Strengthening Medicine Registration in Benin: A Detailed Assessment

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About SIAPS

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

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Key Words

medicines registration, digital system, electronic medicines registration, medicines regulation

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CFA	Communaute Financiere Africaine
CTD	Common Technical Document
DPMED	Direction de la Pharmacie, du Médicament et des Explorations Diagnostiques
HIV	Human Immunodeficiency Virus
MA	Marketing Authorization
MOH	Ministry of Health
MSH	Management Sciences for Health
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SIGIP-ARP	Integrated System of Computerized Management of Regulatory Process in a Drug Regulatory Authority
SOP	Standard Operating Procedure
TB	Tuberculosis
USAID	US Agency for International Development
USD	United States Dollar
WAEMU	West African Economic and Monetary Union
WHO	World Health Organization

BACKGROUND

The Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is a five-year cooperative agreement funded by the US Agency for International Development (USAID) and implemented by Management Sciences for Health (MSH). The goal of SIAPS is to improve the availability of quality pharmaceutical products and effective pharmaceutical services through strengthening pharmaceutical systems.

Benin has a population of 10.9 million[1] people and its health sector faces challenges common to low- and middle-income countries, namely communicable diseases such as malaria, HIV and AIDS, and tuberculosis (TB). The gross national income of 820 United States dollars (USD) (2016)[2] is too low to support the health care needs of the population. This is further evident in the poverty and income inequality, where 47.3% of the people live below the international poverty line (2007–2011) on less than USD1.25 a day, with health expenditures amounting to 2.1% of the gross domestic product.[3]

Substantial investments have been made in the Benin supply chain management system over the past three years. In 2016, USAID/Benin requested that SIAPS provide support to the Benin Ministry of Health (MOH) and conduct a comprehensive assessment of the pharmaceutical supply chain. This led to the development of a National Supply Chain Strategic Plan. SIAPS also initiated targeted assistance to strengthen the pharmaceutical system to address needs created by the Ebola crisis, as well as pharmaceutical management needs for malaria and other priority health products.

Despite the above-mentioned interventions, Benin continues to experience weaknesses in its pharmaceutical management system. Assessments conducted in recent years have identified inadequate application of policies and regulations, human resources, regulatory skills, and information systems and tools to support the pharmaceutical regulatory system as key deficits. These critical elements ensure the availability of safe and quality-assured medicines and other health commodities that are vital to achieving better health outcomes.

In November 2016, at the request of USAID/Benin, SIAPS conducted a rapid assessment of the medicines registration system of the Direction de la Pharmacie, du Médicament et des Explorations Diagnostiques (DPMED) in Benin and made recommendations to address the challenges arising from its current information system. The assessment identified opportunities to improve regulatory processes for the efficient and transparent registration of medicines, including a recommendation to update medicines registration standard operating procedures (SOPs) and strengthen the electronic information management system to handle the registration process at DPMED. While digitalization can improve the management of regulatory information, its effectiveness depends to a large extent on the existence of adequate medicines registration procedures and a system that complies with regional and international standards. Support is required to improve the efficiency of the registration system, including document management and communication of regulatory information.

Most medicines are supplied through the public sector, with the private sector having only three major distributors. A private sector assessment conducted by Abt Associates revealed

[1] http://www.afro.who.int/pt/countries/benin
[2] World Development Indicators database, World Bank, December 15, 2017
[3] https://www.unicef.org/infobycountry/benin_statistics.html

that product registration is a centralized, highly controlled, and protracted process within MOH, which limits market competition and product availability, particularly of key pharmaceuticals. These registration and licensing processes are bureaucratic and time consuming.[4] It is imperative to identify the bottlenecks within the registration system and take a pragmatic approach to implement solutions that will improve the efficiency of the medicines registration system.

MOH oversees the department responsible for medicines regulation in the country known as DPMED. It is one of the seven departments in the MOH charged with developing and enforcing the national pharmaceutical policy and, through enactment of the law, is mandated to regulate all medicines on the market. The DPMED Director reports to the Technical Director who subsequently reports to the Secretary General of MOH.

