Review of Pharmaceutical Supply Management for Artemisinin-Based Combination Therapies, Antiretrovirals, and Tuberculosis Products

Provided by the Global Fund in Guinea, July 16-27, 2007

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ACRONYMS

ACS	Association of Health Centers
ACT	artemisinin-based combination therapy
AQ	amodiaquine
ART	antiretroviral therapy
ARV	antiretroviral
AS	artesunate
CCM	Country Coordinating Mechanism
CNLS	HIV/AIDS National Committee
DNPL	*Direction Nationale de la Pharmacie et du Laboratoire*
DOTS	directly observed treatment, short course
DREAM	Drug Resource Enhancement against AIDS and Malnutrition [Project]
FEFO	first expired, first out
FIFO	first in, first out
GDF	Global Drug Facility
GFATM, Global Fund	Global Fund against AIDS, Tuberculosis and Malaria
GNF	Guinean franc
GoG	Government of Guinea
GTZ	*Deutsche Gesellschaft fur Technische Zusammenarbeit* (German Technical Cooperation)
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
IPT	intermittent preventive treatment
LLITN	long-lasting insecticide-treated bednet
LMS	Leadership, Management and Sustainability [Program/MSH]
LNCQM	National Laboratory for Quality Control of Medicines
MAP	Medical Assistance Program
MoH	Ministry of Health
MSF	Doctors without Borders
MSH	Management Sciences for Health
NDP	National Drug Policy
OI	opportunistic infection
PCG	*Pharmacie Centrale de Guinée* (Central Medical Stores)
PEV/SSP/ME	Immunization Program/Primary Health Care/Essential Drugs Program
PNALT	National Tuberculosis Control Program
PNLP	*Programme National de Lutte contre le Paludisme* (National Malaria Control Program)
PNLS	HIV/AIDS National Program
PNPCSP-IST-SIDA	HIV/AIDS National Program
PR	Principal Recipient

PRISM	*Pour Renforcer les Interventions en Santé Reproductive et MST/SIDA* (Strengthening Reproductive Health and STI/HIV/AIDS Interventions [Project])
RDT	rapid diagnostic test
RPM	Rational Pharmaceutical Management
SOP	standard operating procedure
SP	sulfadoxine-pyrimethamine
STG	standard treatment guideline
TB	tuberculosis
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
USAID/WARP	USAID West Africa Regional Program
USD	U.S. dollar
WHO	World Health Organization

SUMMARY

Over the past years, Guinea has received significant support from various donors for improving the management of essential medicines and pharmaceuticals in public health facilities. In 1998, the U.S. Agency for International Development (USAID) through the project *Pour Renforcer les Interventions en Santé Reproductive et MST/SIDA* (PRISM) supported a *Study on Logistics and Supply of Family Planning and STI Supplies* to address different issues related to the procurement and distribution of contraceptives in Upper Guinea and the Forest Region. This study was followed a year later by an *Evaluation of Logistics Information Systems for Essential Medicines in Upper Guinea and the Forest Region*, also supported by USAID, to complete the first study on logistics. Although the recommendations from these studies were well received, the pharmaceutical sector is still struggling to reach a level that could make essential medicines and commodities available and accessible to the Guinean population.

In 2003, Guinea received more than 16 million U.S. dollars (USD) from the Global Fund against AIDS, Tuberculosis and Malaria (Global Fund, or GFATM) for reinforcing interventions against the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and malaria, and USD 3.7 million in 2006 for tuberculosis (TB). Following discussions between the Global Fund Portfolio Manager, the Global Fund Country Coordinating Mechanism (CCM) Manager in Geneva, and USAID West Africa (USAID/WARP), USAID/WARP requested Management Sciences for Health (MSH) to assist the CCM Guinea in efforts to strengthen its structure and also to identify major bottlenecks and systemic problems blocking grant implementation in the area of pharmaceutical management. A team of MSH consultants from the Leadership, Management, and Sustainability (LMS) Program, supported by USAID/Guinea and the Rational Pharmaceutical Management (RPM) Plus, and funded from the USAID/WARP Mission, worked with the CCM Guinea as well as technical managers in the area of pharmaceuticals to conduct a diagnostic study in Guinea from July 8 to July 27, 2007, and provided appropriate recommendations to national authorities and Global Fund managers.

This report focuses on the pharmaceutical management component review. A separate report has been developed by the LMS Program.

Key Findings

General Observations

- Different sources of procurement exist for HIV/AIDS, ,malaria, and TB medicines: antiretroviral (ARV) drugs are provided by the GFATM, the Medical Assistance Program (MAP), *Deutsche Gesellschaft fur Technische Zusammenarbeit* (German Technical Cooperation, or GTZ), Doctors without Borders (MSF), the World Health Organization (WHO), the United Nation's Children's Fund (UNICEF) for the prevention of mother-to-child transmission, and a donation from India in 2006; artemisinin-based combination therapies (ACTs) are being procured only by (MSF, with a recent donation from China (July 2007); TB products are provided by the Global Drug Facility (GDF), the Raoul Follereau

Foundation, the Damien Foundation, MSF, and the Swiss Alliance Mission (Mission Philafricaine).

- The procurement and distribution systems are broken down in different parallel and independent mini-systems.

- Deficiencies of the pharmaceutical information system for the three health conditions lead to the absence of accurate information for decision making on pharmaceutical management.

Specific Observations

National Malaria Control Program (PNLP)

- The PNLP envisions gradually introducing ACTs in the country, starting with few prefectures and using this experience and lessons learned to extend ACTs nationwide, but it has no written plan for the proposed phased approach.

- Pharmacists or pharmaceutical managers are lacking to manage malaria products and track ACTs delivered to health facilities.

- No standard treatment guideline (STG) document exists in conformity with the new malaria treatment policy.

HIV/AIDS National Program (PNPCSP-IST-SIDA)

- A mini-document of procedures, “Mécanisme de gestion des ARV et réactifs de laboratoire dans le cadre de la prise en charge des PVVIH” (CNLS-2005) was available but not disseminated.

- Difficulties exist in tracking ARVs and other products delivered to health facilities: no program or tool is in use to capture data on regimen and number of patients according to regimen.

National Tuberculosis Control Program (PNALT)

- The directly observed treatment, short course (DOTS) strategy for case management of tuberculosis is being applied nationwide.

- Difficulties exist in tracking TB products delivered to health facilities: no program or tool is in use to capture data on patients according to the different phases of treatment.

- Good storage and conservation practices are not followed at the central warehouse located at Ignace Deen: there is no evidence of first-in, first-out/first-expired, first-out (FIFO/FEFO) practices.

Pharmacie Centrale de Guinée (PCG)

- PCG activities are decentralized in four regional depots at Labé, Kankan, Faranah, and Nzérékoré.
- A *Manual of Procedures* for PCG operations has been prepared and is being used by staff.
- The PCG prepared a Procurement and Distribution Plan for Health Commodities but has not yet applied it.
- Drug management software (SAARI) is used for PCG operations but with limited knowledge by the users.
- The essential medicines list still includes products not in compliance with the new policy on treatment of malaria (chloroquine).
- ARVs are not secured from the public in the warehouse; there is no security or protection of HIV/AIDS products, which are accessible to anybody who gets into the warehouse (this problem was solved immediately following a technical meeting conducted by the RPM Plus consultant with the PCG Director and his staff).

Key Recommendations

National Malaria Control Program

- Recruit a pharmacist for drug management operations.
- Prepare the STG document in conformity with the new policy on malaria case management.
- Build capacity and carry out quantification exercises to improve procurement of malaria products.
- Explore the possibility of integrating the private sector in malaria activities in light of the new policy on case management.

HIV/AIDS National Program

- Build capacity and carry out quantification exercises to improve procurement of ARVs and HIV/AIDS-related products.
- In coordination with PCG, conduct an inventory of expired medicines and schedule their destruction as soon as possible.
- Take actions to rehabilitate the pharmaceutical management information network from bottom to top and vice versa.

National Tuberculosis Control Program

- Integrate TB products provided by the Global Fund into the PCG pharmaceutical management system.

- Take actions to reorganize the central warehouse at Ignace Deen as soon as possible to respond to the basic principles of pharmaceutical management.

PCG

- Create in PCG a Management Unit for Global Fund Products that includes at least one pharmacist PCG stock manager, the HIV/AIDS program pharmacist, the PNALT pharmacist (when recruited), the PNALT pharmaceutical manager, one computer specialist, and one secretary; the terms of reference should focus on traceability of the GFATM products, stock inventories, and availability of information for quantification and decision making.

- In coordination with the Global Fund program managers, identify and reinforce mechanisms for sharing information on stock management on a regular basis.

- Provide refresher courses for personnel using the SAARI software; PCG should also explore the possibility of an interconnected network with the regional depots.

- Take the lead and encourage the creation of a National Quantification Committee for the GFATM products.

INTRODUCTION

At the request of USAID, the LMS/MSH Program and the MSH/RPM Plus Program traveled to Guinea to deliver a technical assistance package prepared jointly to assist the CCM Guinea in identifying operational and management problems, as well as priority interventions to address organizational and technical issues that impede implementation of the Global Fund grant. LMS was asked to focus on CCM strengthening, while RPM Plus would investigate the in-country procurement and supply system for HIV/AIDS, malaria, and TB products and provide appropriate recommendations to strengthen management of health commodities in support of GFATM programs.

Through the PRISM project implemented in Guinea from 1998 to 2007, the USAID/Guinea Mission responded to numerous pharmaceutical issues following the *Study on Logistics and Supply of Family Planning and STI Supplies* and the *Evaluation of Logistics Information Systems for Essential Medicines in Upper Guinea and the Forest Region*, conducted by MSH with regard to the procurement and distribution of contraceptives in Upper Guinea and the Forest Region. In 1999, the European Union also financed an audit of PCG to identify strengths and weaknesses and to provide recommendations for reinforcing the pharmaceutical sector. Among the most recent contributions to the Guinean pharmaceutical sector are an audit conducted by WHO in 2005, an audit of the Guinea Ministry of Finances also conducted in 2005, and a study supported by the *Projet d'Appui Complémentaire à la Santé* conducted in 2006 by Cecoforma/University of Liege to identify interventions for improving pharmaceutical and health commodity management in Guinea. The recommendations from these studies were well received, but the pharmaceutical sector is still struggling to reach a level that could make essential medicines and commodities available and accessible to the Guinean population.

In 2003, the Global Fund agreed to provide a USD 16.5 million grant to the Ministry of Health (MoH) to support the implementation of the HIV/AIDS and malaria programs. This grant from Round 2 started in April 2004. In September 2006, USD 3.7 million was also approved for TB in Round 5, which started in February 2007. In Round 6, the Government of Guinea (GoG) was granted an additional USD 21.9 million for HIV/AIDS and malaria interventions. This grant was still pending signature at the time of this consultancy; but in total, Guinea will receive more than USD 42 million, of which USD 23 million is allocated to the purchase of medicines and other health commodities for the three programs. The MoH is the Principal Recipient (PR) receiving these grants. Guinea was not prepared to respond on time and appropriately to the Global Fund request for proposals for Round 7 because of organizational problems in its CCM.

This report details the findings of the pharmaceutical management review for the three programs. On July 25, 2007, at the CCM office in Conakry, these findings were presented to the CCM; the MoH; and the program coordinators for HIV/AIDS, malaria, and TB as well as to USAID. A separate report was submitted by LMS for CCM strengthening.

Objectives of the Study

This consultation was conducted by Catherine Severo, Global Fund Support Manager, LMS Project, and Michael Derosena, RPM Plus Senior Program Associate. Ms. Severo was assisted by two local MSH consultants, Tanou Diallo and Oumar Diakite. Mr. Derosena worked mainly with Dr. Youssouf Doumbouya, the technical assistant seconded to PCG, and the Global Fund program coordinators.

LMS had the following objectives—

- Determine the extent to which the CCM Guinea has adequate structure and framing documentation to allow it to function effectively (including the CCM Secretariat, if any, and the CCM work plans and budgets)

- Determine the extent to which the CCM Guinea is carrying out the five basic functions of a Global Fund CCM

- Reorient the CCM Guinea to the role, responsibilities, and functions of a Global Fund CCM, as defined by the GFATM

- Assist the CCM Guinea and the PRs and lead subrecipients to inventory the principal systemic problems and bottlenecks blocking grant implementation, and review the efforts deployed to date to remove them

The RPM Plus objectives were as follows—

- Identify the principal bottlenecks and weaknesses in pharmaceutical management for Global Fund grants with a focus on the following—

    - National guidelines and procedures for medicine registration, essential medicines list, STGs, quality control, and the selection of products

    - Procurement of medicines practices, including processes, funding sources, levels, prequalification of suppliers, quantification procedures and capacity, and coordination among donors and partners

    - Systems for storage and distribution at the different levels of the health system

    - Pharmaceutical management information systems used by the three programs to monitor availability of medicines and to provide necessary information for decision making

    - Systems at health facilities to determine availability of medicines, quality of products, inventory management and control, and use of medicines

- Present key findings to the Guinean national programs and to the CCM
- Brief and debrief USAID Mission as requested

Method of Work

RPM Plus joined LMS during a workshop conducted for CCM strengthening to present the most common issues in pharmaceutical management. The RPM Plus presentation is included as Annex 1. Before traveling to Guinea and while in the field, the RPM Plus consultant reviewed a set of documents to gain a better understanding of the context of the Guinean pharmaceutical management system in general and the management of the Global Fund products in particular. The list of documents reviewed is contained in Annex 2. Also in preparation for the visit, key informants were identified and contacted to schedule meetings and interviews. They included representatives from PCG, especially the Information Technology team, users of the pharmaceutical management software SAARI, and the pharmacist consultant seconded to PCG for technical assistance in stock management (see Annex 3).

