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SIAPS
Systems for Improved Access
to Pharmaceuticals and Services

Sierra Leone Project Update

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CONTINUOUS RESULTS MONITORING AND SUPPORT SYSTEM

A performance improvement system takes root



Figure 1. Staff at a peripheral health unit (PHU) review inventory control forms to complete a CRMS check list.

Background: Implementing a system to help track critical service indicators

In May 2016, SIAPS began helping Sierra Leone institute a Continuous Results Monitoring and Support System (**CRMS**) to assess baseline challenges in pharmaceutical management and regularly track and support improvement in key areas. The CRMS uses a series of indicators related to medicine consumption and availability, disease case management, storage conditions and practices, inventory control and human resources.

SIAPS is using this approach in Sierra Leone to improve pharmaceutical management in all health facilities as part of the post-Ebola recovery effort. The CRMS approach includes forming and training team members, planning logistics, visiting health facilities, collecting and analyzing data, providing real-time support and mentoring, preparing reports, and bringing key stakeholders together to review results and plan future activities. Participants celebrate progress, analyze gaps, and develop solutions to problems that can be addressed by the next joint meeting two to three months later. Sources of data include treatment registers; inventory control cards; report, request, and issue vouchers; interviewing and direct observation.

Implementation: CRMS is in third cycle

SIAPS supported the launch of the CRMS in two districts in June 2016. Although it was originally intended that there be one cycle every three months in each district, competing priorities and logistics challenges contributed to an average six-month turnover per district. By the end of 2016, all 13 districts had conducted their first CRMS cycle, and 10 districts had conducted 2; 9 districts had completed their third cycle by July 2017. On average, 85% of health facilities in each district participated in the CRMS exercise.

Sample CRMS Indicators

- Availability of medicines
- Availability of forms/tools
- Use of inventory control/management information system tools
- Testing, positivity, and treatment correlation
- Availability and practice of proper storage:
 - Adequate storage available
 - Drug boxes stacked on pallets
 - Boxes stacked away from wall
 - Loose drug containers shelved
 - Store organized
 - Expired drugs segregated for disposal
 - Expired drugs disposed
- Availability of staff
- Staff training and supervision/mentoring status
- Adverse drug reaction reporting

District	CRMS CYCLE 1	CRMS CYCLE 2	CRMS CYCLE 3
Bo	Yes (May 23-27/2016)	Yes (Oct 18-23/2016)	No
Bonthe	Yes (Aug 23-28/2016)	Yes (Mar 10-14/2017)	Yes (July 5-9/2017)
Moyamba	Yes (Jul 20-25/2016)	Yes (Dec 8-12/2016)	Yes (July 5-10/2017)
Pujehun	Yes (Aug 10-15/2016)	Yes (Mar 7-12/2016)	Yes (June 30-4/2017)
Tonkolili	Yes (Aug 21-26/2016)	Yes (Dec 7-12/2016)	Yes (June 29-July 4)
Koinadugu	Yes (Aug 12-18/2016)	Yes (Dec 6-10/2016)	Yes (July 19-24/2017)
Bombali	Yes (May 20-26/2016)	Yes (Oct 24-29/2016)	Yes (July 21-26/2017)
Kambia	Yes (Dec 6-10/2016)	Yes (July 5-9/2017)	No
Port Loko	Yes (July 18-24/2016)	Yes (Jan 10-15/2017)	Yes (July 5-10/2017)
Kailahun	Yes (July 25-30/2016)	Yes (Mar 6-10/2017)	Yes (July 10-14/2017)
Kenema	Yes (Jan 9-15/2017)	Yes (July 7-12/2017)	No
Kono	Yes (Aug 8-13/2016)	Yes (Dec 15-19/2016)	Yes (July 23-28/2017)
Western Area	Yes (Aug 15-21/2016)	Yes (July 3-9/2017)	No
	13/13	13/13	9/13

To date, SIAPS has collected all of the resulting data and will help expedite recording and analysis. A simplified, more user-friendly template has also been developed for data recording and entering.

Storage capacity improvements

As part of the support element of CRMS, SIAPS is providing shelves, pallets, and storage cabinets to improve storage problems identified during the CRMS exercise. So far, 50 health facilities have been assessed for storage adequacy: 11 in Bombali, 8 in Port Loko, 11 in Tonkolili, 16 in Western Area, and 4 in Kenema. Work has been completed in 5 health facilities in Tonkolili, 11 in Bombali, 8 in Port Loko and 16 in Western Area resulting in a cumulative total completion of 40 health facilities.

