managed by:</b> Head nurse</p> <p><b>Reported to:</b> HZ</p> <p><b>Reporting frequency:</b> Weekly</p> <p><b>Key tasks:</b> Compile and report data weekly</p> <p><b>Community Level</b></p> <p><b>Managed by:</b> RECO</p> <p><b>Reported to:</b> Head nurse</p> <p><b>Reporting frequency:</b> Daily</p> <p><b>Key tasks:</b> Community sensitization and reporting of cases</p>
---	---	--

**Table 1: Key Malaria Indicators by System**

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

	SNIS	IDSR
<b>Number of malaria cases</b>		
Suspect/fever cases	Y	Y
Tested (diagnostically)	Y	N
Diagnostically confirmed (positive)	Y	Y
Clinical/presumed/unconfirmed	Y	N/Y
Outpatient	Y	N
Inpatient	Y	N
Uncomplicated/severe	N	N
Age categories (e.g., <5, 5+) / Sex disaggregation (M, F)	Y/N	Y/N
Pregnant women	Y	N
<b>Number of malaria deaths</b>		
Age categories (e.g., <5, 5+) / Sex disaggregation (M, F)	Y/N	Y/N
Pregnant women	Y	N
<b>Commodities (Availability or stockout/consumption)</b>		
RDT	Y	N
ACT (AL, ASAQ)	Y	N
Severe malaria treatment	Y	N
SP	Y	N
<b>IPTp 1/2/3+</b>	Y	N
<b>Completeness of reporting</b>	Y	Y

## Data Quality Activities

### Routine data quality reviews/audits

- Both the NMCP and the SNIS carried out various quarterly data quality checks from the national and provincial levels. The NMCP is in the process of harmonizing data quality assessment tools used by various partners in hopes of promoting one tool for all partners to use nationally. In the nine U.S. President's Malaria Initiative (PMI)-supported provinces, PMI supports provincial advisors to support the NMCP in initial analyses of malaria data for decision making and to conduct quarterly data quality audits.

### Review meetings

- Data review meetings are held monthly at all levels of the health pyramid. The quarterly NMCP meeting includes all NMCP partners. An annual review is held once a year at the national level for malaria data and other SNIS data. At the provincial level, two reviews are scheduled per year, one each semester. At HZ level, the data analysis meetings are held monthly.

### Supervision

- With the support of PMI (Integrated Health Project, PMI Measure Malaria and CHISU) and Global Funds MEASURE Evaluation, the NMCP organizes joint quarterly supervision in the provinces. The provinces supervise the HZs on a quarterly basis, and the HZs supervise the health facilities on a monthly basis, which in turn organize supervision visits to the community (RECOs and SSCs).

## Monthly or quarterly malaria bulletin

- Since 2020, DRC produce, with PMI support, a regular malaria bulletin on a quarterly basis at the national and provincial levels (9 PMI supported provinces). The quarterly Malaria Epidemiological Bulletin is a key NMCP data analysis product that provides provinces/Health Zones with the ability to see how their routine malaria data quality and malaria data (e.g., suspected cases, test positivity, and the severity of malaria cases) compares to other provinces or Health Zones. It highlights disease trends, abnormal data, and highlights potential data gaps.

## Data availability

- The NMCP at the national, provincial, and HZ levels has access to the routine malaria data through DHIS 2. In addition, some facility-level staff and partners at various levels have been provided access to DHIS 2 and the related data.

## Data use

- Data are primarily used in reporting and to monitor trends on an annual basis. The degree with which this occurs at various levels is highly variable. Monthly HZ meetings review the data, identify issues, and develop follow-up actions, but how this is conducted varies among the HZs. Provinces analyze data from HZs to assess trends and send feedback if necessary. Relevant decisions at each level of the health pyramid are taken after data analysis. To perform data analysis and use, there is a malaria data analysis Guide created by the NMCP and PMI Measure Malaria, which outlines how data review meetings at various levels are organized to verify and analyze data to strength data quality. Noted that the PNLN has collaborated with technical partners to develop and implement a Malaria Dashboard for visualizing malaria data in DHIS2.

## Additional Context

- In DRC, the majority of facilities are private, and most of these report into DHIS 2.
- A cluster of health facilities are grouped together to form a health area, a sub-unit of the HZ. One of the facilities has a designated head nurse, “infirmier titulaire,” and serves as the lead health facility for the health area, hosting and presiding over the monthly data review meetings.
- The constant addition and closure of health facilities, due to the large number of private facilities, remains a challenge because these cannot be added and subtracted from the DHIS 2 platform on a rolling basis; thus, the denominator of expected reports may not always be accurate.
- The SNIS introduced revised data collection tools in January 2017, but until now, trainings on the new tools have not occurred, and some issues have been observed (for example, no place for malaria deaths on the hospital reporting form).
- Despite providing all 516 HZ offices with VSAT (very small aperture terminal) antenna for data transmission and connectivity, considerable challenges remain for getting DHIS 2 fully functional across the country and ensuring regular connectivity.
- The NMCP and the Ministry of Health developed a 2018–2020 health management information system/DHIS 2 multi-donor project to harmonize efforts across the country, which was updated in 2020.
- The NMCP developed a National Strategic Plan 2020–2024 with all partners, in which DHIS 2 is promoted as the only way of receiving and analyzing data. All partners should appropriate DHIS 2 for data analysis and use.
- There is a growing network of community health workers in DRC, but ensuring regular capture of these data into DHIS 2 remains a challenge.

- SNIS framework updates take place to correct the variables to be collected.
- Surveillance is done in two ways: (1) weekly data analysis to detect possible malaria epidemic outbreaks, and (2) monthly analysis of sentinel site data to determine trends in key malaria indicators. No support is provided for surveillance data analysis.
- The NMCP developed with PMI Measure Malaria support the Malaria data analysis Guide for the national, provincial and Health Zone levels.
- In collaboration with PMI Measure Malaria, CHAI and PATH, The NMCP conducted the malaria surveillance assessment in 8 provinces (Tshopo, Kwilu, Haut-Uele, et Kinshasa, Haut Katanga, Kasai Oriental, Lomami, Sud Kivu). This assessment was conducted (1st time) in DRC to identify strengths and gaps in malaria surveillance in the country. The results will help the NMCP to design and implement priority interventions to strengthen the system. The assessment was organized in 2021.

## 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:

- DHIS2 rollout in 114 health districts
- Development and deployment of hospital DHIS 2 and community-based DHIS 2. Adoption and regular development of a malaria bulletin to guide decision making. Introduction and 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).

## PMI Measure Malaria

University of North Carolina at Chapel Hill • 123 West Franklin Street, Suite 330

Chapel Hill, NC 27516 USA

Phone: 919-445-6949 • Fax: 919-445-9353

measuremalaria@unc.edu • [www.measuremalaria.org](http://www.measuremalaria.org)

This information was made possible by the generous support of the American people through the United States Agency for International Development (USAID) and the U.S. President's Malaria Initiative (PMI) under the terms of the PMI Measure Malaria Associate Award No. 7200AA19LA00001. PMI Measure Malaria is implemented by the University of North Carolina at Chapel Hill, in partnership with ICF Macro, Inc.; Tulane University; John Snow, Inc.; and Palladium International, LLC. The contents do not necessarily reflect the views of USAID/PMI or the United States Government. FS-23-633f PMM

