Options Analysis for Integration of Oxytocin in the EPI Cold Chain in Mali

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Options Analysis for the Integration of Oxytocin the EPI Cold Chain in Mali

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Key Words

Post-partum hemorrhage, oxytocin, quality, integration, cold chain, EPI

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ACRONYMS AND ABBREVIATIONS

ASACO	Association de Santé Communautaire (Community Health Association)
ASCOMA	Consumer Association of Mali
CDW	*Cercle* distribution warehouse
CHC	Community Health Center
CRGS	Compte Rendu de Gestion de Stock (Stock Management Report)
CTD	Community Health Center Technical Director
DFM	Directorate of Finance and Equipment
DHS	Demographic and Health Survey
DPM	Directorate of Pharmacy and Medicines
DRH	Division of Reproductive Health
DV	dépôt de vente (sales depot)
EPI	Expanded Programme on Immunization
FELASCOM	Local Federation of Community Health Associations
FENASCOM	National Federation of Community Health Associations
FERASCOM	Regional Federation of Community Health Associations
GCPH	General Census of Population and Housing
HI	Health Inspectorate
IS	Immunization Section
MDG	Millennium Development Goal
MHTRT	Maternal Health Technical Resource Team
NDH	National Directorate of Health
NGO	nongovernmental organization
PPH	post-partum hemorrhage
PPM	People's Pharmacy of Mali
RDH	Regional Directorate of Heath
RHC	Referral Health Center
SDADME	Schéma Directeur d'Approvisionnement et de Distribution des Médicaments Essentiels (Master Plan for Procurement and Distribution of Essential Medicines)
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
UNICEF	United Nations Children's Fund
USAID	US Agency for International Development
WHO	World Health Organization

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We also extend our sincere thanks to the participants of the two working meetings for their interest and active participation.

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EXECUTIVE SUMMARY

Post-partum hemorrhage (PPH) still remains one of the major causes of maternal mortality, accounting for 35% of all maternal deaths.[1] The World Health Organization (WHO) has recommended oxytocin as the most effective medicine for the prevention and treatment of PPH, particularly for facility-based births. In line with this recommendation, most countries list oxytocin as the medicine of choice for prevention and treatment of PPH. Likewise, oxytocin figures on the essential medicines list of most countries, and oxytocin products are registered in-country.

Despite this favorable policy framework for oxytocin use, supply chain barriers persist in a number of countries that limit access to this medicine. The factors that contribute to this lack of availability include inadequate forecasting of requirements, weak information systems, and poor distribution systems. Another major challenge to access to quality oxytocin is the maintenance of cold storage of the product throughout the supply chain. Oxytocin requires storage at between 2 and 8 degrees Celsius, with possible excursions to room temperature storage for brief periods (not exceeding four weeks). In many countries, the distribution systems in place for essential medicines do not allow for cold storage.

The Maternal Health Technical Resource Team (MHTRT) of the UN Commission on Life-Saving Commodities for Women and Children has been exploring strategies to increase access to quality oxytocin, including advocating for the integration of oxytocin in the existing cold chain for the Expanded Programme on Immunization (EPI).

Some countries, such as Mali and Ghana, have attempted integration in some areas of the country already and have experiences that can help answer that question. PATH and the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program recently prepared case studies on these countries that describe the extent to which integration was achieved. In neither case was integration systematic; it occurred spontaneously and out of necessity at points along the distribution chain.

The purpose of this activity is to work with national stakeholders to identify and analyze feasible and acceptable options for the integration of oxytocin in the EPI cold chain at key points along the distribution chain and to develop guidance on the operationalization of such integration.

A team composed of an international consultant, a national consultant, two representatives from the Directorate of Pharmacy and Medicines (DPM) and the SIAPS-Mali team worked together in the preparation and organization of workshops. Two working meetings were facilitated—

- The first working meeting, the task force work session, was attended by representatives of the various structures of the Ministry of Health and Public Hygiene involved in the

[1] WHO and UNICEF. *Countdown to 2015 Maternal, Newborn, and Child Survival: Building a Future for Women and Children: The 2012 Report.* Geneva: WHO Publications; 2012.

EPI cold chain, supply chain, and use of oxytocin as well as a representative of consumers and of community health associations (ASACO, by its French acronym).

- The second working meeting, the stakeholders' workshop, gathered the participants of the task force work sessions along with representatives of the different levels of the health pyramid and nongovernmental organizations (NGOs).

During the preparatory phase of the two working meetings, the team developed the terms of reference, the letter of invitation, and the agenda of the working meetings and presentations and agreed on the profile of the participants for the working meetings.

The methodological approach was the same for both working meetings, namely presentations followed by discussion and group work, summarized in a plenary session.

Task Force Work Sessions

The presentation of the results of the case study on the integration of oxytocin in the EPI cold chain helped inform stakeholders about the realities encountered on the ground. At the end of the work sessions, field workers were aware of the challenges of storing oxytocin in a cold chain. The participants in the task force work sessions agreed on integration of oxytocin in the EPI cold chain at health district and community health center (CHC) levels and proposed the development of a logical framework and implementation plan.

Recommendations from task force work sessions:

1. DPM/NDH/RDH/RHC/CHC
   - Integrate the management of oxytocin in the EPI cold chain.
   -
2. DPM/NDH
   - Maintain two levels for the integration: district and community.
   -
3. RHC/CHC
   - Pay the prescription of oxytocin at the level of the dépôt de vente (DV) manager.
   -
4. ASACO
   - Provide an update of the integration of oxytocin to all of the stakeholders involved.
5. Health District
   - Supervise quarterly the implementation of oxytocin integration.
   -
6. DFM/DPM/NDH
   - Provide the *Cercle* distribution warehouses (CDWs) with refrigerators with temperature control devices.

Stakeholders' Workshop

The presentation of the results of the case study on the integration of oxytocin in the EPI cold chain has allowed reaching the consensus that a formalization of this integration is required. The different integration options as well as the logical framework and implementation plan proposed by the task force were amended and validated.

Recommendations from the workshop:

1. Central level
    - Formalize the integration of oxytocin in the EPI cold chain through an administrative act.
    - Provide refrigerators to health centers that do not have them currently.
    - Perform regular monitoring and analysis of the quality of oxytocin at key points in the distribution chain.
    - Plan to train private facilities in the management of the cold chain for temperature-sensitive products, including oxytocin, in the future.
-
2. Regional level
    - Take an inventory of small cold chain equipment (vaccine carrier, thermometer, icepack).
-
3. Health district level
    - Ensure implementation of the integration of oxytocin in the EPI cold chain.
    - Monitor the strategy.
    - Ensure the renewal of icepacks for vaccine carriers at the maternity level.
-
4. Community level
- Ensure the renewal of icepacks for vaccine carriers at the maternity level.
- Ensure functionality and ongoing maintenance of the cold chain at CHCs.
- Urge ASACO to ensure the continued functionality of the cold chain.

INTRODUCTION

Context

Post-partum hemorrhage (PPH) still remains one of the major causes of maternal mortality, accounting for 35% of all maternal deaths.[2] The World Health Organization (WHO) has recommended oxytocin as the most effective medicine for the prevention and treatment of PPH, particularly for facility-based births.[3] In line with this recommendation, most countries list oxytocin as the medicine of choice for prevention and treatment of PPH. Likewise, oxytocin figures on the essential medicines list of most countries, and oxytocin products are registered in country. Despite this positive policy framework for oxytocin use, supply chain barriers that limit access to the medicine still persist in many countries. A multicountry survey from 2012 showed that continuous availability of oxytocin at service delivery points remains an issue.[4] The factors that contribute to this lack of availability include inadequate forecasting of requirements, weak information systems, and poor distribution systems. Another major challenge to access to quality oxytocin is the maintenance of cold storage of the product throughout the supply chain. Oxytocin requires storage at between 2 and 8 degrees Celsius, with possible excursions to room temperature storage for brief periods. In many countries, the distribution systems in place for essential medicines do not allow for cold storage. Likewise, in many settings warehouses at lower levels of the system and service delivery points do not have the infrastructure or equipment to maintain cold storage.