CRMS teams encouraged and provided support to health-facility staff to help reorganize their stores and update stock cards. In some health facilities, the CRMS team worked with the communities to make basic pallets from locally available wood to stack medicine boxes, to prevent damage from water or moisture when stored on the floor. These are basic, low-investment activities that have a high impact on good pharmaceutical management practices. Other benefits that the CRMS exercise produced to date include reliable stock-status data, real-time problem identification and solving, mentoring, and a feeling of accomplishment by district team members.

Photo gallery: Post-CRMS storage optimization



Figure 2. A CRMS team member helps clean up a PHU



Figure 3. Sorting medicines and building storage pallets



Figure 4. An improved PHU store

CRMS automation: Introducing a web-based dashboard

To take systems strengthening support to the next level, SIAPS is introducing a web-based enhanced information graphic display platform. The dashboard, which can be found at <http://slpharmadb.org/>, features data from each health facility and supply structure and will provide real-time access to patient and commodity information. It will serve as an early warning system that will contribute to averting stock-outs, avoiding emergency procurements, and ensuring an uninterrupted supply of all key products. It will also improve forecasting and timely procurement using national and donor resources.

The CRMS dashboard will provide:

- Improved data quality, both during capture and entry
- Timely data entry – there is a lack of dedicated personnel to do manual reports
- Expedited data cleaning
- Timely report generation
- Faster summary report – the current Excel system is very time consuming

Originally programmed to handle data on essential medicines and HIV-, malaria-, and TB-related products, the dashboard data is also being expanded to include all CRMS-related data. Dashboard users can download an Excel template pre-filled with metadata, which district staff can carry and fill in while in the field. After filling in, the Excel template will be uploaded in the dashboard. The automation of CRMS will ensure data quality by using Excel cell validation rules, generate automatic report summaries, provide trend analysis of the different variables, and print and export narrative and graphic reports. The reports displayed in the CRMS dashboard will include morbidity data, stock status of tracer products, inventory control, expiration status, rational use, and other system-related data.

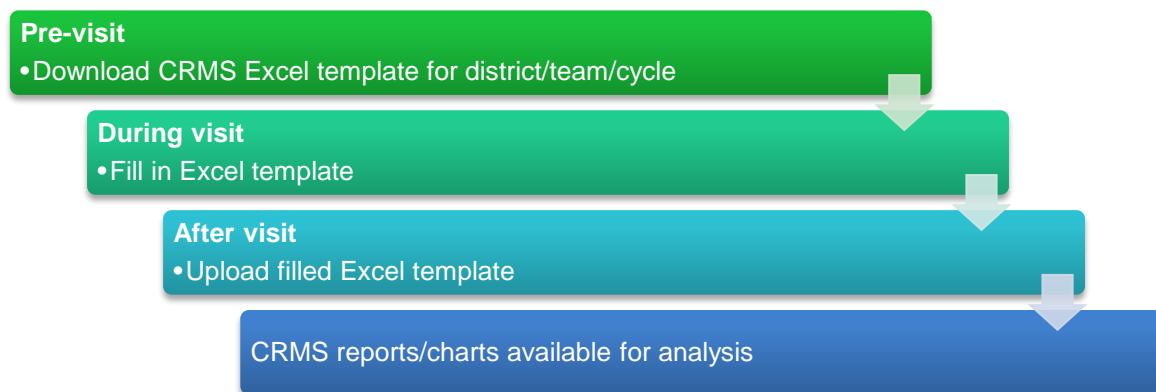


Figure 5. CRMS dashboard data entry/upload flow

Next steps

Results of the three CRMS cycles will be used to fine-tune the process, refine data tools, and scale up the program to supply chain and management structures, promoting full stakeholder ownership of the system. Due to the rapid CRMS roll out and the backlog of data entry, analysis, and reporting, SIAPS is engaging a dedicated group of district-level management team members and employing a campaign to accelerate the data management and reporting process.

To ensure its sustainability, SIAPS has started building the capacity of the district health management teams to take a lead role in planning and implementing the CRMS with limited support from SIAPS. The Directorate of Drugs and Medical Supplies is appointing focal persons to provide central oversight and ownership of the system.

The Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program, implemented by Management Sciences for Health (MSH), received two years of funding in September 2015 from the US Agency for International Development (USAID) to provide technical assistance for rebuilding and strengthening the post-Ebola pharmaceutical supply chain management system in Sierra Leone. The project covers health management teams, medical stores, hospitals, and peripheral health units in all 13 districts and involves the country's Directorate of Drugs and Medical Supplies (DDMS), which is responsible for coordinating and providing pharmaceutical services (including promoting rational medicine use) in Sierra Leone; the National Pharmaceutical Procurement Unit; and the Pharmacy Board of Sierra Leone.