Individual meetings were conducted with the Director-General of Public Health, UNICEF, and GTZ to investigate their past or current contributions to the implementation of the three programs. Technical discussions were conducted with the PNPCSP-IST-SIDA (or PNLS) Program Coordinator and her assistant, the PNLP Coordinator and staff, and the PNALT Coordinator to better understand the vision and the strategic orientation of the MoH in implementing the Global Fund programs. In addition to these meetings, different field visits were conducted to assess the storage conditions of the Global Fund products at PCG, verify the correct use of pharmaceutical management tools, and assess the storage conditions of TB products at the central warehouse of Ignace Deen Hospital and use of TB pharmaceutical management tools. Ignace Deen Hospital is an accredited center for HIV/AIDS case management. It also serves as the central warehouse for TB medicines. The field visit facilitated dynamic discussions on ARVs and pharmaceutical management for opportunistic infections (OIs), as well as coordination mechanisms between Ignace Deen and the Donka Hospital, which share responsibilities of HIV/AIDS case management and treatment of OIs for Ignace Deen patients.

The PNLP plans to progressively introduce ACTs in a few prefectures, eventually working toward implementing home-based malaria case management at the community level in the long term. The consultant’s discussions with the PNLP focused on the current progress of implementation of ACTs and identification of strengths and weaknesses that need to be addressed immediately. Similar visits were conducted at the HIV/AIDS program and the PNALT.

At the end of the mission, a general meeting was held at the CCM office to share and validate the findings and recommendations of this study, at which the CCM president, the three program coordinators, the PCG Director, the Director-General of Public Health, and the USAID/HIV/AIDS officer gave input and feedback.

During the meetings and interviews, the consultants used a set of tools that included specific questionnaires addressed to PCG, the *Direction Nationale de la Pharmacie et du Laboratoire* (DNPL), the National Laboratory for Quality Control of Medicines (LNCQM), GTZ, and each of the three programs: TB, HIV/AIDS, and malaria.

Limitations of the Study

- Most of the visits were conducted at the central sites of the three programs.
- Interviews were primarily with the program coordinators, with the exception of PCG and the PNLP.
- Service delivery points visited were not representative of the country.
- This consultancy is intended to be a rapid review of the pharmaceutical system in Guinea.

The results are based on interviews and observations that provide general insight into the key gaps and opportunities for improvement. Further indicator-based, in-depth surveys would be required if quantitative baseline data are to be established.

THE NATIONAL MALARIA CONTROL PROGRAM

Malaria has always been a public health problem in Guinea. The annual incidence rate is estimated between 108 and 115 per 1,000 population. Children less than five years of age are the most affected, with an estimated annual incidence rate of 314.6 per 1,000.[1]

The first coordinated actions against malaria started in Guinea in 1972 with the *Projet de Lutte contre le Paludisme* initiated by WHO. In 1993, the PNLP was created with support from the GoG and WHO. The PNLP's activities to control malaria in Guinea focused mainly on indoor residual spraying and fumigation, associated with administration of chloroquine to patients. As the program was being implemented, however, a 2001 study conducted by WHO showed a mounting resistance to chloroquine (28 percent in the Forest Region), which led to the search for other options in addressing the country's malaria problem.

The national authorities recently changed the national malaria policy to include long-lasting insecticide treated bednets (LLITNs), rapid diagnostic tests (RDTs), ACTs, and sulfadoxine-pyrimethamine (SP) for intermittent preventive treatment (IPT). On October 26 and 27, 2004, a national workshop was conducted to discuss the rationale of changing the treatment policy. A consensus was reached to start implementing ACTs in 2006. The choice of ACTs was based on WHO studies and references and the experiences of other African countries. In May 2005, the MoH organized a new national workshop for selecting ACTs for malaria case management. The 33 participants who discussed this topic favored the combination artesunate + amodiaquine (AS + AQ) as first-line treatment and more appropriate for Guinea.[2] Quinine is recommended for ACT treatment failures and for severe malaria. For pregnant women, all malaria cases are considered severe, and the recommended treatment is quinine.

The price for treating a child with ACT was fixed by the national health authorities at 500 Guinean francs (GNF), while an adult will pay GNF 1,000 (approximately USD 0.10 and USD 0.20, respectively). In spite of this new orientation for malaria case management, the PNLP has not yet officially launched the ACT program. ACTs are currently being used only in the Dabola prefecture by MSF/Sweden in partnership with the MoH.

In coordination with PCG, a distribution plan was prepared for 5 million tablets of SP delivered by UNICEF in 2006, which played the role of procurement agent for the Global Fund programs following an agreement for assistance signed with the MoH in April 2004. Through UNICEF also, the PNLP obtained 70,000 LLITNs in 2006, of which 55,000 were to be distributed in the prefectures of Faranah, Mali, Tougue, and Dinguiraye. At the time of this consultancy, following another procurement of 70,000 LLITNs, anecdotally deemed "controversial," the PNLP was looking for resources to clear approximately 300,000 new LLITNs that had been stuck at the port since December 2006.

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[1] PNLP proposal submitted to the Global Fund for Round 2.
[2] PNLP. *Atelier national de consensus sur l'adoption des ACT pour la prise en charge du paludisme simple en Guinée*, Conakry, 28 avril 2005.

Although responsible for the development of policies, norms, and protocols, the PNLP has not yet taken any big steps for the overall planning of the ACT program's implementation. In July 2005, the MoH/PNLP published the policy document *Politique Nationale de Lutte contre le Paludisme;* however, only limited copies were made available, and they were not disseminated nationwide. Although the new ACT policy has not been implemented nationally, the PNLP envisions beginning the implementation in a few prefectures and extending the policy to other prefectures in a phased approach. No written plan exists, however, and the STGs have not been prepared yet for training and dissemination, notwithstanding the fact that some ACTs started to enter the country and more could be available very soon.

The PNLP is headed by a Program Coordinator, supported by a team of seven technical staff that includes four medical doctors, two biologists who also conduct entomology activities, and another biologist who is also a *parasitologiste*. The technical team is supported by limited administrative personnel. There is no pharmacist or manager responsible for pharmaceuticals and laboratory commodities within the program.

Malaria control activities are structured according to the design of the national health system and are integrated into the primary health care package. The system is composed of three levels: central, regional, and district (prefectures)—the last is the level of implementation. No regional or district extension of the PNLP monitors malaria activities at the peripheral level, contributes to the malaria action plans, supervises program activities, or prepares specific activity reports. All primary care monitoring activities are under the responsibility of the *Chargé des Maladies*, who reports to the district director. The integration of malaria activities into the primary health care package certainly has numerous advantages. However, managing interventions, carrying out monitoring and evaluation, and reporting activities at the peripheral level suffer from lack of human and logistics resources. The traceability of products delivered to sites cannot be ensured, and no reliable information is available at the PNLP on inventory and stock management. In addition, different problems were reported with unplanned donations, especially one from China that offered ACTs to Guinea in July 2007, and a donation of 100,000 treatments that is being offered by the French company Sanofi Aventis, which will most likely arrive in country in August 2007. In spite of the new orientation of malaria case management, an order was noted of 1 million tablets of chloroquine that was placed by PCG (apparently against the will of the National Health Director) for the Conakry Association of Health Centers (ACS). No plan was discussed for how this quantity of chloroquine would be distributed and used.

The PNLP's objectives under the Global Fund grant were to (a) treat 60 percent of people suffering from fever (malaria) at the community level and health facilities according to the new ACT treatment policy; (b) provide LLITNs to 30 percent of pregnant women and children less than five years of age by the end of 2007; and (c) increase the IPT rate among pregnant women from 70 percent to 80 percent by the end of 2007. It is unlikely that substantial progress will be made toward these objectives. The program was rated "B2" (Inadequate but potential demonstrated) in 2007 by the Global Fund.[3] Although the grant was signed in 2004, so far about 66 percent of the allocated funds have been disbursed for malaria activities. The second

[3] Guineau: Grant Performance Report, August 21, 2007, <http://www.theglobalfund.org/search/docs/2GINM_240_177_gpr.pdf>, pages 26–29.

grant in Round 6 was approved in an amount of USD 17,339,399 for malaria. It had not yet been signed at the time of this consultancy.[4]

Gaps Identified at PNLP

- No detailed plan for phasing out old antimalarials and phasing in ACTs to cover the entire country
- Weaknesses in quantification procedures for forecasting needs for antimalarials and other related commodities
- Absence of pharmacists or drug managers to manage malaria products and track ACTs delivered to health facilities
- Absence of STG document in conformity with the new malaria treatment policy
- No pharmacovigilance plan to support the implementation of the ACTs
- Absence/lack of information on activities conducted in the field (reports transmitted directly to the national information service of the MoH)
- Decentralization of ACTs and malaria-related products to the regional depots: no coordination mechanisms are in place between PCG and the PNLP for ensuring good management of these products

Recommendations and Potential Areas of Intervention

- Technical assistance for updating training materials on management of malaria medicines and commodities
- Technical assistance for preparing a training plan and conducting training in pharmaceutical management
- Technical assistance for the harmonization and standardization of pharmaceutical management tools
- Revision, editing, and dissemination of the STGs for malaria
- In coordination with PCG, preparation and dissemination of SOPs for malaria products at facility level

[4] Guinea-Conakry and the Global Fund, Portfolio of Grants, <http://www.theglobalfund.org/Programs/Portfolio.aspx?countryID=GIN&lang=en>.

- Technical assistance for building the commodity management information system for malaria: automated and manual tools at all levels of the health system, appropriate training and follow-up
- Technical assistance for setting up a manual/automated system for tracking distribution and use of antimalarials at facility level

- Capacity building for improving quantification procedures and actual quantification exercises for malaria products

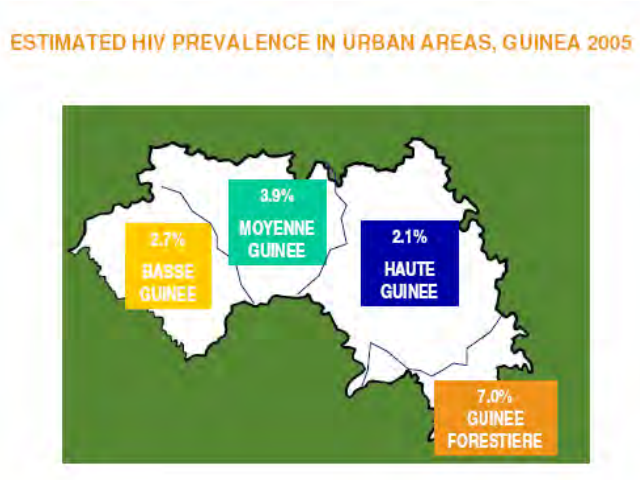
- Coordination with PCG and MSF for conducting a national quantification exercise and preparing a distribution plan of ACTs

- Technical assistance for preparing a pharmacovigilance plan

- Exploration by PNLP of the possibility of integrating the private sector in malaria activities in light of the new treatment policy

THE NATIONAL HIV/AIDS PROGRAM

Since the outbreak of the HIV/AIDS epidemic in the 1980s, Guinea has experienced a growing number of people affected by the disease. Although relatively low in comparison with some other West African countries, the seroprevalence rates of HIV/AIDS called for immediate and strong actions from the national health authorities. The epidemic shows a variable profile among the general population with a prevalence rate between 2.1 percent in Upper Guinea and 7 percent in the Forest Region (Figure 1). Statistics for the year 2001 showed that the prevalence rate jumped from 32 percent in 1996 to 42 percent among commercial sex workers. The prevalence was 7.3 percent for truck drivers, 6.7 percent in the army, and 4.7 percent among miners. The number of people infected with HIV was estimated to have reached 140,000. The number of deaths attributable to HIV/AIDS in 2001 was estimated at 9,000. The mother-child rate of HIV transmission has been estimated between 30 percent and 40 percent, and the number of AIDS orphans was about 13,700 in 2002.[5]



Source: Global Fund (Guinea proposal for Round 6).

