SIAPS West Africa Regional Project
End of Project Report

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SIAPS
Systems for Improved Access to Pharmaceuticals and Services

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About SIAPS

The goal of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is to ensure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Toward this end, the SIAPS result areas include improving governance, building capacity for pharmaceutical management and services, addressing information needed for decision-making in the pharmaceutical sector, strengthening financing strategies and mechanisms to improve access to medicines, and increasing quality pharmaceutical services.

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ACRONYMS

ART	antiretroviral therapy
ARV	antiretroviral
CNLS	Commission Nationale de Lutte contre le SIDA
EDT	Electronic Dispensing Tool
JURTA	Joint United Nations Regional Team on HIV/AIDS
LMIS	Logistics Management Information System
OSPSIDA	Outil de suivi des produits du VIH/SIDA en Afrique de l'Ouest
PEPFAR	President's Emergency Plan for AIDS Relief
PNLS	Programme National de Lutte contre le SIDA
PSM	procurement and supply management
PSSLS-IST	Programme Sectoriel Santé de Lutte contre le Sida et les IST
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
UNAIDS	United Nations Program on HIV and AIDS
USAID	US Agency for International Development
WAHO	West African Health Organization
WARP	West Africa Regional Project

BACKGROUND

Globally, sub-Saharan Africa is the region most affected by HIV/AIDS. Barriers to accessing health services remain a major constraint, particularly to marginalized populations, and are mostly due to weak health systems. In 2012, a number of countries in West Africa reported alarming stock-out rates of lifesaving HIV/AIDS medicines, such as antiretrovirals (ARVs) and medicines to treat opportunistic infections. Countries in the West Africa region have not only had stock-outs of critical medicines but also have generally demonstrated a lack of capacity to identify and address the underlying causes of these stock-outs or to generate accurate and reliable data for decision making, such as accurate stock levels and projection of future needs. The root causes of these supply chain challenges include poor coordination among partners, lack of pharmaceutical management data for quantification (forecasting and supply planning), poor storage management at both warehouses and service delivery points, and inadequate training and supervision of dispensary staff in health facilities.

US Agency for International Development (USAID)/West Africa requested the USAID-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program to provide support in six target countries in the West and Central Africa region—Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo—to address these recurrent pharmaceutical supply management issues. This resulted in the initiation of the SIAPS/West Africa Regional Project (WARP) in 2013.

The SIAPS Approach

Using a systems strengthening approach, SIAPS/WARP aimed to improve coordination among regional and national stakeholders to ensure ARV and HIV and AIDS commodity availability, increase the use of pharmaceutical management information for decision making, enhance access to financial resources for the procurement of ARVs to prevent stock-outs, and build capacity for pharmaceutical supply management. Applying good governance, leadership, and management practices at the regional and national levels supports efficient and effective processes within integrated health systems to ultimately increase patient access to quality medicines and services.

Goal: Facilitate the availability of quality pharmaceutical products especially those related to HIV and AIDS to achieve high-level desirable health outcomes in target West Africa countries

Objective 1: Improve coordination among regional and national stakeholders involved in ensuring ARVs and HIV and AIDS commodity availability **(IR 1)**

Sub-objective 1.1: Strengthen collaboration and coordination with the West African Health organization (WAHO) to improve the management of buffer stock for ARVs

Activity 1.1.1: Provide technical assistance to WAHO to enable security stock initiative through use of OSPSIDA

Sub-objective 1.2: Strengthen collaboration and partnership in West Africa Region

Activity 1.2.1: Collaborate with the existing regional coordination mechanism JURTA by participating into JURTA semi-annual meetings and conference calls involving all regional stakeholders and partners involved in HIV and AIDS commodity management

Activity 1.2.2: Attend regional events organized by regional health offices, their partners, or non-US Government partners to discuss commodity security

Objective 2: Enhance capacity for pharmaceutical supply management **(IR 2)**

Sub-objective 2.1: Enhance individual, institutional, and sub-organizational capacity on HIV and AIDS pharmaceutical management in focus countries

Activity 2.1.1: Support national coordination mechanism to convene monthly meetings that involve country stakeholders and all partners involved in HIV and AIDS commodities

Activity 2.1.2: Support national AIDS control programs to conduct quantification for HIV and AIDS commodities

Objective 3: Increase the use of pharmaceutical management information for decision making at the national and regional levels **(IR 3)**

