

Deployment of the HIV and AIDS Commodity Management Tool OSPSIDA in Six Focus Countries in West and Central Africa: Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo

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The goal of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is to assure 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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OSPSIDA, Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo

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ABBREVIATIONS AND ACRONYMS

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral
CAME	Centrale d’Achat des Médicaments Essentiels (Central Medical Stores)
CAMEG	Centrale d’Achat des Médicaments Essentiels Generiques (Central Medical Stores)
CENAME	Centrale Nationale d’Approvisionnement en Médicaments et Consommables Medicaux Essentiels (Central Medical Stores)
CAPR	Centre d’Approvisionnement Pharmaceutique Régional
CDC	Centers for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CISLS	Coordination Intersectorielle de Lutte contre le VIH/SIDA et les IST (Intersectoral Committee of Fight Against HIV and AIDS and STIs)
CMS	Central Medical Stores
CNLS	Commission Nationale de Lutte contre le SIDA
CTA	Centre de Traitement Ambulatoire (outpatient treatment center)
CPFM/SSP	Cellule du Projet Fonds Mondial Sida Secteur public
DFH	Directorate of Family Health
DGPML	Direction Generale de la Pharmacie, du Médicament et des laboratoires (Directorate of Pharmacy, Medicines, and Laboratory of the Ministry of Health)
DLM	Direction de la Lutte contre la Maladie (Division of Fight against Diseases of the Ministry of Health)
DNPL	Direction Nationale de la Pharmacie et des Médicaments (Department of Pharmacy and Medicines)
DPM	Direction de la Pharmacie et du Médicament (Directorate of Pharmacy and Medicines)
DPMED	Direction de la Pharmacie, du Médicament et des Explorations Diagnostiques (Directorate of Pharmacy, Medicines, and Diagnostic Investigations)
DREAM	Disease Relief through Excellent and Advanced Means
DSF	Direction de la Santé Familiale (Ministry of Health’s Department of Family Health)
DSME	Direction de la Santé Mere-Enfant (Ministry of Health’s Department of Mother and Child)
DRS	Direction Régionale de la Santé (Regional Directorate of Health)
ESTHER	Ensemble pour une Solidarité Thérapeutique Hospitalière En Réseau (Together for a Hospital Therapeutic Solidarity Network)
EWS	early warning system
HIV	human immunodeficiency virus
HNN	National Hospital of Niamey (Hopital National de Niamey)
ICAP	International Center of AIDS Program of Columbia University
IST	infection sexuellement transmissible (sexually transmitted infection)
LMIS	logistics management and information system
MOH	Ministry of Health

Abbreviations and Acronyms

MSF	Médecins Sans Frontières (Doctors without Borders)
MSH/LMG	Management Sciences for Health and Leadership Management and Governance
NACC	National AIDS Control Commission
NACP	National AIDS Control Program
NGO	nongovernmental organization
ONPPC	Office National des Produits Pharmaceutiques et Chimiques (Central Medical Stores)
OSPSIDA	HIV and AIDS Commodity Management Tool (Outil de Suivi des Produits du VIH/SIDA en Afrique de l'Ouest)
PCG	Pharmacie Centrale de Guinée (Guinea's Central Medical Stores)
PEPFAR	United States President's Emergency Plan for AIDS Relief
PMTCT	prevention of mother-to-child-transmission
PNLS	Programme Nationale de lutte contre le SIDA (National HIV/AIDS Program)
PNPCSP	Programme National de Prise en Charge Sanitaire et de Prévention des IST/VIH/Sida (HIV and AIDS Control Program)
PSSLS	Programme Sectoriel Santé de Lutte contre le SIDA (National AIDS Control Program)
PSM	procurement and supply management
RTK	rapid tests kit
SE/CNLS	Secretariat Exécutif du Comité National de Lutte contre le SIDA (Executive Secretariat of National AIDS Control Commission)
SIAPS	Systems for Improved Access to Pharmaceuticals and Services (Program)
SOLTHIS	Solidarité Thérapeutique et Initiatives de Lutte contre le VIH/SIDA (Therapeutic Solidarity and Initiatives against HIV/AIDS)
SP/CNLS	Secretariat Permanent de la Commission Nationale de Lutte contre le SIDA (National AIDS Control Commission's Permanent Secretariat)
WHO	World Health Organization
ULSS	Unité de Lutte Sectoriel Santé (National AIDS Control Program)
UNAIDS	United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
USAID/WA	US Agency for International Development West Africa
WAHO	West African Health Organization
WARP	West Africa Regional Project

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EXECUTIVE SUMMARY

The availability and quality of HIV commodity, including antiretrovirals (ARVs) and HIV test kits, increase the demand for HIV care services and enables the scale-up of antiretroviral therapy (ART). In West Africa and Central Africa, stock-outs often occurred because of poor coordination and information sharing among partners and lack of a reliable early warning system.

With funding from the US Agency for International Development West Africa (USAID/WA) and in collaboration with West African Health Organization (WAHO) and key stakeholders involved in the procurement and supply management at country and regional levels, Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program has provided supports to six countries in West and Central Africa. Those countries, Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo, will set up a web-based early warning system (EWS) known as the HIV and AIDS Commodity Management Tool (OSPSIDA) to monitor HIV and AIDS commodities.

From June 2014 to June 2015, SIAPS staff members traveled to six countries to build the capacity of key actors involved in HIV and AIDS commodity management at national level on the use of OPSIDA.

The date for the training in each country was as follows—

- Togo (June 2014)
- Niger (August 2014)
- Burkina Faso and Benin (September 2014)
- Cameroon (September 2014)
- Guinea (June 2015)

Upon arrival in each country, the SIAPS group paid a courtesy call to the coordinator of the National AIDS Control Commission (NACC) or a representative of the National AIDS Control Program (NACP) and any available stakeholder. This courtesy call was to talk about how to deploy OPSIDA and how to use its reports to make decisions faster.

Each country's training venues were specifically chosen or changed because of the location's access to the Internet.

The SIAPS group demonstrated the OPSIDA to members of the HIV and AIDS Procurement and Supply Management (PSM) Technical Committee who will be using the system. The data entry requirements and output reports for both the facility and the national levels were also explained. During the launch of OPSIDA, each country will enter facility-level data for HIV commodities and patient information monthly or quarterly, depending on how the logistics management and information system (LMIS) is set in each country. In addition, facility-level data will be consolidated to generate national reports.

Participants from different agencies, such as the NACP, the NACC, the Central Medical Stores (CMS), Directorate of Family Health, Directorate of Pharmacy and Medicines (DPM), and other

national institutions, were asked to register in OSPSIDA. Participants from central-level offices numbered 13 from Benin, 9 from Burkina Faso, 16 from Cameroon, 17 from Guinea, 15 from Niger, and 11 from Togo. In Burkina Faso, the SIAPS West Africa Regional Project also trained 29 participants from regional health offices of the MOH.

In each country, participants who registered received permission for entry to OSPSIDA. OSPSIDA provides four user roles. Three of those roles involve people who will be able to enter, submit, accept, and publish data—

- Country data viewer: Participants with this permission level will be able only to view their country's reports and will not be able to enter data.
- Country data entry operator: All training participants were given this permission. These users will be able to view only one country's data and will not be able to view or edit data from other countries. The country data entry operator's main responsibility is to enter monthly stock and patient information and submit data for review.
- Country data entry manager: All training participants were given this permission. Each country has at least one data entry manager whose main task is to accept the data submitted by country data entry operators, after proper review. They will also be able to enter and update any data entered by data entry operators.
- Regional administrator: These users will publish country-accepted data for display in the web portal and available for summary reports. The SIAPS regional project team based in Accra, Ghana, will undertake this task.

The SIAPS team also demonstrated the data entry pages for products, regimens, country products, country regimens, country profile, and monthly stock and patient entry form. The team then prepared all data required to complete OSPSIDA entry forms. Users then entered the prepared data into each data page shown on a big screen—

- Country profile: The users provided country profile information as of December 2013 or December 2014, depending on what was available when their training sessions took place. The team entered the data with all users.
- Regimens: Users checked off the regimens that are active in the country.
- Products: Users checked off the ARV and rapid test kit (RTK) products that are available in the country.
- Health facilities and warehouses location: The team entered facility details with all users. Users appreciated being able to locate facilities on Google Maps. The team assigned the task of locating the facilities to one group of users. The task of updating the basic data of each facility (facility type, region, and supporting warehouse) was assigned to another group of users.

- Quarterly or monthly facility stock and patient entry form: Data are entered in this major entry form every month or every quarter.

At the end of training session, national-level and facility-level consolidated reports with the country's real-time data were presented to that country's HIV and AIDS PSM Technical Committee. The group discussed data quality and ways to improve it in the future.

Roles and responsibilities were assigned to local agencies for data entry, analysis, and review of OSPSIDA reports for decision making. The NACP hosted OSPSIDA in Benin, Burkina Faso, Cameroon, and Togo. The NACC hosted OSPSIDA in Niger and Guinea.

BACKGROUND

Globally, Sub-Saharan Africa remains most severely affected by HIV, accounting for 69% of the people living with HIV worldwide. Barriers to accessing health services remain a major constraint, particularly to marginalized populations, mostly because of weak health systems. With more international commitment to responding to HIV and AIDS, funding has increased. Countries in the region have begun demonstrating ownership of and have increased commitment to the HIV response by directly funding HIV programs and instituting boards and policies to guide program administration. Several of the established NACPs are principal recipients of grants from the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund). Some countries in the region are progressing toward universal access to treatment.

Alerts that life-saving drugs for ART and treatment of opportunistic infections are out of stock have emerged from a number of countries in West Africa. For example, eight countries in the region not only have reported stock-outs of critical drugs, but also are unable to identify and address underlying causes or to generate accurate and reliable data about current stock and the way to project needs. As in many countries, the root causes might include poor coordination among partners, paucity of pharmaceutical management data for forecasting supplies, poor inventory management and storage practices at pharmaceutical warehouses and dispensing points, and inadequate training and supervision of dispensary staff in health facilities.

In the face of multiple stock-out alerts, several uncoordinated responses have addressed stock-out crises, especially at country level. The main responses solicited in the recent past are the emergency commodity fund of the President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund's voluntary procurement pool, coordinated procurement planning, UNITAID, Grant Management Solutions, and exchanges between countries. However, these are all short-term solutions, and they are not sustainable. What is needed is a proactive and in-depth analysis of the root causes of the recurrent pharmaceutical supply management issues and implementation of effective long-term solutions.

To provide effective long-term solutions, USAID's West Africa office requested that SIAPS provide support to six countries in West and Central Africa.

To do so, SIAPS conducted a situational analysis in six countries—Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo—to understand the current capacity for HIV and AIDS commodities management and supply. The analysis also assessed the readiness of the HIV and AIDS commodities information management systems to provide the information necessary to routinely monitor the availability of HIV and AIDS products in the region.

On the basis of information collected from the rapid situation analysis, SIAPS developed a regional dashboard. The dashboard is a website that serves as an EWS monitoring HIV and AIDS commodities to detect stock-outs and to minimize the risk of stock-outs in the six countries.

OSPSIDA DEPLOYMENT IN SIX FOCUS COUNTRIES

Togo

Deployment Date

Togo was the first country where OSPSIDA was deployed. The deployment has been conducted only at central level. A user acceptance test coupled with capacity building of selected staff was conducted from June 19 to June 27, 2014.

In-Brief with PNLs and CNLS

On June 19, 2014, the SIAPS team led by the West Africa Regional Project director, regional technical adviser, and the OSPSIDA system developer paid a courtesy call to Dr. Assetina Singo, the Coordinator of the National AIDS Control Program (PNLS) (Programme National de Lutte contre le SIDA). The team presented the SIAPS WARP to the PNLs team and other stakeholders. In the afternoon, the SIAPS team paid another courtesy call to Vincent Pitche, the Coordinator of National AIDS Control Commission (CNLS) (Commission Nationale de Lutte contre le SIDA), who promised to provide SIAPS with all the necessary support to complete the mission.