In recognition of this challenge, the Maternal Health Technical Resource Team (MHTRT) of the UN Commission on Life-Saving Commodities for Women and Children has been exploring strategies to increase access to quality oxytocin, including advocating for the integration of oxytocin in the existing cold chain for the Expanded Programme on Immunization (EPI). In most countries, EPI cold chains are highly effective in reaching even the lowest levels of the system. However, they are managed vertically, separately from other essential commodities. One of the barriers to integrating other products in the EPI cold chain is the perception at the country level that this is not permitted. To address this perception, the MHTRT in close collaboration with the WHO and the United Nations Children's Fund (UNICEF) developed a joint statement, clarifying that countries may choose to integrate other products, specifically oxytocin, in the EPI cold chain to ensure access to quality products.[5] Now the question is how to operationalize this integration at the country level. Some countries, such as Mali and Ghana, have attempted integration in some areas of the country already and have experiences that can help answer that question. PATH and the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program recently prepared case studies on these countries that describe the extent to which integration

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[2] WHO and UNICEF. *Countdown to 2015 Maternal, Newborn, and Child Survival: Building a Future for Women and Children: The 2012 Report.* Geneva: WHO Publications; 2012.
[3] World Health Organization. *WHO Recommendations for Prevention and Treatment of PPH.* Geneva: WHO; 2012.
[4] Smith J, Currie S, Perri J, Bluestone J, Cannon T. *National Programs for the Prevention and Management of Postpartum Hemorrhage and Pre-Eclampsia/Eclampsia: A Global Survey*. Washington, DC: Maternal and Child Health Integrated Program; 2012.
[5] http://www.unicef.org/health/files/EPI_cold_chain_WHO_UNICEF_joint_statement_A4_rev2_5-14-15_(3).pdf

was achieved. In neither case was integration systematic; it occurred spontaneously and of necessity at points along the distribution chain. The question remains of how feasible systematic integration of oxytocin in the EPI cold chain is.

Objective

The main objective of this activity was to work with national stakeholders to identify and analyze feasible and acceptable options for the integration of oxytocin in the EPI cold chain and to develop guidance on the operationalization of such integration.

The specific objectives are—

- Communicate with national stakeholders to form a national task force composed of representatives from appropriate offices of the Ministry of Health (the Directorate of Pharmacy and Medicine [DPM], National Directorate of Health [NDH]/Division of Reproductive Health [DRH], NDH/Immunization Section [IS], People's Pharmacy of Mali [PPM], Health Inspectorate [HI]), UNICEF, and other relevant stakeholders, who will lead the options analysis

- Assist in organizing and facilitating task force working sessions to map feasible options for integration based on the results of the case study, and define what needs to happen to operationalize these options

- Work with national stakeholders to collect additional data if necessary, as determined during the task force working sessions

- Assist in organizing and facilitating a broader stakeholders' workshop during which the options for integration are presented, consensus is reached on what are the most feasible recommended options, and an action plan for operationalizing recommendations is developed

GENERAL INFORMATION ON MALI

Geography[6]

The Republic of Mali is a country in West Africa. It covers an area of about 1,241,248 square kilometers. Mali shares 7,200 kilometers of borders with seven countries: Algeria to the north, Niger on the east, Burkina Faso to the south-east, Côte d'Ivoire and Guinea to the south, and to the west Mauritania and Senegal.

The terrain is low and slightly rough; it is a country of plains and low plateaus. The average altitude is 500 meters. The hydrographic system, tributary of the geographical configuration extending between 11° and 25° north latitude, topography, and climate, essentially consists of the basins of Upper Senegal and Niger. Two rivers cross Mali: the Niger and the Senegal. The hydrographic system primarily serves the south. The northern part of this area is irrigated by the Senegal River and its tributaries, the eastern part by the Niger River and its tributaries. The climate of the entire network is tropical: high water during the rainy season and low water in the dry season.

Thus, from south to north, 25% of the territory is located in the Sudano-Guinean zone, 50% in the Sahelian zone, and 25% in the Saharan desert. The climate is dry with a dry season and a rainy season that lasts on average five months in the south and less than a month in the north. The level of precipitation is between 1,300 and 1,500 millimeters in the south while the average is about 200 millimeters in the north. The interior delta of the Niger River is a virtual inland sea. The delta, 300 kilometers long by 100 kilometers wide, plays a regulatory role in the region's climate.

[6] The information in this section comes from the following source: Cellule de Planification et de Statistiques (CPS/SSDSPF), Institut National de la Statistique (INSTAT), Centre d'Études et d'Information Statistiques (INFO-STAT). *Enquête Démographique et de Santé au Mali (EDSM V) 2012-2013*. Bamako, Mali. Rockville, MD, USA: ICF International; 2014.

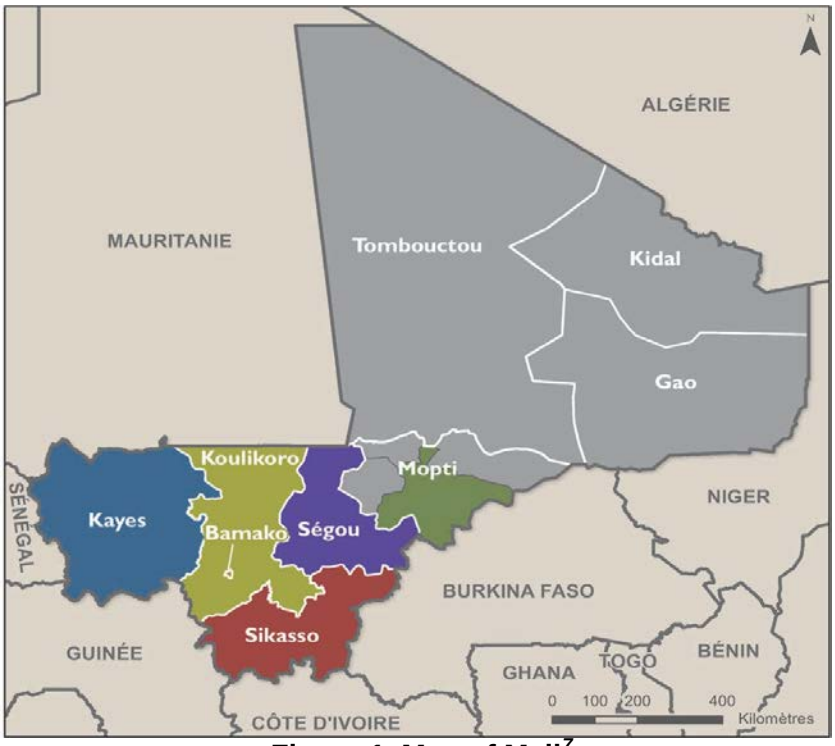

Figure 1. Map of Mali[7]

Population

According to the final results of the General Census of Population and Housing from 2009 (GCPH-09),[8] Mali's population was 14,517,176 inhabitants, of whom 50.4% were women. In 2012, the population was estimated at 16,319,000 inhabitants with a growth rate of 3.6% between censuses. The majority of the country's population resides in rural areas (74.5%). The urbanization rate is 22.5%. The spatial distribution is uneven. The population density is highly variable, from 90 inhabitants per square kilometer in the Niger central delta to less than 5 inhabitants per square kilometer in the northern Saharan zone. The population is concentrated in the southern part of the country and along the Niger River. According to the GCPH-09, the northern regions (Gao, Timbuktu, and Kidal) are home to only 9% of the population. The population of women of reproductive age (15–49 years) was 3,189,905 and thus represented 22% of the total population. According to data from GCPH-09 the main subgroups consist of—

- Children under one year (0–11 months): 3%
- Children 1 to 4 years (12–59 months): 14%
- Children under 5 years (0–4 years): 17%
- Children under 15 years (0–14 years): 46%

[7] Cellule de Planification et de Statistiques (CPS/SSDSPF), Institut National de la Statistique (INSTAT), Centre d'Études et d'Information Statistiques (INFO-STAT). *Enquête Démographique et de Santé au Mali (EDSM V) 2012-2013.* Bamako, Mali. Rockville, MD, USA: ICF International; 2014.