DPMED's main objective is to ensure the availability and accessibility of quality medicines for the population. To fulfill this mandate, the agency aims to strengthen its regulatory capacities through optimization of the registration of pharmaceutical products. Benin's current registration system shares the basic concerns common to most developing countries, including the capacity to assess and monitor the safety, efficacy, and quality of medicines and other health products. DPMED is faced with the following constraints:

- Lack of or insufficient traceability of dossiers and regulatory actions (e.g., the authorization to market a product is often difficult to find)
- Inconsistent and unsafe records archiving system
- Insufficient human resources
- Inefficient electronic management system

The Director of DPMED, Benin, expressed interest and willingness to strengthen the registration system for medicines and other health products by digitalizing the process through support from SIAPS; this is one of the major steps in improving the effectiveness of medicines regulation.

The purpose of SIAPS's technical assistance visit in August 2017 was to conduct a situational analysis regarding the findings and recommendations made after SIAPS conducted a rapid assessment in November 2016. The goal was also to develop appropriate recommendations and a plan for the implementation of Pharmadex software and the management system of the medicines registration process at DPMED, Benin.

[4] SHOPS Project. 2013. Benin Private Health Sector Assessment. Brief. Bethesda, MD: Strengthening Health Outcomes through the Private Sector Project, Abt Associates, Inc.)

METHODOLOGY

To assess the registration system at DPMED, critical documents were reviewed and key informants were administered the registration/marketing authorization (MA) component of the World Health Organization (WHO) Global Benchmarking Tool, version V, using the 2016 fact sheets. The assessment, conducted in August 2017, set out to establish and verify progress in the implementation of recommendations made after SIAPS's November 2016 assessment of the registration system.

A review of the SIAPS report from the November 2016 assessment provided information on the key recommendations and action plan for optimization and digitalization of the medicines registration system. The WHO Global Benchmarking Tool indicators on medicines registration/MA were administered through interviews with key personnel and meetings with senior management and relevant staff at DPMED.

The main objective of the work was to support planned and upcoming activities that SIAPS is conducting in collaboration with MOH through DPMED to strengthen its medicines registration system.

Specific objectives were to:

- Work with DPMED on the mapping and optimization of its medicines registration process

- Review and agree upon requirements and a plan for the implementation of Pharmadex software at DPMED

RESULTS

Policies and Legal Framework for Medicines Registration

National medicines policy in Benin covers aspects related to medicines regulatory control, registration, procurement, and quality assurance, together with a plan for implementation. The laws governing the regulation of medicines in Benin are provided for in several ordinances and decrees, as specified in table 1.

Table 1. Pharmaceutical laws and regulations in Benin

No.	Year	Source	Wording
Regional West African Economic and Monetary Union (WAEMU) community regulations			
	2010	WAEMU	Regulation 06/2010/CM/ WAEMU of October 1, 2010, on the procedures for the approval of pharmaceutical products for human use in the WAEMU Member States
National laws (#1 is an order, the rest are decrees)			
1	1975	President of the Republic	Ordinance 75-7 of January 27, 1975, on the medicinal products in Dahomey
2	1975	President of the Republic	No. 75-21 of January 27, 1975, of application of Order No. 75-7 of January 27, 1976, containing the scheme of medicines in Benin
3	1989	President of the Republic	No. 89-307 of July 28, 1989, on approval of the statutes of the procurement of essential drugs and medical consumables
4	1997	President of the Republic	No. 97-632 of December 31, 1997, for the registration of human medicinal products in the Republic of Benin
5	2001	President of the Republic	No. 2001-036 of February 15, 2001, laying down the principles of ethics and conditions of exercise beyond traditional medicine deterioration in Benin
6	2003	President of the Republic	No. 2003-515 of December 1, 2003, approving the statutes of the laboratory
7	2006	President of the Republic	No. 2006-396 of July 31, 2006, Republic of Benin presidency of the attribution, organization, and functioning of MOH
8	2016	President of the Republic	No. 426 of July 20, 2016, on the responsibilities, organization, and functioning of MOH
Ministerial orders			
1	2013	Health Minister	Order No. 095/MS/DC/SGM/CTJ/DPMED/SA of May 6, 2013, on the responsibilities, organization, and functioning of DPMED
2		Minister of Public Health	4182/MSP/DC/DPHL/SPM public cabinet establishing assignments and operation of the technical commission of drugs
3	2002	Health Minister	6691/MSP/DC/SGM/DTC/DRFM/DPED/SPM appointment of members of the Technical Commission of Medicines
4	2007	Health Minister	No. 1801/MS/DC/SGM/DTC/DPM/SA of February 20, 2007, bearing responsibilities, organization, and functioning of the Pharmacy and Medicine Directorate
5	2012	Health Minister	0311/MS/DC/SGM/CTJ/DPMED/DA/SA of June 13, 2012, laying down detailed rules for the approval of cosmetic products in the Republic of Benin
6	2012	Health Minister	0343/MS/DC/SGM/CTJ/DPMED/DA/SA of July 10, 2012, laying down detailed rules for the approval of nutritional supplements in the Republic of Benin
7	2014	Health Minister	No. 249/MS/DC/SGM /CTJ/DPMED/DA/SA of June 26, 2014, establishing the terms of reference, composition and functioning of the Expert Committee on the Evaluation of Applications for the Accreditation of Medicinal Products for Human Use
8	2015	Health	No. 239/MS/DC/SGM/CTJ/DPMED/DA/SA of June 17, 2015,

