

Professionalizing Health Logistics in Burkina Faso: Challenges, Implementation and Sustainability

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Abstract The management of information and logistics is an essential component of health product systems. In a context of limited financial resources and morbidity and mortality sustained by persistent diseases, it is necessary to strengthen health systems through competent resources, especially human resources (HR), to ensure performance, sustainability and independence from external funding. In Burkina Faso, a strong and lasting partnership between the Ministry of Health and the Bioforce Institute has existed since 2005 to address this issue. This partnership has created a favorable environment for the professionalization of health logistics and for the recognition of its significant role in health system performance. The objective of this article is to present this case study and share the lessons learned, to potentially inform other countries and partners interested in developing the HR for health supply chain management (SCM). The study starts with an analysis of the health supply chain context in Burkina Faso. It then explains the appropriateness of applying a transversal approach to strengthening the health system's HR for SCM and it describes the implementation of this approach in the country. Finally, results are presented and discussed. While health programs typically use their own logistics channels and implement vertical approaches to the health supply chain challenge, a transversal approach has been applied here to strengthening the national health system in its entirety and improve health outcomes in a sustainable manner. Since 2011, the Ministry and its partner have built on the *People that Deliver* global initiative and on other regional consultations to develop a three-year strategic plan at the national level and implement a systemic approach to logistics HR, which includes the development of pre-service training program in health logistics, the training and deployment of seventeen acting health logisticians in health districts in three pilot regions and at the central level, and the revision of the country's legislation to allow for the creation of the health logistician profession. While some years are generally needed for structural change to occur, several factors of success can be identified and benefit other similar initiatives: deep understanding of the context (here, public sector pharmacy technicians are key actors); awareness of the importance of logistics HR; government involvement; coordination with international efforts (here, through the People that Deliver Initiative); and benefits from pairing a national champion (the Ministry's General Directorate for Pharmacy, Drugs and Laboratories) up with a strongly committed partner (the Bioforce Institute) within the framework of a coherent strategy.

Keywords Supply Chain, Health Products, Logistics, Human Resources, Professionalization, Medical Equipment, Cold Chain, Distribution, Procurement

1. Introduction

Access to health products is one of the main priorities of the World Health Organization (WHO). Unfortunately, this guiding principle is undermined by stock-outs, lower quality drugs and weakness of the supply system: poor needs assessment, illegal circuits, non-compliant storage areas, lack of reliable information systems, lack of financial resources for procurement, etc.

In this context, global initiatives fighting diseases and, more particularly, striving to reach Millennium

Development Goals 4, 5, and 6, recognize the need for Health Systems Strengthening (HSS). One of the main objectives is to develop an effective and efficient supply system through institutional and organizational capacity-building which makes human resource (HR) development a strategic priority.

In countries with limited resources, the optimal use of health supplies can only be achieved through the professionalization of the people in charge of management and through increased versatility at peripheral levels in order to address priority needs. The aim is not only to strengthen existing capacity but also to fill gaps.

It is the analysis of these gaps, in compliance with WHO recommendations¹, that was the basis for Burkina Faso's

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¹ See technical report on WHO/AFRO consultations (Kinshasa, 2010),

innovative approach to strengthening health logistics through the creation of a new professional status: the health logistician profession.

2. Context Analysis: Burkina Faso's Health System

Burkina Faso is a landlocked country in the heart of West Africa. Its health system is pyramidal: the operational level is composed of more than 1,600 health centers, around 102 medical centers, including 42 with surgical services; the intermediate level has 9 regional hospitals; and the central level has three university hospitals and one national hospital.

The country is characterized by epidemic diseases, the increase of non-communicable diseases, and the constant threat of infectious diseases. By the end of 2012, HIV seroprevalence was estimated to 1.2% and the number of patients receiving antiretroviral treatment was estimated at 42,410, including 2,473 children. Malaria accounted for 45.4% of external consultations in health districts and was the first cause of hospitalization in both health districts and hospitals. The prevalence of global acute malnutrition was 11% in 2010 versus 21% in 2003. Finally, the crude mortality rate was 11.8‰, the child mortality rate was 91.7 for one thousand live births, and the infant and child mortality rate was 141.9 for one thousand live births.

An organized pharmaceutical supplies circuit is in place and its regulatory framework has been strengthened during the last five years. Human resources involved in this sector are essentially pharmacists and public sector pharmacy technicians who are present at all levels of the health pyramid. However, the health system still suffers from an unreliable logistics management and information system, poor management capacity, lengthy acquisition procedures, financial resource deficit for specific procurement, and challenging coordination of health product supply both upon arrival in the country and during distribution throughout the territory².