[8] Institut National de la Statistique (INSTAT). *Recensement Général de la Population et de l'Habitat, 2009.* Bamako, Mali; 2010.

- Young people under 19 years (0–18 years): 55%;
- Women of childbearing age (15–49 years): 22%

The main ethnic groups are the Bambara, Malinke, Sarakolé, Peul, Dogon, Sonrhaï, Bobo, Bozo, Moor, Tuareg Tamasheq, and Arabs. The main religions practiced in Mali are Islam 94.8%, Christianity 2.4%, and animism 2%, according to the final results of the GCPH-09.

Administrative Organization

Mali is divided into eight administrative regions (Kayes, Koulikoro, Sikasso, Segou, Mopti, Gao, Timbuktu, and Kidal) and one district with the rank of region (the capital, Bamako). The north consists of the regions of Gao, Timbuktu, and Kidal. The south is divided between the regions of Kayes, Koulikoro, Sikasso, Segou, and Mopti and Bamako district. Each region is divided into circles (*cercles*), for a total of 49 circles.

In the context of decentralization, Mali has 703 municipalities, of which 684 are rural and 19 urban, including the 6 municipalities of the Bamako district. Each municipality is administered by a municipal council composed of a mayor and councilors elected by universal suffrage; the circle is administered by the Board of the circle and the region by a regional council.

Mali is a unicameral Republic (parliamentary system with a single chamber). Executive power is represented by the president and his government, led by a prime minister who is accountable to the people.

Health Situation

In Mali, health care is provided to the population in accordance with a pyramidal organization of care comprising three levels—

- The operational level has two sublevels.
  - The first sublevel consists of 1,170 Community Health Centers (CHCs) functional in 2013 and offers the Minimum Package of Activities.
  - The second sublevel or first referral level consists of 62 referral health centers (RHCs). They have a technical platform including a medical team and a surgical team.
- The intermediate level is a secondary referral level and consists of seven Public Hospitals: Kayes, Sikasso, Segou, Mopti, Timbuktu, Gao, and the Mother and Child Hospital.

- The national level is the tertiary referral level with 6 Public Hospitals or University Hospital Centers: Point "G", Gabriel Touré, Institute of Tropical Ophthalmology of Africa, National Center of Odonto-Stomatology, Hospital of Mali, and Kati Hospital.

The private sector is present at all levels of the pyramid as well—but less so in the regions.

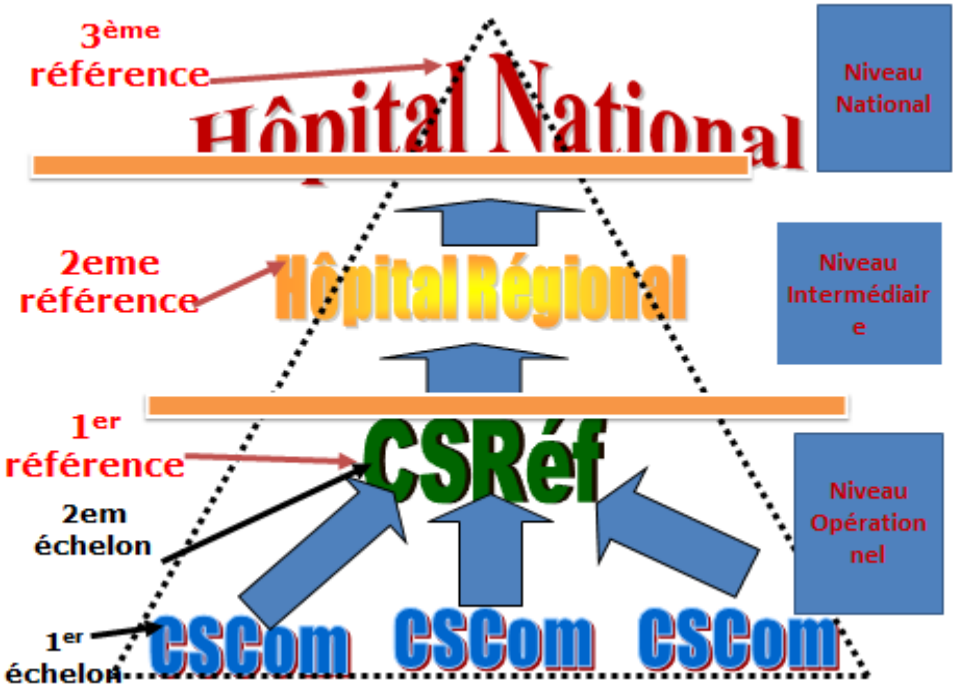

Figure 2: Pyramidal organization of health care[9]

The Strategic Framework to Fight Poverty has worked to achieve the Millennium Development Goals (MDGs). The political and socioeconomic context has not favored the implementation of the planned actions to achieve them.

The security and political crisis in Mali has had negative impacts on achieving the MDGs. These negative impacts have resulted mainly in losses of economic and social achievements, as well as a shortfall of development actions that have led to structural changes in the MDG implementation system. MDG 5 on maternal mortality should be reduced by nearly a quarter to reach the target of 144.3 deaths per 100,000 live births. From 582 deaths per 100,000 live births according to the Demographic and Health Survey of Mali in 2001 (DHS III),[10] maternal mortality declined to 464 deaths per 100,000 live births in 2006 (DHS IV)[11] and to 368 deaths

[9] Ministère de la santé et de l'hygiène publique. États généraux de la santé: Forums régionaux pour les régions de Ségou, Sikasso et Mopti, 28, 29 et 30 août 2014, Ségou, Mali.
[10] Cellule de Planification et de Statistique du Ministère de la Santé (CPS/MS), Direction Nationale de la Statistique et de l'Informatique (DNSI) et ORC Macro. *Enquête Démographique et de Santé au Mali 2001*. Calverton, MD, USA: CPS/MS, DNSI et ORC Macro; 2002.
[11] Cellule de Planification et de Statistiques du Ministère de la Santé (CPS/MS), Direction Nationale de la Statistique et de l'Informatique du Ministère de l'Économie, de l'Industrie et du Commerce (DNSI/MEIC) et Macro International. *Enquête Démographique et de Santé du Mali 2006.* Calverton, MD, USA: CPS/DNSI et Macro International; 2007.

per 100,000 live births in 2012–2013 (DHS V).[12] Despite this decline, the level of maternal mortality remains very high in Mali, far from the target.