No.	Year	Source	Wording
		Minister	establishing the powers, organization, and functioning of the National Commission for Medicines
9	2016	Health Minister	No. 0406 fixing the fees for the approval of pharmaceutical products for human use and the way in which they are used
10	2017	Health Minister	No. 001/MS/DC/SGM/CTJ/DPMED/SA/ 006SGG17 of January 30, 2017, bearing responsibilities, organization, and functioning of DPMED
Circulars (#1 is a memo, the rest are circular notes)			
1	2012	Director, DPMED	Memorandum 1230/MS/DPMED/DA/SA of December 3, 2012, implementing Regulation 06/2010/CM/WAEMU on the procedures for the approval of pharmaceutical products for human use in the Member States of WAEMU
2	2013	Director, DPMED	MS/DPMED/DA/SA circular of February 3, 2013, of DPMED relating to the receipt of applications for variations in MA
3	2015	Director, DPMED	Circular letter 009/MS/DPMED/DA/SLRGP/SA of January 6, 2015, on the MA for cosmetic products

To enforce compliance, DPMED follows both the regional community regulations issued by WAEMU in 2010 and those issued by the Republic of Benin, in addition to ministerial orders. The link between regional community regulations and implementation at the national level was through a ministerial memo dated December 2012, without reference to a national decree or regulation.

In January 2017, MOH issued regulations providing a clear description of the roles and responsibilities expected from DPMED. The legal provisions, which direct that medicines cannot be marketed or placed on the market unless they are duly registered by DPMED or have been granted MA, are available but are spread out across several decrees and ministerial orders.

Ordinance No. 75-7, January 27, 1975, the Drug System in Dahomey, Chapter III: Registration of drugs, Article 12: (1) specifies that, "No pharmaceutical specialty can be brought into Dahomey until fulfillment of registration at the Ministry of Public Health (Directorate General of Pharmacies). However, unregistered drugs may be imported by special permission with respect to international aid. Similarly, unregistered drugs can also be imported and used for purposes of therapeutic trial in conditions that will be set by decree. (2) The registration will be granted to products with no danger to the health of the population and of real therapeutic interest and a character of novelty and originality than those already on sale in the country."

Legal provisions are currently in place, which mandate that all medical products require registration/MA before they are placed on the market, as well as the applicable fines, charges, penalties, and sanctions in the event of non-compliance. The regulation requires that dossier applications for MA be submitted in the common technical document format.

Article 13: "Violations of the provisions of Article 12 above, and orders made pursuant to this article, are punishable by imprisonment for one to six months and fees of 100,000 to 5,000,000 Communaute Financiere Africaine (CFA) francs."

Legal provisions have been published and implemented and are applicable to all medical products. The evidence of registration or MA was available in the form of a registration number and an MA certificate.

Guidelines offering guidance to applicants on the registration of medicines have not yet been developed.

Human Resources Capacity

Roles and responsibilities of DPMED, the department responsible for registration/MA activities and their placement on the market, are specified in the newly established regulation No. 001/MS/DC/SGM/CTJ/DPMED/SA/006SGG17 January 30, 2017, which bears the responsibilities, organization, and functioning of DPMED. There is a legal basis for the organizational and governance structure within MOH that allows for the exchange of information within DPMED. The arrangement establishes the roles and persons within DPMED responsible for the major registration activities, and how their roles relate to the governance structure of the organization, as well as to the laboratory quality control and inspectorate activities.

