



Community health worker volunteers collecting SMC data with Android tablets. TOUGAN Health District, Burkina Faso, 2 July 2021. Photo: Dr. Victor NANA

# **Burkina Faso Pilots SMC Campaign Digitization**

#### SUCCESSFUL PARTNERSHIP AND LOCAL LEADERSHIP IN THE FIGHT AGAINST MALARIA

#### **Overview**

Burkina Faso is a landlocked country lying in the semi-arid Sahel and Savanna zones of Africa with a population of roughly 21 million people. A partner in Burkina Faso's development since 1960, CRS works with the government, local partners, and other members of civil society to address major development challenges – including malaria prevention.

#### **Burkina Faso and Malaria**

Malaria is a major health issue in Burkina Faso. It is endemic throughout the country, with a seasonal upsurge from June through October. Overall, Burkina Faso is among the countries with the highest number of malaria cases and deaths (3.4% of the global cases and 3% of global deaths)<sup>1</sup>. Children under age 5 are the most vulnerable group affected by malaria; in 2019, they accounted for 67% of all malaria deaths worldwide. USAID President's Malaria Initiative (PMI) estimates that in Burkina Faso, in 2022, there will be 294,446 cases of severe malaria in children<sup>2</sup>. The World Health Organization recommends a strategy called Seasonal Malaria Chemoprevention (SMC) to prevent the peak of malaria-related morbidity and mortality among children aged under 5 years<sup>3</sup>. SMC is defined as the intermittent administration of full treatment courses of an antimalarial medicine during the malaria season to prevent illness. The objective is to maintain therapeutic antimalarial drug concentrations in the blood throughout the period of greatest risk. SMC is recommended for four consecutive months in which at least 60% of annual malaria cases occurred.

#### **SMC Campaign Digitization**

SMC campaign digitization involves transitioning from a traditionally paper-based data collection system to a digital data collection platform. Digital SMC campaigns enable more agile analysis and reporting by having high quality data that can be accessed in real time to inform decision-making and enable strategic changes on the fly. For example, campaign managers

<sup>&</sup>lt;sup>1</sup> World Health Organization (2021). World Malaria Report 2021.

<sup>&</sup>lt;sup>2</sup> USAID President's Malaria Initiative (2021). <u>Burkina Faso, Malaria Operational</u> <u>Plan FY2021</u>.

<sup>&</sup>lt;sup>3</sup> World Health Organization (2021). WHO Guidelines for malaria. 13 July 2021.

can review campaign coverage rates on a daily basis, and adapt activities as needed. With paper-based forms, it can take months to transfer the information on the forms to a database, then clean and analyze the data before it can be used to inform decisions. As such, coverage rates will only be known long after the campaign has ended, and no remedial action can be taken. Other disadvantages of paper forms include legibility, aggregation, and human error (loss of paper forms leading to loss of data). Mistakes in data processing and long lag times between data collection and analysis can make the paper-based process time-consuming and sometimes inaccurate.

## The Pilot

To improve the accuracy of malaria data collected, the Ministry of Health (MoH) of Burkina Faso requested that the National Malaria Control Program (NMCP) pilot the digitization of data collection in their annual SMC campaign in the Tougan Health District. NMCP requested CRS' technical and management support to enable the digitization. Data collection was conducted using the Tracker and Capture applications within the DHIS2 platform, as the latter is the NMCP's platform of choice. The results of the pilot will help national government health agencies such as the NMCP and the National Directorate of Health Information Systems (DSIS) transition from a paperbased system to a more robust and sustainable digitized data collection platform for future nationwide malaria campaigns.

## What are DHIS2 Tracker and DHIS2 Capture?

DHIS2 Tracker is the case management application for DHIS2 while DHIS2 Capture is the application loaded onto Android devices and used to collect data in the field. Data from the field collected using Capture is loaded into the Tracker case management application and subsequently synced with the national DHIS2 system.

