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Health and Immunization Supply Chain Leadership Regional Conference

Technical Report

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- *FINAL* -

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Acronyms

AMP	Agence de Médecine Préventive
ACAME	Association of Central Procurement Agency for Essential Medicines
CCE	Cold Chain Equipment
CHAI	Clinton Health Access Initiative
DCPEV	Direction de la Coordination du Programme Elargi de Vaccination (Cote d'Ivoire)
DIEM	Department of Equipment, Infrastructure, and maintenance
DRC	Democratic Republic of Congo
EPI	Extended Vaccination Program
EVM	Effective Vaccine Management
Gavi	Global Alliance for Vaccine and Immunization
JSI	John Snow, Inc.
PATH	Program for Appropriate Technologies in Health
PNA	National Supply Pharmacy (Senegal)
TGI	Technical Group for Immunization (West and Central Africa)
UNICEF	United Nations Children's Emergency Fund
WAHO	West African Health Organization
WHO	World Health Organization

Summary

The regional conference on Leadership for Health and Vaccination Supply Chain was held on 13-14 June, 2016 in Abidjan, Côte d'Ivoire, under the patronage of Her Excellency Dr Raymonde Goudou Coffie, Minister of Health and Public Hygiene of Côte d'Ivoire. This conference, organized by Agence de Médecine Préventive, gathered 100 participants from 11 francophone African countries, partners of Gavi, the Vaccine Alliance, regional organizations, training institutions and private sector partners. The objective of the conference was to obtain the political engagement of participating country heads and partners to support the improvement of countries' environments to optimize investments in the health supply chain and cold chain equipment to assure their long-term viability and fair vaccination coverage.

To accompany the preparation and implementation of the conference, a steering committee composed of Gavi partners was formed. The committee identified four subjects regarding the fundamentals of the health supply chain in the region: the optimization of supply chains; the management of cold chain equipment; human resources and leadership; financing and sustainability of the supply chain.

During the two-day conference, the participants discussed via roundtables factors encouraging or limiting the implementation of initiatives capable of producing a sustainable evolution of the institutional environment for efficient supply chains. Inspired by countries' and partners' experiences and the roundtable discussions, the country delegations, composed by high-level decision makers, drafted a road map to steer the implementation of activities to strengthen the health and immunization supply chain.

At the end of the conference, a call to action for the strengthening of the health and immunization supply chains in Africa was issued by the participants to the national authorities, technical and financial partners, civil society and private sector partners.

The monitoring of the implementation of the road maps and the call to action was entrusted to the technical group for vaccination, composed of Gavi partners in the region.

1. Context

Immunization is broadly recognized as one of the most beneficial and profitable interventions in public health, and it is estimated to avoid 2.5 million deaths around the world. However, as of today, one out of five children does not receive all the vaccine doses that he/she is entitled to.

Over the past decades, substantial investments were made to ensure that low and middle income countries have access to safe medicines and vaccines, which are effective to protect communities against most common infectious diseases. Nevertheless, the availability and quality of these products are dependent on supply chains deployed from the manufacturer to the most remote communities.

Yet in many countries, particularly in sub-Saharan Africa, supply chains are no more adapted to the respond to the challenges faced by health systems. Those systems do not allow populations to fully benefit from new and better performing health products, leading to deaths and financial loss that could have been avoided. Logistic systems are penalized by weak infrastructure, lack of equipment, unsuitable basic services (transportation, information technology), and a lack of qualified personal, resulting in issues such as wastage and shortage of vaccines, and as many missed opportunities to vaccinate children. Nevertheless, any successful immunization program assuring access to quality health services is conditional on efficient health logistics.

In order to engage public authorities to make strong decisions and act in a resolute, collaborative, and effective manner regarding supply chains, and also with the objective to strengthen the capacity of health systems to respond to basic current and future needs of populations, Gavi, the Vaccine Alliance and the *Agence de Médecine Préventive* (AMP), organized the Health and Immunization Supply Chain Leadership Regional Conference, from June 13 to 14, 2016, in Abidjan, Côte d'Ivoire.

The conference, which gathered eleven countries benefiting from Gavi's support (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Guinea, Guinea-Bissau, Mali, Niger, Senegal, and Togo), as well as regional institutions, technical and financial partners, and partners from the private sector, was centered on four themes, which stand as the fundamentals of immunization logistics systems:

- Supply chain optimization;

- Management of cold chain equipment;
- Human resources and leadership; and
- Funding and sustainability of supply chain.

In the course of those two days, participants exchanged on acquired experience, lessons learned and opportunities. They prepared a call to action addressed to political authorities as well as financial and technical partners in order to renew their endeavor and increase their efforts to invest in human, financial, and material resources for health supply chain and logistics. Besides, on the basis of the roadmaps developed by country delegations, participants identified ways and means to promote the development of effective and sustainable supply chains.