The human resource capacity of DPMED was reviewed with respect to the number of personnel, their composition, their skill set and experience, as well as their specific areas of expertise to perform registration/MA functions. The number of human resource positions involved in the medicines registration process included five administrative secretaries, two pharmacists employed on permanent basis, four pharmacists on contract basis, one nurse, and one computer scientist. The contracts for the four pharmacists are due to end in 2018.

The competency skill mix is not adequate to carry out the process of medicines registration and the systems/structures to ensure appropriate placement of staff with respect to competence and skills were not in place. Additionally, the professional profiles of the human resources engaged in registration/MA activities were not documented. The level of education and skills/expertise to perform a particular function in the registration/MA process were not adequate given the number and qualification of staff currently available (table 2).

Table 2. DPMED medicines registration human resources mix

No.	Activity	Qualification/Level	No. of Staff
1	Receipt of Applications	Administrative Secretary	5
2	Screening of Applications	Pharmacists (Contract)	4
3	Allocation of Dossiers	Pharmacist (Head of Legislation, Regulation, and Pharmaceutical Governance)	1
		Nurse (Head of Quality Control and Pharmacovigilance Division)	1
4	Administrative Assessment	Pharmacists (Contract)	4
		Nurse	1
5	Issue of Registration Certificates	Director	1

There was no clear appointment for the head of medicines assessment and registration in the organogram, although the head of quality control and pharmacovigilance division seemed to take on the managerial role for the registration division.

Technical evaluation was carried out by a statutory technical committee comprised of experts from various scientific disciplines, and review was conducted by the National Commission

for Medicines, which is responsible for making recommendations for granting approval or rejection of medicines.

Duties, functions, responsibilities, and necessary competencies were established and updated in the respective job descriptions for only the two heads of the registration department. There were no job descriptions for the officers involved in evaluation of medicine dossiers.

Training was reportedly undertaken on a regional basis once a year under WAEMU. The content of this training was not based on a training plan derived from assessment of need. It was noted that there was no training plan/matrix for DPMED staff and no records of the staff training activities were maintained.

Standard Operating Procedures for Medicine Registration

Establishing SOPs for the medicines registration process is key to ensuring consistency, orderly processing of applications, and effective execution of all registration activities within the organization. Regulations required that DPMED establish procedures for receiving and evaluating dossier applications. Procedures are required for the following stages of the medicines registration process:

- Receiving dossier applications for MA of medicines
- Screening dossier applications
- Evaluating and registering of medicines
- Completing post-registration activities including variations, renewals, suspensions, withdraws, and cancellations to registered medicines

Procedures for registration of medicines for human use were well specified in Annexes I, II, and III of Regulation No. 06/2010/CM/WAEMU.

Documented procedures, including forms and checklists used in the assessment of the different parts of the registration applications, as well as in the assessment of requirements for specific classes of medical products at the national level, were not fully developed nor in place. A checklist used for screening dossier applications was in place, however, it was not evident that the checklist was used in the screening process based on the records presented. The scope and extent of the assessment process with respect to MA applications received and processed through both routine and non-routine pathways were not clearly defined. Non-routine pathways involve processing of fast-track applications, among others.

At the time of the verification there were 6,300 products on the register. However, there seemed to be duplication of records and the information was incomplete for some records. It was not easy to determine the backlog at a single time point. The timelines for the registration process flow were specified in the WAEMU regulations as 120 days, however, it was difficult to track and trace the time that applications were handled from receipt to the outcome of the evaluation and decision by the National Commission for Medicines.

According to Regulation No. 06/2010/CM/WAEMU, Article 16, the registration validity period was defined as five years from the date of approval. Documented procedures to assess the various classes of variations were not available. Furthermore, there were no documents in place to ensure that the same set of criteria were used to assess registration applications regardless of source/origin (foreign, domestic) and/or destination of the medical product (public/private).

DPMED has a Technical Experts Committee comprised of external experts who are mandated to evaluate registration applications under the legal provision in Article 7 of the WAEMU 2010 regulations. No technical assessment of the registration is undertaken by DPMED internally, but rather, only administrative assessments, including receiving and screening of applications. Ministerial Order No. 249/MS/DC/SGM/CTJ/DPMED/DA/SA of June 26, 2014, established the terms of reference as well as composition and functioning of the Expert Committee on the Evaluation of Applications for the Accreditation of Medicinal Products for Human Use. Specific procedures for the scope of the Committee's scientific contributions and review activities, as well as the program of work, need to be documented.