It should be noted that in 2009, maternal mortality in urban areas was 115.2 per 100,000, which is below the target value. At the same time, in rural areas the rate was greater than 550 per 100,000 births. The downward trend in maternal mortality is related to the increase in the proportion of assisted deliveries and prenatal and postnatal monitoring.[13]

The NDH Reproductive Health Strategic Plan 2014–2018 aims, among other things, to reduce maternal mortality. However, the state budget for health from 2004 to 2012 stagnated for years at around 7% to 8% of the state budget. This represents half the 15% agreed in the Abuja Declaration.[14]

The National Pharmaceutical Policy is an integral part of the health policy. The supply system of essential medicines in Mali is managed through the circuit of the Master Plan for Supply and Distribution of Essential Medicines (SDADME by its French acronym). In addition to the PPM, which is the preferred state tool for providing essential medicines in the public and parastatal sectors, Mali had 65 private institutions of import and distribution of medicines in December 2013.

[12] Cellule de Planification et de Statistiques (CPS/SSDSPF), Institut National de la Statistique (INSTAT), Centre d'Études et d'Information Statistiques (INFO-STAT). *Enquête Démographique et de Santé au Mali (EDSM V) 2012-2013.* Bamako, Mali. Rockville, MD, USA: ICF International; 2014.
[13] Gouvernement du Mali. *Revue annuelle du Cadre Stratégique pour la Croissance et la Réduction de la Pauvreté 2012-2017, année 2014.*
[14] Ministère de la Santé, Direction Nationale de la Santé. *Plan stratégique de la santé de la reproduction 2014-2018, Bamako, Mali.*

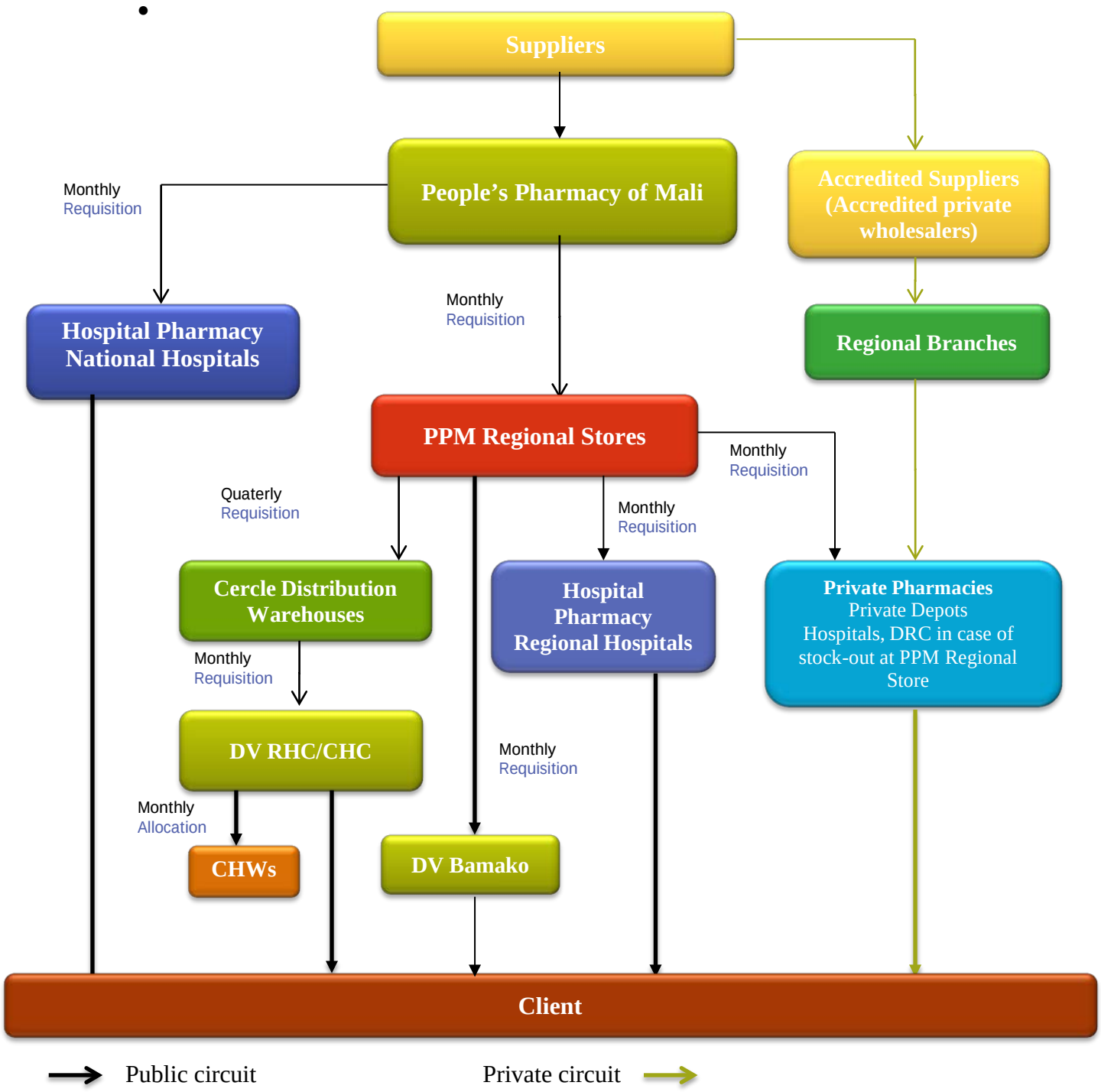

Figure 3. Supply and distribution chain for essential medicines in Mali[15]

[15] Ministère de la Santé. *Manuel de procédures opératoires standards pour la gestion du système de l'information logistique des médicaments essentiels et intrants des programmes de santé.* Mai 2013

ACTIVITY IMPLEMENTATION

A team composed of an international consultant, a national consultant, two representatives from the DPM, and the SIAPS-Mali team worked together in the preparation and organization of workshops. Two working meetings were conducted.

- The first working meeting, the task force work sessions, was attended by representatives of the various structures of the Ministry of Health and Public Hygiene involved in the EPI cold chain, supply chain, and use of oxytocin as well as a representative of consumers and of ASACO.

- The second working meeting, the stakeholders' workshop, gathered representatives of the different levels of the health pyramid and NGOs in addition to the participants of the task force work sessions.

During the preparatory phase of the two working meetings, the team developed the terms of reference, the letter of invitation, and the agenda of the working meetings and presentations, and agreed on the profile of the participants to the working meetings.

The methodological approach was the same for both working meetings, namely presentations followed by discussion and group work, with a closing plenary session on the results of the group work and conclusions reached.

TASK FORCE WORK SESSIONS

Introduction

These three-day work sessions were held July 29–31, 2015, in the meeting room of the Health Inspectorate (see letter of invitation, agenda, and terms of reference in annexes). The opening ceremonies and closing of the work sessions were respectively chaired by the representative of the Director of Pharmacy and Medicine and the Director of Pharmacy and Medicine.

Participants came from the following structures of the central level (see list in annexes)—

- DPM
- NDH/DRH
- NDH/IS
- Regional Directorate of Health (RDH) of Bamako
- PPM
- IH
- National Federation of Community Health Associations (FENASCOM)
- Consumer Association of Mali (ASCOMA)
- SIAPS
- US Agency for International Development (USAID)

WHO and UNICEF were invited to participate in the task force work sessions, but unfortunately they were unable to join the group.

