



Wilson Ondongo (left), Head of Health Information Services and Epidemiological Surveillance uses the software DHIS2 (District Health Information Software) at the District Health Department in Brazzaville, Republic of the Congo on July 23, 2019. On the right, the screen displays the software DHIS2. Photo: Sam Phelps, CRS, 2019

DHIS2 & Catholic Relief Services:

SUPPORTING MINISTRIES OF HEALTH WITH DISTRICT HEALTH INFORMATION SYSTEMS

OVERVIEW

DHIS2 is a health management information system intended to aggregate health data at national scale. The tool is used by ministries of health in more than 70 countries, including nationwide deployments in over 50. It is most widely used in sub-Saharan Africa with other deployments in Asia and Latin America.

While the tool can provide a myriad of information management functions for the health sector and beyond, its primary purpose is to aggregate health information from local sources to a national database. It can aggregate data from various data sources, link the data together, and provide reporting that is targeted towards different audiences. It can capture information in several ways by direct input into a web form, input from Excel or CSV data sources, or system to system data exchange.

WHAT MAKES DHIS2 DIFFERENT?

DHIS2 is different from other data collection platforms because of its widespread use at national scale in lower/middle income countries. It has strong capability to collect data from different sources, aggregate, and present data through various reports; and, a wide range of actors use DHIS2 to disseminate information throughout the world.

WHEN AND HOW DOES CRS USE DHIS2?

One of the widest adopted use scenarios for DHIS2 is feeding existing project data sources into established national DHIS2 instances, allowing governments insight into NGOs' programmatic data. DHIS2 is also used when multiple stakeholders (such as government ministries or regional health actors) want to centralize data from multiple collection modalities in one place or share data with donors.

COUNTRY PROGRAM EXAMPLES:

In 2014, the evaluation of the National Health Information System (NHIS) of **Guinea**, according to PRISM (Performance of Routine Health Information System Management) revealed the following weaknesses: *absence of strategic and normative documents; absence of an electronic tool for data management; only about 20% of health reports were complete; absence of standard and harmonized data collection tools; and, no effective supervisions, all leading to a weak system unable to provide health information in real time.* To address these issues and strengthen the health information system, CRS provided support focusing on four key areas:

- Strengthened normative frameworks such as: the 2016-2020 National Health Information System Strategic Plan; a catalogue of indicators for the health sector; a manual of procedures of data management; as well as, monitoring tools focused on the health information system.
- Strengthened routine data collection with the launch of DHIS2.
- Established the national deployment management team.
- Built technical, functional, and operational capacity.

In 2020, Guinea implemented the COVID-19 module to track, contacts, travelers', signs and temperature follow-up, suspects tested, confirmed cases, and deaths.

In **Mali**, CRS has expanded the application of DHIS2 beyond the health sector by leveraging its information management capabilities to improve communication and coordination among humanitarian actors. Given the large number of rapid response mechanism (RRM) actors intervening in Mali, OCHA and CRS identified a need for an evidence-based tool to improve targeting, avoid duplication of efforts, and promote a more efficient and harmonized system for tracking and responding to crises. CRS Mali held meetings with OCHA and RRM actors to identify humanitarian information needs and then contracted with Logical Outcomes to develop a DHIS2 platform for the RRM in 2019. CRS currently manages the platform and coordinates with the Norwegian Refugee Council (NRC) and other RRM actors to enter data and update the platform daily. The platform includes:

- Data visualization through maps, charts, and dashboards to show geographic and periodic trends related to crisis alerts, rapid assessments, multisectoral responses conducted by the RRM.
- Archive/document-sharing system for crisis alert reports and rapid assessment reports.
- Query system for pulling data for reporting, planning and advocacy.

Nigeria's Federal Ministry of Health has used DHIS2 for routine data collection from public health facilities since 2014, with substantial investment from The Global Fund (GF). As an implementer of the GF malaria grant, CRS is expected to use DHIS2 for routine reporting from public health facilities and for donor reporting. In 2015, CRS Nigeria was engaged as a sub-recipient (SR) to the National Malaria Elimination program (NMEP) in implementing the GF malaria grant, with the responsibility of supporting reporting by public health facilities on DHIS2, including activities to improve data quality on DHIS2 platforms in 2 states. In 2017, CRS Nigeria was engaged by the GF as Malaria co-Principal Recipient with NMEP, which increased the scope of these responsibilities to 24 states.

In **The Gambia**, CommCare is used by CRS for the collection of malaria data such as through routine Long Lasting Insecticide

Nets (LLIN) distribution and mass campaigns (LLIN and Seasonal Malaria Chemoprevention (SMC)). A major challenge is integrating this data into DHIS2. CRS shares both routine and campaign reports with the Ministry of Health (MOH), which is manually entered into DHIS2. Additionally, access rights are provided to National Malaria Control Program (NMCP) M&E, and training provided to enable viewing the CommCare platform and also generate reports from Power BI. CRS and NMCP have agreed and included in the reprogrammed activities under the Global Fund grant to use DHIS2 to collect routine LLIN data. Hence, health workers and LLIN distributors at the health facility level will be trained. Each of the 59 health facilities in the country will be provided a mobile device with the DHIS2 app installed for routine data collection.

RESULTS:

Some of the results of CRS support in **Guinea** include:

- Improved data completeness from **20% to 97%** at the end of 2017.
- **320** managers trained on DHIS2 (7 on Level 1 in Lomé), **260** executives trained in basic computer skills, and **2** in advanced DHIS2 in Oslo.
- Guinea's standard data collection tools are harmonized and available at each level of the hierarchy.
- The supervision rate increased from **0%** at the end of 2015 to **80%** at the end of 2017.
- To date, NHIS is functional and strengthened, capable of providing real-time information for improving health services and decision-making.

In **Mali**, some of the results of CRS' support include:

- **140+** user accounts created.
- **12** humanitarian flash updates published using platform data and shared with NGOs, OCHA, and the government.
- Platform presented at humanitarian cluster meetings (WASH, Food Security, Shelter/NFI) and used for gap analysis, targeting, and planning.
- Annual crisis alert maps developed in collaboration with the REACH initiative for OCHA's ICC annual meeting.
- WordPress plug-in developed for linking DHIS2 data to public website; plug-in published as open-source code on GitHub for the benefit of the entire DHIS2 community.

In **Nigeria**, the reporting rate for about **10,000** public health facilities in the 13 GF supported states improved from **84%** in Q1 2018 to **89%** in Q4 2019.

In **The Gambia**, LLIN and SMC data is available to NMCP and MOH. With the addition of using DHIS2 for routine LLIN data collection the MOH is positioned to directly generate LLIN reports.