Capacity Building of Central-Level Staff

Participants' profile

Eleven participants from PNLs and Central Medical Stores (CAMEG) (Centrale d'Achat des Médicaments Essentiels Génériques) received training on data entry and on ways to make decisions based on reports generated by OSPSIDA (table 1).

Table 1. Number of participants trained on OSPSIDA, Togo

Organization	Participant number		
	<i>Female</i>	<i>Male</i>	<i>Total</i>
PNLS	3	7	10
CAMEG		1	1
Total	3	8	11

Training

Day 1: June 19, 2014

SIAPS demonstrated OSPSIDA to participants who were going to actively use the system and explained the data entry requirements and output reports for both facility and national levels. As decided earlier, Togo would enter facility-level data for HIV and AIDS commodities and for patient information. Facility-level data was consolidated to generate national reports. The SIAPS

team started training in the PNLS meeting room, where it discovered excellent access to the Internet. Therefore, the team continued to have training sessions at the same venue.

Day 2: June 20, 2014

After the users registered in OSPSIDA, the SIAPS team gave data entry permissions and informed them that three types of OSPSIDA user roles existed at the country level for updating data (figure 1):

- Country data entry operator: All the Togo training participants were given permission to view only one country's data. They would not be able to view or to edit data from other countries. The country data entry operator's main responsibility is to enter monthly stock and patient information and to submit the data for review.
- Country data entry manager: Each country will have at least one data entry manager whose main task is to accept the data submitted by country data entry operators after proper review. The managers will also be able to enter and to update any data entered by data entry operators.
- Country data viewer: These users will only view country reports and will not be able to enter data.

The SIAPS regional project team based in Accra will be the regional administrator of OSPSIDA. The regional administrator will publish country-accepted data to display in the web portal and to be available for summary reports. These users will enter and update any data available on the website. The main role of the regional administrator will be to give permission to new users and to add new products and regimens. The SIAPS team will undertake this task at first and gradually transfer it to each country.

The SIAPS team demonstrated the following web pages: data entry page for products, regimens, country products, country regimens, country profile, and monthly stock/patient entry form. On June 20, the participants had difficulty entering data into the portal because of Internet speed. The team transferred the training venue to the University of Togo computer lab where the participants could access high-speed Internet through the following week.

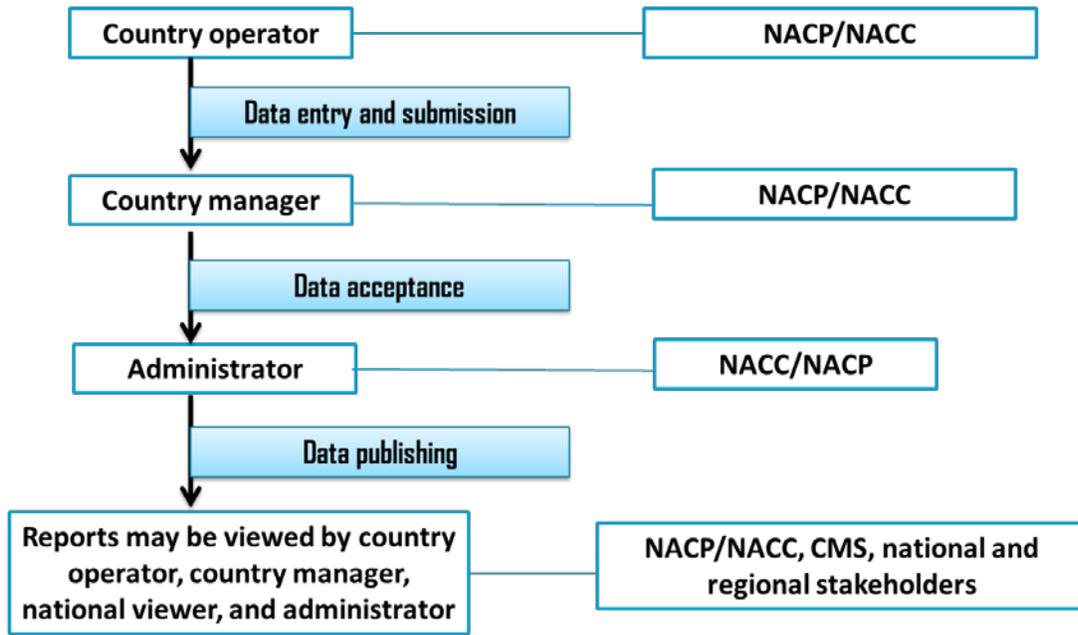


Figure 1. OSPSIDA data entry, submission, acceptance, and publishing, Togo

Day 3: June 23, 2014

With a responsive Internet in the new location, the team demonstrated the following data entry pages and entered data on a large screen while the participants did the same at their computer work stations—

- Country profile: Participants entered the data from the December 2013 four-page country profile. Participants entered data in the first two pages, which contained basic parameters and the number of patients using each regimen. Funding requirements for 2014–16 could not be entered, nor could the pledged funding that had not yet been validated by the Global Fund.
- Regimens: Participants checked off the regimens that are active in Togo.
- Products: Participants checked off the ARV and RTK products that are available
- Health facilities: Togo has 78 health facilities, 5 regional warehouses, and 1 central warehouse for HIV commodity management (figure 2). The SIAPS team and the participants entered facility details. Users appreciated being able to locate facilities on Google Maps. The team assigned the task of locating the facilities to one group of users. The task of updating the basic data of each facility (facility type, region, and supporting warehouse) was assigned to another group of users.
- Monthly facility stock and patient entry form: Data are entered monthly in this major form. The team started entering data from January 2014. Users brought the reports received from the health facilities. Then together with the users, the team entered data for

one facility. Next, the team distributed data from the facilities, and users and they started January 2014 data entry themselves.

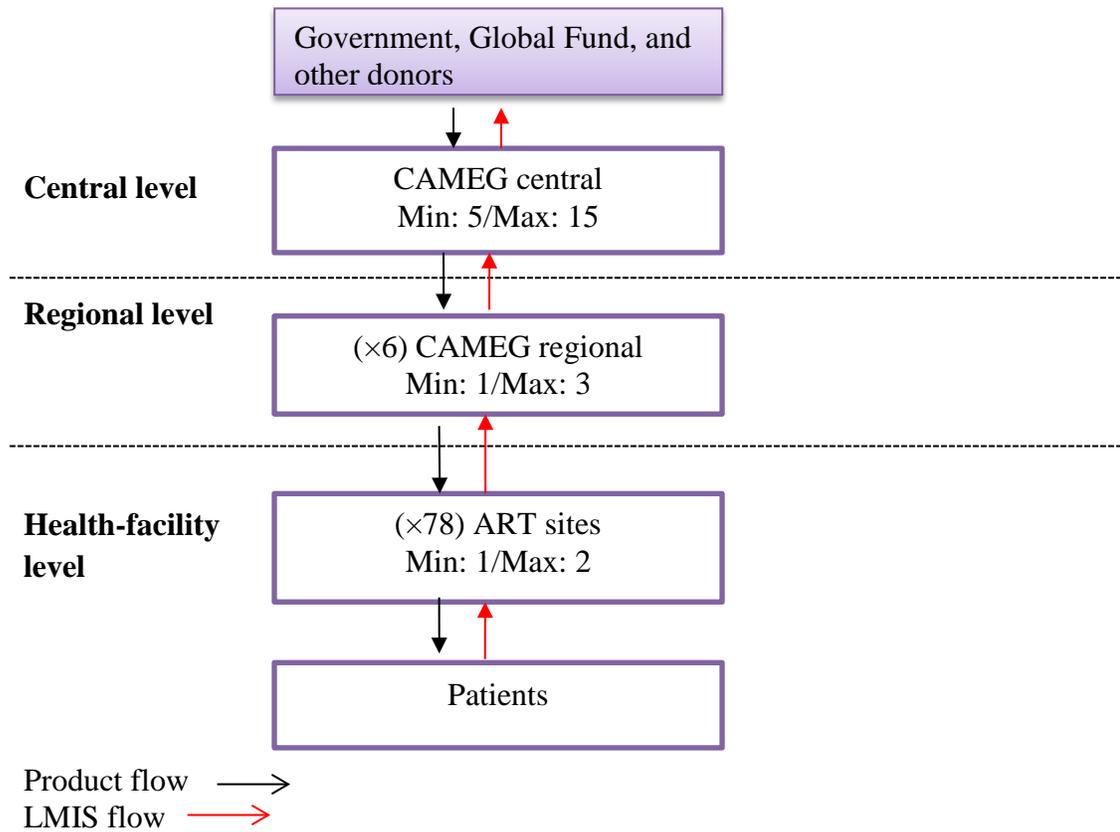


Figure 2. Flow of HIV and AIDS products and related information for OPSIDA, Togo

Day 4: June 24, 2014

Users continued to enter data from all facilities. Unfortunately, the Internet service fluctuated that day. However, users entered data for all facilities for January 2014 and then submitted the reports. After being reviewed, those reports were accepted and published.

Day 5: June 25, 2014

In the morning, the team gave a demonstration of OPSIDA to the Togo National Coordination Committee (the PSM Technical Committee on HIV and AIDS commodities). The committee expressed concerns about the visibility and access levels of sensitive HIV and AIDS data. In the afternoon, the participants started entering data. Afterward, data were entered for five regional warehouses and the central warehouse. But the warehouses report only closing balances and do not submit monthly logistics reports. For completeness, participants entered opening (from last month's balance) and closing stock, and then adjusted the remaining quantity for all products for warehouses. Then the participants submitted, accepted, and published all reports.

Day 6: June 26, 2014

As the participants began to enter data from February 2014, some of the stock information from the January 2014 report was discovered to be incorrect. The team decided to unpublish the January reports and to review each report for accuracy. After the corrections were made, the reports were again submitted. Participants began entering data from February 2014.

Day 7: June 27, 2014

The team presented national- and facility-level consolidated reports to the National Coordination Committee with live January 2014 data from Togo. The committee gave a large amount of positive feedback to the team.

The team also discussed and finalized the list of updates from participants and observers that were required in OSPSIDA. A major issue was that OSPSIDA had the option only for monthly entry at both the facility and national levels, and some countries receive reports from facilities quarterly. Changing the reporting frequency for the website was not possible. The option to enter a quarterly report needed to be incorporated in OSPSIDA before conducting a user acceptance test for another country.

Participants agreed on roles and responsibilities of the local entity for data entry, submission, acceptance, and publishing (table 2). The PNLs pharmacist was nominated to be the OSPSIDA country manager.

Lessons Learned

One outcome of the OSPSIDA data entry training was that LMIS paper reports submitted by health facilities to the PNLs were not accurate in many cases. In most cases, the closing stock of January did not match the opening stock for February. In fact, OSPSIDA was designed to automatically populate the opening stock in subsequent month, and therefore errors in data entry could be easily detected. This information has alerted the team to look for errors in the reports submitted by the sites.

Table 2. Roles and responsibilities of each entity and organization in data entry, validation, and publication, Togo

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Monthly	PNLS	PNLS	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	PNLS	PNLS	Not required		All viewers

Note: PMTCT = prevention of mother-to-child-transmission

Niger

Deployment Date

Niger was the second country where OSPSIDA was deployed. In August 2014, it was deployed at the central level such as in Togo.

In-Brief with the National AIDS Control Commission

On August 4, 2016, the team paid a courtesy call to the coordinator of the Intersectoral Committee of the Fight Against HIV and AIDS and STIs (CISLS; Coordination Intersectorielle de Lutte contre le VIH/SIDA et les IST), Alhousseini Maiga, to talk about deployment of OSPSIDA.