Figure 1. Estimated HIV prevalence

Two entities are responsible HIV/AIDS program operations: the HIV/AIDS National Committee (CNLS), which oversees the general aspects of program implementation, and the PNPCSP-IST-SIDA at operational level. It is not clear how the two are functioning and where their limits are. PNPCSP-IST-SIDA appears to be the "Coordination mechanism for all HIV/AIDS case management activities nationwide."[6] It includes four structural components—

[5] UNAIDS/WHO. 2004. Epidemiological Fact Sheet on HIV/AIDS and Sexually Transmitted Infections: Guinea, 2004 Update. <http://www.who.int/GlobalAtlas/predefinedReports/EFS2004/EFS_PDFs/EFS2004_GN.pdf>.
[6] Ministère de la Santé Publique/CNLS. Mécanisme de Gestion des ARV et Réactifs de Laboratoire dans le cadre de la Prise en Charge des Personnes Vivant avec le VIH, Août 2003.

1. The Committee of Eligibility, which identifies patients eligible for exemption from treatment charges; the price for treatment is GNF 35,000, about USD 10, every month in Conakry and free of charges in the regions

2. The Medical Technical Committee, which that prepares and revises protocols and regimens and decides the eligibility of patients for treatment

3. The Technical Committee for Social Aspects of the disease, which makes decisions related to studies, community issues, and support to adherence

4. The Procurement and Management Committee, which oversees the tender process for medicines and HIV/AIDS-related commodities, stock management, and organization of antiretroviral therapy (ART) centers[7]

The division of responsibilities between the CNLS and PNPCSP-IST-SIDA means that in practice both have operational activities. The CNLS is mainly supported by the World Bank MAP project while the PNPCSP-IST-SIDA depends on the Global Fund and other donors. There is no apparent coordination mechanism for activities, such as follow-up of patients, quantification, and inventory management. This lack of clarity is aggravated by the fact that currently other stakeholders operate on their own initiative in HIV/AIDS activities under very weak coordination between the CNLS and the PNPCSP-IST-SIDA. MSF/Belgium, MSF/Sweden, GTZ, and the Drug Resource Enhancement against AIDS and Malnutrition (DREAM) project are those working in parallel with the national program.

Information collected from the PNPCSP-IST-SIDA and GTZ shows that at the end of June 2007, more than 5,000 patients were under treatment in 14 ART centers distributed among five organizations and structures, broken down as follows—

1. MSF/Belgium at Matam/Conakry Health Center and the district hospital of Guekedou: 2,323 patients

2. MoH at the university hospitals of Donka and Ignace Deen; the accredited treatment center ASFEGMASSI; the regional hospitals of Kindia, Kankan, and Labé; and the district hospital of Lola : 1,940 patients

3. GTZ in Faranah and Kissidougou: 749 patients

4. DREAM of Saint Egidio Community: 250 patients

5. MSF/Sweden in Camp Lainé in Nzérékoré: 21 patients

The Donka and Ignace Deen hospitals in Conakry were the first public health facilities to receive accreditation by the GoG for case management of HIV/AIDS patients. Currently, Donka provides ART and OI medicines to people living with HIV/AIDS while Ignace Deen takes

[7] Ibid.

charges of OIs only and refers eligible HIV/AIDS patients to Donka. The distribution of patients per regimen at Donka's hospital is shown in Table 1.

Table 1. HIV/AIDS Patients under Treatment at Donka

Regimen	Number of Patients	Percentage
Duovir + Stocrin 600mg (AZT+3TC+EFV)	287	32.3
Triomune 40 mg	216	24.3
Triomune 30 mg	181	20.4
Duovir + nelfinavir (AZT + 3TC + NVF)	83	9.3
Lamivudine + stavudine + nevirapine (3TC+d4T+NVP)	50	5.6
Duovir + nevirapine (AZT + 3TC + NVP)	39	4.7
Zidovudine + Stocrin + Videx (AZT + EFV + ddl)	20	2.2
Zidovudine + Videx + nelfinavir (AZT + ddl + NVF)	6	0.7
Stavudine + Videx + nelfinavir (d4T + ddl + NVF)	4	0.4
Lamivudine + Videx + nelfinavir (3TC + ddl + NVF)	1	0.1
Total	**887**	**100**

Source: PNPCSP-IST-SIDA.

This pattern is believed to represent the national profile of the HIV/AIDS treatment program, from which it can be seen that Guinea is not affected by the "multicombination syndrome" that is observed in other countries. This finding is certainly very encouraging.

Although this information is useful for quantification purposes, there is a total absence of data on use, consumption, and availability of pharmaceuticals coming from the sites to give direction to the central level on quantities to be procured. In addition, Guinea has received a donation of ARVs from India that has jeopardized management of the stock already available in the country. Not only was this donation not in the pipeline, but according to PCG and the PNPCSP-IST-SIDA, most of the products delivered came with a short date of expiration and were for monotherapy.[8] Additionally, MAP had a separate order of ARVs for the CNLS, and the Global Fund made another order of pediatric formulations for whose use the ART service providers did not receive appropriate training. As a result, the HIV/AIDS program experienced an overstock that led to the decision to use as a priority most of the products with the closest dates of expiration (FEFO). Eventually, an important quantity of products expired before use, not only from the Indian donation stock, but also from the MAP and GFATM stocks. Data on expired products collected at the PCG warehouse are shown Table 2.

[8] Notes from interview with PCG staff and the PNPCSP-IST-SIDA coordinator.

Table 2. Expired ARVs from Various Sources (excluding India)

Name	Dosage	Source	Unit	Quantity	Date Expired
Neviramune (NVP)	200 mg	FM	Tablet	480	04/01/07
Viramune sp (NVP)	10 mg/ml	FM	Bottle	264	06/01/07
Stavudine (D4T)	40 mg	MAP	Tablet	58,620	04/01/07
Stavudine (D4T)	40 mg	MAP	Tablet	35,940	05/01/07
Stavudine (D4T)	30 mg	MAP	Tablet	21,540	05/01/07

While on one hand the program was dealing with expired products, on the other hand the lack of coordination and information from donors, combined with weaknesses in the planning and quantification process, aggravated this situation because quantities needed for many products were overestimated and received in country with a short expiration date (Table 3).

Table 3. ARVs with Short Expiration Dates

Name	Dosage	Source	Unit	Quantity	Expiration Date
Zidovir solution	50 mg/5 ml	GFATM	Bottle	300	10/01/07
Zidovir solution	50 mg/5 ml	GFATM	Bottle	6	11/01/07
Triomune	40 mg	MAP	Tablet	22,800	09/01/07
Triomune	30 mg	MAP	Tablet	21,600	10/01/07
Duovir (AZT/3TC)	300/150 mg	UNICEF	Tablet	4,800	10/01/07
Lamivudine syrup	100 mg/ml	UNICEF	Bottle	32	09/01/07

Source: PCG.

One way to limit the waste is to explore the possibility of exchanging a certain amount with GTZ and MSF, depending on their needs. Although many ARVs were in excess, others were experiencing stock-outs, some of them since February 2007 as shown in Table 4.

Table 4. Stock-Outs of ARVs

Name	Dosage	Unit	Source	Date Stock-Out Began
Crixivan (indinavir)	400 mg	Tablet	GFATM	03/26/07
Lamivudine	150 mg	Tablet	GFATM	02/27/07
Neviramune	200 mg	Tablet	MAP	02/27/07
Nevirapine	200 mg	Tablet	UNICEF	04/25/07
Videx (didanosine)	200 mg	Tablet	GFATM	06/05/07
Viracept (nelfinavir)	250 mg	Tablet	GFATM	03/07/07
Ziagen (abacavir)	300 mg	Tablet	MAP	02/26/07

Source: PCG database.

Gaps Identified at the PNPCSP-IST-SIDA

- Difficulties tracking ARVs and other products delivered to health facilities: no program or tool in use to capture data on regimen and number of patients according to regimen
- Weaknesses in coordination and communication with partners and other stakeholders involved in HIV/AIDS activities
- Difficulties in forecasting needs caused by the absence or lack of accurate data on patients and stock management

Recommendations and Potential Areas of Intervention

- Prepare a training plan in drug management.
- Harmonize the management tools used for collecting data on HIV/AIDS pharmaceutical management.
- In coordination with partners, prepare a training curriculum that includes management of ARVs and lab products.
- Build capacity for improving quantification procedures and use exercises to enable the adequate estimation of orders.
- Provide technical assistance for setting up a manual/automated system for tracking distribution and use of HIV/AIDS products.

- In coordination with PCG, update the inventory of expired medicines and schedule their destruction as soon as possible.
- Update the ARV management tools, especially the *Bon de commande*, to include information on the number of patients and regimen, as well as stock inventory.
- Provide technical assistance for developing SOPs for HIV/AIDS products at facility level.
- Update the quarterly report forms to include information on ARVs, HIV/AIDS lab commodities, and OI medicines.
- Request technical assistance for preparing manual tools for quantification to be used by managers in health facilities to support the rationalization of their estimated orders.
- Explore the possibility of using a management tool such as the RPM Plus ARV dispensing tool (ADT, previously SIMPLE 1) for tracking ARVs and OI medicines at facility level.
- Rehabilitate the pharmaceutical management information system.

THE NATIONAL TUBERCULOSIS CONTROL PROGRAM

As in many West African countries, the Guinean population is affected by TB, which represents one of the top infectious diseases in the country. Statistics from WHO show that the prevalence rate for TB was 431 per 100,000 population in 2005 with an incidence rate of 105 per 100,000 population.[9] The first coordinated actions against tuberculosis go back to 1990 with the introduction and development of the DOTS strategy, which now covers the entire country. The PNALT takes leadership in all TB activities. The program is supported by a certain number of donors and international organizations. The most prominent among them are the Raoul Follereau Foundation, the Mission Philafricaine, and GDF. The PNALT also receives emergency support from the Damien Foundation when product shortages are imminent.

TB medicines and commodities are stored at the central warehouse located at the Ignace Deen Hospital. The warehouse is secure, but its management suffers from an evident laxity. The temperature is not controlled, air conditioners are put on only when there is need to get in the depot, and there was no sign of good pharmaceutical management practices with the exception of the stock cards, which were well maintained. Otherwise, expired medicines were mixed with the current active stocks, and inventories are not done on a regular basis. The program is strictly vertical as is TB pharmaceutical management.

Guinea was successful in submitting to the Global Fund its proposal for tuberculosis on Round 5. A grant of USD 3.7 million was approved in 2006 for the implementation and consolidation of the DOTS strategy. For the past three years, the PNALT has received TB drugs from GDF for a cycle of three years to cover needs for patients in Conakry (51 percent of TB cases). In preparing the Global Fund proposal, the PNALT assumed that funds from the grant would be available to purchase medicines and commodities at the end of the GDF cycle. Although the grant was approved in 2006, the terms of the agreement for purchasing TB medicines dictate that funds can be withdrawn only in year 3. Because of delays in approving the proposal, a potential gap and risk of shortage of TB medicines now exists while the PNALT is waiting for the GFATM budget to be available for procurement of medicines. It is imperative that the PNALT contact GDF to request a second cycle or at least another year of procurement while awaiting the opportunity to use the Global Fund budget.

Gaps Identified

- Difficulties exist in tracking TB products delivered to health facilities: no program or tool is in use to capture data on patients at different phases of the treatment.
- No medicine is available for patients with multidrug-resistant TB (0.5 percent).
- Weaknesses exist in coordination and communication with partners and other stakeholders involved in TB activities.

[9] WHO. TB Country Profile: Guinea. <http://www.who.int/GlobalAtlas/predefinedReports/TB/PDF_Files/gin.pdf>.

- Storage conditions at the Ignace Deen warehouse do not show any sign of application of good pharmaceutical management principles.
- Expired products since January 4, 2007, are mixed with the current active stock.
- There is no evidence of the application of the FEFO/FIFO system.
- The temperature of the warehouse is not monitored.
- Periodicity of inventories is not consistent.
- The PNALT is strictly vertical, leading to the vertical management of TB products and commodities with no opportunity for integration with other essential products.

