

## Meetings with local partners to discuss PQM proposed activities

Bamako, Mali  
October 7-11, 2013

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### *Trip Report*

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## **Executive Summary**

On this trip, Dr. HAJJOU had several meetings with local partners including the National Medicine Regulatory Authority, the National Malaria Control Program, the National Laboratory of Health, the National Tuberculosis Control Program, and the National Center of Pharmacovigilance to discuss planned activities and introduce the program to new officials.

This trip allowed PQM to assess the current situation in Mali, after 18 months of interruption of PQM activities. It was also an opportunity to meet new staff and gather useful information to finalize this year's work plan.

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### **About PQM**

The Promoting the Quality of Medicines (PQM) program, funded by the U.S. Agency for International Development (USAID), is the successor of the Drug Quality and Information (DQI) program implemented by the United States Pharmacopeia (USP). PQM is USAID’s response to the growing challenge posed by the proliferation of counterfeit and substandard medicines. By providing technical leadership to developing countries, PQM helps build local capacity in medicine quality assurance systems, increase the supply of quality medicines to priority USAID health programs, and ensure the quality and safety of medicines globally. This document does not necessarily represent the views or opinions of USAID or the United States Government. It may be reproduced if credit is given to PQM and USP.

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## ACRONYMS

ADR	Adverse Drug Reaction
CDC	U.S. Centers for Disease Control and Prevention
CNAM	Centre National d'Appui contre la Maladie
DPM	Direction de la Pharmacie et du Médicament
DQI	Drug Quality and Information Program
HPLC	High Performance Liquid Chromatography
LNS	Laboratoire National de la Santé
MOH	Ministry of Health
MQM	Medicines Quality Monitoring
PMI	President's Malaria Initiative
PNLP	Programme National de Lutte contre le Paludisme
PNLT	Programme National de Lutte contre la Tuberculose
PQM	Promoting the Quality of Medicines Program
PSI	Population Services International
PV	Pharmacovigilance
QA	Quality Assurance
QC	Quality Control
RDH	Regional Directorates of Health
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
TB	Tuberculosis
TLC	Thin-Layer Chromatography
USAID	United States Agency for International Development
USP	United States Pharmacopeial Convention
WHO	World Health Organization

## **Background**

The U.S. Agency for International Development (USAID) and U.S. Pharmacopeial Convention (USP) began assisting Mali's Ministry of Health (MOH) in 2008 to strengthen their medicine quality assurance systems. Activities focus on strengthening the capacity of the Direction de la Pharmacie et du Médicament (DPM) and Laboratoire National de la Santé (LNS) in pharmacovigilance (PV), drug registration, and medicine quality control (QC).

In 2009, PQM provided training to the staff of LNS' medicine QC laboratory on good laboratory practices and testing antimalarials using high performance liquid chromatography (HPLC) and dissolution. PQM has since provided refresher training in dissolution.

In collaboration with LNS, DPM, Programme National de Lutte contre le Paludisme (PNLP), and Regional Directorates of Health (RDH), in 2010 PQM established a medicine quality monitoring (MQM) program focused on monitoring the quality of antimalarials. In addition to Bamako, this program involves sentinel sites in seven regions where samples of antimalarials are collected and tested using Minilabs<sup>®</sup>. Data from the sentinel sites revealed several counterfeit quinine sulfate samples that did not have any active pharmaceutical ingredient. PQM assisted LNS in conducting confirmatory testing on the failed samples, and regulatory actions were taken to withdraw the failed medicines from the market.

In 2011, PQM conducted a thorough review of LNS' quality management systems and designed an implementation plan with priority actions that need to be taken by LNS to become compliant with ISO 17025 standards.

## **Purpose of Trip**

Drs. HAJJOU traveled to Bamako, Mali, to:

- Meet with local partners and introduce the PQM program to new leadership at DPM and PNL
- Assess LNS' progress in implementing the ISO 17025 plan
- Review data from the latest round of sampling and testing antimalarials

## **Source of Funding**

This trip was funded by USAID/Mali, through the President's Malaria Initiative (PMI).