Capacity Building of Central-Level Staff

List of participants

Fifteen participants from the following organizations attended the five-day training on use of OSPSIDA (table 3):

- CISLS
- ONPPC (Office National des Produits Pharmaceutiques et Chimiques)
- MOH's Department of Mother and Child (DSME) (Direction de la Santé de la Mere-Enfant)
- National AIDS Control Program (ULSS) (Unite de Lutte Sectoriel Santé)
- National Hospital of Niamey (HNN) (Hopital National de Niamey)
- United Nations Programme on HIV and AIDS (UNAIDS)

Table 3. Number of participants trained on OSPSIDA, Niger

Organization	Participant number		
	Female	Male	Total
CISLS	1	1	2
ONPPC		1	1
DSME	3	3	6
ULSS	1	3	4
HNN		1	1
UNAIDS		1	1
Total	5	10	15

Training

Day 1: August 4, 2014

The team demonstrated OSPSIDA to the HIV and AIDS PSM technical committee members who would be using the system. The team explained the data entry requirements and output

reports, at both the facility and national levels. As decided earlier, Niger would enter facility-level data for HIV commodities and patient information, and the data would be consolidated to generate national reports.

The training began at CISLS but because of the slow Internet speed in Niger, the training was moved to the UNAIDS office upon recommendation from the monitoring and evaluation adviser of UNAIDS (a member of the HIV/AIDS PSM committee).

Day 2: August 5, 2014

The fifteen participants registered in OSPSIDA, and then they were given data entry permissions. The team informed the participants of the four types of user roles in OSPSIDA as demonstrated in Togo. The team then demonstrated the following web pages: data entry page for products, regimens, country products, country regimens, country profile, and monthly stock/patient entry form. All data required to complete OSPSIDA entry forms were prepared.

Day 3: August 6, 2014

The team and the users started entering the following data on each page together on the big screen:

- Country profile: The users provided information from the December 2013 country profile to enter.
- Regimens: Participants checked off the regimens that are active in Niger.
- Products: Participants checked off the ARV and RTK products that are available in Niger.
- Health facilities: Niger has 1 central medical store and 36 sites that will report on HIV and AIDS commodities, and participants located each of these sites on Google Maps to enable graphical display of the reports (figure 3).
- Quarterly facility stock and patient entry form: This form is where data will be entered every quarter. The team started entering data for the first quarter (January–March 2014).

Day 4: August 7, 2014

Users continued to enter data from all facilities for the first quarter of 2014. After being reviewed by participants, those reports were accepted and published. Users began to enter logistics data for the second quarter (April–June 2014). The team noticed that the quality of data was low, because most closing numbers did not correspond with the opening stock of the following quarter. Users did not complete data entry for the second quarter because all reports were not available at the central level.

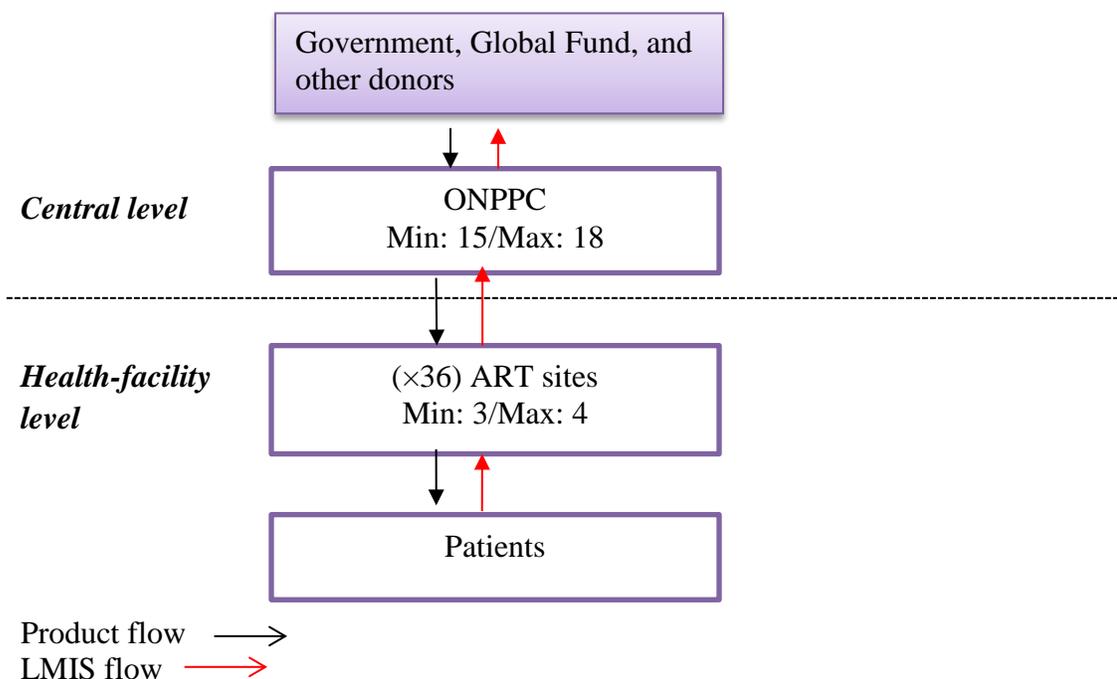


Figure 3. Flow of HIV and AIDS products and related information in OSPSIDA, Niger

Day 5: August 8, 2014

In the morning, the team presented national- and facility-level consolidated reports with Niger real time data to the HIV/AIDS PSM technical committee. The committee gave feedback to reinforce the need for high-quality logistics data. The participants continued to enter data in the second half of this training day.

On Tuesday, August 17, the training team met with ONPPC senior management to present the reports and to discuss emergency actions to improve data quality.

Participants agreed on the local entity's roles and responsibilities for data entry, submission, acceptance, and publishing (table 4). The CISLS pharmacist was nominated to be OSPSIDA country manager.

Lessons Learned

The deployment in Niger also highlighted the data quality of paper LMIS reports submitted by health facilities managing HIV and AIDS commodities to central level. All LMIS paper reports—100%—were inaccurate. The closing stock of the first quarter (January–March 2014) did not match the opening stock for the second quarter (April–June 2014). The reporting rate for the second quarter (April–June 2014) was very low at 43.2%.

Table 4: Roles and responsibilities of each entity and organization in data entry, validation, and publication, Niger

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Quarterly	CISLS	CISLS	CISLS	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Quarterly	ONPPC	ONPPC	CISLS	SIAPS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Quarterly	CISLS	CISLS	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	CISLS	CISLS	Not required		All viewers

Cameroon

Deployment Date

Cameroon was the third country where OSPSIDA was deployed. Initially, the deployment was done at central level from August 23 to September 5, 2014, by SIAPS regional technical adviser based in Accra. Later, SIAPS Cameroon supported the NACP to deploy OSPSIDA at the regional level in January 2015.

In-Brief with CISLS

The SIAPS regional technical adviser arrived in Yaoundé on August 24, 2016. After the SIAPS technical office oriented the adviser on OSPSIDA, the SIAPS country project director accompanied the SIAPS regional technical adviser to pay a courtesy call to Dr. Jean Bosco Elat, the Director of the NACC. The adviser also met with Dr. David Kob Same, the contact person identified by the NACC director for OSPSIDA.

Capacity Building of Central-Level Staff

List of Participants

Sixteen participants attended the five-day training on the use of OSPSIDA (table 5). They came from the following organizations:

- CNLS
- Central Medical Stores (CENAME) (Centrale Nationale d'Approvisionnement en Médicaments et Consommables Médicaux Essentiels)
- MOH's Division of Fight against Diseases (DLM) (Direction de la Lutte contre la Maladie)
- International Center of AIDS Program of Columbia University (ICAP)
- Clinton Health Access Initiative (CHAI)
- Centers for Disease Control and Prevention (CDC)
- UNAIDS

Table 5: Number of participants trained on OSPSIDA, Cameroon

Organization	Participant number		
	Female	Male	Total
CNLS	1	7	8
CENAME		2	2
DLM	1		1
CHAI	1	1	2
ICAP		1	1
CDC		1	1
UNAIDS		1	1
Total	3	13	16

Training

Registration and Data Entry

Each participant was asked to open the dashboard and register. After registering, each participant received an email that allowed him or her to be activated. After activation, the registrants were given access privilege according to their level of use. The participants worked as a team to enter the country profile that included population, HIV prevalence, sites profiles, and so forth.

The entry requirement for the dashboard includes the following, on separate data entry pages—

- Product entry
- Regimen entry
- Health facilities entry and linking with warehouse
- National-level patient and stock status
- Facility-level patient and stock status

After the initial data entry, the group continued to set up a map of each facility site and its location, which would allow the report to be generated graphically (figure 4). A total of 166 sites and regional stores information should have been entered, but due to a lack of data, the group was able to complete only 62.7% of sites reports for January 2014. The reports were generated for all the participants to see. Then a data quality check was completed.

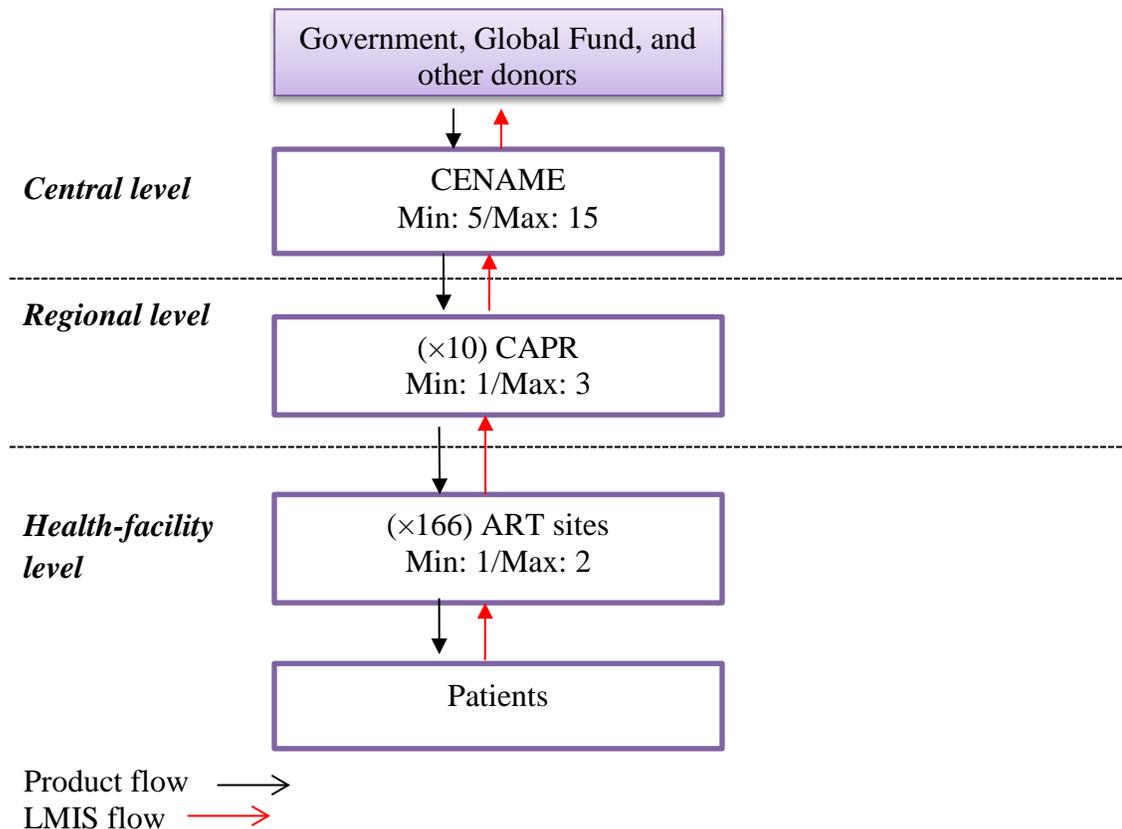


Figure 4. Flow of HIV and AIDS products and related information on OPSIDA, Cameroon

On Monday, September 2, the results of the reports were presented to the participants. Copies of the report were forwarded to people who could not attend, such as the director of the NACC who was out of town that day.