Sub-objective 3.1: Strengthen availability and use of information on ARV and HIV and AIDS pharmaceutical management to improve evidence-based decision making

Activity 3.1.1: Support the six focus countries to keep OSPSIDA up to date and use reports generated for evidence-based decision making

Activity 3.1.2: Support WAHO to organize stakeholders meeting to review OSPSIDA reports for decision making

Activity 3.1.3: Provide technical assistance to the PNLS to support the large-scale implementation of the EDT in Togo

KEY INTERVENTIONS AND ACHIEVEMENTS

To address the challenges described above, WARP worked closely with both country programs and regional bodies. At the regional level, WARP worked with WAHO and the Joint United Nations Regional Team on HIV/AIDS (JURTA). At the national level, country HIV/AIDS control programs, central medical stores, pharmacy and medicines departments, and other stakeholders collaborated throughout the following interventions.

Quantification and Supply Planning

In 2013, SIAPS provided orientation to the six focus countries' program managers on quantification and supply planning for HIV and AIDS commodities using Quantimed and Pipeline. After the orientation, WARP provided further training to three focus countries (Cameroon, Niger, and Togo). The trainings focused on defining requirements, steps, and processes for forecasting and supply planning of lab commodities. Trainings also described the various types of data needed for quantification, data collection tools, and techniques to manipulate available data to utilize best practice tools for the quantification of HIV/AIDS lab commodities. Countries generated their commodities forecasts for up to two years and prepared a supply plan for the following year.

Electronic Dispensing Tool

Togo's Programme National de Lutte contre le SIDA (PNLS) identified the need to improve patient and commodity data management at antiretroviral therapy (ART) sites to have reliable data for resupply, forecasting, and quantification. The Electronic Dispensing Tool (EDT) was adopted for this purpose in December 2014 and with WARP's support was piloted at five ART sites, covering 8,828 patients living with HIV/AIDS—26.4% of ART patients in the country at the time. WARP supported the PNLS to build the capacity of five staff members as EDT trainers (super users) who in turn worked with nine dispensers from five ART sites where the software was installed.

WARP supported the PNLS to integrate monthly logistics management information system (LMIS) reports sent from ART sites into the EDT. This helped improve the completeness, timeliness, and reliability of commodity and patient data at sites. By the end of the pilot period, the EDT had proven that the five pilot sites could generate accurate data at any time, whereas sites without the EDT took at least five days to prepare and submit their monthly reports.

Best practices learned from piloting the EDT in Togo were used to support the development of a concept note to the Global Fund requesting funding to roll out the tool nationwide. The concept was approved by the Global Fund, and nationwide scale up began in the last quarter of 2017. Prior to the nationwide roll out of the EDT, WARP and the PNLS agreed to conduct an evaluation of the pilot phase undertaken at the five sites supported by WARP and also at another site supported by the PNLS. The evaluation gathered information on the functionality of the EDT

at the pilot sites; the duration and quality of the service for patients; the impact on management practice, data availability, inventory, and patient management; and the timeliness and quality of reports.

The evaluation team found that all pilot sites continuously used the EDT for dispensing. Half of the sites reported a positive impact on their delivery because the tool allowed them to accurately track stock levels, enabled punctuality in ordering stock, and added other relevant information to make it possible to avoid treatment interruptions due to stock-outs. Compared to the previous tool used at ART sites, all users confirmed that dispensing with the EDT was faster, by an estimated one to two minutes, which in turn facilitated data entry in real time at 83% of the sites.

WARP also installed a newer version of the EDT in 2016 at four of the five original pilot sites and supported the PNLS to conduct supportive supervision visits at each site. During visits in January and February 2017, concordance was 100% between physical and theoretical stock at all five sites. Further, four of the sites had already abandoned the paper-based dispensing register because the EDT had improved the completeness and timeliness of reporting by these facilities.

In October 2017, WARP provided technical support to the PNLS to develop a national rollout strategy for the EDT. Technical assistance was also provided to further build the capacity of the IT manager and super users ahead of the scale up. The EDT source code was handed over to the country team along with other documents required to facilitate a smooth scale up process. At the end of the SIAPS/WARP program, Togo had full ownership of the EDT and the capacity to implement and manage the nationwide rollout of the tool. By February 2018, the EDT had been rolled out to 82 ART sites in Togo with support from the Global Fund.