The National Commission for Medicines was legally responsible for validating the work of the Technical Experts Committee.

The WAEMU Regulation 06/2010/CM/WAEMU of October 1, 2010, specified different pathways to handle the various kinds of medicines. Proprietary medicines and vaccines undergo a full evaluation including submission of Common Technical Document (CTD) module 1: administrative and product information; module 2: overview and summaries; module 3: quality; module 4: non-clinical study reports; and module 5: clinical study reports. Generic medicines applicants do not need to submit module 4.

After reviewing available documents and interviewing select personnel, the evaluation team observed that there were no documented SOPs being followed by registration personnel. The registration process described and demonstrated through a presentation of the electronic information system (i.e., Integrated System of Computerized Management of Regulatory Process in a Drug Regulatory Authority [SIGIP-ARP]) outlined the following stages:

1) Payment of required fees to the Ministry of Finance

2) Submission of the dossier in hard copy and on a CD together with evidence of payment to the administrative secretary

3) Screening by the registration officer

4) Dossier evaluation by the Technical Experts Committee

5) Review by the National Commission for Medicines

6) Issuing of registration certificate/rejection letter by the DPMED Director (pending approval or rejection, respectively)

The availability of procedures and other tools is shown in table 3.

Table 3. Availability of registration procedures and tools

No.	Registration process stage	SOP/checklist/report template	Available & acceptable (A) Needs improvement (NI) Not available (NA)
1	Receipt of dossiers	Appointment form, checklist for receipt of dossiers including confirmation of payment, paper/electronic copies in CTD format, and samples	NA
		Issue reference number for the various types of medicines or reject application	NA
2	Screening of dossiers (Administrative Assessment)	Procedure for administrative assessment of applications	NA
		Checklist for administrative assessment of applications	NI
3	Submission of samples to the quality control laboratory	Procedure for sending samples to the laboratory	NA
		Laboratory request template	NA
		Laboratory report template (certificate of analysis)	NI
4	Technical evaluation	Procedure for technical evaluation of applications	NA
		Evaluation report template	NI
5	Review by the National Commission for Medicines	Procedure for review by the National Commission for Medicines	NA
		Review report template	NI
6	Issuance of MA	Procedure for issuing regulatory decision	NA
		MA certificate template/letter	A

The procedures were found to be non-compliant with international best practices, in that there were no designated officers to receive and screen dossiers. Documented procedures were either not available or needed improvement, with the exception of the MA certificate template. Dossier evaluation was handled entirely by the Technical Experts Committee, which would meet at specified times to evaluate and make recommendations on medicines registration.

Accountability, Transparency, and Communication

Mechanisms should be in place to ensure that information on registration and/or MA applications—including authorized, suspended, rejected, and completed applications—are published to promote transparency and information sharing among stakeholders and potential stakeholders, such as retailers and patients. This approach builds trust between all those involved.

A list of medical products registered and/or granted MA is available in SIGIP-ARP. The list is updated after the products are granted registration status rather than on a regular basis. There were no SOPs providing guidance on how to enter information or the type of information to enter in the database (e.g., product brand name, International Non-Proprietary Name, registration or MA number or certificate, validity period of the registration or MA, active ingredient, manufacturer and potency/concentration). Additionally, the list was neither published nor accessible to the public. The DPMED website was no longer functional and the information was also not available on the MOH, Benin website.

Performance Monitoring

Performance monitoring ensures that all activities within the MA functionality are subject to quality controls and other checks to reduce errors and ensure that the processes, as well as the results at the various stages/phases of the registration application processing flow, are consistent in order to generate an assured output. This creates consistency in the regulatory performance of registration or MA functions, as well as reliable outputs. Performance monitoring activities include receipt of registration applications, acknowledgement of registration applications, processing/evaluation/assessment of various parts of applications, generation of recommendations following the evaluation/assessment process, approval/deferral/rejection of registration applications, issuance of registration or MA numbers and certificates, and the publication and public accessibility of summary product characteristics-like information and summary technical evaluation reports.