Although there were some hiccups, the group managed to enter some of the data. Four days were spent on registration and data entry. The major problem was lack of logistics data from the facilities.

Report Discussion

Participants discussed the route forward and ways Cameroon should collect data for OSPSIDA, because a lack of data would make the tool ineffective. The NACC coordinator promised to contact the sites to request the needed logistics data. The coordinator also promised to work with colleagues to ensure that the system was up to date. The group agreed that the SIAPS team in Cameroon would follow up to ensure accurate data entry. In the meantime, the regional technical adviser supports data entry.

Participants also agreed on the local entity's roles and responsibilities for data entry, submission, acceptance, and publishing (table 6).

Debriefing and Next Steps

On September 3, the SIAPS regional technical adviser had a briefing with the USAID senior health adviser at USAID in Cameroon. The USAID adviser was briefed on the deployment and the lack of data available, and then he requested to be registered on the tool.

NACC requested that the people in charge of data management at the regional level be trained to handle data entry from health facilities.

Table 6. Roles and responsibilities of each entity and organization in data entry, validation, and publication, Cameroon

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Monthly	CNLS	CNLS	CNLS	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Monthly	CENAME	CENAME	CNLS	CNLS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Monthly	CNLS	CNLS	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	CNLS	PNLS	Not required		All viewers

Burkina Faso

Deployment date

Burkina Faso was the fourth country where OSPSIDA was deployed. The deployment was done at the country’s central level in September 2014 and at the regional level in February 2016.

Deployment at Central Level

In-Brief with NACC (SP-CNLS/IST) of Burkina Faso

On September 8, the SIAPS team paid a courtesy call to the permanent secretary of CNLS, Didier Bakouan, to talk about deployment of OSPSIDA and the use of OSPSIDA reports to make faster decisions.

Participant Profile

Nine participants—members of the national PSM coordination committee—attended the five-day training on use of OSPSIDA (table 7). The participants came from the following organizations—

- National AIDS Control Program (PSSLS) (Programme Sectoriel Sante de Lutte contre le SIDA)
- National AIDS Control Commission’s Permanent Secretariat (SP/CNLS) (Secretariat Permanent de la Commission Nationale de Lutte contre le SIDA)
- CAMEG
- Global Fund’s Project Management Unit (CPFM/SSP) within SP/CNLS
- MOH’s Department of Pharmacy, Medicines, and Laboratory (DGPML) (Direction Generale de la Pharmacie, du Médicament et des Laboratoires) Directorate of Family Health (DSF) (Direction de la Santé Familiale)

Table 7. Number of central-level participants trained on OSPSIDA, Burkina Faso

Organization	Participant number		
	Female	Male	Total
PSSLS	2	1	3
SP/CNLS		1	1
CPFM		1	1
CAMEG	1		1
DGPML	2		2
DSF		1	1
Total	5	4	9

Training of Key Staff from PSM Technical Committee

Day 1: September 8, 2014

In the SP/CNLS conference room, the team demonstrated OSPSIDA to the HIV and AIDS PSM Technical Committee members who will use the system. The data entry requirements and output

reports, at facility level and national level, were also explained. As decided earlier, Burkina Faso will enter facility-level data for HIV commodities and patient information quarterly.

Nine participants were asked to register in OPSIDA, and then they were given data entry permissions. The participants were informed of OPSIDA's three types of country user roles and who would be able to update data.

The following web pages were demonstrated: data entry page for products, regimens, country products, country regimens, country profile, and monthly stock and patient entry form. All data required to complete OPSIDA entry forms were then prepared.

Days 2–4: September 9–11, 2014

The second of day training continued at the SP/CNLS conference room and then moved to PSSLS the third and fourth days for better access to the Internet.

The SIAPS team began to enter the following data on each page together with the users on the big screen—

- Country profile: The users gave the December 2013 country profile information that was available and the group entered the data.
- Regimens: The group checked off the regimens that are active in Burkina Faso.
- Products: The group checked off the ARV and RTK products that are available in Burkina Faso.
- Health facilities: Burkina Faso has 12 regions, 1 central warehouse, and 7 regional warehouses with 100 ART sites that will be reporting (figure 5). Each site was set up with its location on Google Maps to enable graphical display of the reports.
- Quarterly facility stock and patient entry form: Data will be entered in this major form every quarter. Data entry from the first quarter (January–March 2014) was completed.

Day 5: September 12, 2014

On the fifth day, the group returned to SP/CNLS for training. In the morning, the national- and facility-level consolidated reports with Burkina Faso real time data were presented to the HIV and AIDS PSM technical committee. The committee members gave some feedback to reinforce the need for a high quality of logistics data. The participants entered data in the second half of the day.

Participants agreed on the roles and responsibilities of local entities for data entry, submission, acceptance, and publishing (table 8). The PSSLS-IST pharmacist was nominated as the OPSIDA country manager.

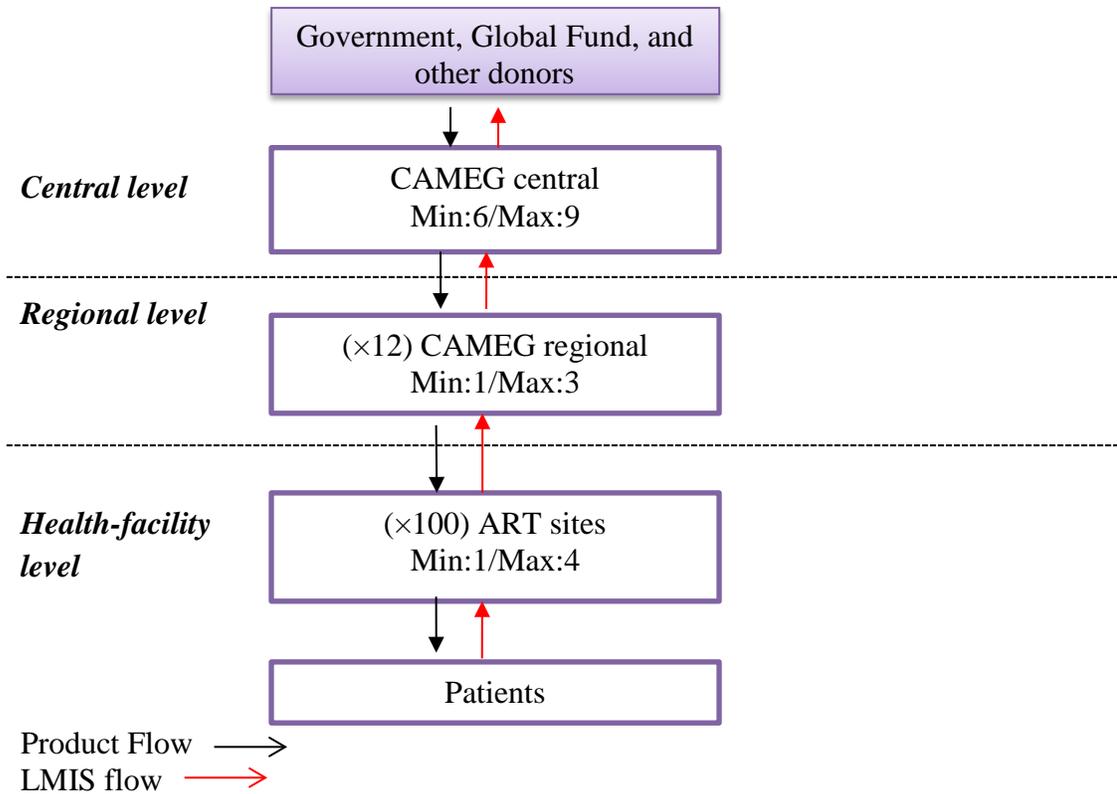


Figure 5. Flow of HIV and AIDS products and related information on OSPSIDA, Burkina Faso

Out-Brief with SP/CNLS and USAID Burkina Faso

On Friday morning, September 12, the SIAPS regional project director met at the USAID office with Jim Parys, USAID representative in Burkina Faso, and Didier Mbayi Kangudie, USAID/WA senior health adviser who was on temporary duty in the country. Parys was excited about OSPSIDA, and he has been granted access as a country viewer to see Burkina Faso reports in OSPSIDA.

That afternoon, the SIAPS regional project director conducted an out-brief with Dr. Mamadou Sokey, a representative of the permanent secretary of CNLS who was out of country the last three days of the training.

Representatives from USAID and SP/CNLS were briefed about the deployment of OSPSIDA and the issues that the project faced.

Table 8: Roles and responsibilities of each entity and organization in data entry, validation, and publication, Burkina Faso

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Monthly	PNLS	PNLS	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	PNLS	PNLS	Not required		All viewers

Lessons Learned

The group noticed that the LMIS paper reports used to collect logistics data (stock, consumption) and patient data were available and archived at the NACP (PSSLS). Electronic versions of LMIS forms were available and archived at PSSLS for January–March and April–June, 2014 reporting periods. This availability could allow SIAPS/WA to assist Burkina Faso for data entry from a remote location.

In Burkina Faso, there is a validation mechanism of all data, including LMIS data in each health region. However, the time allocated to LMIS data validation is insufficient to engage discussions and find ways to improve data quality.

Staff members from national entities who attended the training were very motivated to use OSPSIDA as a tool to make decisions.

However, the team identified some weaknesses in LMIS forms. The current LMIS tools were not collecting losses and adjustments, and users could report losses and adjustments as quantity consumed.

The opening balance was combined with quantity received, and the paper-based tool was giving more work to people entering data into OSPSIDA where the opening balance was separated from the quantity received from warehouse.

The lack of quality in the LMIS reports was still an issue as it was in other countries where OSPSIDA was already deployed (Togo, Niger, Cameroon). The SIAPS team recommended that NACP train users and reinforce supervision of supply chain functions across all levels to improve the quality of the data.

For patient reports, the team noted that Burkina Faso has too many regimens. Nine regimens were reported as a first-line adult regimen. Thirty regimens were reported for second-line adult regimen.

In the short term, the Burkina Faso team committed to entering data from the second quarter and agreed to deploy the OSPSIDA at the regional level.

Deployment of OSPSIDA at Regional Level

A team comprising the SIAPS regional project director, two OSPSIDA country managers (for Togo and Benin), and WAHO webmaster (OSPSIDA regional administrator) traveled to Burkina Faso in February 2016 to support the deployment of OSPSIDA at the regional level. This deployment was a result of a coordinated effort between SIAPS, USAID/WA, and the Global Fund. The regional deployment was seen as the best option to improve data entry and sustain the use of OSPSIDA in Burkina Faso. SIAPS provided technical assistance to facilitate the training workshop whereas the Global Fund funded the workshop's organization.

Training Venue

The workshop ran from Monday, February 22, to Saturday, February 27, 2016, in the conference room of the Regional Directorate of Health of Koudougou, a city 100 kilometers from Ouagadougou, the capital of Burkina Faso.

Participants' Profile

A total of 37 participants from central-level institutions such as PSSLS-IST, SP/CNLS-IST, CPFM/SSP, CAMEG, and the 13 Regional Directorates of Health (DRS) (Direction Régionale de la Santé) have been trained on data entry and use of OPSIDA reports to make decisions on HIV and AIDS commodity management.

The number of participants per organization and facility is described in table 9.

Table 9: Participants per organization or facility, Burkina Faso

Organization or facility	Participant number		
	Female	Male	Total
PSSLS-IST	3	5	8
CPFM/SSP*		1	1
CAMEG	1		1
DRS	6	21	27
Total	10	27	37

*CPFM/SSP is the Global Fund project management unit within the permanent secretary of the SP/CNLS-IST.

Capacity Building of Regional Staff

Day 1: February 22, 2016—Opening ceremony, presentation of OPSIDA and use of reports

The training was launched by the head of the PSSLS-IST, who thanked SIAPS for bringing participants from Togo and Benin to share their country experiences with Burkina Faso as part of south-to-south collaboration. The PSSLS-IST director also thanked the WAHO participant who attended and expressed hope that the transition would be smooth to avoid compromising the use of OPSIDA after the SIAPS project. He also thanked the workshop's funder, Global Fund.