3. A Transversal Approach to Professionalizing Health Logistics

Assessing the performance of health structures and programs calls for a distinction between healthcare and the non-medical functions which affect the effectiveness of health activities. These non-medical functions, also called 'support' or 'logistics' functions³, cover three main areas:

technical equipment, medical equipment and the health products supply chain.

On the one hand, healthcare activities are carried out by standard professions – doctors, pharmacists and paramedics who benefit from universally defined professional frameworks⁴. These frameworks provide the basis for professional associations which have great medical and social influence. They apply transversally in the 'Program approach' implemented by international institutions i.e. across Programs for the Fight against HIV/AIDS, Malaria, and Tuberculosis, Maternal and Child Health, Reproductive Health, etc⁵.

On the other hand, logistics functions are general underpinned by a vertical approach. To ensure performance of the health supply chain, Health Programs often develop or generate their own logistics circuits. This approach has both strengths and limitations: if the logistics of these Programs is removed from complex supply systems in West African countries⁶, there only remains a narrow channel for health logistics at the national level. Yet, logistics HR are an essential factor of health system performance, sustainability and independence from external funding. They require a systemic approach to health system strengthening.

In Burkina Faso, while district health teams have the required 'standard' (medical) competences to meet health challenges, they are not designed to carry out logistics functions in a continuous, transversal and effective manner. According to many analysts, the district is a crucial level of the health pyramid but performance is often undermined by logistics.

Macro-economic analyses confirm local assessments showing that the final price of medicines can be strongly determined by the high add-on costs in the supply chain (UN; 2008). The billions of dollars which have been invested in health programs for decades are now put in perspective with health system deficiencies, low availability of medical equipment estimated at 40 to 80% (Shauna Mullally; 2013), cold chain inconsistencies, stock-outs, and other weaknesses of the supply chain⁷. The challenges raised by new vaccines, e.g. the increase of volumes (multiplied by five) and costs (multiplied by the twenty-four), are likely to result in the breakdown of supply chains already stretched to their limits. Global organizations are now convinced of the fact that professionalizing supply chain management (SCM) has become an imperative as much as an emergency (People that Deliver; 2012). Only a transversal approach, as in the case of doctors, pharmacists, nurses and midwives, can address the

available from: <http://www.resolog.org/content/rapport-technique-atelier-de-con-sensus> (French); and WHO presentation at the 2nd African Regional Conference on Immunization (Ouagadougou, 2010), available from: http://www.bioforce.as-so.fr/IMG/pdf/intro_log_sante.pdf (French).

2 See MoH presentation at the People that Deliver Global Positioning and Harmonization Conference (Geneva, 2011), available from: <http://peoplethatdeliver.org/sites/peoplethatdeliver.org/files/dominique/files/Burkina%20Faso%20%E2%80%93%20Professionaliser.pdf> (French).

3 2010 WHO/AFRO consultations, *ibid*.

4 Professional frameworks include competency frameworks, pre-service and in-service training, certification (diplomas), membership to professional networks, incentives, career prospects, etc.

5 These programs will be indicated by a capital letter in the remainder of the text.

6 See explanation of the complexity of some African supply systems available from the WHO website: <http://www.who.int/medicines/areas/coordination/partnerscoordination/en/index.html>.

7 See health supply chain assessments in developing countries available from the People that Deliver website: <http://www.peoplethatdeliver.org/content/health-supply-chain-assessments-developing-countries>.

challenge of logistics HR (Optimize; 2011).

When considering effective management of logistics functions, the question of outsourcing and collaboration with the private sector often arises. This question must be analyzed in context yet, regardless of the situation, outsourcing requires a professional approach to technical and procedural challenges, as well as the ability to contract the private sector effectively. Professionalizing logistics functions is not about promoting public sector technicians involved at all levels. It is about developing logistics managers able to identify and implement the best solutions in given contexts, to innovate and to adapt through time and as circumstances change. This should include the ability to organize logistics for health emergencies, take relevant prevention measures, and interact with other professions involved in the health system⁸. The HR challenge is above all about saving lives and logistics should no longer constitute an obstacle to access to quality healthcare.

4. Government Involvement at the National Level

Since 2005, Burkina Faso's Ministry of Health (MoH) has paid special attention to this issue and it has been working in close collaboration with several organizations to try and find sustainable solutions to the health logistics HR challenge.