Recommendations and Potential Areas of Intervention

- Improve storage conditions and inventory management practices: warehouse organization, temperature conditions, promotion of good practices in pharmaceutical management
- Reinforce pharmaceutical management mechanisms, data collection, and analysis
- Provide technical assistance for developing SOPs at all levels in pharmaceutical management for TB
- Integrate TB products provided by the Global Fund into the PCG pharmaceutical management system
- Prepare a training plan in pharmaceutical management
- Coordinate with partners for quantification exercises and distribution of TB products
- Advocate for extending GDF support for TB medicines while ensuring transition to the GFATM budget for procurement of TB pharmaceuticals

THE GUINEA PHARMACEUTICAL SUPPLY MANAGEMENT SYSTEM

The PCG inherited from the former Central Medical Stores *PharmaGuinée*, which has been for years the main source of pharmaceuticals and supplies for the public health sector. To the present, PCG is still identified by Guineans as *PharmaGuinée*. PCG has the status of an *EPIC* (public institution with industrial and commercial vocation) with assets estimated at GNF 6,243,793,992 (approximately USD 1,250,000). Although under the authority of the MoH, PCG has complete financial and managerial autonomy and has been functioning without government subsidy since its creation in 1993. Following the Bamako Initiative, UNICEF supported the creation of the Immunization Program/Primary Health Care/Essential Drugs Program (PEV/SSP/ME) that supplied peripheral health facilities, especially first points of contact—health posts and health centers—with essential medicines and commodities while PCG supplied national hospitals and other institutions at the first and second levels. The PEV/SSP/ME was operational until recently (June 2007), when the MoH validated its integration into the PCG following numerous recommendations from consultants, some of them as far back as 1998.

The creation of PCG was supported by Decree No. A/93/1382/MSAS/MEF/CAB of March 1993 that stated PCG's mission to "ensure procurement of pharmaceuticals and commodities for health institutions, NGOs supporting the public health sector, bilateral and multilateral projects, universities, institutions and pharmacies authorized by the Ministry of Health in Guinea." PCG is managed by a board of 11 administrators and a director-general designated by the MoH and approved by a governmental decree. A deputy director assists the general director. PCG staff totals 45 persons, 16 of whom are pharmacists.

Source: PCG.

PCG is a central piece in the application and success of the national health policy. Because of its autonomous status, an agreement was necessary between PCG and the MoH, delineating their roles and responsibilities in providing medicines and commodities to health facilities in Guinea.

This document states that PCG will: (a) procure, store, and distribute essential medicines and health commodities, in priority to the PCG regional warehouses, health centers, health posts and other similar health structures, and *eventually* to other nonpublic nonprofit health institutions; (b) sell medicines and commodities at low costs to facilitate financial and geographical access to medicines and essential health commodities to the Guinean population, with a reasonable margin to support the financial capabilities of the institution for the investments needed to improve its operational capacities. In its statement 6, the agreement mentions that "PCG agrees to apply cash on delivery procedures in order to build revenues and avoid dealing with too many clients with bad credit." The same agreement makes the GoG responsible for supporting PCG to prevent any cash-flow problems that would affect the availability of medicines and health commodities. In practice, not only does PCG not receive any fiscal privileges from the GoG for its operations, but the GoG itself cumulated substantial debts over the years to PCG that reached the amount of GNF 6 billion (about USD 2 million).[10]

The PCG main warehouse is located in Dixin, a populated neighborhood of Conakry. The compound totals 3815 square meters that accommodate 25 offices, a meeting room, a cafeteria, various maintenance locations, the storage warehouses, and two cold rooms. Provision of electricity is erratic in Conakry, but PCG has two auxiliary generators to compensate for this problem. In addition to the central warehouse in Conakry, PCG has extra storage capacity of 650 square meters, distributed among the central warehouse and four regional depots located in Labé (240 square meters), Kankan (125 square meters), Faranah (125 square meters), and NZérékoré (160 square meters). A fifth regional depot (240 square meters) serves the Guinea Maritime region but is located at the PCG compound in Conakry. Combined with the regional depots, PCG storage capacity totals 4,465 square meters. PCG plans to build another regional warehouse in Boké to be in compliance with the national norm requiring each regional capital to have a supply point within 200 kilometers of each health facility.

In terms of logistics, PCG has two big trucks of 7 and 8 tons, two midsize trucks of 3 tons, five small trucks of 1.5 tons, three vehicles for supervision, and five other vehicles from the PEV/SSP/ME.

[10] Notes from meetings with the PCG director.

Source: PCG.

Figure 2. Regional warehouse locations

Procurement of Essential Medicines

Seven suppliers represent the main providers of essential medicines and health commodities to PCG: the International Dispensary Association, Missionpharma, LDI, Bristol Myers, GlaxoSmithKline, Hetero Drugs Ltd, and the Chemical Industrial and Pharmaceutical Laboratories. Procurement of medicines and other pharmaceuticals for 2005 reached a total of GNF 4,294,595,556 (approximately USD 1,480,000). There was a small increase in 2006 when PCG purchases reached GNF 4,423,956,215 (approximately USD 1,525,500). These procurements were conducted by PCG using its own assets. As stated in its mandate, PCG procures pharmaceuticals and commodities for both public and private sectors. In parallel, nongovernmental organizations and international organizations operating in Guinea also procure pharmaceuticals and commodities needed for their operations.

PCG's supply chain system is fully decentralized. The four regional depots play the role of extension of the central level, but proceeds of all product sales are transferred to one PCG bank account. Since the inception of PCG's operations, private pharmacies have been authorized to buy directly from PCG. This mechanism allows PCG to increase its cash flow, already constrained by the amount of debts accumulated by the government.[11]

General procurement for PCG clients is conducted according to the PCG manual of procedures. Procurement of pharmaceuticals was managed until recently by a "Tender and Purchasing Committee" that included only PCG's contacts and national employees. But the composition of this committee was revised recently to include independent members from neutral organizations,

[11] Notes from interview with the PCG director.

such as a representative from the WHO office in the country. Because of cash flow problems and lack of information from health institutions, PCG frequently makes several small orders of essential medicines, sometimes three or four times during a year.

In April 2007, PCG drafted a Procurement and Distribution Plan that details the process of preselecting suppliers for ARVs and OI medicines, the quantification procedures, and the procurement process. The quantification method is weak because this exercise is based only on the national list of essential medicines and STGs available for some diseases. It does not refer to any morbidity or consumption methods. In theory, for essential medicines, orders are submitted to suppliers when the stocks reach the minimum level that corresponds to an estimated 8 months (6 months for delivery plus 2 months of security stock), but the consumption method is not formally used for calculations. For Global Fund products, the procurement and distribution plan proposes that a sole source should be used for ARVs and ACTs. It favors qualified suppliers from the WHO list or suppliers in countries participating in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use or the Pharmaceutical Inspection Cooperation/Systems. The list of accredited suppliers is usually maintained for two years.

Procurement of medicines is conducted either by open tenders, restricted tenders, negotiated tenders, or direct purchases. The Tender and Purchasing Committee has the authority to decide which suppliers should be deleted or added to the list of interested suppliers.

An interesting PCG initiative is the identification of a set of indicators to evaluate its own performance in procurement and pharmaceutical management. The following six key indicators have been identified—

1. Percentage of median international price paid for products purchased in every order (in reference to the *MSH International Drug Price Indicator Guide*)

2. Percentage of samples tested for quality control that satisfy the quality tests (every order)

3. Percentage of orders that are received according to the lead time scheduled (annual)

4. Average time of delivery of orders from PCG to clients (every 3 months)

5. Average percentage of time out of stock for a set of tracer medicines (every 3 months)

6. Average percentage of PCG distribution costs (every 3 months)

Procurement costs are calculated on cost/insurance/freight (CIF) prices plus 10 percent. The sale prices are equal to the purchasing costs plus tax fees and 30 percent of the cost price. In spite of the devaluation of the GNF, the sale prices of PCG products have not changed since 2004. For essential medicines and commodities, there are officially about 10 wholesalers that supply the private sector and some facilities of the public sector. But anecdotally, the number could reach approximately 25 because of the extension of the parallel market and MoH difficulties in

controlling that market. For Global Fund products, procurement operations are not the sole responsibility of PCG. Different parallel systems also exist as shown in the following figures.

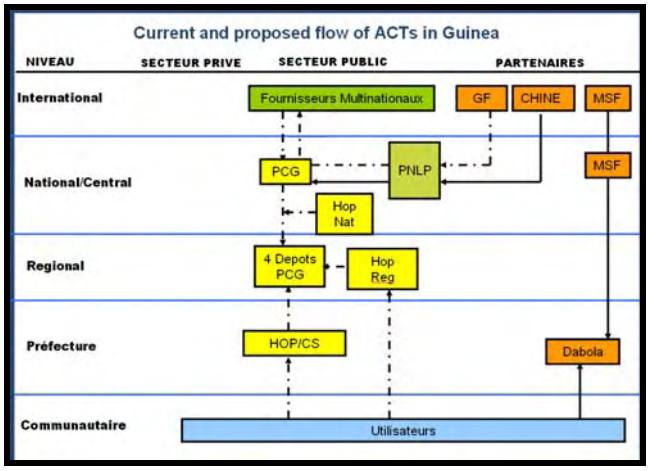


Figure 3. Flow of ACTs in Guinea

ACTs are used only in the Dabola prefecture and are being provided by MSF. This is a completely independent system in which orders are placed by MSF International, introduced in the country, and used by service providers in Dabola. However, the recent Chinese donation of ACTs is managed by PCG and will follow the regular distribution network. The PNLP has not yet identified the target prefectures for the ACT extension. This may change because the MoH is involved directly in the planning and distribution process. It was agreed that future orders will be under PCG supervision and will continue to be managed by PCG.

As shown in Figure 4, ARVs have almost the same situation. Procurement operations are conducted by different sources: the Global Fund, GTZ, MAP, and MSF, in addition to unplanned donations (India).

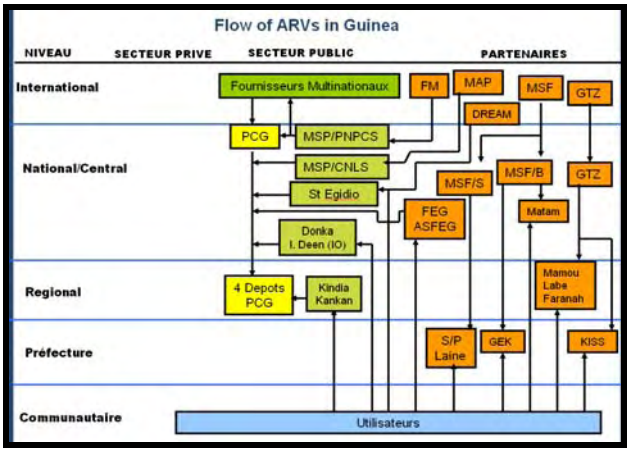


Figure 4. Flow of ARVs in Guinea

Different parallel systems still exist. PCG has proposed that even where procurement activities continue to be done separately, when pharmaceuticals are in country, they should be part of a common basket managed by PCG for better coordination of needs estimates, management of the quantification process, and distribution of ARVs to the health facilities. This is unlikely to happen in the immediate future and until an operational and efficient pharmaceutical management system is put in place.

TB medicines are not excepted from these problems. For the past three years, TB medicines were provided to the PNALT by the GDF mechanism. These products are used for case management of patients in Conakry that represent 51 percent of total TB cases. The Damien Foundation, the Raoul Follereau Foundation, and the Mission Philafricaine are other players in procurement activities. The Mission Philafricaine covers needs for the Forest Region; Raoul Follereau covers the Upper Guinea regions; the Damien Foundation takes in charge an important part of Middle Guinea, and GDF took over the other part after the departure of MSF. As previously mentioned, it is critical that PCG coordinate procurement activities for TB products.

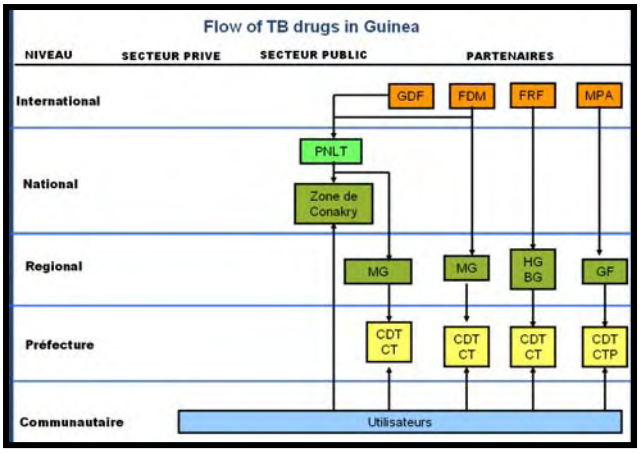


Figure 5. Flow of TB Medicines in Guinea

In addition to its mandate to procure, store, and distribute essential medicines and health commodities to public health facilities, PCG was identified in the MoH/CNLS document as "the unique source of procurement for ARVs and Lab reagents."[12] An evaluation conducted for the Global Fund in 2004 by the agency KPMG concluded that PCG was not ready to ensure properly the purchase of products for the Global Fund programs, mainly because of weaknesses identified in its procurement process. One of the key problems raised was that the procurement committee operating at PCG that was composed of only nationals affiliated with PCG. To fill the gap resulting from absence of an appropriate procurement agent while allowing PCG to address this problem, an Agreement for Assistance in Procurement was signed between UNICEF and the MoH for the procurement of 308,200 long-lasting insecticide-treated bed nets, 5 million SP

[12] Ministère de la Santé Publique/CNLS. Mécanisme de Gestion des ARV et Réactifs de Laboratoire dans le cadre de la Prise en Charge des Personnes Vivant avec le VIH, Août 2003.

tablets, two Toyota vehicles, and 40 motorcycles, as well as lab reagents and microscopes. For multiple reasons, UNICEF experienced significant difficulties in the application of this agreement with the MoH and was able to deliver 70,000 LLITNs, 5 million tablets of SP, the two vehicles, and 40 motorcycles. PCG also requested ARVs, and UNICEF responded by proposing a certain number of products *with a short date of expiration.*[13] The agreement terminated, and PCG is now required to act as procurement agent for the Global Fund program.