Following the remarks of HIV and AIDS program coordinator, the SIAPS team presented meeting objectives and agenda to participants. The agenda was amended, and participants agreed to reschedule sharing experiences of Togo and Benin to the morning of the second day.

Next, the SIAPS regional project director showed the OPSIDA PowerPoint presentation. This presentation outlined the support from SIAPS to deploy the OPSIDA tool at Burkina Faso's central level in September 2014 and the challenges faced during data entry. The presentation also updated recommended actions from SIAPS after deploying OPSIDA at central level in September 2014. Some recommendations such as LMIS redesign were ongoing. The HIV and AIDS program recently began to revise LMIS tools to collect missing data not captured by

previous forms, including beginning balance, quantity received, and losses and adjustments. SIAPS recommended the regional-level deployment to optimize the tool's use in Burkina Faso.

Togo's OSPSIDA manager completed the presentation with a live demonstration. He emphasized the facility- and national-level OSPSIDA features such as entry forms and data entry requirements.

In the afternoon, WAHO's webmaster, who will be the OSPSIDA manager, created credentials for all meeting participants.

Meeting facilitators assigned those participants to access www.OSPSIDA.org by using generic credentials so they would become familiar with the tool before being granted access.

Day 2: February 23, 2016—Sharing country experience and data entry

Workshop participants and facilitators started the second day with the OSPSIDA managers of Benin and Togo presenting their experiences with the tool.

In Benin, OSPSIDA was deployed in September 2014 at the central level with support from USAID through SIAPS. To speed data entry and use the tool to make decisions, the HIV and AIDS program deployed the tool at regional level. The HIV and AIDS program had support from Global Fund, which also supported hiring clerks to enter 2014 data. Benin has had success in (a) early detection of stock-outs of abacavir pediatric formulation in February 2015, (b) redistribution of zidovudine and lamivudine (adult formulations), (c) improvement of data quality, (d) availability of site consumption data, (e) cross-checking of data with two sources (OSPSIDA and Monitoring and Evaluation), and so forth. Despite the success noted since deployment at the central and regional levels, there are challenges to address such as the availability of data and the quality of the data.

Togo's presentation followed the same pattern as Benin's. Togo was the first of the six countries in Central and West Africa where OSPSIDA was deployed. Success in Togo includes the early detection of ARV stock-out in December 2014, which helped the country quickly get access to PEPFAR emergency commodity fund to buy missing ARVs.

After the country presentations, the WAHO webmaster gave participants their access rights to OSPSIDA. All participants were granted access to become country operator and manager so that they could enter and validate data for each region.

Participants were asked to assess the level of the data entry to OSPSIDA from January 2014 to December 2015 and identify what data remained to be entered.

The NACP gave each region an Excel file with patient and commodity data to enter in OSPSIDA.

Day 3: February 24, 2016—Data entry

Each region’s participants entered patient and commodity data for each quarter. They started entering data where data entry stopped previously.

CAMEG representatives entered commodity data for each warehouse and also worked closely with the principal recipient (SP/CNLS-IST [Permanent Secretary of National AIDS Control Commission]) of the Global Fund to update procurement data in OPSIDA.

Day 4: February 25, 2016—Data entry

The fourth day was also dedicated to data entry. Table 10 shows the percentage of data entered and published for each item.

Table 10. Status of data entry as of February 25, 2016, Burkina Faso

Data type	Data entry responsibility	% of data entered and published
Health facility commodity data (stock status, consumption, losses and adjustments)	Regions	91
Health facility patient data (patients by regimen)	Regions	91
Central and regional warehouse commodity data (stock status, consumption, losses and adjustments)	CAMEG	100
Central and regional warehouse product expiry dates	CAMEG	11
Products on order (not yet received by central warehouse)	CAMEG, CPFM/SSP	100
Country profile update	PSSLS-IST	0
Supply chain update	PSSLS-IST	0

Day 5: February 26, 2016: Analysis of OPSIDA reports and closing ceremony

SIAPS discussed OPSIDA and presented all national- and facility-level reports to participants for plenary discussions. Eight facility-level paper reports were missing; yet because 91% of data were entered and published, enough were available for the team to make valuable comments.

December 2015 reports show that Burkina Faso was not at risk of a stock-out, but 51% of the country’s inventory of products would expire if the staff did not make decisions quickly.

SIAPS led discussions with participants on what steps follow OPSIDA’s regional deployment. These discussions covered roles and responsibilities of each actor in the process of data entry and submission, data acceptance, and data publication. Table 11 summarizes the discussions.

Table 11. Roles and responsibilities of national entities in charge of data entry, submission, acceptance, and publication, Burkina Faso

Data type*	Frequency	Data entry, submission, and acceptance		Data publication	
		Responsibility	Completion deadline	Responsibility	Completion deadline
Health facility commodity data	Quarterly	Regions	15th of the month following the quarter	PSSLS-IST	20th of the month following the quarter
Health facility patient data	Quarterly	Regions		PSSLS-IST	
Central and regional warehouse commodity data	Quarterly	CAMEG	25th of the month following the quarter	PSSLS-IST	28th of the month following the quarter

*Data requiring submission and acceptance before being published.

Table 12. Roles and responsibilities of national entities in charge of data entry and publication, Burkina Faso

Data type**	Data entry and publication		
	<i>Frequency</i>	<i>Responsibility</i>	<i>Deadline</i>
Central and regional warehouse product expiry dates	Quarterly	CAMEG	30th of the month following the quarter
Products in order	Quarterly and when needed	CAMEG, CPFM/SSP	15th of the month following the quarter
Country profile update	Annually and when needed	PSSLS-IST	February 15th and when needed
Supply chain update	Quarterly and when needed	PSSLS-IST	15th of the month following the quarter and when needed
OSPSIDA setting updates (products, regimen, facility, Min-Max, etc.)	When needed	PSSLS-IST	When needed

**Submission and acceptance were not required before data were published. Min-Max is an inventory control system.

Data entry appeared to help identify numerous errors in paper LMIS reports produced by the ARV treatment sites.

To optimize OSPSIDA in Burkina Faso so that it serves as a decision making tool, SIAPS and participants agreed on the following—

- Improve data quality (conduct frequent supervision of LMIS users and provide feedback to users).
- Closely monitor stock status at the regional and central depots of CAMEG to avoid expired products.
- Involve pharmacists at dispensing sites that have huge numbers of HIV+ patients in data entry so that the regional pharmacist remains as the OSPSIDA regional manager.

- Use OPSIDA reports to make decisions at PSM technical committee meeting. The recommendations from these meetings are to be stored in supply-chain updates of OPSIDA.

Benin

Deployment Date

Benin was the fifth country to have OPSIDA deployed. Initially, the SIAPS regional project director conducted this work at central level from September 15 to 18, 2016. Later, the Global Fund provided the PNLS financing to deploy OPSIDA at departmental level in January 2015.

In-Brief with PNLS

On September 15, NACC deputy coordinator, Dr. Ali Imourou, met with SIAPS to talk about deploying OPSIDA and using OPSIDA reports to make faster decisions.

Capacity Building of Central Staff

List of Participants

Thirteen participants attended the four-day training session for using OPSIDA (table 13). They represented the following organizations—

- PNLS
- Central Medical Stores (CAME) (Centrale d’Achat des Médicaments Essentiels)
- SP/CNLS
- Directorate of Pharmacy, Medicines, and Diagnostic Investigations (DPMED) (Direction de la Pharmacie, du Médicament et des Explorations Diagnostiques)

The technical advisers of the Global Fund and World Health Organization (WHO) also attended the training.

Table 13. Number of participants trained on use of OPSIDA, Benin

Organization	Participant number		
	Female	Male	Total
PNLS	4	4	8
SP/CNLS	—	1	1
DPMED	—	1	1
CAME	—	2	2
Global Fund and WHO	—	1	1
Total	4	9	13

Training

Day 1: September 15, 2014

The SIAPS team demonstrated OSPSIDA to members of the HIV and AIDS PSM technical committee, who were going to actively use the system. The participants met in the UNAIDS conference room in Benin. Data entry requirements and output reports were explained at the facility and national levels. Earlier, the team decided that Benin's participants would enter facility-level data for HIV commodities and patient information monthly.

All participants were asked to register in OSPSIDA. Next, they were given data entry permissions and told about the three types of user roles in OSPSIDA that would be able to update data.

The team demonstrated the following data entry web pages: products, regimens, country products, country regimens, country profile, and monthly stock/patient entry form. Then all data required to complete the OSPSIDA entry forms were prepared.

Day 2–3: September 16–17, 2014

The group moved to the conference room of Management Sciences for Health and Leadership Management and Governance (MSH/LMG) because of Internet access issues at the UNAIDS office.

Together, the group entered the following data on each page on the big screen—

- Country profile: The users provided country profile information from December 2013 to enter. Data related to pledged funding were not completed and thus not available.
- Regimens: Users checked off the regimens active in Benin.
- Products: Users checked off the ARV and RTK products available in Benin.
- Health facilities: Benin has six regions, one central warehouse, and two regional warehouses with 86 ART sites that will be reporting (figure 6). Each site was set up with its location on Google Maps to enable graphic display of the reports.
- Monthly facility stock and patient entry form with January 2014 data was completed, and entry of February data began.

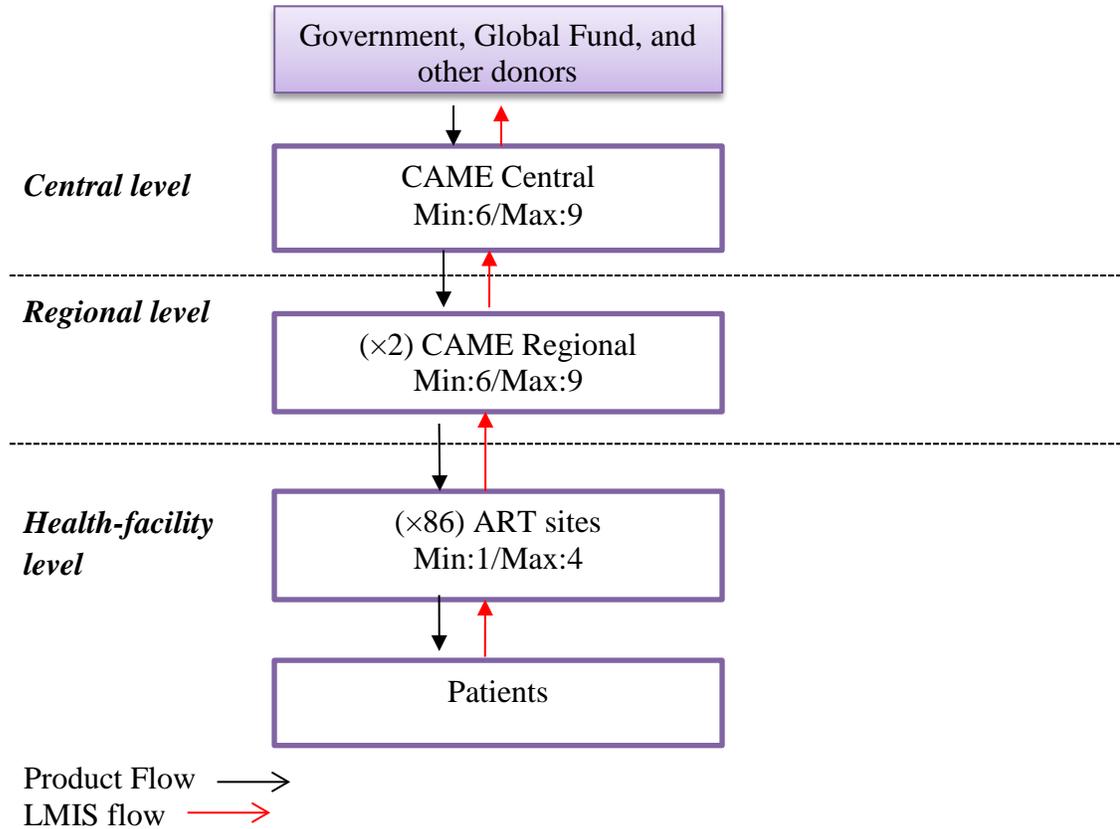


Figure 6. Flow of HIV and AIDS products and related information set into OPSIDA, Benin

Day 4: September 18, 2014

In the MSH/LMG conference room in the morning, the participants presented national- and facility-level consolidated reports with Benin real time data to the HIV and AIDS PSM technical committee. The group discussed data quality and ways to improve it in the future.