In 2007, the establishment of the Bioforce Institute's 'Center of Expertise, Research and Development in Health Logistics' in the Hauts-Bassins region allowed for several programs to be unfolded in order to create a favorable environment for the professionalization of SCM and for the recognition of logistics functions as key factors of health system performance. First of its kind, the center's approach has been designed to support a systemic approach to human resources, segment by segment, through several compartmentalized Health Programs. Irrespective of the focus – Maternal and Child Health, Cold Chain Improvement, Hospital Maintenance, Fight against HIV/AIDS and Malaria, etc., priority is given to the integration of the human factor. For example, technical equipment delivery is the opportunity to strengthen competences in procurement, reception, commissioning, and maintenance⁹. Thematic training courses and the development of a virtual network, Resolog¹⁰, also contribute to the emergence of a professional community of health logisticians throughout health regions¹¹.

8 2010 WHO/AFRO consultations, *ibid*.

9 Within the framework of a three-year project aimed to support maternal and child health in the Hauts-Bassins and Cascades regions (2011-2013), implemented by Bioforce and with financial support from the French government and the Regional Council of the Rhône-Alpes region.

10 <http://www.resolog.org/> (French)

11 In Burkina Faso (Hauts-Bassins region), Senegal (Matam and Saint Louis), Mali (Tombouctou) and Madagascar (Antsinanana) within the framework of the Unit for discussions and partnership between the Rhône-Alpes region, West Africa and Madagascar (CEPRAOM); see: <http://www.rhonealpes.fr/180-cooperation-afrique.htm> (French).

Concerned about integrating its work at the international level, the MoH engaged in consultation with the WHO, UNICEF, UNFPA, and USAID. In June 2011, the MoH's General Directorate for Pharmacy, Drugs and Laboratories (DGPML) participated in the Global Conference untitled 'Meeting Tomorrow's Health Challenges through Workforce Excellence in Supply Chain Management' (WHO, Geneva). This was a decisive step which marked the establishment of a privileged relationship between the DGPML and the Bioforce Institute and the creation of a working group in charge of assisting the MoH in the elaboration of a policy aimed at improving the professionalization of health logistics managers. Since then, advocacy towards health authorities, technical and financial partners, and international organizations has been made within the framework of the People that Deliver Global Initiative (PtD)¹². In 2013, the Ministry joined the PtD Board of Directors and adopted its vision and objectives, therefore significantly raising the health logistician's profile.

As a result of this collaboration, the initial working group extended (DGPML, Bioforce Institute, DRH¹³, ENSP¹⁴, DSME¹⁵, DPV¹⁶, etc.) and a three-year national strategic plan for strengthening HR capacity in health logistics was elaborated. Once again, fundraising was made as part of a Health Programs (mainly supported by The Global Fund to Fight AIDS, Tuberculosis and Malaria) yet without losing sight of the main priority: sustainably strengthening the personnel in charge of logistics functions.

5. Results

The approach chosen by the country builds on the existing status of public sector pharmacy technician (PSPT), and more particularly on a 2008 decree which had never been implemented but theoretically gives PSPTs access to executive status. There was a mutual interest in matching PSPTs' competency framework to the priorities identified in the three main areas of health logistics and to cover the corresponding gaps. In synergy with the MoH's central administration, these professionals have been highly involved in efforts to match the framework with the executive position.

In 2013, the MoH started the elaboration of a new curriculum in health logistics, with technical support from the Bioforce Institute and financial support from "France Expertise Internationale". Recruitment for this training program will be launched through a regular public sector competition (Sinare; 2013).

In parallel, for the first time, seventeen health agents will be deployed in as many health districts in three regions and at the central level to ensure functional continuity. They will

12 <http://www.peopletthatdeliver.org/>

13 Human Resources Directorate

14 National School of Public Health

15 Directorate for Maternal and Child Health

16 Directorate for Prevention through Immunization

act as health logisticians on the basis of a multi-skilled competency framework and be recruited among PSPTs at the district level, with the help of local health actors (regional directors and district chief doctors), and therefore be given the opportunity to become executive PSPTs. Logisticians will bridge what has been the missing link between the other professions. They will be deployed in support to pharmacists, financial managers and health program managers. In the long term, they should develop effective solutions whose impact will be measured through the performance of Health Programs and efficiency in the use of allocated resources.

Finally, the legal texts governing health professions will be reviewed to introduce the new position and open access to other health professionals.