OSPSIDA: Regional HIV/AIDS Dashboard

In 2014, WARP conducted a situational analysis in Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo to gain an understanding of the countries' capacity for HIV/AIDS commodity management and supply and to assess the information management systems. The analysis found gaps in data collection, transmission, and use that contributed to poor quality data and low use of information for decision making. To overcome these obstacles, WARP recommended a commodity tracking dashboard for use at the country and regional levels.

WARP developed an HIV/AIDS commodity management tool called Outil de suivi des produits du VIH/SIDA en Afrique de l'Ouest *(*OSPSIDA), which is a web-based program that manages patient and stock information on ARVs and rapid test kits and other products used in the treatment of HIV/AIDS. Deployed in the six focus countries, OSPSIDA allows faster aggregation by pulling information from tools used at the national and facility levels. It is also an early warning system to quickly respond to risks of overstock and shortages of ARVs and other medications for opportunistic infections.

In each country, WARP assisted in training stakeholders within the Ministries of Health involved with HIV/AIDS commodity management on data entry and report analysis to facilitate evidence-based decision making. Because OSPSIDA captures both patient and stock data, it enables accurate forecasting and predicts funding gaps. Through strengthened capacity in analysis,

partners can anticipate and prevent stock-outs and expiry risks and make collective decisions to transfer stock among the six countries.

Regional Collaboration

WARP promoted regional collaboration within the West Africa region through participation in several JURTA meetings and facilitating joint action among various stakeholders. These meetings also offered an opportunity to discuss the United Nations Program on HIV and AIDS (UNAIDS) 2016–2021 strategy and to reflect together on the West African regional submission that would contribute to the UNAIDS global strategy. WARP also joined the JURTA-Procurement and Supply Management (PSM) Working Group to discuss PSM issues in West and Central Africa and to develop priority interventions to fill the gaps.

Benin

In September 2014, OSPSIDA was deployed in Benin at the national level. Benin was one of two key focus countries, the other being Togo, in which WARP helped strengthen coordination and monitoring of HIV/AIDS commodities. Benin successfully implemented OSPSIDA and kept it updated with facility-level information throughout most of the program. There were challenges with updating the tool in the last year of the program and a backlog of data entry as a result of human resource challenges, primarily at the central level. WARP transitioned OSPSIDA to full country ownership in Benin, with program and IT staff having been equipped to manage and maintain the tool independently.

Burkina Faso

OSPSIDA was deployed at the national and regional levels in Burkina Faso in September 2014 and February 2016, respectively. Despite a strong and functional data validation mechanism at the regional level, the Programme Sectoriel Santé de Lutte contre le Sida et les IST (PSSLS-IST), the country's national AIDS program, faced delays with data entry due to a lack of trained human resources. Through close advocacy from WARP and the USAID/West Africa Regional Health Office, a workshop funded by the Global Fund's Principal Recipient for the HIV/AIDS Grant in 2016 was organized to train pharmacists and monitoring and evaluation advisors from each of the 13 regional health offices on data entry and use of OSPSIDA to improve decision making at the regional and central levels. By the end of the program, Burkina Faso was no longer actively using OSPSIDA for HIV/AIDS commodity management.

Cameroon

Beginning in August 2014, OSPSIDA was deployed at the national level in Cameroon. In 2016, WARP worked closely with SIAPS to develop new approaches, such as involving and training an HIV civil society organization on data entry and analysis of OSPSIDA reports. OSPSIDA was successfully transitioned to country ownership in Cameroon in August 2016. SIAPS provided remote capacity building exercises to staff from the national AIDS control program to assist in managing and monitoring the effective use of OSPSIDA and to avoid interruption of data entry.

In 2017, WARP staff traveled to Cameroon to train members of the national quantification committee in forecasting and supply planning of lab reagents and consumables, including rapid test kits needed for ART, prevention of mother-to-child transmission, voluntary counseling and testing, and lab monitoring programs. WARP also trained committee members on forecasting lab commodities and using ForLab for commodity forecasting. Staff were trained on developing a supply plan as the basis for procurement activities.

Guinea

At a regional stakeholders meeting in Accra in April 2015, Guinea expressed an urgent need to host OSPSIDA and use it as an early warning system for the country's HIV/AIDS products. However, due to the Ebola outbreak, deployment of OSPSIDA at the national level in Guinea was delayed until June 2015. Guinea did not sustain the use of OSPSIDA, and at the end of the program was not actively using it as a tool for HIV/AIDS commodity management.