Objectives

- Share the results of the case study on the integration of oxytocin in the EPI cold chain
- Identify, analyze, and propose different options for the integration of oxytocin in the EPI cold chain in Mali
- Propose a logical framework for the various options chosen
- Propose an implementation plan of the selected options

Methodology

The methodological approach was based on—

- Presentations followed by discussion
- Group work followed by presentation of conclusions in plenary

Proceedings of the Three-Day Work Sessions

The activities of the first day began with the presentation of the results of the case study on the integration of oxytocin in the EPI cold chain. It was followed by an introduction to the work sessions and the group work, during which participants were asked to answer the following questions—

1. Should integration of oxytocin in the EPI cold chain be considered?
2. If yes, at which level(s)?
3. If not, why? Propose other alternatives for the cold storage of oxytocin.

At the end of the first day of work sessions, the participants agreed to integration of oxytocin in the EPI cold chain at health district level (RHCs) and community level (CHCs).

The work sessions of the second day were centered on developing and proposing an acceptable, achievable, and sustainable logical framework for the selected levels for integration. The reflections centered on the following topics: infrastructure, human resources, roles and responsibilities, information systems, distribution network of oxytocin, training, and cost.

The work sessions of the third day addressed developing and proposing an implementation plan for the integration of oxytocin in the EPI cold chain for district and community levels according to a defined framework (template) for the following topics: activities, resources, responsibilities, structures involved, objectively verifiable indicators, means of verification, results, costs, and implementation schedule.

The workshop discussions focused mainly on the following aspects—

- The integration of oxytocin in the EPI cold chain
- Maintaining two levels for integration: district and community
- Inadequate quality control of products in general by the National Health Laboratory
- Inadequate cold chain for essential medicines throughout the supply circuit
- The selection criteria of the areas visited
- The presence of freezers in CHCs
- The improper storage of oxytocin in facilities
- Payment for oxytocin tot the DV Manager and not tot the midwife mistress
- The need for the availability of refrigerators at the CDWs

- Respect of the cold chain during the supply by CDWs
- The implementation evaluation period of integration of oxytocin in the EPI cold chain by the health district
- Recovery of oxytocin stock upon turnover of the team on duty in maternity

To all these concerns, detailed answers were given by facilitators, supported by the consultants.

Work Session Results

Participants retained the health district and community levels for the integration of oxytocin in the EPI cold chain and proposed a logical framework as well as an implementation plan for this integration.

Proposed Logical Framework

Integration of Oxytocin at the Health District Level

The best option selected has been developed for the CDWs with a cold chain.

Supply

- The material of the EPI local office will be used for this purpose.

Storage

- The district's stock will be kept at the CDW.
- The RHC's stock will be kept in the EPI local office.

Roles and responsibilities

Human resources	Roles and Responsibilities
Head doctor	Ensure proper implementation of integration
CDW Manager	• Communicate the needs of CDW in oxytocin to PPM regional store • Use the equipment of the EPI office for transport • Monitor the temperature during transportation and storage • Monitor and record the temperature of the refrigerator • Monitor the stock and complete management tools
DV Manager	• State to the CDW the RHC's oxytocin needs • Store the oxytocin in the refrigerator of the EPI local office • Approve the issue slip from maternity • Monitor the stock and complete management tools • Cash the daily incomings • Confirm the payment of prescriptions issued by the midwife mistress
Responsible for EPI local office	• Make available the EPI local office equipment for the transport and storage at the RHC's maternity • Store the oxytocin in the refrigerator for the RHC • Deliver the stock to maternity in accordance with the delivery order signed by the DV Manager • Keep the oxytocin movement notebook
Midwife mistress	• Report the daily oxytocin needs for maternity to the RHC DV Manager • Get approval for the needs from the RHC DV Manager • Resupply at the EPI local office • Manage the stock of oxytocin in a vaccine carrier equipped with a thermometer • Monitor the temperature of the vaccine carrier • Issue prescriptions with triple counterfoil to clients to allow payment to the RHC DV • Maintain accurate record of the movement of oxytocin and the requisition/issue register

Oxytocin circuit

PPM regional store ⇨ CDW ⇨ RHC DV (EPI) ⇨ Maternity ⇨ Client

Information circuit

RHD ⇦ CDW ⇦ DV RHC ⇦ Maternity

→ Feedback

- Management tools
- RDH :
- Stock Management Report (CRGS by its French acronym)
- Order slip
- Stock card
- Delivery note
- Inventory form
- Minutes of reception sheet
- Temperature record sheet

DV RHC:

- Stock Management Report (CRGS)
- Order slip
- Stock card
- Delivery note
- Inventory form
- Daily and weekly tally sheet
- Minutes of reception sheet

EPI local office:

- Record of movement of oxytocin

Maternity:

- Record of movement of oxytocin
- Requisition/issue slip

Training needs

Disseminate the integration process and train all stakeholders in the integration of oxytocin.

Accompanying measure

- Provide all CDWs with dedicated refrigerators.

Integration of Oxytocin at the Community Level

The group adopted the following scenario with respect to feasibility, acceptability, and sustainability—

- The CHC DV managers resupply at the CDWs. The managers must have vaccine carriers with icepacks and thermometer as a control device; the delivery rooms must also have vaccine carriers and icepacks for storage during their duty period.
- Oxytocin must be received according to SDADME procedures.
- Facilities must make available management tools in accordance with SDADME.

- The manager must give the stock of oxytocin to the EPI responsible for conservation in the cold chain, and the latter must have a correctly kept movement notebook. The EPI Responsible will deliver a sufficient stock of oxytocin to providers in the delivery room when temperature monitoring is performed.
- The CHC Technical Director (CTD) must inform, sensitize all stakeholders, take actions, and disseminate information through a memo to all involved actors.
- The CTD should develop a monitoring plan for the implementation of integration.
- All actors must play their role for the sustainability of this integration.

Human resources

- Training of staff involved in the management of oxytocin
- Daily internal follow-up of the providers by the EPI Responsible
- Weekly supervision of the EPI Responsible and DV Manager by the CTD
- Quarterly supervision of the implementation of the integration by the health district

Roles and responsibilities

Actors	**Roles and responsibilities**
ASACO	Provide an update on oxytocin integration at the meetings of the Management Committee
CTD	Monitor the management of pharmaceuticals including oxytocin
DV Manager	Ensure product availability
EPI Responsible	• Ensure the proper conservation of oxytocin • Be available to make the stock available to the providers of the delivery room • Complete accurately the management tools • Transmit data on a monthly basis to DV Manager
Providers in the delivery room	• Ensure the proper storage of the product in the delivery rooms • Complete the management tools accurately • Produce and transmit the monthly consumption report

Oxytocin supply circuit

Oxytocin follows the supply circuit as described in SDADME.

PPM regional store ⇨ CDW ⇨ CHC DV (EPI) ⇨ Maternity ⇨ Client

Information system

Data must be transmitted through the monthly consumption report (CRGS).