SIAPS presented the Burkina Faso experience, where data are validated at the regional level, to the Benin team.

Participants agreed on roles and responsibilities of local entities for data entry, submission, acceptance, and publication (table 14). The PNLs supply chain officer was nominated as OPSIDA country manager.

Key Findings

The LMIS paper form for collecting logistics data (stock, losses and adjustments, and consumption) is well designed. But the patient reporting form did not allow users to note the difference between first- and second-line regimens as OPSIDA requested.

NACP planned to review LMIS forms in the short term. Most of the LMIS forms collected from the 86 ART sites from January to August 2014 are available at NACP and are well recorded.

The central team that attended the training was motivated to use OSPSIDA to monitor product availability, and the team was willing to implement the tool at the regional level.

The quality of LMIS reports is still an issue in Benin just as in other countries where OSPSIDA has been deployed (Togo, Niger, Cameroon, Burkina Faso). For example, when participants began to enter the February 2014 data, the opening balance did not match the closing balance of the previous month. The regional level lacks data validation.

Furthermore, the inventory control system Min-Max needs to be reviewed, particularly for the regional and central warehouses. Additionally, the LMIS data flow needs to be harmonized, and the same data should go to CAME and PNLs.

Collaboration with in-country partners

During the deployment in Benin, the SIAPS team and the technical adviser for Together for a Hospital Therapeutic Solidarity Network (ESTHER) Ensemble pour une Solidarité Thérapeutique Hospitalière en Réseau) PSM and for WHO and the Global Fund had good discussions. Both organizations were willing to closely collaborate with SIAPS to use OSPSIDA in Benin. ESTHER was supporting the country to revise LMIS forms, and its staff promised to share those forms with SIAPS for suggestions.

Out-brief with PNLs and USAID in Benin

On Thursday, September 18, while the team was entering data from February 2014, SIAPS regional project director met with Maria Vivas, USAID HIV/AIDS and Department of Family Planning and Reproductive Health adviser in Benin. Just after his presentation, he was granted access as a country viewer to view Benin reports in OSPSIDA.

That afternoon, the team briefed Dr. Ali Imourou, Deputy Coordinator of NACP (PNLS), in the absence of the program coordinator.

Table 14. Roles and responsibilities of each entity and organization in data entry, validation, and publication, Benin

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Monthly	PNLS	PNLS	PNLS	SIAPS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Monthly	PNLS	PNLS	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	PNLS	PNLS	Not required		All viewers

Guinea

Deployment Date

OSPSIDA deployment in Guinea was delayed because of the outbreak of Ebola virus disease in the country. In April 2015, during regional stakeholders meeting organized by SIAPS in Accra to review the first year of OSPSIDA implementation, SIAPS and Guinea's NACC agreed to deploy OSPSIDA in June 2015.

In June 2015, SIAPS regional project director and OSPSIDA country manager for Togo went to Guinea to build capacity to use OSPSIDA at the central level.

Training Venue

The organizers met in the conference room of Guinea's Central Medical Stores (PCG) (Pharmacie Centrale de Guinee). Internet access was poor during the five-day training, even after meeting with the PCG director general to ask for improvement. Some participants came with their Internet key (modem), and SIAPS loaded the keys with prepaid cards so the participants could use them for the duration of the training.

Participant Profiles

Seventeen participants came from the following organizations—

- PCG
- Executive Secretariat of National AIDS Control Commission (SE/CNLS) (Secretariat Executif du Comité National de Lutte contre le SIDA)
- HIV and AIDS Control Program (PNPCSP) (Programme National de Prise en Charge Sanitaire et de Prévention des IST/VIH/Sida)
- Department of Pharmacy and Medicines (DNPL) (Direction Nationale de la Pharmacie et des Médicaments)
- Doctors without Borders (MSF) (Médecins Sans Frontières),
- Therapeutic Solidarity and Initiatives against HIV/AIDS (SOLTHIS) (Solidarité Thérapeutique et Initiatives de Lutte contre le SIDA),
- Three major antiretroviral treatment sites in Conakry (Centre DREAM [Disease Relief through Excellent and Advanced Means] and the outpatient treatment centers [CTA] [Centre de Traitement Ambulatoire] Donka and Ignace Dean Hospital).

All participants were members of the HIV and AIDS PSM technical committee of Guinea.

The number of participants per organization or facility is described in table 15.

Table 15. Number of participants trained to use OPSIDA, Guinea

Organization	Participant number		
	Female	Male	Total
PCG	1	1	2
SE/CNLS	2	4	6
PNPCSP		3	3
DNPL		1	1
MSF	1		1
DREAM		1	1
SOLTHIS		1	1
CTA Donka		1	1
CTA Ignace Dean		1	1
Total	4	13	17

Capacity Building of Central Staff

Training

Day 1: June 1, 2015—Opening ceremony, presentation of OPSIDA and use of reports

In the absence of the executive secretary of the NACC, training was officially launched by the head of PNPCSP, who thanked SIAPS for this regional initiative to improve the availability of HIV and AIDS products and to share information among stakeholders. He noted that because reporting rates are low, lack of data at the central level affects the management of HIV and AIDS products in Guinea. He suggested that the team start by entering data from the big sites in Conakry run by the MOH and the nongovernmental organizations (NGOs) MSF and DREAM.

After the opening ceremony, the team demonstrated OPSIDA to the HIV and AIDS PSM technical committee members, who were to use the system. The team explained the data entry requirements and output reports, for both the facility and national levels.

Dr. Brice Assimadzi shared with all the participants the experience of Togo’s use of OPSIDA. He described how the HIV program has organized itself and used the data entered into OPSIDA to make the system more vibrant and useful to prevent stock-outs and expired inventory.

In the afternoon, because the venue lacked Internet access, the team used a flip chart to show what data were required by OPSIDA. The team and participants discussed how the current flow of products and the related LMIS system occurs in Guinea. With this information, the team could adapt the system in OPSIDA when setting up for the second day. Guinea appears to have two parallel distribution systems, one led by the government and another led by MSF.

Before closing for the first day, the team explained the role of each user in the system and informed participants that they would be set as country operators and country managers during the training.

Day 2: June 2, 2015—OSPSIDA configuration

The team entered the following data on each page together with the users on a big screen—

- Country profile: The participants provided December 2014 country profile information, and the group entered the data. The group completed only the first page of the required four pages because data were lacking for the number of patients per regimen, for funding required for each category of products, and for pledged funding as of December 2014. Without such information, OSPSIDA could not generate the funding gaps.
- Country regimens: The participants listed the regimens active in Guinea. The team recorded 37 regimens, including a regimen used for PMTCT.
- Products: The team listed the ARV and RTK products available in Guinea and recorded 40 ARVs and 2 RTKs.
- Facilities: Because of the parallel systems in Guinea, the team entered in OSPSIDA two central warehouses—one owned by the MOH and one owned by MSF (PCG and MSF’s central warehouse)—as well as 59 health facilities of which four are supported by MSF (collect products and report directly to MSF central warehouse). All sites were set up by location on Google Maps to enable the graphic display of the reports (figure 7).

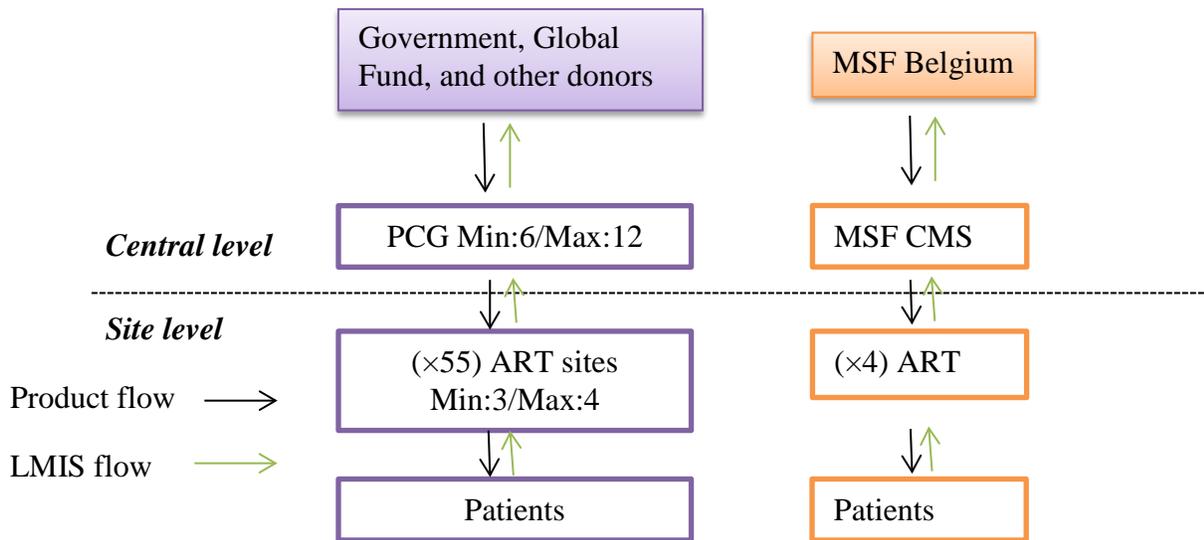


Figure 7. National supply chain of HIV and AIDS commodity, Guinea

Day 3: Wednesday, June 3, 2015—Patient and commodity data entry—dummy data for exercise

Every month, data are entered in the facility stock and patient entry form. Because Guinea lacked data, each participant selected a site and entered dummy data for January 2015. Then they

submitted and accepted data as required by OPSIDA. The SIAPS team published the data entered by all the participants.

The SIAPS team demonstrated how to cross-check the quality of data entered in OPSIDA. The team also presented all the reports (facility and national levels) generated automatically by OPSIDA and showed how these reports could help users make evidence-based decisions.

Participants were pleased with the demonstration. However, the data in the system were not real data. The team asked PNPCSP members to bring paper LMIS reports the next day even though the reporting rate was still low in Guinea.

Day 4: Thursday, June 4, 2015—Guinea current data for patient and commodity data entry

The HIV and AIDS program members came with monthly reports collected from sites receiving ARVs and RTKs from PCG in 2015. Each participant selected LMIS paper reports for at least one facility. Unfortunately, the team was found reports for only 8 of the 59 ART sites and 1 report for the CMS, which gave Guinea a reporting rate of 13.1% in OPSIDA for January 2015.

The SIAPS team organized participants into groups to enter data. After the groups completed entering data, the team asked each group to submit data and selected a manager from another group to review that data. SIAPS published the data, and the reports were shown to participants. At the close of the day, the team trained participants to use the offline version to enter data into OPSIDA.

Day 5: Friday, June 5, 2015: Debrief and Recommendations

In the morning, the team and participants discussed the challenges faced and the roles and responsibilities of each organization and entity for management of OPSIDA (table 16). The team also recommended actions.

The executive secretary of the SE/CNLS could not attend the closing ceremony because he needed to return to Conakry. In a phone call, the SIAPS regional project director briefed the executive secretary about what has been done so far; the issues faced; and the recommended short-, medium-, and long-term actions.

Recommendations

At end of the training, participants agreed to implement the following recommendations.