Storage

A specific section of the PCG depots is used for storage of products provided by the GFATM, MAP, USAID, WHO, and UNICEF. The warehouse is well maintained. Three thermometers in different locations in the warehouse were noted with temperatures checked twice a day and recorded on sheet inside the depot. During different visits at different times of day, the temperature was between 24° and 27° C. The store was clean and well organized. Products from different donors are identified and arranged according to the FEFO system. The only problem was the specific identification of each item, which was not done according to international norms. However, following consultants' discussions with the PCG staff, an immediate attempt was made to address this problem, but it was not done properly.

Another major issue was the storage of ARVs and HIV/AIDS-related commodities. The store did not have any security system or measures to protect those products against theft or pilferage. ARVs could be easily accessed by anyone who gets in the warehouse.

A solution to this problem was imperative because delivery of orders to the facilities are received and controlled inside the warehouse. The PCG Director was informed and immediately met with his staff to discuss possible options. Before the assessment team's departure from Guinea, the problem was solved, as shown in the following picture: the metallic shelves were reorganized and used not only to serve as regular storage instruments, but also to isolate the ARV section that was placed under the control of one designated manager who reports to the General Director.

Fire protection extinguishers also presented a concern because the last inspection dated back to 2005. A specialist was contacted by PCG to test the device and take appropriate action.

[13] Note from interview with the General Director of Health.

Distribution

PCG is in charge of distribution to the regional depots, but neither the PCG as central warehouse nor the regional depots deliver products to health facilities, to other private clients, or to organizations.

The supply chain operates on a "push" system that allows PCG central to deliver medicines and commodities to the regional warehouses. Delivery is normally conducted every six months, but it also takes place on demand when some products are at risk of shortage. For the Global Fund products, PCG's Procurement and Distribution Plan states that a schedule for distribution will be prepared jointly with partners. This distribution might be incorporated into the provision of essential medicines to be delivered to the regional depots. The "pull" system will be used for distribution to health facilities. It gives them the responsibility of calculating their needs and submitting orders to the regional depots. For facilities in Conakry, orders will be sent directly to PCG central. As for all essential medicines, a standard *Bon de Commande* is prepared by the *Chefs de Centres* or pharmacists from national and regional hospitals to be used for this purpose.

For the three programs, pharmaceutical management activities are not supported by any written SOPs. In spite of formal training activities conducted by PRISM, a project formerly supported by

USAID, and sporadic on-site training in inventory management, the limitations in pharmaceutical management operations represent a serious issue because pharmaceutical managers lack the capacity to follow good practices in pharmaceutical management and cannot adequately quantify their requirements and manage their inventory according to pharmaceutical norms.

Gaps Identified at PCG

- The essential medicines list still includes products not in compliance with the new policy on treatment of malaria (chloroquine).
- Coordinating mechanisms and sharing of information in commodity management are lacking among the three programs, headquarters, and health facilities: PCG, health districts, health facilities; as well as with stakeholders involved in commodity management for the programs (GTZ, MSF, GFATM, etc.).
- There is no specific independent area for delivering products to clients and customers; control of products at reception is done inside the warehouse.
- ARVs are exposed to all general users of the warehouse; there is no security or protection of HIV/AIDS products.
- Deficiencies in the pharmaceutical management information system result in serious gaps in data collection and management.
- Discrepancies exist between stock cards and computerized data for Global Fund product management.
- Errors exist in registering ARVs in the software, including missing information on dosage, expiration dates, and the like.
- PCG staff have limited knowledge of SAARI pharmaceutical management software.
- PCG does not distribute pharmaceuticals beyond the warehouses of the central and regional levels to the prefectures and health facilities.
- There are no standard operating procedures for pharmaceutical management in the regions, prefectures, and health facilities.
- The transportation fleet is aging: PCG vehicles are more than 14 years old.

Recommendations and Potential Areas of Intervention

- Create a "Management Unit for Global Fund Products," composed of one pharmacist PCG stock manager, the PNPCSP-IST-SIDA pharmacist, the PNALT pharmacist (when recruited), the PNALT pharmaceutical manager, one computer specialist, and one secretary; the terms of reference will focus on traceability of products, stock inventories, and availability of information for quantification and decision making.

- Reorganize the warehouse, identifying medicines and commodities according to international norms and standards.

- In coordination with the program managers, identify and reinforce mechanisms for sharing information on stock management on a regular basis.

- Explore different mechanisms for matching pharmaceutical management information on the stock cards and the pharmaceutical management software.

- When ordering ACTs and ARVs, request deliveries in staggered fashion to avoid overstock and waste caused by expired products.

- Speed up the configuration of the SAARI software to make available accurate information on all Global Fund products or on one specific product when requested.

- Provide refresher courses to personnel and staff using the SAARI software and explore the possibility of an interconnected network between PCG and the regional depots.

- Take the lead in promoting creation of a National Quantification Committee for the GFATM products (technical assistance may be required).

POLICY AND REGULATIONS

The DNPL is the National Drug Authority that regulates pharmaceuticals in Guinea. The DNPL is located in the administrative building of the MoH. It is composed of two main divisions or departments: (a) the Division of Biopharmaceutical Institutions, which includes the following sections: Accreditation of Private Pharmacies, Pharmacovigilance, and Laboratories; and (b) the Division of Medicines, which includes the following sections: Economy of Medicines, Registration of Pharmaceuticals, and Pharmaceutical Legislation. In terms of human resources, the DNPL has a staff of 17 that includes 9 pharmacists. The DNPL is responsible for the preparation and revision of the National Drug Policy (NDP). The first NDP document was prepared in 1994 and validated in 1996. The last revision of the NDP was in 2006. The DNPL has limited capacities and lacks organizational and operational resources: it has few computers, which are obsolete; is weak in archival procedures; and lacks documentation. When it was reported last year that there were some problems with a batch of contaminated nelfinavir (some were in use in MSF-supported health facilities), the DNPL was very passive and leaned on MSF and regional health authorities to withdraw the contaminated products.

Decree No. 7444/MSP/SGG requires registration of all medicines and health products entering Guinea. The process starts with the "Visa for Importation" to allow a better knowledge of the number of products in circulation in the country. The following documents are required—

- Free sale certificate from the country of origin
- Results of preclinical and clinical studies
- Certificate of analysis
- Certificate of price wholesaler net of taxes

The amount of GNF 900,000 (USD 200) is required for every pharmaceutical form of a product; GNF 900,000 for every packaging condition; and GNF 900,000 per every dosage. As additional support, samples should be submitted to the DNPL for analysis by the LNCQM in Guinea or the *Laboratoire National de Santé Publique et d'Expertise* (LANSPEX) in Niger. It takes an average of six months for a brand-name product to get registered and three to four months for a generic. Normally, a product is registered for five years. Registration is required after five years if the product will continue to circulate in Guinea.

Two organs of the DNPL are responsible for the application of pharmaceutical regulations: the National Drug Committee and the Pharmacy Inspectorate. Although they conduct some activities, this is still a bit more theoretical than factual. The DNPL does not have enough resources or the operational capacity to fully ensure follow-up and law enforcement.

QUALITY CONTROL AND PHARMACOVIGILANCE

The National Laboratory of Quality Control for Medicines is responsible for quality assurance of medicines and health-related products used or to be used in Guinea. The LNCQM was created by Decree No. 95/239/PRG/SGG on August 29, 1995, under the name of Department of Pharmaceutical Chemistry. Instead of being a branch of the DNPL (at that time a second-level section of the MoH), it was attached to the National Institute of Public Health on December 2004 by Decree No. 10943/MSP/SGG. The LNCQM is a first-level Laboratory that is located in the PCG compound without being part of the PCG organizational structure. It has the responsibilities of (a) analyzing and monitoring quality of medicines—modern and traditional—imported or locally manufactured; (b) defining and ensuring implementation of a quality control policy for medicines and health-related products; (c) conducting necessary tests of conformity control on all medical products in country or to enter the country; (d) analyzing and monitoring quality of water, beverages, and food products; (e) providing the expertise related to frauds, counterfeit products, toxicity, and medico-legal aspects of drugs as well as veterinarian and environmental assessments; and (f) assisting in activities against counterfeit products entering or produced in the country. On December 2006, with Decree No. 7444/MSP/SGG, the MoH took a new step in quality assurance by reinforcing the Decree of August 2005 and making mandatory quality control of all medicines and health-related commodities—whether imported for sale, donations, or manufactured in the country. Violation is punished by a penalty ranging from GNF 200,000 to 1,000,000 (about USD 40 to USD 200).

The LNCQM is composed of four technical units: (a) the Quality Control unit; (b) the Hydrology-Bromatology unit; (c) the Toxicology unit; and (d) the Traditional Pharmacopeia unit. Although located at the PCG compound, the LNCQM is totally independent. There is enough space for the operations of all units. However, in spite of support from the African Development Bank for the rehabilitation of the building and technical assistance from the Pierre Fabre Foundation, which provided some basic equipment, the place still needs major improvement. Its personnel is composed of five pharmacists, one chemist, one biologist, one assistant pharmacist (*préparateur en pharmacie*), and one technical assistant from China seconded to the LNCQM. Over the past years, the LNCQM has been experiencing numerous organizational problems that hampered its capabilities to fully respond to its mandate. The affiliation to the National Institute of Health seems no longer appropriate now that the DNLP is a first-level Directorate that has responsibilities tied to the LNCQM. Most personnel are nearing retirement age. Resources (materials, equipment, reagents, consumables, etc.) are very limited. Notwithstanding these constraints, the LNCQM has been a valuable support to the pharmaceutical sector.

Guinea is extremely vulnerable and an easy target for poor-quality medicines and counterfeit products coming from or through West African countries. A large variety and quantity of antimalarials have been reported to be in circulation in Côte d'Ivoire, Ghana, Mali, Nigeria, and Senegal.[14] In 2006, the LNCQM performed different tests on 54 products. Approximately 26 percent failed for multiple reasons: antibiotics with no active ingredients, antimalarials

[14] US Pharmacopeia Drug Quality and Information Program. 2007. Matrix of drug quality reports in USAID-assisted countries.

contaminated or without active ingredients or with low dosage, products disintegrated or deteriorated before expiration, and so on. There were also fake labels with no information on the manufacturers or counterfeit products like this brand-name ampicillin that contained talcum power.[15]

Quality of medicines circulating in the country is guaranteed by the visa delivered by the DNPL following analysis of the required documents, especially the certificate of sale from the country of origin and the results of different physical and chemical controls conducted on samples sent to the LNCQM, along with the registration request. Upon arrival at PCG and wholesaler's warehouses, all medicines are put in quarantine. Samples are taken randomly and sent to the LNCQM for testing and quality control according to international norms. This is requested for medicines as well for lab commodities such as the RDTs. However, the LNCQM does not have the capability to perform quality control testing for the RDTs. In fact, from an interview with key MoH personnel and LNCQM, it appears RDTs might be currently in use only in the Dabola prefecture (not verified) where MSF has initiated the ACT treatment policy.