Niger

OSPSIDA was deployed at the national level in Niger in August 2014 and showed that the availability of HIV/AIDS commodities was being hampered by a weak LMIS. Niger had challenges with keeping OSPSIDA up to date due to poor entry of paper-based LMIS data into the system, low facility reporting rates, and poor overall data quality. This prevented Niger from detecting a critical stock-out of ARVs before it occurred. However, Niger avoided treatment interruption by conferring with the JURTA-PSM Working Group. JURTA was able to quickly access Togo's up-to-date HIV stock data through OSPSIDA to request a rapid transfer of ARVs from Togo, preventing the interruption of ARV treatment for numerous patients in the country.

Togo

OSPSIDA was deployed in Togo in June 2014 and eight PNLS staff—four from the PSM unit and four from the monitoring and evaluation unit—were trained on data entry and report interpretation for faster decision making. Following the capacity building workshop, the WARP team subsequently met the PNLS coordinator and the coordinator of the Commission Nationale de Lutte contre le SIDA (CNLS), the national AIDS control commission, and agreed on the roles and responsibilities of the team who attended the training workshop and on the way forward.

OSPSIDA enabled continued medicines availability; in November 2014, OSPIDA reports alerted the PNLS of a possible stock-out of specific ARVs and revealed the underlying causes. With WARP support, this information was made available within one day and used to make a request to the US President's Emergency Plan for AIDS Relief's (PEPFAR) emergency commodity fund for a donation of ARVs to address the stock-out. When reviewing OSPSIDA reports in early 2017, WARP and the PNLS noted that there was a risk of stock-outs of two key products—tenofovir-lamivudine-efavirenz and abacavir-lamivudine—if orders were delivered as initially scheduled. Based on OSPSIDA data, the PNLS requested expedited delivery from the supplier, and the products were delivered and distributed to care and treatment sites as quickly as possible, preventing treatment interruption for the majority of patients. As previously mentioned, Togo

was also able to avert a stock-out in Niger as a result of the regional collaboration and access to updated stock data.

Togo saw a significant improvement in data quality through the use of OSPSIDA. The concordance between closing balances and opening balances of stocks in the LMIS reports increased from 55% to 100% within a year of the deployment of the dashboard. Facility reporting rates also improved, starting at 20% in June 2014 and stabilizing at 100% in September 2015. In 2016, WARP provided support to the PNLS by using a data entry clerk dedicated to OSPSIDA data entry to fill the human resources gap at the central level.

WARP supported the PNLS to use OSPSIDA to incorporate patient and commodity data to assess the impact of potential stock-outs on patients receiving ARVs. The 71% of ARVs that were at high risk of stock-out at the national level put 96% of patients at high risk of treatment interruption. However, this 96% decreased to less than 1% in November 2015 with close support from WARP.

Togo was successful in its implementation of OSPSIDA, and this changed the way the PNLS worked. However, in the third and fourth quarters of 2017, Togo faced challenges with maintaining data completeness and timely reporting on OSPSIDA. A backlog of report entries from facilities and at the central level developed. This resulted in a lack of visibility of ARV stock levels. Human resource challenges were identified as one factor contributing to this challenge. The motivation of data capturers at facilities was affected by notices of termination issued in July as a result of a change in funding priorities under the Global Fund grant from January 2018. The national roll out of the EDT in Togo was another factor that impacted on the ability to capture, authorize, and publish data in OSPSIDA within reasonable timeframes.

Togo experienced challenges with ARV stock levels in the fourth quarter of 2017 as a result of certain orders for ARVs not being fulfilled. These challenges resulted in critically low levels of stock for some ARVs, particularly the combination tablet tenofovir/lamivudine/efavirenz 300/300/600mg, which is used by the majority of adult patients. In January 2018, Togo experienced a stock-out of four critical ARV products for both adults and children. At that time, OSPSIDA data were incomplete, so despite the functionality of the tool, it was not able to provide full visibility of stock at all facility levels within the ARV supply chain in the country, which would have provided an early warning to avert a stock-out.

In February 2018, SIAPS conducted a rapid assessment of the stock-out of ARVs in Togo to identify the root causes and make recommendations for a rapid resolution of the situation. After a direct request for assistance from the Government of Togo to USAID, the possibility of providing assistance to the country through the PEPFAR Emergency Commodity Fund was proposed. WAHO was engaged by USAID to explore the possibility of facilitating a regional response by countries that may have excess stock of the specific ARV required urgently in Togo. The process had not been resolved at the time this report was finalized.