RDH ⇦ CDW ⇦ CHC DV ⇦ Maternity

→ → →

→ : Feedback

Proposed Implementation Plan

Activities	Resources required	Responsible	Organizations involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								2015	2016	2017	2018
District level											
Advocate with the MSHP	Human and financial	DPM	NDH, SIAPS	Number of advocacy sessions held	Report	Accession by MSHP to the process	1,000	X			
Disseminate the process of integration	Human, financial, and material	DPM	NDH, PPM	Number of sessions held	Dissemination reports	Actors are informed about the integration process	as a reminder	X	X		
Report the state of CDWs	Human, financial, and logistical	DPM	NDH	Report	Report	The number of CDWs that have dedicated refrigerators is known	as a reminder		X		
Develop complementary tools (Integration Guide, etc.)	Human, financial, and material	DPM, NDH	PPM	Number of tools developed	Tools	The tools are developed	as a reminder		X		
Develop training materials for staff involved	Human, financial, and material	DPM, NDH	PPM	Number of training materials developed	Training materials	Training materials are developed	as a reminder		X		
Train involved staff	Human, financial, and material	DPM	NDH, PPM	Number of staff trained	Training reports	The staff involved is trained	as a reminder		X		
Provide the CDWs with dedicated refrigerators and temperature control accessories	Human, financial, and logistical	Health-DFM	DPM, NDH	Number of CDWs that have dedicated refrigerators/ planned number	Delivery note, reception reports	CDWs are equipped with dedicated refrigerators and temperature control accessories	as a reminder		X		
Monitor the strategy	Human,	DPM	NDH, HI,	Number of	Monitoring	The degree of	as a		X	X	X

Activities	Resources required	Responsible	Organizations involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								2015	2016	2017	2018
	financial, and logistical		PPM, FENASCOM, ASCOMA	monitoring sessions executed/planned	Reports	integration is known	reminder				
Evaluate the strategy	Human, financial, and logistical	DPM, NDH	HI, FENASCOM, ASCOMA	Number of evaluation missions conducted/planned	Evaluation reports	The degree of integration is known	as a reminder			X	X
Community level											
Training of 4,680 staff involved in the management of oxytocin: 1,170 DV Managers; 1,170 EPI Responsible; 2,340 maternity providers	Human, financial, and material	DPM	NDH; RDH; HCR	Number of staff trained**/**number of staff planned	Reduction of maternal mortality			X			
Monitoring of the integration: CHC level	Human	CTD	ASACO	Number of monitoring sessions performed/planned	Continued availability of quality oxytocin at service provider level			X	X	X	
Quarterly supervision	Human, financial, and material	HCR	NDH; RDH; DPM	Number of supervisions conducted/planned	Effective integration of oxytocin in the EPI cold chain			X			
Annual evaluation	Human, financial, and material	NDH; RDH	DPM	Number of evaluations conducted**/**planned	Effective integration of oxytocin in the EPI cold chain				X		
Inventory of non-dedicated refrigerators in the CHCs	Human, financial, and material	NDH	RDH; DPM; Health-DFM; FENASCOM	Number of non-dedicated refrigerators in CHCs	Number of non-dedicated refrigerators in CHCs known			X			
Inventory of CHCs	Human,	NDH	RDH; DPM;	Number of CHCs	Number of			X			

Activities	Resources required	Responsible	Organizations involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								2015	2016	2017	2018
that have no refrigerator	financial, and material		Health-DFM; FENASCOM	not having a refrigerator**/**total number of CHCs	CHCs with no refrigerators known						
Purchase of dedicated refrigerators	Financial and material	Health-DFM	NDH; DPM	Number of CHCs provided with dedicated refrigerators**/**total number of CHCs	All CHCs are equipped with dedicated refrigerators			X			
Purchase of vaccine carriers	Financial and material	NDH	Health-DFM	Number of CHCs equipped with vaccine carriers**/**total number of CHCs	All CHCs are equipped with vaccine carriers			X			
Purchase of thermometers and icepacks	Financial and material	NDH	Health-DFM	Number of CHCs equipped with thermometers and icepacks**/**total number of CHCs	All CHCs are equipped with thermometers and icepacks			X			
Multiply / Make available management tools	Human, financial, and material	NDH	Health-DFM	Number of CHCs equipped with management tools**/** total number of CHCs	All CHCs are equipped with management tools			X			

NB: Number of functional CHCs in 2014 is 1,170 according to FENASCOM.

1,204 functional CHCs in the Statistical Yearbook 2014 being validated
1,170 functional CHCs in the 2013 Statistical Yearbook.

Conclusion and Recommendations from the Task Force Work Sessions

Conclusion

The presentation of the results of the case study on the integration of oxytocin in the EPI cold chain helped better inform stakeholders about the realities in the field. At the end of the work sessions, field workers appeared aware of challenges of storing oxytocin in a cold chain. Integration of oxytocin in the EPI cold chain is crucial for the patient to benefit from a quality product to help reduce maternal mortality.

The participants in the task force work sessions answered yes to the integration of oxytocin in the EPI cold chain at health districts and CHCs before the development of different integration options and an implementation plan.

Recommendations

At the end of the three-day task force work sessions, participants made the following recommendations—

Recommendations	Responsible
Integrate the management of oxytocin in the EPI cold chain	DPM/NDH/RDH/HCR/CHC
Maintain two levels for the integration: district and community	DPM/ NDH
Pay the prescription of oxytocin at the DV Manager	HCR/CHC
Provide an update of the integration of oxytocin to all the actors involved	ASACO
Supervise quarterly the implementation of the integration of oxytocin	Health District
Provide the CDWs with dedicated refrigerators with temperature control devices	Health-DFM/DPM/NDH

STAKEHOLDERS' WORKSHOP

Introduction

This workshop was held on August 10–11, 2015, at the Hotel Salam Bamako (see letter of invitation and agenda in annexes). The opening and closing ceremonies were chaired by the Director General of the DPM.

The participants come from the following structures (see list in annexes):

- Central level: DPM, NDH/DRH, NDH/IS, PPM, HI, National Center for Information, Education, and Communication for Health, National Federation of Community Health Associations (FENASCOM), and Consumer Association of Mali (ASCOMA)

- Regional level
  - Regional Directorate of Health: Pharmacist and EPI focal point from RDH Bamako, Kayes, Koulikoro, Sikasso, Ségou, Mopti, and Gao
  - Referral Health Centers:
    - Commune I: Head doctor, Pharmacist, and EPI Responsible
    - Nioro: Head doctor and DV Manager,
    - Koulikoro: Head doctor and EPI Responsible
    - Sikasso: Head doctor, Pharmacist, and CDW Manager
    - Baraouéli: Head doctor and CDW Manager
    - Bankass: Head doctor and DV Manager
    - Gao: Head doctor
  - Community Health Centers:
    - Korofina Nord: CTD and DV Manager
    - Nioro: Matron
    - Kolèbougou: ASACO member and EPI Responsible
    - Sanoubougou II: Midwife
    - Baraouéli: CTD and ASACO member
    - Bankass: EPI Responsible

- Technical and financial partners:
  - USAID Mali
  - USAID/ASSIST
  - USAID/SSGI
  - USAID/SIAPS
  - INTRAHEALTH International

WHO, UNICEF, the United Nations Fund for Population, and USAID/KJK were invited to participate in the stakeholders' workshop but unfortunately were unable to attend.

Objectives

- Present the case study on the integration of oxytocin in the EPI cold chain
- Analyze and validate the different options selected for integration
- Validate the conceptual framework and implementation plan of options

Methodology

The methodological approach was based on—

- Presentations followed by discussion
- Group work followed by discussion of results in plenary

Expected Outcomes

- The results of the case study are shared.
- The selected integration options are validated.
- The proposed conceptual framework and implementation plan are validated.

Proceedings of the Stakeholders' Workshop

The activities of the first day began with the presentation of the results of the case study on the integration of oxytocin in the EPI cold chain for Mali. This presentation was followed by an introduction to the workshop and group work. The group work focused on analyzing and amending the logical framework proposed by the participants of the task force work sessions.