Gaps Identified at the LNCQM

- Limitations in operational capacities of the LNCQM resulting from its dependence on the National Institute of Health and not the DNLP
- Limited resources hampering the capacity of the LNCQM to obtain the necessary reagents or ingredients to perform tests appropriately
- Extreme dependence on external assistance
- Lack of logistics for collection of samples at national level

[15] LNCQM. Interview with director; LNCQM. 2006. *Controle et Suivi de la Qualité des Médicaments en République de Guinée, 2006.*

- Retiring personnel, although they seem to be motivated
- Physical conditions of the LNCQM that call for attention and rehabilitation
- Basic equipment, materials, and consumables needed for operational functions (Pierre Fabre Foundation's assistance was put on hold because of political instability)
- Large variety of counterfeit drugs in circulation in Guinea; antibiotics, analgesics, and cough syrup are among the most common
- Lack of resources and weaknesses in the surveillance of the Guinean borders, aggravating the problem of counterfeit products

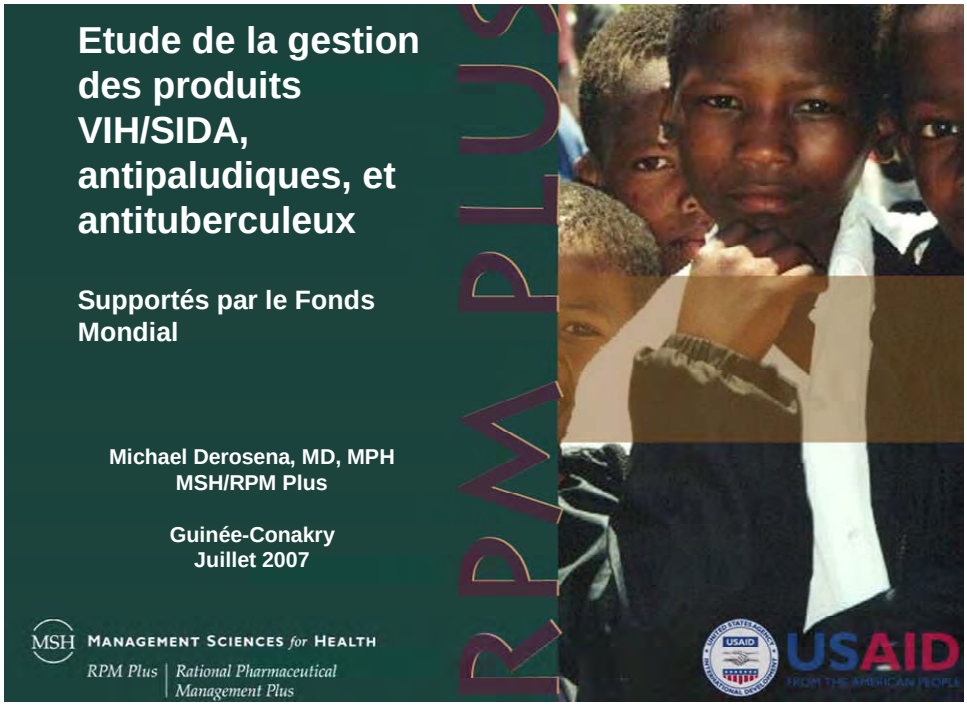
Recommendations and Potential Areas of Intervention

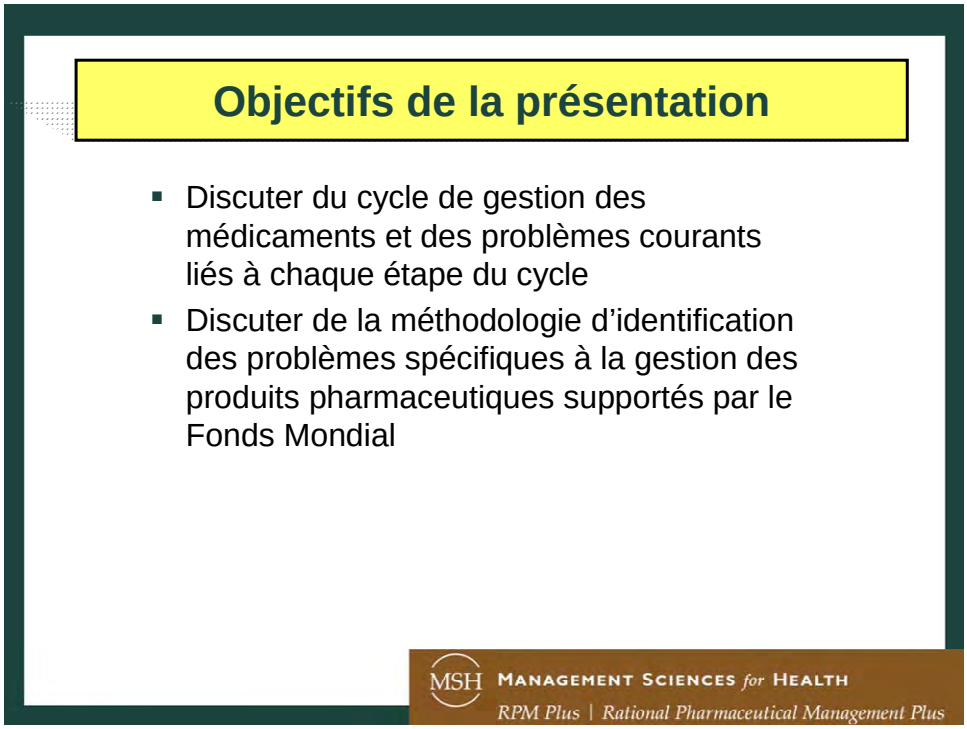
- Reinforce the institutional capacity of the DNLP and revise the organizational chart to attach the LNCQM to the DNLP.
- Reinforce quality assurance activities, especially in light of the introduction of ACT in Guinea.
- Increase quality control through inspection and testing of products as they arrive at the ports.
- Rehabilitate existing infrastructure.
- Reinforce operational capabilities of the LNCQM by providing additional equipment needed and training to personnel.

CONCLUSION

Implementation of the three Global Fund programs in Guinea is affected by the absence of the basic instruments and mechanisms to support initiatives for improving pharmaceutical management practices and extending quality services. Because the ACT policy is in its initial stage of development and the HIV/AIDS program as well as the PNALT are being expanded and consolidated, it is appropriate to bring a new dynamic and orientation in activities being conducted, based on lessons learned in other countries. Although limited, the personnel of the three programs look motivated as a lot of efforts are being deployed to reach the targets and objectives. Following this study, a more in-depth evaluation is required to investigate in particular the storage conditions of pharmaceuticals of the GF, the utilization of the management tools, and the dispensing practices and rational use of drugs and lab commodities at district and facility levels. Technical assistance is required for developing a workable drug management information system prioritizing the availability of quality data for quantification and decision-making. It is also necessary to favor a better coordination between donors, the MoH and the three programs to be able to monitor the procurement process, develop a distribution plan, and ensure traceability of drugs delivered at health facilities. These are immediate priorities that need to be addressed.

ANNEX 1. PRESENTATION TO CCM: COMMON PROBLEMS IN PHARMACEUTICAL MANAGEMENT





Appui du Fonds Mondial à la Guinée

Série	Maladie	Fonds demandés	Fonds approuvés
2	VIH/SIDA	9,651,105.00	9,651,105.00
	Paludisme	6,893,509.00	6,893,509.00
5	Tuberculose	6,906,675.00	3,749,845.00
6	VIH/SIDA	20,419,475.00	4,585,537.00
	Paludisme	26,978,927.00	17,339,399.00
Total		**$ 70,849,691.00**	**$ 42,219,395.00**

Source: http://www.theglobalfund.org/Programs/Portfolio.aspx?countryID=GIN&lang=fr

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Budget produits pharmaceutiques pour les trois programmes

Série	Maladie	Accord de don	Médicaments et produits	Pourcentage
2	VIH/SIDA	9,651,105.00	2,785,324.00	32.6%
	Paludisme*	8,750,287.00	3,170,204.00	36.2%
5	Tuberculose**	2,811,029.00	517,009.00	18.3%
6	VIH/SIDA***	4,585,537.00	1,174,309.89	25.6%
	Paludisme***	17,339,399.00	15,987,687.00	92.2%
Total		**$ 43,137,357.00**	**23,634,533.89**	**54.7%**

* Phase 1 et 2 – Source : http://www.theglobalfund.org/search/docs/2GINH_239_176_ga.pdf
** Phase 1 seulement – Source : http://www.theglobalfund.org/search/docs/5GINT_1031_497_ga.pdf
*** Don approuvé - Accord non encore signé

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Pourquoi une bonne gestion des médicaments

- Les médicaments sauvent les vies et améliorent la santé
- Les médicaments augmentent la confiance des populations dans le personnel de santé et favorisent la fréquentation des points de prestation de services
- Les médicaments sont chers
- La gestion des médicaments est différente de la gestion des autres produits de consommation
- Des améliorations substantielles sont toujours possibles dans l'approvisionnement et l'utilisation des médicaments

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Pourquoi une bonne gestion des médicaments fournis par le Fonds Mondial

- Conditions liées à la gestion des médicaments en général
- Environ 50% des fonds dans les propositions soumises au FM sont alloués à l'achat de médicaments/produits médicaux (*) – Guinée: 55%
- Selon le FM, une des raisons majeures de l'échec des programmes est la faiblesse dans la gestion des achats et de stockage des produits (*)
- Conditions exigées par le FM pour le fonctionnement d'une chaine d'approvisionnement et de stockage performante, transparente, efficace, avec un système d'assurance qualité en place

* Source: http://www.theglobalfund.org/en/about/procurement/

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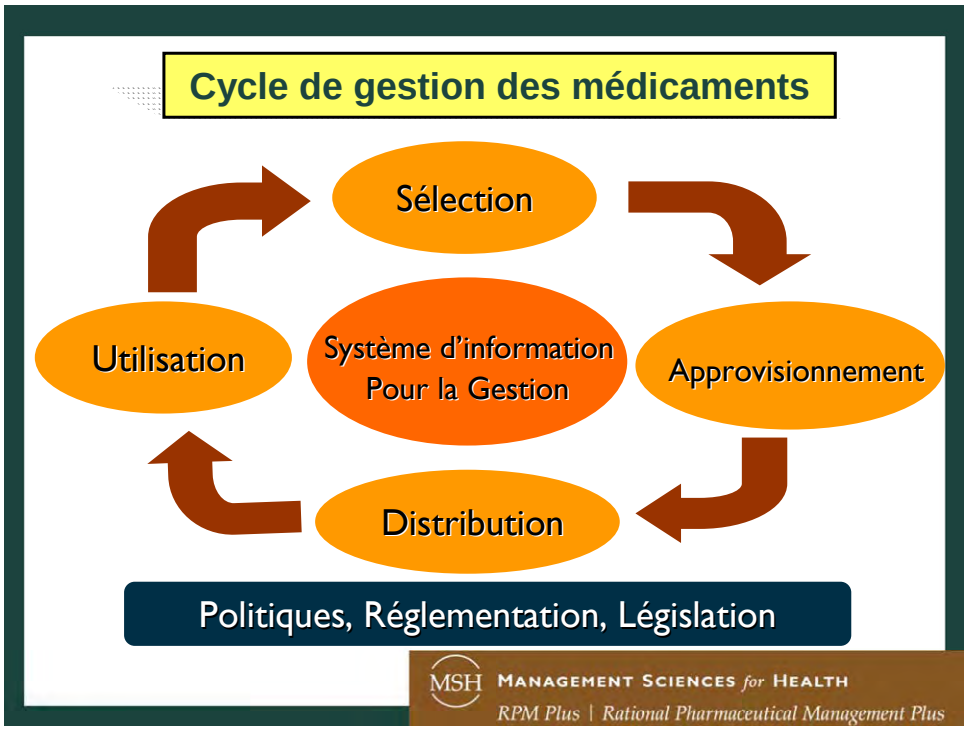
Cycle de gestion des médicaments
Sélection
Approvisionnement
Distribution
Utilisation
Système d'information
Pour la Gestion
Politiques, Réglementation, Législation
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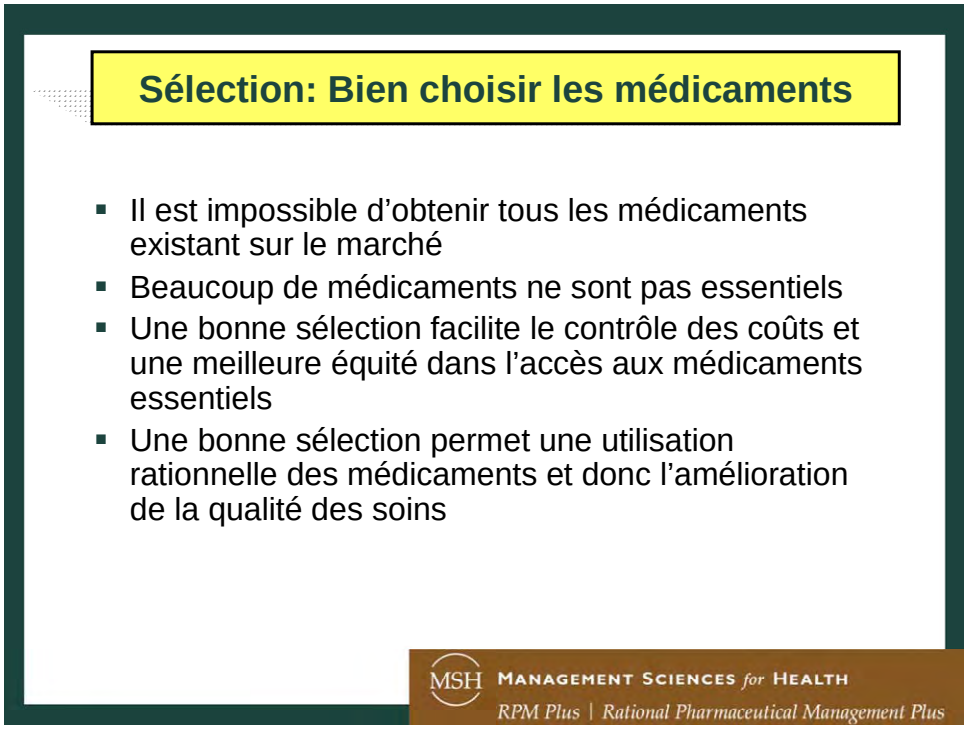
Sélection: Bien choisir les médicaments
Il est impossible d'obtenir tous les médicaments existant sur le marché
Beaucoup de médicaments ne sont pas essentiels
Une bonne sélection facilite le contrôle des coûts et une meilleure équité dans l'accès aux médicaments essentiels
Une bonne sélection permet une utilisation rationnelle des médicaments et donc l'amélioration de la qualité des soins
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Problèmes courants liés à la sélection

- Absence/inefficacité du Comité National de Médicaments
- Politique pharmaceutique nationale non définie/élaborée
- LNME inexistante ou non actualisée
- Trop de produits à même composante chimique et même efficacité thérapeutique
- Produits non essentiels
- Directives de Traitement Standard (DTS) non élaborées ou non mises à jour
- Problème des médicaments de marque versus génériques

Quelle est la situation en Guinée?

