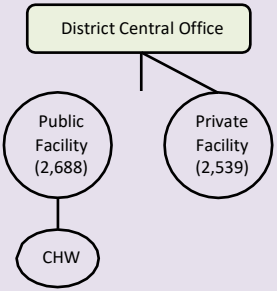


**RHIS Profile:** This document outlines the reporting structures of routine health information systems (RHIS) that include malaria data. In Cameroon, this includes the following: a health management information system, Système National d’Information Sanitaire (SNIS); the Système de Gestion des Données (SGDP) of the National Malaria Program (PNLP) which is partially integrated into SNIS; and an integrated disease surveillance and response system, Surveillance Intégrée des maladies et de la Riposte (SIMR). DHIS2 has been adopted as the reporting platform for SNIS in 2015 and aims for integration and phase out of the parallel disease reporting system. In 2018, DHIS2 was scaled up in all regions, health districts and in almost 40 percent of Formations Sanitaires (FOSA). The SGDP is gradually being integrated into the SNIS, in particular at the level of basic data collection tools (harmonized registers) and DHIS2 software where the form for entering malaria data has been configured. Paper forms are used in all health facilities and data are then consolidated from registers weekly or monthly. The weekly (SIMR) or monthly (SNIS, SGDP) data previously consolidated on paper form are entered in the DHIS2 at the FOSA level, where capacity to do this already exists, or at the health district level, which does not have strong capacity. Additional efforts are being made to scale rollout to the FOSA level and increase the levels of completeness.

	SNIS	SGDP	SIMR
	<b>When started:</b> 2015 <b>Scale-up status:</b> Nationwide	<b>When started:</b> 2011 <b>Scale-up status:</b> Nationwide	<b>When started:</b> 2011 <b>Scale-up status:</b> Nationwide
<b>Central</b>	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Health information unit (HIU) within the Ministry of Public Health (MINSANTE) <b>Dissemination:</b> Annual reports, epidemiologic bulletin <b>Key tasks:</b> Administration of the SNIS, updating the health map, maintenance of the DHIS2, creating data management tools, data consolidation, data analysis, feedback, creation of data use product, dissemination	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Planning, Monitoring, and Evaluation Section (SPSE) of PNLP <b>Dissemination:</b> Semester progress reports, PNLP annual report, World Malaria Report <b>Key tasks:</b> Data consolidation, data quality checks, data analysis, feedback, creation of data use product, dissemination	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Department to Fight against Illness, Epidemics and Pandemics (Direction de la Lutte contre la Maladie, les Epidémies et les Pandémies – DLMEP) of MINSANTE <b>Dissemination:</b> Weekly coordination meeting with partners <b>Key tasks:</b> Data consolidation, data analysis, feedback, creation of data use product
<b>Regional</b> <ul style="list-style-type: none"> <li>• 10 regions</li> <li>• 19 health districts per region (mean)</li> </ul>	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Health Information and Planning Service (SISP) <b>Reported to:</b> HIU <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Collection of updated data for the health card, data consolidation and analysis	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Surveillance, Monitoring and Evaluation unit of Regional Malaria Control Technical Group (RMCTG) <b>Reported to:</b> Central Malaria Control Technical Group of the PNLP <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Data entry, data consolidation, data quality checks, data analysis, feedback	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Regional Center for the Prevention and Control of Epidemics (CERPLE) <b>Reported to:</b> DLMEP <b>Reporting frequency:</b> Weekly <b>Key tasks:</b> Data validation and analysis, creation of data use product
<b>Health District</b> <ul style="list-style-type: none"> <li>• 189 health districts</li> <li>• 10 health areas per district (mean)</li> <li>• 30 health facilities per district (mean)</li> </ul>	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> Health District Team <b>Reported to:</b> SISP <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Data entry, data analysis, data use	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> District Malaria Focal Point <b>Reported to:</b> RMCTG <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Data entry, data quality checks, feedback	<b>Reporting format/platform:</b> DHIS2 <b>Managed by:</b> District Surveillance Focal Point <b>Reported to:</b> CERPLE <b>Reporting frequency:</b> Weekly <b>Key tasks:</b> Data entry and transmission
<b>Facility</b> 	<b>Reporting format/platform:</b> Paper-based form or DHIS2 depending on facility; monthly activity report—all health indicators <b>Managed by:</b> Head of FOSA <b>Reported to:</b> Health district <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Data collection and compilation	<b>Reporting format/platform:</b> Paper-based form, malaria data collection form <b>Managed by:</b> Facility Malaria Focal Point (usually head of FOSA) <b>Reported to:</b> Health district <b>Reporting frequency:</b> Monthly <b>Key tasks:</b> Data collection and compilation	<b>Reporting format/platform:</b> Epidemic Potential Diseases (MAPE) form <b>Managed by:</b> Head of FOSA <b>Reported to:</b> Health district <b>Reporting frequency:</b> Weekly <b>Key tasks:</b> Data collection and compilation