At the plenary session, discussions focused on—

- The storage capacity of refrigerators in RHCs and CHCs following the introduction of ROTATEQ in the EPI routine,
- The storage of products in Gao in the absence of a PPM regional store
- The absence of refrigerators in some CHCs
- Accessibility of the refrigerator by maternity staff in health facilities (RHCs and CHCs)
- The purchase of vaccines by the PPM
- The storage time of oxytocin in the absence of a cold chain

The analysis and the amendment of the proposed implementation plan constituted the essential activities of group work on the second day. At the end of the session, the discussions concerned the following points—

- Filling out of the record temperature sheet in the maternity

- Review of training modules for staff involved in the integration of oxytocin in the cold chain instead of the development of modules
- The leader of the monitoring activity of the integration at CHCs
- The permanent functionality of the cold chain in CHCs

Stakeholders' Workshop Results

At the end of workshop, participants validated the logical framework and implementation plan proposed by the task force for health district and community levels.

Logical Framework

Health District Level

The best option selected was developed for the CDWs with a cold chain.

Supply

- The material of the EPI local office will be used for this purpose.

Storage

- The district's stock will be kept at the CDW.
- The RHC stock will be kept in the EPI local office.

Roles and responsibilities

Actors	Roles and Responsibilities
Head doctor	Ensure proper implementation of integration
Pharmacist	Analyze and validate the needs expressed by the DV manager
CDW Manager	• Use EPI office equipment (insulated box and icepacks) for transport • Monitor the temperature during transportation and storage • Record twice daily the temperature of the refrigerator (morning – 8 am and afternoon – 2 pm) • Monitor the stock and complete management tools • State the CDWs' oxytocin needs to the PPM Regional Store • Develop report
DV Manager	• State the RHCs' oxytocin needs to the CDWs • Store the oxytocin in the refrigerator of the EPI local office • Approve the issue slip from maternity • Monitor the stock and complete the management tools • Cash the daily incomings • Confirm the recovery cost of prescriptions issued by the midwife mistress
Responsible for EPI local office	• Make the EPI local office equipment available for transport and storage at the HCR maternity

Actors	Roles and Responsibilities
	• Store the oxytocin in the refrigerator for the HCR • Deliver the stock to maternity in accordance with the delivery order signed by the DV Manager • Keep the oxytocin movements notebook
Midwife mistress	• State the daily needs of oxytocin for the maternity to the RHC DV Manager • Get approval of the needs from the RHC DV Manager • Resupply at the EPI local office • Manage the stock of oxytocin in a vaccine carrier equipped with a thermometer • Monitor the temperature of the vaccine carrier • Issue prescriptions with triple counterfoil to clients to allow cost recovery to the RHC DV • Maintain the oxytocin record of movements and the requisition/issue register

Oxytocin circuit

PPM regional store ⇨ CDW ⇨ DV RHC (EPI) ⇨ Maternity ⇨ Client

Information circuit

Maternity ⇨⇦ DVRHC ⇨⇦ CDW ⇨⇦ RDH

⇦ : Feedback

Management tools

RDH:

- Stock management report
- Order slip
- Stock card
- Delivery note
- Inventory form
- Minutes of reception sheet
- Temperature record sheet
- Minutes of product destruction

DV RHC:

- Stock management report
- Order slip
- Stock card
- Delivery note
- Inventory form
- Daily and weekly tally sheet

- Minutes of reception sheet
- Reception form
- Minutes of product destruction
- Prescriptions counterfoil book

EPI local office:

- Oxytocin movements notebook
- Temperature record sheet

Maternity:

- Oxytocin movements notebook
- Requisition/issue slip
- Temperature record sheet

Training needs

- Disseminate the integration process and train all stakeholders in the integration of oxytocin in the EPI cold chain.

Accompanying measures

- Provide all CDWs with dedicated refrigerators
- Follow up with trained staff in the field (supervision)
- Increase the storage capacity of EPI local offices
- Provide RHCs that do not have electricity with solar refrigerators
- Ensure the maintenance of all equipment

Community Level

Relative to the feasibility, acceptability, and sustainability the group adopted the following scenario—

Prerequisites

- Oxytocin must be ordered and received according to SDADME procedures.
- Facilities must make available all management tools as per SDADME.
- Take the inventory of small equipment (thermometer, icepacks, and vaccine carriers) before the implementation of the integration of oxytocin in the EPI cold chain.
- All actors must play their role for the sustainability of this integration.
- The DV managers must have vaccine carriers with icepacks and thermometers as a control device.
- Delivery rooms must also have vaccine carriers and icepacks for storage during their duty period.

Supply

The EPI equipment will be used for this purpose.

Storage

The stock of CHCs will be kept in the EPI cold chain.

Roles and responsibilities

Actors	Roles and responsibilities
Health district	• Quarterly supervision of the implementation of integration
ASACO	• Provide an update of the integration of oxytocin at the meetings of the Management Committee
CTD	• Inform, sensitize all stakeholders • Disseminate information through a memo to all the actors involved • Take corrective actions to remedy the shortcomings noted • Develop a calendar (weekly and monthly) for the monitoring of the implementation of integration: o Monthly monitoring of pharmaceuticals management including oxytocin o Weekly follow-up of the EPI Responsible and the DV Manager
DV Manager	• Ensure product availability and monitoring • Resupply at the CDW • Deliver the stock of oxytocin to EPI Responsible for storage in the cold chain • Approve the issue slip from maternity • Monitor the stock and complete the management tools • Cash the daily incomings • Confirm the cost recovery for prescriptions issued by the providers in the delivery room • Collect weekly data responsible at the EPI Responsible and maternity
EPI Responsible	• Ensure the proper conservation of oxytocin • Make available the EPI local office equipment for transport and storage at the CHC maternity • Store oxytocin of CHC in the refrigerator • Deliver the stock to maternity in accordance with the delivery order duly signed by the DV Manager • Give a sufficient stock of oxytocin to providers in the delivery room when recording the temperature • Keep the management tools correctly (movement notebook accurately completed) • Transmit data on a monthly basis to DV Manager • Weekly update of issued oxytocin and remaining stock • Daily internal monitoring by the EPI Responsible to providers
Providers in the delivery room	• Ensure proper storage of the oxytocin in delivery rooms • State the daily oxytocin needs to CHC DV • Replenish at the EPI local office • Keep the stock of oxytocin in a vaccine carrier equipped with a thermometer • Check icepacks regularly • Monitor the temperature of the vaccine carrier • Keep the oxytocin movement notebook and the requisition/issued register correctly • Record the amount of oxytocin used in the movement notebook • Produce and transmit the monthly oxytocin usage report • Issue prescriptions with triple counterfoil to clients to enable cost recovery of oxytocin at CHC DV

Oxytocin supply circuit

Oxytocin follows the supply circuit as describee in SDADME.

PPM regional store ⇨ CDW ⇨ DV CHC (EPI) ⇨ Maternity ⇨ Client

Information system

Data must be transmitted through the monthly consumption report (CRGS).