Short-term recommendations for June–August 2015—

- Collect all LMIS paper reports from health facilities
- Enter health facility data into OPSIDA
- Enter warehouse data into OPSIDA
- Enter shipments data into OPSIDA
- Accept all data entered into OPSIDA

- Use OSPSIDA report for PSM technical committee after entering data into the system
- Share feedback reports with dispensers

Medium- and long-term recommendations for September 2015–March 2016 —

- Implement the HIV and AIDS LMIS system in Guinea
- Develop a standard operating procedures manual
- Perform training of trainers and users training
- Reinforce supervision and coaching of users to improve quality of data and reporting rate

Table 16. Roles and responsibilities of each entity and organization in data entry, validation, and publication, Guinea

Data entry				Data submission	Data acceptance	Data publication	Report reading
Type of data	Details	Frequency of entry	Responsibility	Responsibility			
Patient and commodity data from health facilities	<ul style="list-style-type: none"> • Patients and regimens • Women on PMTCT • Number of patients tested for HIV • Stock • Consumption • Losses and adjustments 	Monthly	PNPCSP and MSF	PNPCSP and MSF	SE/CNLS and MSF	SIAPS	All viewers
Commodities data from central warehouses	<ul style="list-style-type: none"> • Stock • Consumption • Losses and adjustments 	Monthly	PCG and MSF	PCG and MSF	SE/CNLS and MSF	SIAPS	All viewers
Shipment data from suppliers	<ul style="list-style-type: none"> • Donors • Quantity • Shipment status • Quantity 	Monthly	SE/CNLS and MSF	SE/CNLS and MSF	Not required		All viewers
OSPSIDA configuration update	<ul style="list-style-type: none"> • Country profile • Country regimen • Country product • Facility entry 	Annually and as needed	SE/CNLS	SE/CNLS	Not required		All viewers

SUMMARY OF OPSIDA SETTING IN SIX FOCUS COUNTRIES

Product Entry

Guinea selected more ARVs than the other focus countries. Togo has a limited list of ARVs in use nationwide (figure 8).

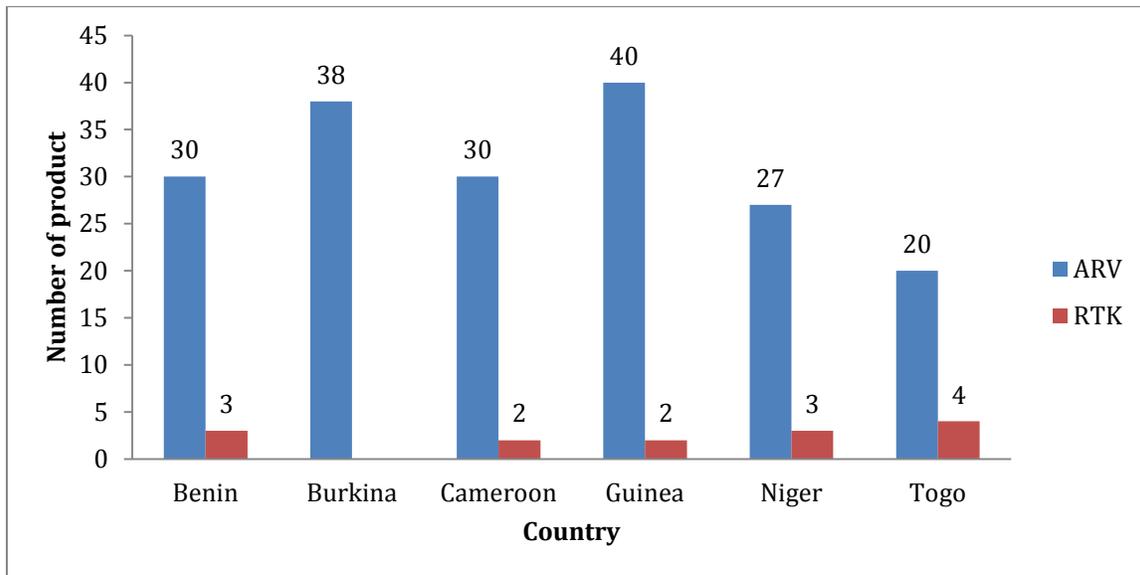


Figure 8: Number of ARVs and RTKs in use in each focus country

Regimen Entry

Burkina Faso has a large number of second-line regimens in use compared to the other focus countries (figure 9).

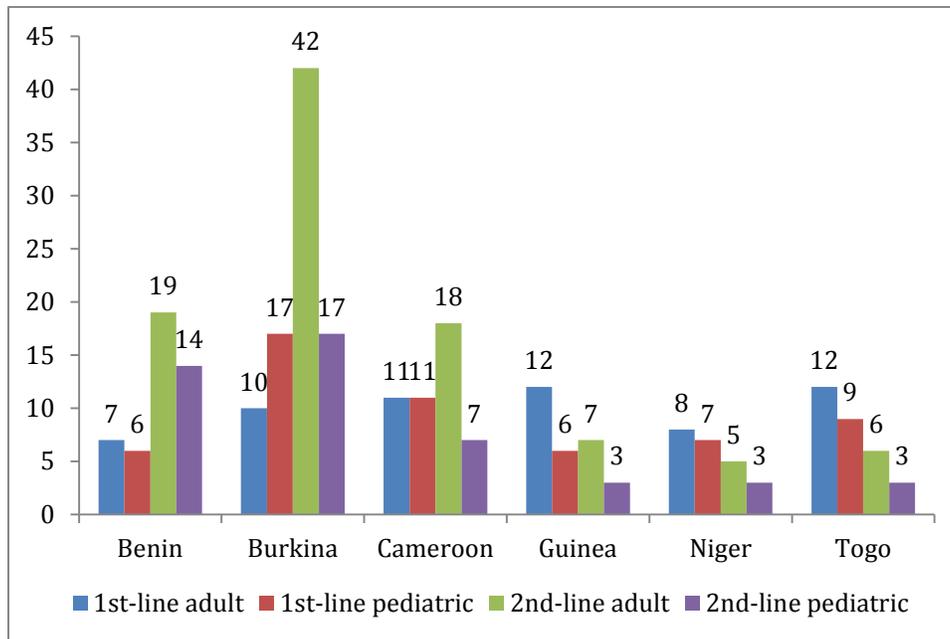


Figure 9. Number of first- and second-line regimens in focus countries

Warehouses and Health Facilities

Cameroon has more antiretroviral treatment sites compared to the other focus countries. In Guinea and Niger, the flow of ARVs and RTKs from central warehouses to health facilities does not involve the regional warehouses (figure 10).

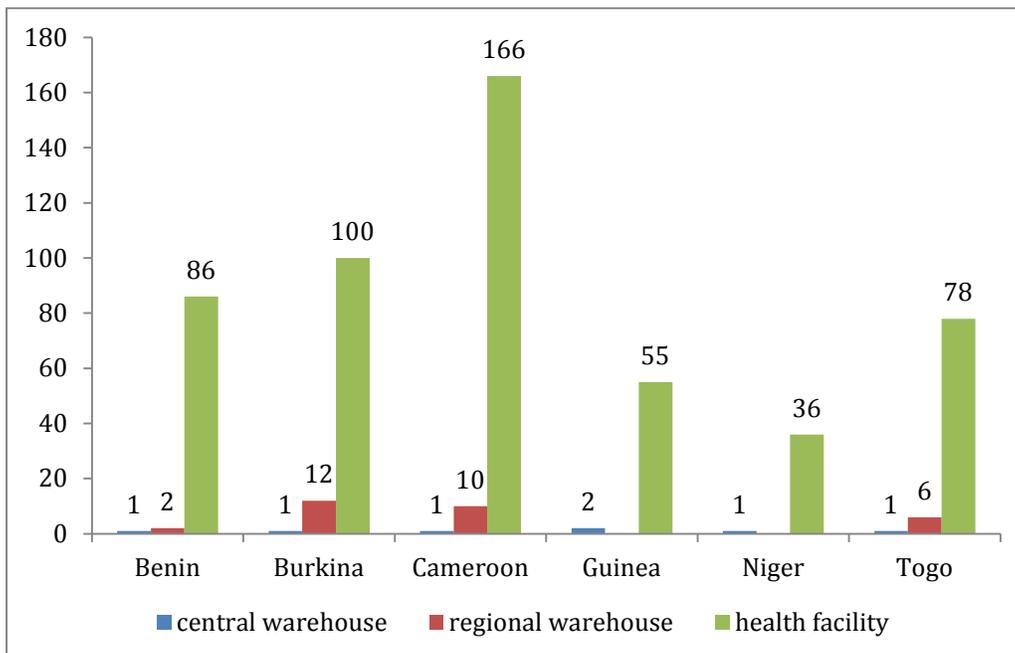


Figure 10. Number of warehouse and health facilities in focus countries

Inventory Control System Min-Max

The levels set for the inventory control system Min-Max are different from country to country (figure 11).

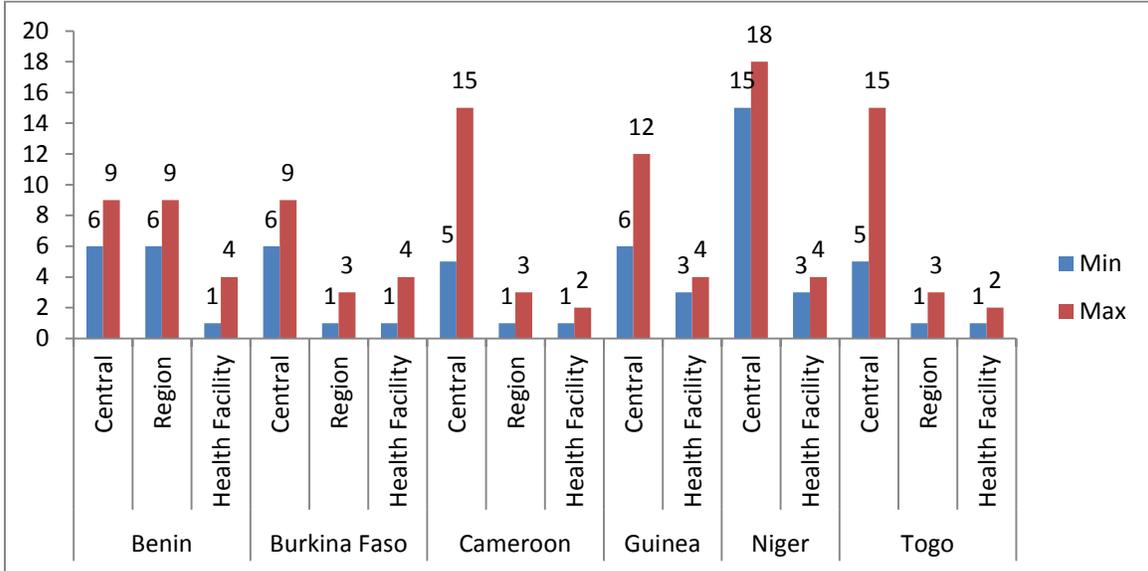


Figure 11. Number of warehouses and health facilities in the focus countries (blue bars are min values, red are max; central refers to central warehouse, region refers to regional warehouse)

Number of Persons Trained to Use OSPSIDA

Figure 12 shows that most of the OSPSIDA training participants are employed by the National AIDS Control Program of the six focus countries.