## **Overview of Activities**

### **Briefing at USAID**

Dr. HAJJOU met with the PMI team (Dr. Aboubacar SADOU, PMI Resident Advisor, and Dr. Jules MIHIGO, U.S. Centers for Disease Control and Prevention (CDC) Resident PMI Advisor) for a briefing on planned activities. The PMI team emphasized the importance of monitoring the quality of antimalarial medicines.

Dr. HAJJOU informed the team that, despite the interruption of PQM activities in 2012, LNS collected antimalarial samples from Bamako, Kayes, Koulikoro, Mopti, Segou, and Sikasso and conducted testing. Dr. HAJJOU planned to review the data from these activities during this trip. The PMI team inquired about the Minilabs<sup>®</sup> in the regions and the readiness of staff from RDH

to resume MQM activities. Dr. HAJJOU informed them that the LNS team coordinating MQM activities will be asking regional staff to provide an inventory of Minilab<sup>®</sup> supplies. In addition, a new MQM protocol has been drafted, and Dr. HAJJOU will share the information with new leadership at DPM and PNLP.

The National Pharmacovigilance Center will be involved in MQM activities now. Its role will be to provide information to LNS on medicines having adverse drug reactions (ADRs), and LNS will investigate whether such ADRs were related to product quality. The National Tuberculosis Program (PNLT) will be invited to participate in MQM activities as well.

One of the difficulties encountered in implementing MQM activities has been the relatively high turnover of regional staff. Minilabs<sup>®</sup> are currently based at the RDH, but Dr. HAJJOU suggested that it would be more convenient if they were based at regional hospitals, which provide a better environment in which to handle chemicals for testing samples.

The group discussed the need for hiring a local consultant to help coordinate and implement PQM activities. Ideally, the consultant will be based at LNS because most activities are conducted in close collaboration with the lab.

#### **Meeting with DPM**

Participants: Dr. Yaya COULIBALY, Director of DPM; Pr. Benoit KOUMARE, Director General, LNS; and Dr. HAJJOU

Dr. HAJJOU gave an overview of PQM and the activities conducted in Mali since 2008. He described the activities planned for this year and emphasized the importance of the MQM program and the role of DPM in assuring the quality of medicines circulating in the market. He indicated that, in the past, DPM has been slow in taking regulatory actions against counterfeit medicines found during MQM activities. Dr. KOULIBALY stated that, under his leadership, DPM is developing standard operating procedures for its functions and underscored his commitment to take immediate action against counterfeit and substandard medicines. The group discussed establishing a working group on counterfeit medicines. Dr. KOULIBALY indicated that such a group exists already but lacks the resources to be functional. Reviving this group will be explored.

#### **Meeting with PNLP**

Participants: Mrs. Cissé Fady TOURE, Head of Prevention Services; Dr. Vincent SANOGO, Pharmacist; and Dr. HAJJOU

This was the first meeting with representatives of the new PNLP team. Dr. HAJJOU gave an overview of PQM's activities and accomplishments in the country and stressed the importance of PNLP involvement in MQM activities. He also gave PNLP more information about the MQM program and discussed with the team the recent discovery of fake quinine tablets. He mentioned to PNLP that the head of the RDH has been informed about the fake samples and the need to withdraw them from the market.

**Walkthrough and discussions with the LNS Quality Assurance (QA) team**

Dr. HAJJOU conducted a quick inspection of the lab equipment in LNS’s Medicines Quality Control Lab. Dr. Djibril KANOTE, Head of Quality Control Services, and Mr. Diarra TIEMOKO, Analyst, were present during the inspection. Dr. HAJJOU reviewed the service status and logbooks for HPLC, Balances, UV-Vis spectrophotometer, Karl Fischer titrator, pH-meter, and Dissolution tester. The following table describes the status:

Equipment	Service Status	Logbook
2 HPLC systems	One out of service	Yes
Dissolution	Working	No
GC	Working	Yes
Karl Fischer	Working	Yes
UV-Vis Spectrometer	Not working properly	Yes
2 Analytical Balances	Working	Yes
pH meter	Working	Yes, but not used consistently
Capillary Electrophoresis	Working	No

These findings were shared with the QA team and the following observations were discussed:

- Information captured in logbooks (HPLC and balances) included results of testing and calculation of relative standard deviation. This information should be in the lab notebook instead. The information in the logbook should be limited to the use of the equipment.
- There was missing information in some logbooks.
- Balances were not adequately calibrated (adequate standard weights were not used)
- The Karl Fischer titrator had not been used for a long period. It needs to be maintained properly.
- The Dissolution tester did not have a logbook.
- The lab conducted verification tests of the UV-Vis spectrophotometer. The instrument had been used despite the fact that it failed the tests.