Performance indicators with corresponding justifications had not been established or implemented along the entire registration/MA activity chain. Staff members involved in registration and/or MA functions were not aware of the indicators, nor the procedures used to monitor and evaluate performance.

Information Management

A database of registered medicines existed containing the corresponding details and information on applications received, approved, and rejected. However, the data were incomplete or duplicated and it was not possible to generate reports on medicines applications received, approved, suspended, or withdrawn from the market. SOPs on essential information to maintain on the database and the appropriate time period were not available. Authorization was required to access information and to update the database, however procedures to monitor and reflect changes had not been documented.

Currently, SIGIP-ARP, a digital system, is in use within DPMED. The system is intended to be regional in the WAEMU countries. It is installed on a local server connected to a LAN that covers a select number of DPMED offices. Due to system performance, the number of staff who can concurrently work on the system is limited to one. The available server is a standard desktop computer (HP Elite Desk) running Windows 7 and boosted with 12 GB RAM and 1TB SATA hard drive. This will not be sufficient for all staff to work concurrently on SIGIP-ARP. Once the server is upgraded, DPMED's current computers will be sufficient to run the SIGIP-ARP application.

DPMED is working with two technical contractors: one for networking and one for electrical installations. These contractors have set up a network switch and installed and truncated the proper cables through select offices. Internet connectivity is intermittent.

Although the SIAPS assessment and technical assistance visit in November 2016 recommended that DPMED implement Pharmadex—registration information management software developed and supported by SIAPS—follow-up discussions with DPMED's top management during the current visit indicated that the agency preferred to improve the use of SIGIP-ARP rather than implement a new system.

The effectiveness of digital automation, regardless of the specific system, relies on manual processes that are already functioning, instituted, and well documented. When such measures are in place, a digital system can then be introduced to manage information and monitor performance of the medicines registration process. In Benin, the manual system can be improved in many areas, as previously described in this report, which will in turn improve the automated system.

RECOMMENDATIONS

The November 2016 assessment conducted by SIAPS at DPMED set out to analyze and understand the regulatory information management system for the registration of medicines in Benin, to make appropriate recommendations, and to propose an action plan based on the results obtained. Based on observations and findings from the assessment carried out in August 2017, it was noted that, within the nine-month period, implementation of the 2016 recommendations had not been initiated. The assessment team therefore makes further recommendations (in italics) for follow-up and implementation, in addition to those made in 2016:

R1. Strengthen human capital to provide well-trained and motivated staff to DPMED to better enforce medicines registration regulations.

Achieving a successful medicines registration system will depend to a large extent on strengthening human resources.

- Consider different options for contractors working at DPMED:
    - Raise salaries to align with salary grids established for permanent civil servants and grant equivalent benefits to avoid frustration and demotivation
    - Integrate them as permanent officials.
    - Recruit them for a time as "embedded staff at DPMED through a donor/implementing partner" and then integrate them as permanent officials.
- Recruit additional staff, including pharmacists and computer scientists.
- Develop and implement a plan for in-service training of staff in the scientific evaluation of MA applications.
- Request that USAID support staff training on accelerated registration procedures for prequalified medicines and vaccines.
- Develop a human resources development plan.
- Establish a team dedicated to improvement of the data management system (e.g., technical staff, IT).

Achieving a successful medicines registration system will depend to a large extent on strengthening human resources, including establishment of a human resource training plan to keep up with the dynamic pharmaceutical industry. Contracts for the four contracted registration personnel, which are ending in one year's time, could be extended for another term as the Ministry of Public Service works to recruit more staff for the department.

R2. Improve the legal framework:

- Clarify procedures for implementing community and international regulations.

- Clarify the delegation of regulatory powers by DPMED, particularly with regard to the direct application of community regulations (WAEMU, Economic Community of West African States) and decisions on the marketing of medicines by the DPMED Director.

- Update regulations and provide for simplified registration mechanisms for medicines included in the national list of essential medicines and those prequalified by WHO. This procedure would apply to purchases made by United Nations agencies and other agencies using a similar approach.

- Revise the status of DPMED to strengthen its powers, including those of inspectors. In order to strengthen DPMED's regulatory power, the legislation should allow DPMED to make decisions within its area of authority without requiring prior approval from the Minister of Health or other authorities. In addition, establishing DPMED as an organization with management autonomy could allow for increased investment of resources, including recruitment efforts and incorporating motivational mechanisms to strengthen its institutional regulatory capacities. In view of its current status, DPMED does not enjoy free administration and autonomous management of its human and financial resources. As a result, it carries out its missions with budget constraints that may limit its performance.