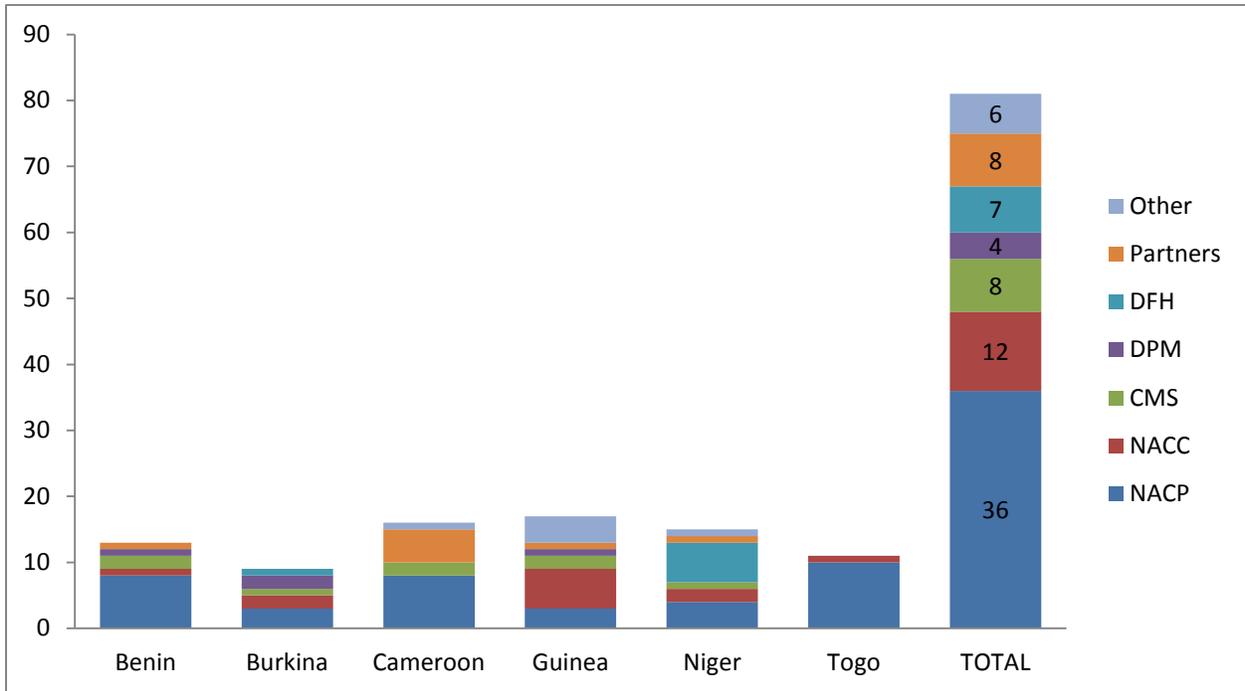


Figure 12. Number of participants trained to use OSPSIDA in focus countries (Partners refers to WHO, Global Fund, UNAIDS, and SOLTHIS; Others refers to other central-level national entities)

ANNEX A. PARTICIPANTS

Togo

#	Name	Title	Organization
1	Dr. Brice Assimadzi	Head of PSM unit	PNLS
2	D'Almeida Stephane	Head of monitoring and evaluation unit	PNLS
3	Attiogbe Kofi	Data manager	PNLS
4	Bah Traore	IT engineer	PNLS
5	Kassi Kofi	Data manager	PNLS
6	Degbebia Ladidi	Data entry clerk	PNLS
7	Juliette Adjobi	Data clerk	PNLS
8	Sokindji Kafin	Trainee	PNLS
9	Aniyenefa Kossivi	Data clerk	PNLS
10	Deh Francis	Stock manager	PNLS
11	Dr. Herve D'Almeida	Director of health program	CAMEG (CMS)

Niger

#	Name	Title	Organization
1	Kelessi Haoua	Epidemiologist	DSME
2	Ibrahim Mato	Stock manager	ONPPC
3	Adama Sima	Medical officer	SOLTHIS
4	Yara Mintou	Monitoring and evaluation officer	ULSS
5	Dr. Adehossi Irene	PMTCT coordinator	DFH
6	Abdourhamane Idrissa	PSM officer	ULSS
7	Dr. Hassane Radjikou	Program director	CISLS
8	Abdourhamane Amina	Data entry clerk	CISLS
9	Ibrahim Aboubacar	Monitoring and evaluation officer	ULSS
10	Harouna Zahou	Database manager	CISLS
11	Boubou Mamadou	Coordinator	RENIP+
12	Mohamed Tahe	Head of planning	CISLS
13	Abdoulaye Adamou	Medical officer	CISLS
14	Daouda Hassane	Chief of department	CISLS
15	Abdoulaye Ousmane	Pharmacist	HNN

Burkina Faso

Training at central level

#	Name	Title	Organization
1	Dr. Mamadou Sokey	Chief of service	CNLS/UCPSE
2	Dr. Domo Yacouba	PSM	CPFM/SSP - CNLS
3	Dr. Zorome Djeneba	Pharmacist chief	PSSLS
4	Dr. Ouedraogo Ines	Health program manager	CAMEG
5	Dr. Sanou Gisele	PharmD	DGPML
6	Mr. Zongo I Paul	Pharmacist	PSSLS
7	Dr. Monique Koncobo	PharmD, coordinator PSM	DGPML
8	Dr. Issa Bara	PharmD	DSF
9	Dr. Solange Ouedraogo	Monitoring and evaluation adviser	PSSLS

Training at regional level

#	Name	Title	Organization
1	Bibata Bambara	Regional pharmacist	DRS PCL
2	Tremedele Ouedraogo	Health officer	DRS PCL
3	Guillaume Ouaba	Pharmacist assistant	DRS Centre Ouest
4	Evelyne Sandwidi	Regional pharmacist	DRS CES
5	Mahamadi Baba	Pharmacist assistant	DRS CES
6	Valerie Ouedraogo	Regional pharmacist	DRS Centre
7	Sonia Marie Ibouldo	Regional pharmacist	CHR Fada
8	Nonfon Gansore	Regional pharmacist	DRS Sahel
9	Lassane Zeda	Health officer	DRS Sahel
10	Robert Sawadogo	Regional pharmacist	DRS Centre Ouest
11	Ousmane Bangaly	Pharmacist assistant	DRS Centre Nord
12	Alexis Ramda	Regional pharmacist	DRS Centre Nord
13	Soumaila Ouattara	Pharmacist assistant	DRS Boh
14	Yaya Ouedraogo	Pharmacist assistant	DRS Cascades
15	Ibrahima Sanou	Regional pharmacist	DRS BMH
16	Soukalo Ouattara	Regional pharmacist	DRS CAS
17	Judicael Bambara	Pharmacist assistant	DRS
18	Kafondo Karim	Regional pharmacist	DRS Est
19	Brahima Traore	Health officer	DRS HBS
20	Mathieu Nitiema	Pharmacist assistant	DRS Sud Ouest
21	Abdou Ramde	Regional pharmacist	DRS Sud
22	Kafara Pare	Pharmacist assistant	DRS Centre
23	Ben Idriss Narro	Regional pharmacist	DRS Centre Sud
24	Noel Bayala	Pharmacist assistant	DRS Centre Sud
25	Alexis Traore	Pharmacist assistant	CHR/OHG
26	Augustin Tangahire	Pharmacist	DS Yako
27	Clarisse Kouarogo	Nurse assistant	DRS Centre Ouest

Benin

#	Name	Title	Organization
1	Dr. Ali Imourou	Deputy coordinator	PSSLS
2	Dr. Christophe Rochigneux	Technical adviser	WHO and Global Fund
3	Dr. Moussa Bachadi	Monitoring and evaluation chief	PNLS
4	Dr. Mireille Ayobo	Procurement and supply manager	PNLS
5	Tchobo De Souza	Statistician	PNLS
6	Onifade Al Fattah	Chief of procurement	DPMED
7	Achille Adoko	Coordinator of technical assistance	SP/CNLS
8	Marcelline Ba Kassim	Inventory manager	PNLS
9	Hermione Dagba	Clinical pathologist	PNLS
10	Agnes Bah-Kpevi	PSM assistant	PNLS
11	Dr. Jean Yaovi Daho	M&E adviser	PNLS
12	Dr. Marcus Viakin	Pharmacist	CAME
13	Bonaventure Otchon	Logistician	CAME

Cameroon

#	Name	Organization	Email
1	Epole Ebah Gwendolyn	CHAI	eebah@clintonhealthaccess.org
2	Dr. Pauline Bodio Figuei	CAPR Centre	pbodio@yahoo.fr
3	Catherine Montou Tadzong*	SIAPS Cameroon	tmentou@msh.org
4	Yves Kaptue Towa*	SIAPS Cameroon	ykaptuetowa@msh.org
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6	Dr. Aubin Assaga*	CNLS	Assagaaubin40@gmail.com
7	Jean Dongang	SIAPS Cameroon	jdongang@msh.org
8	Serge Valery Edimo	CNLS	serge.edimo@cnls.cm
9	Gatien Ekanmian	UNAIDS	ekanmiang@unaid.org
10	Philippe Bruno Medouma	CENAME	medoumaphil@yahoo.fr
11	Dr. Jean Bosco Elat	CNLS	jeanbosco.elat@cnls.cm
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15	Ayissi Ayissi Antoine Ulrich	CENAME	aayissi@yahoo.fr
16	Dr. Florence Zeh Kakanou	DLM MOH	florencezk@yahoo.fr
17	JP Anguissa Abessolo	ICAP	ja2931@columbia.edu
18	Glory Bimila	CHAI	gbimila@clintonhealthaccess.org
19	Gilbert Tene	CDC	gtene@qcdgroupille.com

*The participants from Cameroon's SIAPS office are not counted in non-SIAPS staff trained to use OSPSIDA.

Guinea

#	Name	Title	Organization
1	Youssouf Koita	Coordinator	PNPCSP
2	Massila Dione	M&E Adviser	SE/CNLS—Kindia
3	Ibrahim Diallo	Data base manager	SE/CNLS
4	Alpha Issiaga Sylla	Regional coordinator	SE/CNLS—Boke
5	Sow Fatoumata Diaraye	Pharmacist, health assistant	SE/CNLS
6	Nafissatou Keita	Pharmacist	SE/CNLS
7	Leonce Kouadio	Pharmacist	DREAM
8	Kansire Conde	Pharmacist, PSM officer	PNPCSP
9	Adama Toure	Lab officer	DNPL
10	Eliza Biasutti	Pharmacist	MSF
11	Alphone Loua	MD, DRS	SE/CNLS
12	Rene Milliman	Data officer	Dean
13	Zakaria Bah	Care and treatment officer	PNPCSP
14	Mouslihou Diallo	Lab and pharmacy officer	SOLTHIS
15	Sow Amadou	Pharmacist	CTA Doonka
16	Keita Adama Bakary	Warehouse manager	PCG
17	Keita Aminata	ARV assistant	PCG

ANNEX B. STANDARD TRAINING AGENDA

Time	Activity	Participants
Day-1		
9h – 11h	<ul style="list-style-type: none"> • Opening Ceremony • Presentation of SIAPS regional project and discussions • Presentation of OSP-SIDA (system inputs and outputs) and discussions 	In-country PSM coordination committee
11h15–13h	<ul style="list-style-type: none"> • Participants registration (User access right to OSPSIDA) <ul style="list-style-type: none"> ○ <i>Country Operator</i> ○ <i>Country Manager</i> ○ <i>Country Viewer</i> 	Focus team (NACP, NACC, Pharmacy and Medicines Department, DFH, Central Medical Stores, partners, others)
14h – 17h	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA – <ul style="list-style-type: none"> ○ <i>Country Profile entry</i> ○ <i>Products, Regimen entry</i> ○ <i>Facility entry and their location in Google Map</i> 	Focus team
Day-2		
9h – 10h45	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Shipments entry</i> ○ <i>Patients and stock entry</i> 	Focus team
11h – 13h	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Patients and stock entry</i> 	
14h – 17h		
Day-3		
9h – 10h45	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Patients and stock entry</i> 	Focus team
11h – 13h		
14h – 17h		
Day-4		
9h – 10h45	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Patients and stock entry</i> 	Focus team
11h – 13h	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Patients and stock entry</i> 	
14h – 17h	<ul style="list-style-type: none"> • Training on data entry into OSPSIDA <ul style="list-style-type: none"> ○ <i>Patients and stock entry</i> 	
Day-5		
9h – 11h	<ul style="list-style-type: none"> • Presentation of OSPSIDA Reports • Discussions 	In-country PSM coordination committee
11h15 – 13h	<ul style="list-style-type: none"> • Recommendations and next steps • Closing ceremony 	