2. Objectives and Outcomes

2.1. Objectives

The main objective of the conference was to reach a joint political commitment from decision-makers of participating countries as well as partners with the aim to support improvement of their country environment. The purpose of this commitment is also to optimize investments in immunization supply chain and cold chain equipment, which will ensure their long-term viability coupled with equitable vaccine coverage.

More specifically, the objectives were to:

- Raise awareness among country leaders and regional partners about the implications of supply chain on the cost and performance of expanded immunization programs (EPI);
- Urge countries to frame policies and procedures addressing supply chain management, and to develop tools to design, implement, and maintain effective supply chains and;
- Facilitate synergies among governments, regional and local partners, civil society organizations and the private sector in order to increase and secure financial, human, and technical investments aiming at ensuring the sustainability of supply chains.

2.2. Outcomes

During the conference, the extensive exchanges among participants allowed them to identify factors enabling the establishment and maintenance of effective and sustainable supply chains. Those exchanges also permitted the preparation of a call to action addressed to countries and partners to embolden them to promote health and immunization supply chain. In addition, the country delegations framed roadmaps to guide and engage decision makers to increase and support investments related to supply chain.

3. Steering Committee of the Conference

3.1. Composition and Secretariat

A steering committee, composed of partnering organizations involved in health products supply chain in the region, was established to contribute to the scientific and organizational preparation of the conference. The steering committee included members from the following organizations:

- *Agence de Médecine Préventive*;
- Gavi secretariat;
- John Snow Inc – Immunization center;
- PATH;
- World Health Organization;
- West African Health Organization; and
- UNICEF.

Dr Jean Martial Kouame from AMP served as the Secretary of the steering committee.

The members of the steering committee brought their technical and scientific expertise to undertake a country situation analysis in view of identifying the strengths, weaknesses, and opportunities in line with the four themes of the conference. They contributed to finalizing the agenda as well as the organizing and facilitating the interactive sessions of the conference.

3.2. Summary of the Activities of the Steering Committee

The steering committee, chaired by the Deputy Director General of WAHO, held five meetings among which four were teleconferences (April 13 and 27, Mai 11 and 25), and one face-to-face (June 12), at the wake of the conference. During those meetings, the steering committee took the following actions:

- Validate of the agenda and list of participants;
- Assign themes for the preparation of presentations;
- Validate of the lists of roundtable panelists and moderators;
- Review of the protocol and situation analysis tools, as well as the analysis report;
- Validate of the moderation guide for roundtable discussions;

Thus, partners were assigned to coordinate the preparation of the themes as follows:

THEMES	PARTENAIRES LEADERS
Supply chain optimization	OMS and PATH
Cold chain equipment management	JSI and UNICEF
Human resources and leadership	AMP and WAHO
Funding and sustainability of supply chain	PATH and AMP

The steering committee members unanimously agreed that the committee should be dismantled after the conference, and that the Technical group for immunization (TGI) would be responsible for following up on the conference works as well as the implementation of the country roadmaps. This technical group includes Gavi partners which are involved in West and Central Africa. As the member organizations of the steering committee are also members of the TGI, this transfer of responsibility is in the best precondition to take place. Consequently, during the TGI meeting held on June 9 and 10, 2016, Mr. Philippe Jaillard, Conference Coordinator, presented the objectives and expected outcomes of the conference. The TGI committed to integrate those activities in its work plan.

4. Progress of the Conference

4.1 Methodology and Agenda

A participatory method was used to encourage interaction, exchange, and sharing of experience among participants:

- Presentation of the current situation, opportunities, and experiences in some countries for each of the four themes;
- Thematic roundtables with selection of panelists among participants;
- Group sessions to prepare roadmaps;
- Plenary session to finalize the call to action with all participants.

The conference agenda is attached as Annex 2 of this report.

4.2. Participants

The conference gathered one hundred participants from countries and partnering organizations.

- Eleven Francophone African countries : Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Guinea, Guinea-Bissau, Mali, Niger, Senegal, and Togo. The country delegations were composed of three to five high-

level decision-makers from the Ministry of Health, including: the Director of Cabinet; permanent secretaries; director from the extended immunization program; and professionals from the financial, administrative, equipment, infrastructure and maintenance, and central medical store departments.