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Approvisionnement

- Des médicaments de qualité
- Médicaments essentiels ou médicaments inscrits sur la LNME
- Quantités suffisantes pour répondre aux besoins
- Des prix les plus bas possibles
- Achats en gros
- Des procédures bien établies et respectées
- Des livraisons faites à temps
- Des fournisseurs fiables
- Un chronogramme respecté
- Des objectifs atteints avec efficacité

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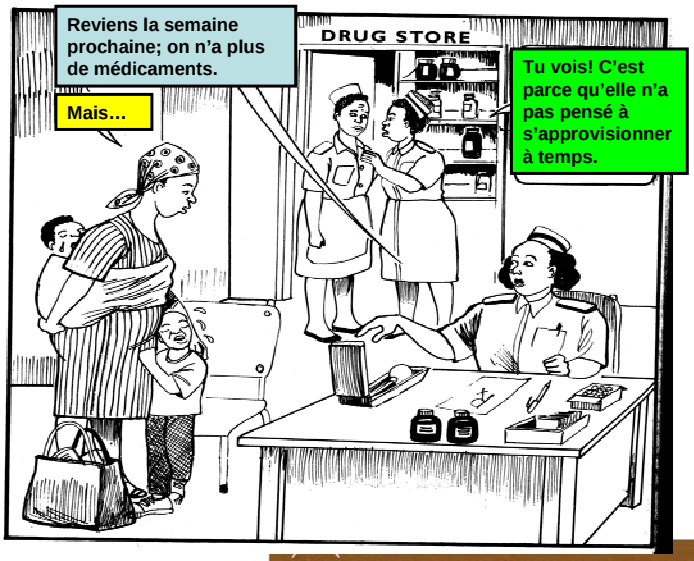
Problèmes courants liés à l'approvisionnement



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Problèmes courants liés à l'approvisionnement

- Processus d'appel d'offre et de passation de marché
- Suivi effectif des fournisseurs
- Articles à commander - LNME
- Quantités à commander
- Fréquence des commandes
- Difficultés pour obtenir les informations nécessaires pour placer une commande
- Assurance qualité: produits contrefaits
- Informations irrégulières sur la performance des achats
- Absence de procédures opérationnelles standard écrites pour les commandes, la réception, le stockage et la livraison des produits
- Gestion financière inadéquate, manque de crédibilité
- Problème (?) des dons

Quelle est la situation en Guinée?

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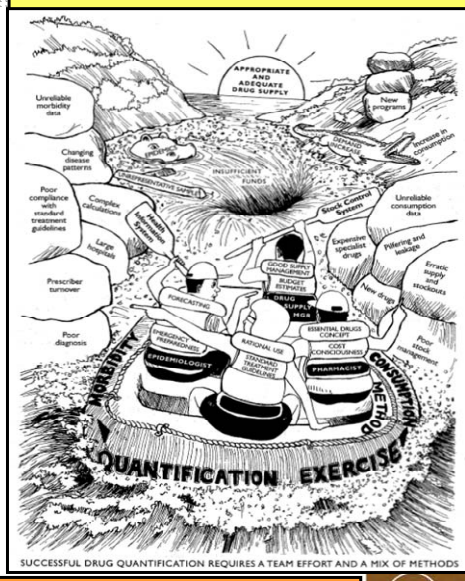
Problèmes courants liés à l'approvisionnement



- Mauvaise estimation des besoins
- Utilisation de données non fiables pour la quantification
- Changements dans le profil épidémiologique des maladies
- Non respect des DTS conduisant à des prescriptions erratiques
- Ruptures de stock fréquentes et prolongées
- Mauvaise gestion de stock

Quelle est la situation en Guinée?

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Distribution

- S'assurer que le *bon* médicament est présent au *bon* endroit pour être dispensé au *bon* malade à un *bon* prix
- Conception du réseau
- Fonctionnalité du réseau de distribution
- Couverture géographique
- Chronogramme de distribution et circuit de livraison
- Contrôle de stock et intervalles de réapprovisionnement
- Formulaires/outils de support et procédures
- Flux de l'information
- Gestion de la logistique de livraison
- Manutention des produits

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Problèmes courants liés à la distribution

- Difficultés d'accès géographique
- Couverture démographique dépassant les capacités
- Centralisation administrative et financière
- Décentralisation sans planification: manque de ressources humaines et financières, manque de moyens, absence ou inefficacité du système de suivi de la gestion
- Déficiences de la logistique
- Accroissement des coûts de gestion
- Augmentation des risques de pertes

Quelle est la situation en Guinée?

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Utilisation

- L'utilisation rationnelle des médicaments implique qu'un patient reçoive:
  - un traitement adapté à ses besoins cliniques
  - dans des doses spécialement établies pour lui
  - pendant une durée adéquate
  - et au coût le plus bas possible pour lui et sa communauté

Conférences des experts de l'OMS, Nairobi 1985

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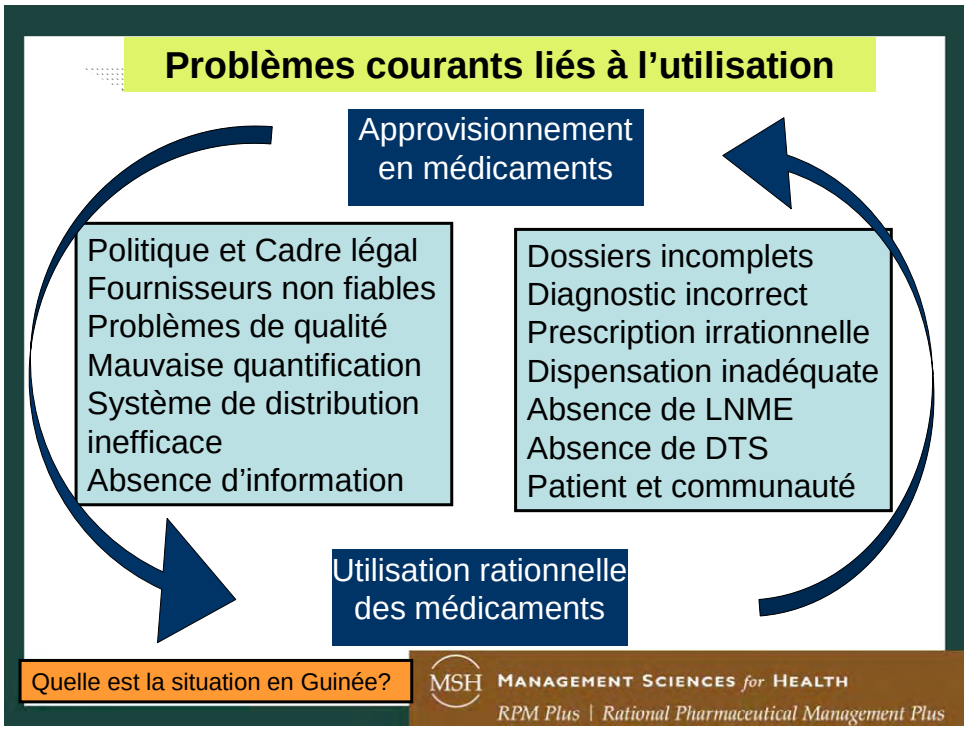
Problèmes courants liés à l'utilisation
Approvisionnement en médicaments
Politique et Cadre légal
Fournisseurs non fiables
Problèmes de qualité
Mauvaise quantification
Système de distribution inefficace
Absence d'information
Dossiers incomplets
Diagnostic incorrect
Prescription irrationnelle
Dispensation inadéquate
Absence de LNME
Absence de DTS
Patient et communauté
Utilisation rationnelle des médicaments
Quelle est la situation en Guinée?
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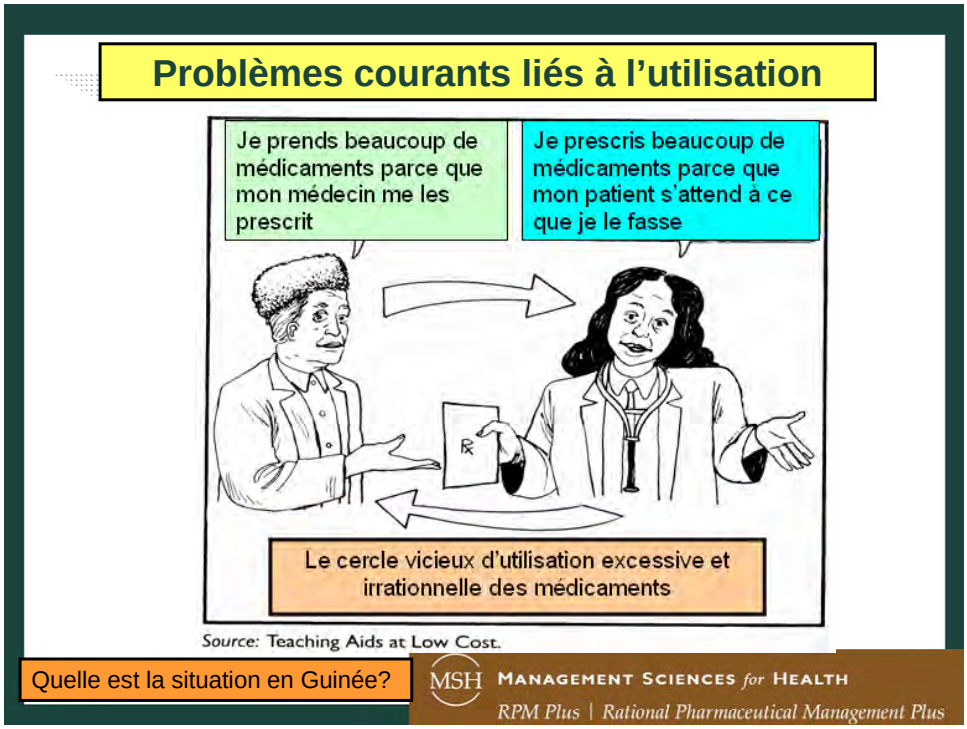
Problèmes courants liés à l'utilisation
Je prends beaucoup de médicaments parce que mon médecin me les prescrit
Je prescris beaucoup de médicaments parce que mon patient s'attend à ce que je le fasse
Le cercle vicieux d'utilisation excessive et irrationnelle des médicaments
Source: Teaching Aids at Low Cost.
Quelle est la situation en Guinée?
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Système d'information pour la gestion

- Système organisé pour collecter, traiter, rapporter et utiliser l'information pour les prises de décision
- La disponibilité de l'information est capitale pour la coordination des éléments du cycle de gestion des produits de prise en charge VIH/SIDA, TB et Palu
- La disponibilité de l'information permet de suivre les indicateurs de performance du programme
- La simplicité du système d'information facilite l'analyse des données et les prises de décisions

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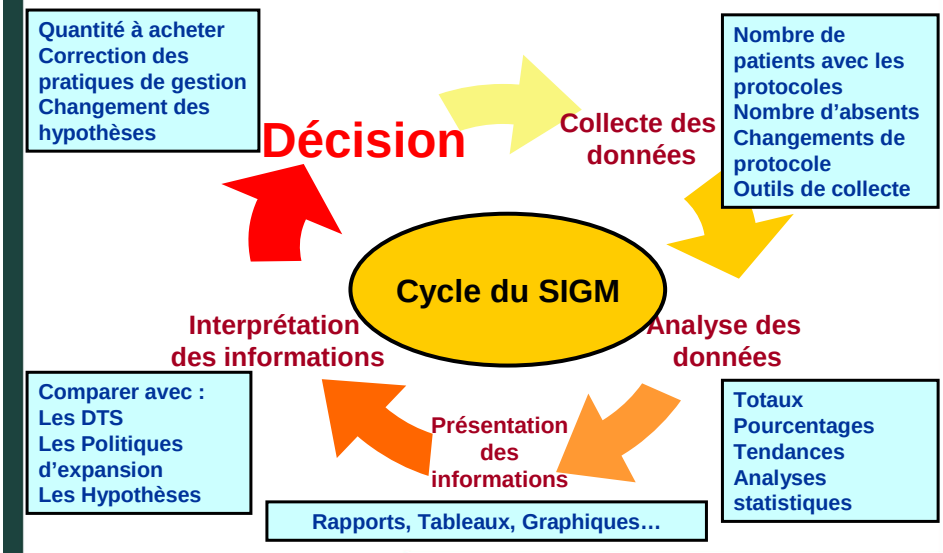
Système d'information pour la gestion