Currently, there are 15 people working in the QC Lab (medicines and condoms). According to Dr. KANOTE, 6 people are capable of using the HPLC system, 4 are capable of using the Dissolution tester and Karl Fischer, and all of the staff members are capable of using the UV-Vis spectrometer and pH meter, as well as performing Thin Layer Chromatography (TLC).

In the last two years, the QA unit has focused its efforts on attaining ISO17025 accreditation for the Microbiology lab. The lab obtained accreditation in June 2013, and the unit’s focus moved to improving the quality management system of the Medicines Quality Control and Condom labs. As a first step, the QA team created an equipment file for each instrument in the lab and then increased the number of QA staff to three. Several meetings were held with Mr. DOLO to discuss the ISO 17025 accreditation plans, and he indicated that, with PMI support through PQM, the QA unit will be able to have the Medicines Quality Control Lab ready for the accreditation pre-audit by the end of this fiscal year. Mr. DOLO pointed out that the major hurdle in reaching all of these goals is the lack of a “culture of quality” among the lab staff. Establishing such a culture will take time, but this should not prevent LNS from moving forward with accreditation efforts.

Dr. HAJJOU discussed with Mr. DOLO the importance of QA unit involvement in MQM activities at LNS as well as the need for assuring the quality of data generated by this program.

### **Review of MOM activities**

Dr. HAJJOU convened a meeting with Ms. Harira CISSE, the focal point for MQM activities. He congratulated her and LNS for conducting sampling and testing of antimalarials in 2012 during the suspension of PQM activities in the country.

He reviewed the data and samples information and offered the following observations and suggestions:

- Raw data and documents for sampling and testing were well organized and maintained.
- Inventory of Minilabs<sup>®</sup> done during the supervisory visit to sentinel sites was not detailed. To facilitate collection of information in a harmonized way, a template file will need to be created and shared with sentinel site teams.
- The TLC tests on artemether-lumefantrine combination were not performed properly. Minilab<sup>®</sup> tests should be executed as described in the Minilab<sup>®</sup> manual; any deviation from Minilab<sup>®</sup> methods should be justified and documented.
- The MQM focal point should have easy access to samples received at LNS.
- Data should be thoroughly reviewed.
- Refresher training in data management and reporting is needed for LNS staff involved in MQM activities.

### **Meeting with Centre National d'Appui Contre la Maladie (CNAM)**

Dr. HAJJOU met with Pr. Samba SOW, Director of CNAM; Oumar MAIGA, Deputy Director of CNAM; and the PV team (Dr. Modibo KEITA, Dr. Adama DAOU, and Dr. Mammadou KODIO) to discuss the involvement of CNAM in MQM activities. Dr. HAJJOU informed the group about the new draft protocol and invited CNAM to participate in reviewing it. The role of CNAM, through the National Pharmacovigilance Center, would be to provide LNS with information regarding products that were found to have ADRs. LNS will sample and test those products to determine whether the ADR is related to the quality of the product.

Dr. HAJJOU informed the group that PMI is not supporting PV activities this year, but the Global Fund is supporting PV for antimalarials. Population Services International (PSI) is managing the Global Fund budget. Pr. SOW asked Dr. HAJJOU to provide advice to the PV team for developing a proposal to PSI, and Dr. KEITA presented planned PV activities. Dr. HAJJOU suggested some activities that should be prioritized.