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

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

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

\*Cameroon captures IPTp4+.

**Data Quality Activities:****Routine data quality reviews/audits:**

- **SNIS:** Data quality assurance (DQA) is done as part of monthly reporting. Further DQA analysis is conducted separately by each program. Supportive supervision is done by all programs in the SNIS—based on funding availability. The National Malaria Control Program (PNLP) provides supportive supervision to the regional level every quarter and to the central level every semester.
- **SGDP:** Controls within the DHIS2 database identify inconsistencies, which are then generated into a separate report. In 2017, a DQA was conducted at the central and regional levels using the World Health Organization (WHO) Excel template. Supportive supervision practices mirror those in the SNIS. Supervisions are financed by Global Fund.
- **SIMR:** DQA is done through the monthly calculation of report completeness.

**Malaria bulletin:** The health information unit does not yet produce an epidemiological bulletin. The PNLN plans to produce quarterly epidemiological reports at the regional level and semi-annually at the central level. The first SGDP epidemiological bulletin was published in 2017, but the production frequency is not consistent. SIMR monthly bulletins are produced at the regional level.

**Data availability:** PNLN and regional and district focal points have access to DHIS2. Regional and district-level data managers have access to all information, but they can edit data for their area (region or district) only. Partners have access through an email database.

**Data use:** SNIS and SIMR malaria data are not used by PNLN due to low completeness. The lowest level of analysis is the district. SGDP data are used by PNLN for commodity forecasting and distribution, grants reporting, and targeting interventions, as well as for the WHO World Malaria Report. The lowest level of analysis is the region. SIMR data are used by other programs (Expanded Program on Immunization and DLMEP) for surveillance of diseases with epidemic potential.

**Additional Context:**

Data completeness through DHIS2 has been dramatically improved since January 2019, with the migration of malaria data transfers in DHIS2. It should be noted that PNLN has technical staff (statisticians) in all 10 regions of the country, who are specialized in data management. Furthermore, since January 2018, the Minister of Public Health recommended all managers of health programs and health facilities use DHIS2 for timely submission of routine data. PNLN, with Global Fund support, has conducted DHIS2 training at the central, regional, and district levels, with the objective of achieving at least 80 percent completeness. The President's Malaria Initiative is also providing support to SNIS and DHIS2 through technical assistance. Recently, there were additional efforts to make registers and reporting materials available to health facilities. Further, 1,800 health facilities (40%) have been trained on data reporting using smartphones. SNIS malaria community-level reporting is captured at the health facility level and reported in the monthly facility report. At the end of each month, the community health workers submit their data to the lead facility in the health area, where the data are validated and compiled by the health facility under the supervision of district-level nongovernmental organizations and implementing partners. The 2,539 private sector health facilities reporting on malaria are captured by the SNIS. There is no community-level reporting in SIMR. Guidelines on DQA have been expanded with support from WHO. Principal partners are WHO and the Global Fund.

Priorities for system strengthening involve the training of health facility workers on data management via the DHIS2 platform, production and distribution of reporting forms, and harmonization of registers, and the training of staff in data analysis and use.

Malaria surveillance guidelines exist since 2017, but there is the need to update the document.

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