Among other objectives, these steps aim at increasing availability of equipment by 50%, redirect 1.5 to 3% of financial resources in custom and transit management to procuring essential medicines, increase by 70% the availability of products in specific areas, increase by 100% the notification of unwanted side effect, and reduce fuel costs by 25%.

Communication about implementation and, above all, results, at both national and international levels, will be the next step and is expected to be made through the PtD Initiative.

6. Discussion

The main thrust of Burkina Faso's strategy is to integrate the new position into public sector competition to guarantee health logisticians' salaries and career development: trained agents will be integrated into the health system and their career path will be subject to the same statutory and legal provisions as all other health professions. This commitment from the government was negotiated prior to the establishment of the project; a feature considered a sensible approach that could serve as a model to ensure sustainability of other similar structural changes elsewhere.

It is still too early to provide objective and scientific data on the benefit of this approach. Yet several observers already recognize that it is common sense and that it is necessary where exclusively Program-centered approaches are in place. Therefore, it seems appropriate to analyze the process and investigate potential benefits for other countries of the sub-region.

The first observation relates to timing. In 2006, an initial assessment of the logistics situation was conducted by the Bioforce Institute under the aegis of the WHO. From 2007 to 2011, the Ministry, and more particularly the DGPML, developed a privileged partnership with the Bioforce Institute and, as a result, the number of thematic training programs increased considerably, and field projects were implemented in the Hauts-Bassins and the Cascades regions. Since 2011, the Ministry has taken part in international efforts through the People that Deliver Initiative. In March 2011, an investigation was conducted on logistics HR

(Bioforce; 2011) and in 2013, seven years after the first assessment, multi-skilled logisticians are to be trained and deployed in seventeen health districts in the country.

This timing highlights the fact that structural changes take time to materialize harmoniously, especially with adherence from the main stakeholders. This is something that is very well known by experts from the field.

The second observation relates to global recognition of the importance of logistics, and more particularly growing awareness of the importance of the human resource factor, even in the absence of objective, quantitative data. In addition to the PtD Initiative, already mentioned above, the Optimize Project's 'Vision 2020' for future immunization supply and logistics systems includes a specific section on human resources (Optimize; 2011). In a similar vein, WHO/HSE/GCR initiated capacity-building in logistics for devastating epidemics on the basis of a multi-skilled reference framework¹⁷. The LOGIVAC project¹⁸, supported by the WHO and the AMP, implements recommendations made by the Bioforce Institute following assessments in five countries in 2006: it demonstrates commitment to HR issues by key organizations such as the Bill and Melinda Gates Foundation. Without being exhaustive, we can also mention dynamic networks such as IAPHL (International Association of Public Health Logisticians)¹⁹ and TechNet21²⁰, strong participation in thematic workshops, and steadiness in the WHO/AFRO approach to the professionalization of health logistics²¹.

This global recognition is a great opportunity for other countries which wish to follow the path laid out by Burkina Faso. While in 2006, recommendations on the need to professionalize logistics HR were very innovative and difficult to integrate into the Health Programs approach, Burkina Faso is now benefiting from a supportive international context. Therefore, it is very likely that it would be much easier now to create a favorable environment for the professionalization of health logistics in other countries as well.

Finally, the third observation underlines the importance of pairing a champion (here, the DGPML) up with a strongly committed partner (here, the Bioforce Institute) active at all levels – from advocacy at internal levels to action on the field – within the framework of a coherent strategy in a given country. Such a pair has complementary competences to initiate and drive change by combining local knowledge and international efforts. In other words, it seems appropriate for global initiatives striving to achieve structural changes to develop such partnerships in countries. The corresponding scheme is a structured network including the global level (international organizations and country representatives) and

17 Fourth Annual Consultation on Outbreak Control Logistics, WHO, November 7-9, 2012

18 <http://www.logivac.org/>

19 <http://iaphl.org/>

20 See agenda of the last meeting in Dakar, available from:

http://www.who.int/immunization_delivery/systems_policy/technet2013/en/

21 2010 WHO/AFRO consultations, *ibid*

the national level which should be mobilized and energized by the pair partners.

7. Conclusions

The human and sociological dimensions of health make it very complex and require concerted, consensual and contextual approaches. We recognize that the approach described above is not universal; however, we think it has the benefit of bringing an efficient and sustainable solution to strengthening the health system because it builds on existing organizational and institutional contexts. The creation of the health logistician profession and more generally the reorganization and strengthening of Human Resources for Health aims to improve health through an approach that involves on-going monitoring. This experience should therefore contribute to feed the debate on improving health performance, and more particularly on taking proper account of logistics functions.

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