Ivory Coast

SISR Profile: Deployment of DHIS2 since 2015 in Ivory Coast as a platform to monitor and measure the progress of health programs. The National Health Information System (SNIS) is managed by the Health Information and Informatics Division *(DIIS)*. The disease surveillance system, or *Disease and Response Integrated Surveillance (SIMR),* collects both routine malaria data and sentinel surveillance data. DHIS2 is the primary source for routine malaria data. A new DHIS2 instance in effect with new SIG tools. Acquisition of a specific malaria server financed by PMI allowing the PNLP to manage malaria data. Recruitment of 2 Data Managers at the PNLP (1 Epidemiological Manager and 1 GAS Manager) with financing from the Monetary Fund.

Acronyms:
DIIS: Health Information and Informatics Division
EQDR : Routine Data Quality Assessment
NPSP: New Public Health Pharmacy
SNIS: National Health Information System

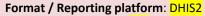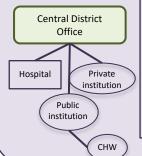|	**SNIS**	**SIMR**
	Start date: 2015 with DHIS2 **Level of scaling**: National with deployment in all districts and reference hospitals (general hospital and regional hospital center)	**Start date**: 2015 with DHIS2, sentinel surveillance since 2017 **Level of scaling**: National level deployment for DHIS2, 36 health centers for sentinel surveillance
National	**Format / Reporting platform**: DHIS2 **Managed by**: DIIS **Dissemination**: Quarterly and annual health reports **Main tasks**: Health information system management, data analysis and decision making, reporting, commodity forecasting, quality control and data validation	**Reporting format / platform**: DHIS2 and Excel **Managed by**: DIIS for DHIS2 and captured by PNLP, used for sentinel site data **Dissemination**: DIIS Annual Health Report, no other dissemination of surveillance data **Main tasks**: Coordination, data analysis, use of data for decision making
Regional • 33 regions • 3 districts per region on average	**Format / Reporting platform**: DHIS2 **Managed by**: Regional CSE **Report sent to**: n / a **Validation frequency**: Monthly, every 15th of the month depending on the reporting month **Main tasks**: Data validation in DHIS2, analysis, quality control, supervision, feedback	**Format / Reporting platform**: DHIS2 **Managed by**: Regional CSE **Report sent to**: n / a **Validation frequency**: Monthly **Main tasks**: Validation of data in DHIS2
District • 113 districts • 3,411 ESPC including 3,311 public ESPC and 1,100 private ESPC of which 760 private for-profit first-level facilities, 96 private faith-based structures, 190 private NGOs , 54 private companies, 134 general hospitals, and 17 CHR (RASS 2020)	**Format / Reporting platform**: DHIS2 **Managed by**: District CSE / Community Activity Focal Points / Use of new SIG tools in place (SIG Report) **Report sent to**: DIIS **Reporting Frequency**: Monthly, every 10th of the month depending on the reporting month **Main tasks**: Data collection, aggregation, data entry into DHIS2, online submission, data analysis, data quality assessment, supervision of the SIGS system PMI Acquisition of 12 smartphones for the 12 sentinel districts	**Format / Reporting platform**: DHIS2 sheet & Excel **Managed by**: District CSE / Sentinel Surveillance Focal Point / Use of new SIG tools in place (SIG Report). **Report sent to**: PNLP on the DHIS2 platform **Reporting Frequency**: Monthly **Main tasks**: Data collection, aggregation, data entry into DHIS2, online submission, data analysis, data quality assessment, supervision of the SIGS system. PMI Acquisition of 12 smartphones for the 12 sentinel districts
Health Center	**Format / Reporting platform**: Paper **Managed by**: Data Manager **Report sent to**: District Data Manager, similar to that of SIMR **Reporting Frequency**: Monthly, every 5th of the month depending on the reporting month **Main tasks:** Paper data collection (file, registers, and monthly report) and transmission. Reference hospitals directly enter data in DHIS2. 23 sentinel sites (ESPC) equipped with computer tools and 2 printers for 2 reference hospitals, office supplies, and acquisition of 36 smartphones by PMI	**Format / Reporting platform**: Paper **Managed by**: Data manager or health care provider **Report sent to**: District Data Manager, similar to that of SNIS **Reporting Frequency**: Monthly, every 5th of the month depending on the reporting month **Main tasks**: Paper data collection, aggregation, and transmission to the district. 23 sentinel sites (ESPC) equipped with computer tools and 2 printers for 2 reference hospitals, office supplies, and acquisition of 36 smartphones by PMI

Central District Office
Hospital
Private institution
Public institution
CHW

Table 1: Key malaria indicators by system

Number of malaria cases	SNIS	SIMR
Suspected cases or fever	O	O
Tested (diagnostic)	O	O
Confirmed (positive) diagnosis	O	O
Clinically confirmed or suspected or unconfirmed	O	O
Outpatient / Inpatient	O/O	O/O
Simple / Severe	O	O
Age groups (e.g., <5, 5+) / Disaggregation by sex (M, F)	O/O	O/O
Pregnant women	O	O
Number of deaths due to malaria		
Age groups (e.g., <5, 5+) / Disaggregation by sex (M, F)	O/O	O/O
Pregnant women	O	O
Amenities (Availability or stockout / Consumption)		
TDR /GE	O/O	O/O
CTA	O/O	O/O
Treatment of severe malaria	O/O	O/O
SP	O/O	O/O
TPI 1 / 2 / 3(+)	O/O/O	O/O/O
Completeness of reporting	O	O

Data quality control activities:
Routine data quality reviews/audits: Data quality control activities include semi-annual data consolidation meetings (including malaria and other programs), on-site data verification missions, and an annual baseline report on routine data quality assessment. These activities are conducted for both systems, but more frequently for the SNIS. The health district and health region provide supportive supervision focused on improving data quality. Both partners and the national government provide funds for supportive supervision. 20 districts are supported by PMI for bi-monthly data quality verification in at least three health facilities.
Monthly or quarterly malaria newsletter:
- 10 malaria surveillance newsletters published from 2019 to date
- Malaria sentinel surveillance newsletters are published quarterly. The one for the April-May-June 2021 quarter was published on October 3, 2021.
- The 2020 Health Status Annual Report (RASS) was released in July 2021
Data availability: The PNLP M&E staff have access to DHIS2 data and participate in bi-annual data consolidation meetings with DIIS and other health programs. District malaria focal points have access to DHIS2. Key partners do not have access to DHIS2.
Data use: Data are used for a number of purposes including: research funding, planning, supervision, product forecasting, reporting, targeting of PNLP interventions, forecasting/distribution of NPSP products. The lowest level at which data are routinely analyzed is the health facility level. Some examples of analyses include: malaria case trends and commodity supply analysis.

Additional context:
The effectiveness of sentinel surveillance has recently improved in Côte d'Ivoire. There has also been increased participation of some private sector clinics in the dissemination of malaria data. However, full integration of the private sector into the health information system remains a challenge for strengthening the system in the next fiscal year.

The main funders for malaria activities in Côte d'Ivoire are the Global Fund and PMI. Important partners include MEASURE Malaria, PSI/Stop Djekoidjo, Vector link, Breakthrough Action, LHSPLA-TA, Save the children, UNICEF, and WHO.

Currently, the national malaria surveillance strategy is based on monthly routine surveillance and secondary sentinel surveillance.

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