- Three regional organizations:
 - o West African Health Organization;
 - o African Development Bank;
 - o Association of Central Procurement Agency for Essential Medicines (ACAME)
- Five training institutes: LOGIVAC Center, Bioforce Institute, the Kinshasa School of Public Health, Polytechnic Institute FHB, National Training Center for Hospital Maintenance Technicians in Senegal;
- Partners from the Gavi Alliance: World Health Organization, UNICEF, Gavi Secretariat, Agence de Médecine Préventive, PATH, JSI, CHAI, VillageReach, and the French Embassy in Cote d'Ivoire.
- Private sector: service providers (installation and maintenance of cold chain equipment) and cold chain equipment manufacturers.

The complete list of participants is attached as Annex 3 of this report.

5. Introductory Session

During the introductory session, Dr Alfred DA SILVA, Executive Director for AMP, extended a warm welcome to participants. Thereafter, the following guests made opening speeches successively:

- Dr Marthe Sylvie ESSENGUE ELOMA, representing the Gavi secretariat ;
- Dr Yves MONGBO, representing WAHO ;
- Dr Kupa Blanchard MUKENGESHAYI, Permanent Secretary representing the Minister of Public Health for the Democratic Republic of Congo, his Excellency Dr Felix Kabange Numbi MUKWAPA ; and then
- Dr Joseph NIANGUE, Cabinet Director of Cabinet, representing the Minister of Health and Public Hygiene of Cote d'Ivoire, her Excellency Dr Raymonde GOUDOU COFFI.

In their opening remarks, the authorities emphasized the need to improve health supply chain since it is an essential link to improve performance of public health systems. The also underlined the need to work jointly to develop synergies and mobilize resources that are essential to deliver quality health products on a continual basis.

6. Session 1: Current Situation and Opportunities

This session provided the participants with an overview of the situation and opportunities at the global, regional, and country level, with regards to the four themes of the conference.

6.1. Supply Chain Optimization

Dr. Souleymane KONE presented the alarming results of the EVM assessments in the region while recalling that the objectives of supply chain are to ensure that the required quantity of products are available, at low cost, in good conditions, and at the time and place where demand is expressed. He also pointing out the challenges that the increasing quantity and value of vaccines raise. The weaknesses are particularly related to temperature monitoring, maintenance of equipment, and distribution, which endanger the quality and the safety of vaccines and emphasize the need to reinforce health products supply chains.

This requires notably eliminating unnecessary levels and redundant stores, reconfiguring the network, scaling infrastructure and redefining methods and principles for inventory supply and management. He mentioned the extension of the collaboration within the health system and of the partnership with the private sector as ways to create synergies for a more effective supply chain.

Dr. Sokhna GAYE reported the experience of Senegal to improve the quality of health products and increase vaccination coverage. The launch in 2015 of the strategic plan of the National Supply Pharmacy integrated the system of mobile supply regional Pharmacies with the consignment sale mechanism with return of the margin to district level, to build up the "Jegesi naa" mobile warehouse. This warehouse comes in two models, one involving the "push model" for a point-of-service delivery. That model made it possible to reduce shortage rates below 2% and improve yields in the St. Louis region. The system could be funded partly by a redistribution of 25% of cost recovery margins to the central level and secondly by contributions from public health programs (Malaria, HIV-AIDS, Tuberculosis, Reproductive Health).

The viability of the system established in Senegal lies on the sustainable financing and the stakeholders' ownership of the health system.

6.2. Management of Cold Chain Equipment

Mr. Ousmane DIA presented an overview of analyses carried out in 55 countries, showing that 90% of cold chain equipment are outdated, and 60% of the refrigerators often expose vaccines to temperatures jeopardizing the quality of the vaccines. The situation analysis conducted in the countries taking part in the conference showed that while half of them have a policy relating to equipment maintenance, only slightly more than one third have a maintenance plan. This inventory challenges the objective of equity and immunization coverage. Therefore, the achievement of public health objectives necessarily requires an efficient management of the supply chain equipment. Approaches to develop may be to strengthen collaboration with infrastructure, equipment and maintenance management departments; to professionalize equipment management and train users; to adopt new technologies and in some cases, collaborate with the private sector.

Preventive and corrective maintenance of cold chain equipment in Côte d'Ivoire presented by Dr. Noël BROU AKA was entrusted to two private companies; one in charge of cold rooms located at central and regional levels and the other taking care of refrigerators and freezers at district and points of service delivery levels. The service delivery contracts specify the preventive maintenance schedule, the procedures for carrying out corrective actions, follow-up interventions and for paying for services. The system strength is based on available trained resource persons to follow-up equipment maintenance and the existence of national guidelines for cold chain equipment maintenance. However, the system suffers from inadequate follow-up of maintenance activities at all levels, the lack of annual and end of contract evaluation of the provider and the non-consideration of refrigerated trucks in the contracts. The outlook is to involve Department of Infrastructure, Equipment, Maintenance (DIEM) and the Regional Centre for Equipment, Supplies and Maintenance (CREMM) to supervise all maintenance contracts.