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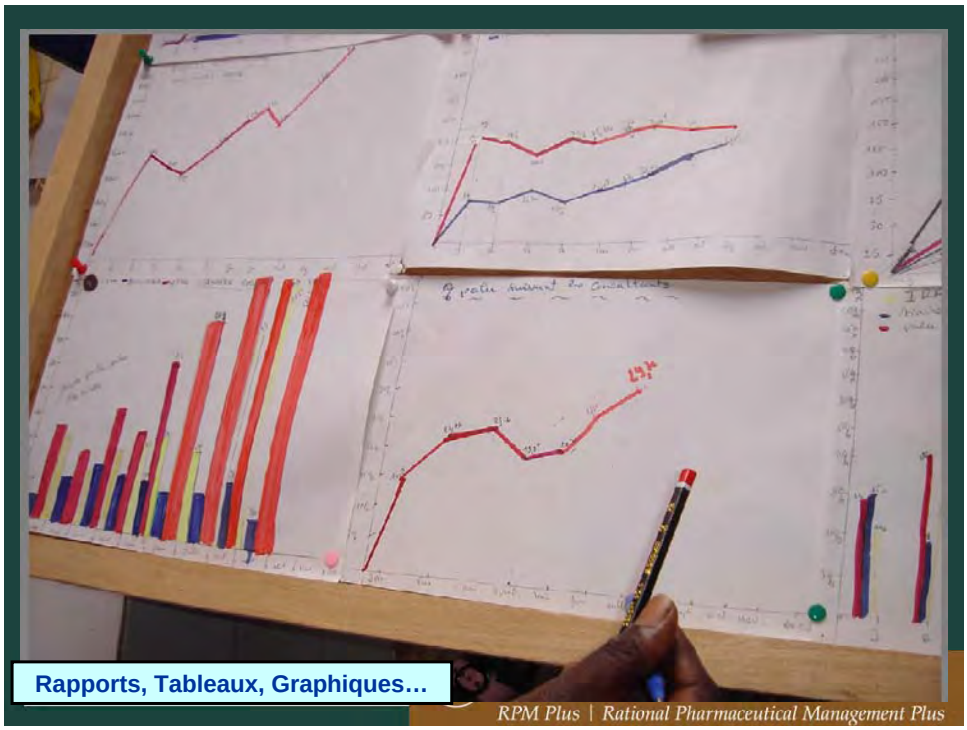

Système d'information pour la gestion

- **Données minimum sur les produits**
  - Quantité en commande ou en rupture de stock
  - Etats de stock avec les dates de péremption
  - Quantité de produits livrés vs aux quantités commandées
  - Produits dispensés par rapport au nombre de patients vus
  - Pertes dues au gaspillage, quantité périmée/détériorée
- **Données minimum sur les patients**
  - Nombre de patients nouveaux - adulte et enfant; homme et femme; type de service; régime/traitement
  - Nombre de patients en cours de traitement selon les régimes ou protocoles - adulte/enfant
  - Changement a un nouveau médicament/régime
  - Nombre de patients guéris, perdus de vue, décès, transferts
  - Pour les formulations liquides ou pédiatriques, nombre de patients recevant les produits

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Problèmes courants liés au SIGM

- **Problèmes liés à la collecte de l'information**
  - Manque/absence d'outils appropriés
  - Complexité et nombre excessif des outils existants
  - Personnel non formé à l'utilisation des outils
  - Manque de motivation du personnel
  - Système non adapté à l'expansion des programmes ou aux changements épidémiologiques
  - Absence de procédures d'archivage et de rapport
- **Problèmes liés au traitement de l'information**
  - Personnel non qualifié
  - Manque de matériel/équipement
  - Absence de méthodes pratiques d'analyse
- **Problèmes liés au système de transmission des rapports**
  - Faiblesse du circuit de l'information
  - Manque de compétence du personnel
  - Manque de motivation

Quelle est la situation en Guinée?

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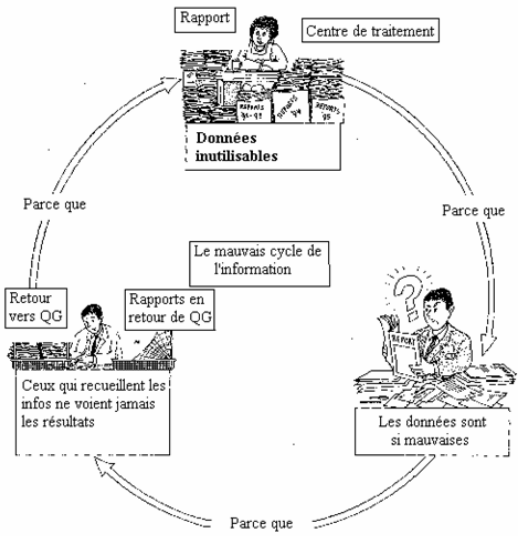
Problèmes courants liés au SIGM



Quelle est la situation en Guinée?

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Méthodologie de l'étude de la gestion des produits du FM

- Revue de la documentation:
  - Evaluation du système logistique des contraceptifs, produits VIH/SIDA et IST dans le cadre du développement du projet PRISM (MSH-1998)
  - Evaluation des systèmes d'information logistique pour la gestion des médicaments essentiels en Haute Guinée et en Guinée Forestière (MSH-1999)
  - Evaluation des besoins en produits pharmaceutiques des structures sanitaires de la Guinée (Y. Doumbouya-2006)
  - Directives Nationales de Traitement du Paludisme (PNLP/MSPM)

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Méthodologie de l'étude de la gestion des produits du FM

- Revue de la documentation:
  - Directives de Traitement Standard pour la PEC des PVVIH
  - Rapport d'activités du PNLP 2005 (PNLP/MSPM)
  - Registres de consultations générales
  - Registre de consultations prénatales
  - RUMER
  - Différents formulaires de gestion de médicaments

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Méthodologie de l'étude de la gestion des produits du FM

- Interview/meetings:
  - CCM/Guinée
  - Staff PNLP, PNLT et PNLS
  - Directeur et Gestionnaires de stock PCG
  - Autorité de régulation des activités pharmaceutiques (DNPL)
  - Autorité responsable du contrôle de qualité
  - SSEI (MSP)
  - Intervenants-clés dans le développement des trois programmes

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Méthodologie de l'étude de la gestion des produits du FM

- Interviews guidées
  - Pour chaque programme, utilisation d'un guide questionnaire centré sur les ressources humaines, la supervision, les pratiques d'enregistrement de stock et de gestion, l'informatique de gestion, le système de rapport, le circuit et l'utilisation de l'information
- Observation directe
  - Vérification de l'utilisation des outils de gestion
  - Vérification du mode de stockage et de conservation des produits des trois programmes
  - Vérification de la concordance entre stock physique et stock théorique

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Méthodologie de l'étude de la gestion des produits du FM

- Visites de terrain
  - PCG/Conakry
  - PCG/Labé
  - 1 centre de prise en charge des PVVIH
  - 1 centre de prise en charge de la tuberculose
  - 1 centre de prise en charge du paludisme

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Limites de l'étude

- Nombre de sites à visiter non représentatif de l'ensemble du pays
- Etude diagnostique plutôt qu'une enquête ou une évaluation du secteur pharmaceutique
- Résultats basés sur des observations plutôt que sur l'évaluation d'indicateurs

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Conclusions

- Les défaillances d'un seul maillon du cycle de gestion ont des effets de disfonctionnement sur tout le système pharmaceutique en général
- La bonne performance des programmes est dépendante d'une gestion rigoureuse des médicaments et autres produits pharmaceutiques
- La performance des trois programmes est dépendante d'un SIG capable de générer et d'intégrer des données sur les pratiques du personnel en matière d'approvisionnement, de stockage et de distribution, de consommation, d'utilisation des services, aussi bien que les pratiques et habitudes des patients

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Produits stockés sur les balcons

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Produits stockés sous un arbre
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ANNEX 2. DOCUMENTS CONSULTED

1. Arrêté No. 7444/MSP/SGG portant institution du Contrôle de Qualité Obligatoire des Médicaments, Dispositifs Médicaux et autres produits de santé en République de Guinée

2. Arrêté No. 10894/MSP/SGG portant Organisation et Fonctionnement du Département de Chimie Pharmaceutique de l'Institut National de Santé Publique

3. Avenant à la convention No 01/MSP/FM/06 relative aux achats de produits médicaux finances par le Fonds Mondial (Source : PCG)

4. Consultation restreinte – Appel d'offre 01/PCG/2007 (Source: PCG)

5. Contrôle et suivi de la qualité des médicaments en République de Guinée, 2006 (Source: LNCQM)

6. Convention Cadre entre la Pharmacie Centrale de Guinée (PCG) et l'Etat Guinéen, Avril 2004 (Source: PCG)

7. Convention relative aux achats de produits médicaux finances par le Fonds Mondial entre le Ministère de la Sante (Récipiendaire Principal) et la Pharmacie Centrale de Guinée – PCG (Agent d'approvisionnement)

8. Dossier d'appel d'offres international ouvert de présélection des fournisseurs – Appel d'offres No. 01/P.C.G/2007 28 mai 2007 (Source: PCG)

9. Fiche de monitorage des réactifs de laboratoire 2007 (Source : GTZ)

10. Fiche d'utilisation des ARV 2007 (Source : GTZ)

11. Guide pour la prise en charge clinique et thérapeutique de l'infection à VIH – Niveau 1 : Poste de santé (Source: CNLS)

12. Guide pour la prise en charge clinique et thérapeutique de l'infection à VIH – Niveau 2 : Centre de santé (Source: CNLS)

13. Guide pour la prise en charge clinique et thérapeutique de l'infection à VIH – Niveau 3 : Hôpital de référence (Source: CNLS)

14. Guide transitoire du traitement du paludisme simple (Source: PNLP)

15. Liste Nationale des médicaments essentiels et Liste complémentaire (Source: PCG)

16. Manuel de procédures de la PCG

17. Mécanisme de gestion des ARV et Réactifs de laboratoire dans le cadre de la prise en charge des PVVIH 2003 (Source: MSP/CNLS)

18. Mémorandum sur la restructuration du LNCQM (Source: LNCQM)

19. Mémorandum sur les taux de prestation de la PCG dans le cadre du Fonds Global (Source: PCG)

20. Plan de gestion des achats et distribution des produits médicaux (Source: PCG)

21. Politique nationale de lutte contre le paludisme en République de Guinée – juillet 2005 (Source: PNLP/MSP)

22. Plan de suivi de la performance et de la pérennité du système de gestion des achats et de distribution (Source: PCG)

23. Rapport de l'atelier de consensus sur l'adoption des ACT dans la prise en charge du paludisme en Guinée (Source: PNLP/MSP)

24. Rapport synthèse de l'atelier de consensus sur le changement de politique de traitement antipaludique (Source PNLP/MSP)

25. Statuts de la Pharmacie Centrale de Guinée (PCG)

26. Surveillance de seconde génération du VIH/SIDA 2003 (Source: MSP/CNLS)

ANNEX 3. LIST OF PERSONS MET

Dr. Youssouf Doumbouya	Technical Assistant, PCG
Dr. Housseni Bah	General Director PCG
Mr. Bangoura	Deputy Director PCG
Dr. Tall	Pharmacist PCG
Mrs. Sangare	Assistant Pharmacist PCG
Dr. Tangaly	Pharmacist PCG
Mr. Bagoureissy Tall	Computer specialist – PCG
Dr. Fodé Dramé	CCM President
Dr. Mahy Bary	General Director MoH
Dr. Haryrata Bah	Pharmacist DNPL
Dr. Binta	Coordinator PNLS
Dr. Djénabou Tall	Pharmacist PNLS
Dr. Léonie Coulibaly and staff	Coordinator PNLP
Dr. Keita	Coordinator PNALT
Mr. Somparé	Drug manager PNALT
Dr. Mamadou Camara	Chief Pharmacist Ignace Deen Hospital
Dr. Fatoumata Oury Diallo	Director of LNCQM
Dr. Helga Piechulek	Director PSLS-GTZ
Dr. Barry Ibrahima Sorry	Coordinator PSLS-GTZ
Dr. Aissatou Dieng	Technical Advisor GTZ
Mr. Nazirou Sacko	Procurement Officer UNICEF