#### **Objectives of the pilot**

- Present the NMCP with the technical resources required to carry out a digitization pilot and build capacity to run digitized national campaigns independently in the future.
- Provide an overall process methodology, a centralized and secure management for equipment, and revised training protocols that integrate adult learning methodologies.
- Strengthen the capacity of NMCP Burkina Faso to improve the quality, promptness, and completeness of SMC campaigns data.

Several technical objectives were outlined as well, mostly dealing with confirming that the technology required for a



Training of Trainers session in Ziniaré, Burkina Faso. 6 August 2021. Photographer: Dr. Victor NANA

successful pilot was configured and set up properly for data to sync with the government cloud DHIS2 server in real time; and, that trainers, community health worker (CHW) volunteers, and supervisors were trained in accordance with their level of responsibility and access.

#### **Implementation:**

After working with Health Information System Program (HISP) West & Central Africa (HISPWCA) to support the DSIS in the development of a mobile application in DHIS2 Capture, training materials were developed to ensure that the NMCP has sufficient technical resources to carry out a digitization pilot and its prerequisites independently in the future. A pre-test was organized in Ziniaré (a town located in the province of Oubritenga) to validate the application in real field conditions with real life data collectors and gauge their comfort using the tablets, review the supervision process, test the support model, and assess the best available mobile data network for each targeted area. Two days of training were provided on the use of tablets for data collection, the SMC campaign process, and clarified roles and responsibilities. Also, it was at this time that CRS presented the support model and introduced the DHIS2 Tracker application. The support model outlines the process for getting support should there be issues during the pilot campaign. Following this, a test campaign conducted over three days with daily review meetings held in the evenings. Lessons learned were shared by volunteers and supervisors on the last day of the pre-test.

To prepare for the pilot in Tougan health district, CRS developed a checklist for implementation readiness, identified the best mobile service operators, quantified the number of SIM Cards required per zone, and developed the SoW of the training of support staff and device configurators. Following this, 818 tablets required for the pilot had to be set up and configured properly. Android tablets were used in lieu of smartphones because the Ministry of Health already had about 500 tablets with another 1,200 available from another partner. The pilot thus leveraged the existing system by reusing technology that was readily available rather than procuring new devices. Finally, 1,600 newly trained Community Health Workers (CHWs) who volunteered to be a part of the digitization pilot used the tablets to input data on children under age 5, malaria prophylaxis tablet distribution, and nutrition screening activities. Almost all the volunteers had been working with the Ministry of Health for many years and are integrated within the community. This enabled them to know where the barriers are within the community and how to work around them. Most importantly, the volunteers had preexisting levels of trust within the communities where they were administering the SMC campaign, which correlates with improved outcomes. The volunteers were also already familiar with how to run an SMC campaign using pen and paper, so all they needed to learn was how to use the DHIS2 application loaded onto the Android tablets. The data successfully synced with Burkina Faso's government DHIS2 system, enabling real-time visibility of activities and campaign coverage.

### **Outcomes of the Pilot**

The digitized SMC campaign was able to reach 96% of registered children in the Tougan Health District. The main benefits of the digitization were:

- Increased campaign transparency and ability to monitor campaign progress in real time.
- Development of a household database featuring eligible children that can be used in future campaigns.
- A significantly reduced workload for CHWs.

The pilot was also successful in building the capacity of relevant local actors, from government workers through supervisors to volunteer CHWs, to conduct digitized campaigns. Most importantly, it was clear following the pilot that there was a general acceptance of the new method of data collection by local stakeholders due to ease of work, enhanced case management for improved follow-ups, and no longer needing to spend so much time on manual data entry.

## **Looking Ahead**

CRS and the relevant health authorities in Burkina Faso are now discussing how to build on the lessons learned from the pilot and how to best leverage digital technology in future SMC as well as mass bed net distribution campaigns. It is the hope that the knowledge gained from successfully completing this pilot will improve program quality and help to ensure universal coverage of SMC and bed nets in targeted areas for 2022.

## **Questions? Contact:**

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