LESSONS LEARNED

- **Investments in keeping the dashboard updated resulted in improvements in supply chain management.** Countries that used OSPSIDA, such as Togo and Benin, experienced lower risks of stock-outs when they kept the tool updated, confirming the key role that access to accurate and timely information for decision making plays in pharmaceutical supply management.

- **Strong country leadership and dedicated human resources are key to successful implementation.** In Togo and Benin, the strong leadership of national HIV/AIDS program managers helped both countries commit to using OSPSIDA as a decision making tool for pharmaceutical supply management. However, where the commitment to use the tool is not matched with the availability of human resources at both the facility and central levels, data completeness cannot be assured, and the tool is not effective as an early warning system. Despite strong leadership in Burkina Faso, it was the lack of human resource capacity that prevented the regular updating of OSPSIDA and led to less improvement in supply management.

- **Build on successes to take solutions to scale.** The successful EDT pilot in Togo led to the development of a successful concept note for the nationwide rollout of the EDT in Togo, which was funded by the Global Fund. As of the end of SIAPS/WARP, the EDT had been rolled out to 82 sites across the country.

- **Combining the use of the EDT at the facility level and OSPSIDA at the national level improved the provision of ARVs to patients.** When OSPSIDA was updated regularly and used effectively in combination with the EDT at ART sites, there was improved overall visibility and management of HIV/AIDS commodities in Togo.

SUSTAINABILITY AND COUNTRY OWNERSHIP

EDT

At the end of SIAPS/WARP in December 2017, the PNLS in Togo took full country ownership of the EDT. The Global Fund has procured the necessary 76 computers and the software needed for EDT implementation. In preparation for the national scale up, key WARP staff traveled to Togo in October 2017 to build the capacity of IT staff at the national level and support the PNLS in developing a comprehensive refresher training of trainers for super users and user training for new staff and new users. All requirements for capacity building of IT staff and EDT super users to empower them to implement the scale up of the EDT have been fulfilled, and key personnel have been in the field ensuring the proper installation and providing onsite training. By February 2018, the EDT had been rolled out to 82 ART sites in Togo with support from the Global Fund.

OSPSIDA

It remains to be seen whether the use of OSPSIDA will be maintained in Togo and Benin after handover of the tool to country ownership. The challenges of transitioning responsibilities to in-country stakeholders and governments further illustrate the need for greater capacity building in existing institutions as well as the need to strengthen human resources in most of the WARP countries. In Cameroon, WARP provided remote capacity building exercises to CNLS staff to assist them in managing and monitoring the effective use of OSPSIDA to avoid any interruption of data entry. This transition has been completed successfully and was documented as a key achievement to ensure country ownership and the sustainability of OSPSIDA in Cameroon. It is anticipated that Cameroon will continue in its use of the dashboard to improve PSM in the country. Despite strong country interest in hosting OSPSIDA, its use is unlikely to be maintained in Burkina Faso, Guinea, and Niger, primarily due to human resource constraints.

Table 1. Implementing Partners, Project Years 3–6

Implementing Partners	Intervention(s)
PNLS Guinea	OSPSIDA
WAHO	OSPSIDA
The Global Fund	OSPSIDA, EDT, quantification
PNLS Togo	OSPSIDA, EDT, quantification
CISLS Niger	OSPSIDA, quantification
PSSLS-IST Burkina Faso	OSPSIDA
PNLS Benin	OSPSIDA
CNLS Cameroon	OSPSIDA, quantification

Table 2. Stakeholders, Project Years 3–6

Stakeholders	Intervention(s)
JURTA on HIV/AIDS/PSM and Treatment Working Group	OSPSIDA
Solidarité Thérapeutique et Initiatives contre le VIH/SIDA	OSPSIDA
Ensemble pour une Solidarité Thérapeutique Hospitalière en Réseau	OSPSIDA
Clinton Health Alliance Initiative	OSPSIDA, quantification
UNAIDS Regional Support Team for West and Central Africa	OSPSIDA
PNLS/CISLS/PSSLS-IST/National AIDS Control Program/Commission	OSPSIDA, EDT
Central Medical Stores	OSPSIDA, EDT, quantification
Pharmacy and Medicine Departments	OSPSIDA, EDT, quantification
Médecins Sans Frontières	OSPSIDA