### **Collaboration and coordination of activities with Systems for Improved Access to Pharmaceuticals and Services (SIAPS)**

Dr. HAJJOU met with Dr. Constance KOUAME TOURE, SIAPS Program Director; Mrs. Safoura BERTH CISSE, Senior Technical Advisor; and Mr. Seydou DOUMBIA, Principal Technical Advisor – Malaria, to discuss opportunities for collaboration. The meeting was held during a workshop that SIAPS was organizing. Dr. HAJJOU took the opportunity to meet with regional pharmacists from the RDH to convey the message that PQM is resuming MQM activities. He identified the number of pharmacists who never received training in sampling and

testing using Minilab<sup>®</sup> and those who needed refresher training (see list in *Annex 1*). He asked all the RDH pharmacists to provide LNS with a detailed inventory of their Minilabs<sup>®</sup>.

The discussion with the SIAPS team focused on ways to coordinate the activities of the two programs, beginning with sharing the work plans.

### **Meeting with PNLT**

Dr. HAJJOU and Mr. DOLO met with the PNLT team (See list of participants in *Annex 2*). Dr. HAJJOU gave an overview of PQM program, focusing on MQM and how PNLT can benefit from it. He informed the audience about the draft MQM protocol that he planned to share with local partners and indicated that PNLT should take the opportunity to use MQM to collect and screen anti-tuberculosis (TB) medicines. Dr. KEITA, Deputy Coordinator of PNLT, welcomed the opportunity to participate in MQM activities and pointed out that PNLT has a working relationship with LNS; the program has submitted anti-TB samples to the lab for testing.

### **Debriefing at USAID/Mali**

Dr. HAJJOU debriefed Dr. SADOU and Dr. MIHIGO on the activities accomplished during this trip. He indicated that his meetings with the partners were positive and will help resume PQM activities and attain this year's objectives. Based on the discussions held with partners, PQM will revise its work plan.

The group discussed the process for hiring a consultant to coordinate PQM activities. Dr. HAJJOU informed the PMI team that LNS is willing to host a PQM consultant and assist with the advertisement of the position.

The PMI team also requested a report on MQM activities.

## **Conclusion**

This trip allowed PQM to assess LNS' current situation, as well as that of other partners, after 18 months of interruption of activities. It was also an opportunity to meet new management and staff at DPM, PNLP, and PNLT. Dr. HAJJOU was able to gather useful information to finalize this year's work plan.

## **Next Steps**

- PQM will revise the work plan and submit it to USAID/PMI for approval (Complete)
- PQM will prepare a report on MQM activities and share it with PMI and USAID (Complete)
- PQM will share the draft MQM protocol with partners for review (Complete)
- LNS will collect an inventory of Minilabs<sup>®</sup> from sentinel site teams (Complete)
- PQM will order Minilab<sup>®</sup> supplies and reagents to replenish the kits (Complete)
- PQM will advertise the consultant position in local media (by December 2013)
- The LNS QA unit will finalize 22 standard operating procedures and train staff (by December 2013)

**Annex 1**

## List of pharmacists from the Regional Directorates of Health

Name	Regional Directorate of Health	Training Status
Dr. Dalané Bernadette COULIBALY	Bamako	No
Dr. Sanoussy KONE	Bamako	No
Dr. Sidi COULIBALY	Kayes	Yes
Dr. Makan DIARRA	Timbuktu	Yes
Dr. Blaise Pascal KY	Koulikoro	No
Youssouf KONATE	Kayes	No
Dr. Timothée DOUGNON	Sikasso	Yes
Dr. Moktar KONE	Mopti	No
Dr. Oyé Ag HAME	Ségou	No
Dr. Daouda DICKO	Koulikoro	Yes
Dr. Seydou ARAMA	Timbuktu	No
Dr. Boubacar DOUMBIA	(DPM)	No
Dr. Seydou COULIBALY	Ségou	No
Dr. Coumba DIALLO	Sikasso	No

## Annex 2

### List of participants in meeting with PNLT

<b>Name</b>	<b>Affiliation</b>
Dr. Lassana KEITA	PNLT
Adbdoul Karim COULIBALY	PNLT/DNS <sup>#</sup>
Nassiana TRAORE	PNLT/DNS
Aissata CISSE TRAORE	INRSP*
Sangaré Oumou FOFANA	PNLT/DNS
Djombogo YAKOUYE	PNLT/DNS
Asséïdou ASSADOU	PNLT
Sominé DOLO	LNS

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