Revise the legal framework to establish DPMED as an organization with management autonomy, thus enabling increased investment of resources, including recruitment efforts and the establishment of motivational mechanisms to strengthen its institutional regulatory capacities.

The direct application of regional community regulations (WAEMU) should be linked with a ministerial regulation at the national level. The ministerial circular could be strengthened in this regard.

The power to register medicines could be officially delegated to the Director of DPMED in order to reduce delays in the registration process.

Abridged registration procedures for priority medicines and others approved by WHO or competent national regulatory authorities should be established as stipulated in the WAEMU regional regulations.

R3. Optimize processes:

- Develop and/or revise and implement procedures, guidelines, and forms to strengthen the implementation of the legal and regulatory framework. To improve transparency, it would be necessary to develop and publish procedures and criteria for decision-making concerning applications for MA, renewal, and variation. Revise the MA application form, prepare an MA renewal form, create checklists of variation applications, and consolidate the Marketing Authorization Decision and Marketing Visa into a single administrative act. Develop procedures for generic drugs, as well as new products and new presentations, uses, and dosages, etc.

- Delete mechanisms and procedures that do not add value and that consume resources and time (e.g., blue cards, dual registration authorization, quality control results as a prerequisite for the review of applications by the Technical Experts Committee)

- Describe the roles of users in the registration system to ensure efficiency, transparency, and accountability. This would reduce the likelihood of confusion, duplication of tasks, and conflicting answers to MA applicants in similar situations. It would also strengthen the mechanisms for internal evaluation of medicinal products by DPMED.

Develop and/or revise and implement guidelines, SOPs, and forms to strengthen the medicines registration process at the national level based on provisions in the national and regional regulations and international best practices. The following guidelines and procedures should be established at the national level for:

- *Submission of documentation for registration of pharmaceutical products*
- *Notifications and variations to a registered pharmaceutical product*
- *Submission of documentation for registration of pharmaceutical products prequalified by WHO and approved by International Council on Harmonization member states*
- *Receipt, screening, evaluation, and issuance of an MA including archiving of records and documents. Specific procedures should be established for proprietary medicines, generic medicines, and vaccines.*
- *Suspension, withdrawal, or cancellation of a medicine from the register as well as the appeal procedure*

The following checklists, forms, and report templates should also be developed:

- *Checklist for receipt of dossier applications*
- *Checklist for screening of dossiers*
- *Dossier evaluation report templates*
- *Expert opinion report templates*
- *Format for the medicines register*
- *Forms for storage and retrieval of applications*

R4. Reform the computerization of regulatory functions (registration and control of imports):

- Recover the SIAMED data, which was abandoned, and Excel data that was restricted with an inaccessible password.
- Transformation of databases (verification, cleaning, and preparation of data inherited from the current system [SIGIP-ARP, SIAMED, Excel]).
- In the medium term, deploy a robust IT management system to contribute to regulatory decision-making and enforcement or shortening of time required to make a regulatory decision, among other things. We recommend Pharmadex for this purpose. Pharmadex is an integrated web-based management solution that facilitates the management, dissemination, and sharing of regulatory information related to the different functions of

the national medicine regulatory authorities. It promotes, among other things, transparency, accountability, and traceability in the field of drug registration.

- Install and maintain a database server to store and secure information, particularly information related to MA dossiers and authorizations of establishments.

- Strengthen the Laboratoire National de Contrôle de Qualité des médicaments et consommables médicaux equipment capabilities and automate the management of analyses.

Establish a server room within DPMED in preparation for installation of a newly upgraded server.

R5. Improve information on regulated medicines for regulated entities (manufacturers, wholesalers, pharmacies, nongovernmental organizations, hospitals, etc.)

Improve information dissemination on registered medicines by publishing a list of registered medicines in the public domain. The list of registered medicines, along with their specified information, would be available to stakeholders, including publication on the MOH website.

R6. Develop indicators for monitoring and evaluating the performance of DPMED in the implementation of regulatory functions for the registration of medicines.

R7. Develop a strategic plan to strengthen DPMED, including organizational structure as well as human and financial resources.