Maternity ⇨ DV CHC ⇨ CDW ⇨ RDH

← ← ←

← : Feedback

Training needs

Training of staff involved in the management of oxytocin

Material resources

Prepare vaccine carriers and thermometers for DV Managers and delivery rooms

Implementation Plan

Activities	Resources required	Responsible	Structures involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								Y 1	Y 2	Y 3	Y 4
Health district level											
Advocate with the MSHP	Human and financial	DPM	NDH, SIAPS	Number of advocacy sessions held	Report	Accession of MSHP to the process	1,000	X			
Review the training modules for the staff involved	Human, financial, and material	DPM	NDH	Number of training modules reviewed	Training modules	Reviewed training modules available	as a reminder				
Disseminate the integration guide	Human, financial, and material	DPM	NDH, PPM	Number of sessions held	Dissemination Reports	Actors are informed about the integration process	as a reminder	X	X		
Establish the state of CDWs	Human, financial, and logistical	DPM	NDH	Number of CDW visited	Reports, Travel clearance	The number of CDWs that have or not dedicated refrigerators is known	as a reminder		X		
Develop complementary tools (Integration Guide, etc)	Human, financial, and material	DPM	NDH, PPM	Number of tools developed	Tools	The tools are available	as a reminder		X		
Train staff involved	Human, financial, and material	DPM	NDH, PPM	Number of staff trained	Training reports	The staff involved is trained	as a reminder		X		
Provide the CDWs dedicated refrigerators and temperature control accessories	Human, financial, and logistical	DPM	Health-DFM, NDH	Number of CDWs that have dedicated refrigerators	Delivery note, minutes of reception	CDWs are equipped with dedicated refrigerators and temperature control accessories	as a reminder		X		

Activities	Resources required	Responsible	Structures involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								Y 1	Y 2	Y 3	Y 4
Monitoring the strategy	Human, financial, and logistical	DPM	NDH, HI, PPM, FENASCOM, ASCOMA	Number of monitoring sessions executed/planned	Monitoring reports	The degree of integration is known	as a reminder		X	X	X
Evaluate the strategy (middle and end of implementation of introduction)	Human, financial, and logistical	DPM, NDH	HI, FENASCOM, ASCOMA	Number of evaluation missions conducted/ planned	Evaluation reports, Travel clearance	The strategy is integrated	as a reminder			X	X
Ensure maintenance of the cold chain	Human, financial and logistical	DPM	NDH	Number of cold chains maintained	Maintenance reports, Travel clearance	Cold chain functional	as a reminder		X	X	X
Provide training and refresher training to two maintainers in each region starting with north regions	Human and financial	DPM	NDH	Number of trained staff**/**planned	Training reports	Trained staff available	as a reminder		X		
Community level											
Train 4,680 staff involved in the management of oxytocin: 1,170 DV Managers; 1,170 EPI Responsibles; 2,340 providers of maternity	Human, financial, and material	DPM	NDH; RDH; HCR; PPM; FENASCOM	Number of staff trained**/**planned	Training reports	All staff involved in the management of oxytocin are trained	as a reminder		X		
Internal monitoring of the integration: CHC level	Human	CTD	ASACO; HCR	Number of monitorings performed/planned	Oxytocin movement notebook	Continued availability of quality oxytocin at providers of	as a reminder		X	X	X

Activities	Resources required	Responsible	Structures involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								Y 1	Y 2	Y 3	Y 4
						service level					
Quarterly supervision	Human, financial, and material	HCR	RDH, DPM, CHC, FELASCOM	Number of supervisions conducted/planned	Supervision reports	Effective integration of oxytocin in the EPI cold chain	as a reminder		X	X	X
Annual evaluation	Human, financial, and material	HCR	DPM, RDH, FELASCOM	Number of evaluations conducted**/**planned	Evaluation reports	Effective integration of oxytocin in the EPI cold chain	as a reminder		X	X	X
Inventory of dedicated refrigerators in the CHCs	Human, financial, and material	NDH	HCR FELASCOM	Number of non-dedicated refrigerators in CHCs	Inventory report of the cold chain	Number of non-dedicated refrigerators in CHCs known	as a reminder	X	X		
Inventory of CHCs that have no refrigerator	Human, financial, and material	RDH	HCR, FELASCOM	Number of CHCs that have no refrigerator**/** total number of CHCs	Inventory report; List of CHCs that have no refrigerator	Number of CHCs with no refrigerators known	as a reminder	X	X		
Provide CHCs with dedicated refrigerators	Financial and material	Health-DFM	NDH, DPM, FELASCOM,	Availability of dedicated refrigerators in CHCs	DPM delivery note, ASACO minutes of reception	All CHCs are equipped with dedicatdd refrigerators	as a reminder	X	X		
Provide CHCs with vaccine carriers	Financial and material	Health-DFM	NDH, DPM, FENASCOM,	Availability of vaccine carriers in CHCs	DPM delivery note, ASACO minutes of reception	All CHCs are equipped with vaccine carriers	as a reminder	X	X		
Provide CHCs with thermometers and icepacks	Financial and material	Health-DFM	NDH, DPM, FENASCOM,	Availability of thermometers and icepacks in CHCs	DPM delivery note, ASACO minutes of reception	All CHCs are equipped with thermometers and icepacks	as a reminder	X			
Ensure the functionality of the cold chain at CHCs	Material (spare parts, fuel)	ASACO	FELASCOM, FERASCOM, FENASCOM, Municipality	Availability of spare parts	Delivery note	All CHCs have functioning cold chain	as a reminder	X	X	X	X

Activities	Resources required	Responsible	Structures involved	Objectively verifiable indicators	Sources of verification	Outcomes	Cost (FCFA thousands)	Schedule			
								Y 1	Y 2	Y 3	Y 4
			ASCOMA								
Multiply/Make available management tools	Human, financial, and material	NDH	Health-DFM	Availability of management tools in CHCs	Delivery note	All CHCs are equipped with management tools	as a reminder	X	X		

NB: Number of functional CHCs in 2014 is 1,170 according to FENASCOM.

1,204 functional CHCs in the Statistical Yearbook 2014 being validated
1,170 functional CHCs in the 2013 Statistical Yearbook

Conclusion and Recommendations from the Stakeholders' Workshop

Conclusion

The presentation of the results of the case study on the integration of oxytocin in the EPI cold chain has allowed reaching a consensus that a formalization of this integration is required. The different integration options as well as the logical framework and implementation plan proposed by the task force were amended and validated.

Recommendations

Participants made the following recommendations by level—

1. Central level
   - Formalize the integration of oxytocin in the EPI cold chain by an administrative act
   - Prepare provision of dedicated refrigerators to health centers that do not have them
   - Perform regular monitoring and analysis of the quality of oxytocin at key points in the distribution chain
   - Plan to train private facilities in the management of the cold chain for temperature-sensitive products, including oxytocin, in the future

2. Regional level
   - Take inventory of the small materials required to maintain cold chain (vaccine carriers, thermometers, icepacks)

3. Health district level
   - Ensure implementation of the integration of oxytocin in the EPI cold chain
   - Monitor the strategy
   - Ensure the resupply of icepacks for vaccine carriers at maternity level

4. Community level
   - Ensure the resupply of icepacks for vaccine carriers at maternity level
   - Ensure functionality and ongoing maintenance of the cold chain at CHCs
   - Urge ASACO to ensure the continued functionality of the cold chain

ANNEXES

Annex A	Invitation letter to the task force work sessions	 AVIS_REUNION_ATELIER1_OXYTOCINE.P
Annex B	Terms of reference of the task force work sessions	 Annex_Mali_Oxy_Report_TOR_Task force
Annex C	Agenda of the three-day work sessions	 Annex_Mali_Oxy_Report_Agenda_Task fc
Annex D	List of participants in task force work sessions	 Annex_Mali_Oxy_Report_Participants list
Annex E	Invitation letters to the stakeholders' workshop	 lettre_Bamako_Atelier_Oxytocine_10-11_A  lettre_rÃ©gions_Atelier_Oxytocine_10-11
Annex F	Terms of reference of the stakeholders' workshop	 Annex_Mali_Oxy_Report_TOR_Stakeholde
Annex G	Agenda of the stakeholders' workshop	 Annex_Mali_Oxy_Report_Agenda_Stakeh
Annex H	List of participants in stakeholders' workshop	 Annex_Mali_Oxy_Report_Participant list_S