CONCLUSION

DPMED has demonstrated a willingness to improve the current medicines registration system amidst the prevailing challenges. The desired results require a concerted effort from MOH, Benin, with support from USAID's SIAPS Program. Significant results may be achieved through proper archiving of documents, establishment of country-specific procedures/guidelines for MA, and addressing server performance to enable improved operation of the current SIGIP-ARP software.

For the medicines registration system to function effectively, DPMED will need to recruit additional technical staff and implement a continuous training program for current staff to meet registration requirements at an acceptable level. In the long term, it would be advisable to segregate the medicine regulatory authority from the mainstream ministry for appropriate implementation and enforcement of the legislation governing control of medicines due to the efficiency in financial and human resource management.

Once the minimum requirements are in place, it would be appropriate to establish Pharmadex software, given its advantages over the current electronic medicines registration system.

ANNEX A. ACTION PLAN

Action	Person(s) responsible	Deadline (dd/mm/yyyy)
a. Formal appointment of a focal person on digitalization of the medicines registration process	Director, DPMED	15/09/2017
b. Establishment of a steering committee for optimization of the medicines registration process	Director, DPMED	01/10/2017
c. Proper archiving of product dossiers – hereunder organizing the containers and a storage system	Head, Head of Legislation, Regulation and Pharmaceutical Governance	25/09/2017
d. Advocacy for the recruitment of additional pharmacists as civil servants at DPMED and designation of personnel to perform dossier evaluation and product registration	Director, DPMED	01/11/2017
e. Review of DPMED registration SOPs in conjunction with registration personnel	Head, Head of Legislation, Regulation and Pharmaceutical Governance/SIAPS/ Consultant	15/12/2017
f. Training applicants on the guidelines for medicines registration process	SIAPS Team	15/11/2017
g. Training registration staff on SOPs for medicines registration process, including abridged process for medicines prequalified by WHO or registered by competent regulatory authorities	SIAPS Team/Consultant	15/12/2017
h. Establish power and network plugs in the proposed server room	Charlemagne Yemoa, DPMED	07/09/2017
i. Procure server equipment	Kim Hoppenworth, SIAPS	18/09/2017
j. Procure backup equipment Network Attachment Storage	Kim Hoppenworth, SIAPS	30/09/2017
k. Install and configure equipment	Kim Hoppenworth, SIAPS	22/09/2017
l. Transfer SIGIP-ARP to the server and make SIGIP-ARP manuals (administrator and users) available at DPMED for regular troubleshooting	SIGIP-ARP Developer and SIAPS	30/09/2017
m. Reconnect all staff to the newly installed SIGIP-ARP server	SIGIP-ARP Developer and Charlemagne Yemoa	31/10/2017
n. Evaluate the current software system (including comparison to alternative)	SIAPS	31/10/2017
o. Data entry of backlog and data quality checks	DPMED	31/12/2017

ANNEX B. ELECTRONIC MEDICINES REGISTRATION IMPLEMENTATION PLAN

ELECTRONIC MEDICINES REGISTRATION IMPLEMENTATION PLAN

Phase & Activity	Responsible	Deliverables	Timeline July 2017 to March 2018															
			Q3	Q4			Q1			Q2			Q3			Q4		
			J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Process Mapping and Requirements – Product Registration Module			X	X														
Conduct situation analysis of DPMED capacity with focus on product registration function and IT infrastructure	SIAPS		X	X														
Conduct a literature review on regulatory environment and existent system for registration of medicines	Kate	Pharmadex Implementation Plan	X															
Conduct a site visit to establish the current situation, validate the findings from previous rapid assessment report, and identify gaps and opportunities for introduction of Pharmadex at DPMED	Kim & Kate	Report on site visit and situational analysis			X													
Process optimization and Capacity Building – Product Registration Module								X	X	X								
Develop SOPs and technical tools, including forms, checklists, and templates, used throughout the product registration process	SIAPS, consultant, Kate Wonder DPMED	Finalized SOPs and supporting documentation, forms, checklists, and templates						X	X	X								
Infrastructure and Data Strengthening				X	X	X												
Establish server room				X														
Procure required hardware				X	X	X												
Configure all staff to connect to the server						X												
Performance Monitoring							X	X	X									
Develop indicators and report to monitor registration performance using SIGIP-ARP	SIAPS, DPMED	Report on key indicators					X	X	X									