6.3. Human Resource Management and Leadership

The procurement chains for health products are becoming more complex and require evolving capacities to cope with challenges such as the emergence of epidemic and limited financial resources. To cope with such a situation, Mr. Philippe JAILLARD indicated that health systems need professionals with technical and managerial skills to design, implement and assess effective supply chains and influence decision makers in their strategic decisions and in fund mobilization. The capacity-building of staff engaged in the supply chain should be based on professionalization, training and the development of its leadership skills. The situation analysis conducted in eleven countries showed the poor consideration of the health

logistician job in their human resources development plan and organizational charts, while a logistics working group was set up in two thirds of the countries.

Various opportunities and initiatives are offered to countries, allowing them to strengthen human resources and leadership for supply chain management, both at global and regional levels: manuals and tools, academic and vocational training, professional networks and partners.

Faced with increasingly scarce financial resources, the need to ensure an optimal management of supply chain for health products leads Burkina Faso to professionalize health logistics. Dr. Beranger KIEMA presented the factors that facilitated the project implementation: availability of financing, commitment of the Ministry of Health, partner's technical support. The project resulted in particular in setting up a Master's degree training in health logistics; the capacity building of 46 health professionals working in supply chain management of health products; the training of national trainers for the Master's degree; the development of a technical paper to advocate for the creation of a health logistician job. Prospects are the creation of the health logistician job at the Ministry of Health, a graduate level education and the certification of the degree at regional level, and fund raising to extend the initiative.

6.4. Funding Sustainability of the Supply Chain

Dr. Abdul GBAYA mentioned the appeal from the WHO Immunization Practices Advisory Committee in 2014, calling on Expanded Program on Immunization (EPI) managers and the global community for the need for renewed investment in vaccine supply systems to remove barriers to access and use of effective vaccines. The situation analysis carried out in the eleven countries taking part in the conference showed low investments for the supply chain. It is clear that most countries are highly dependent on external financing. All the countries have a budget line for funding vaccines. However, only half of them have a line for the supply chain in the EPI budget. Moreover, the EPI suffers from delays in fund disbursement procedures and from budget cuts. The sustainability of the supply chain has three main levers: efficiency of logistics systems and resource use; improvement of the budget planning and disbursement process; and resource mobilization and source of funding diversification. It is based on stakeholders' ability to develop robust plans and implement targeted and effective advocacy work.

Didier MAHUNDE presented the 2020 Vision of the supply chain for Health, defined by the authorities of the Ministry of Public Health of the Democratic Republic of Congo (DRC). To

implement this, a profound structural reorganization of the chain has been undertaken to improve the availability of vaccines in provinces and to build logistics management capacities at all levels. The country intends to use the funding opportunities offered by Gavi and other partners but also strengthen its capabilities for raising internal funds, including through action and advocacy from the parliamentary system. The sustainability mechanisms in the vaccination supply chain decided by the country requires the Government's commitment in reconfiguring and modelling logistics systems, the draft bill on health and the vaccination being discussed and amended in Parliament, the advocacy to include the immunization budget in the Government's unavoidable expenditure, and the coordination of partnerships; the sharing and integration of the supply chains of programs and Departments of the Ministry of Public Health and the establishment of the Health System Steering Committee at different levels.

7. Session 2: Defining Success

The objectives of the roundtables on each of the four themes of the conference were to describe the approach used by the participants for the implementation of local or regional initiatives, to identify the facilitating and limiting factors, and to list and describe the available opportunities.

7.1. Roundtable 1: Optimization of the Supply Chain

The objective of this roundtable was to share country experiences (Benin and Senegal) regarding the integration and the pooling of supply chains, identifying best practices of management for the optimization of the supply chain, and finally define the conditions of success.

Moderator: M. DICKO Modibo (Program Director, Intrahealth in Senegal)

Reporters: Dr. Jean Martial KOUAME and Mrs. Mariama GUEYE

Panelists: Dr. BASSABI Aladji NDeye (Director of EPI Benin), Dr. Sokhna GAYE (PNA, Senegal), Dr. Idrissa TRAORE (Director, AMP Benin office) and Mr. Souleymane KONE (WHO, Geneva).

After an introduction by the moderator, the discussion revolved around three subjects: the supply chain concept; the optimization and coordinated integration of supply chains; the pooling and best practices for supply chain sustainability.

The panelists presented the experiences of Benin and Senegal in the reorganization of the supply chains and their integration. These experiences were carried out by following a

systematic analysis of the situation, using feasibility and impact studies, and strategic decision from the health authorities. This also involved partners' and communities' engagement, demonstrations in the field, interim evaluations and assessment, before a consensus decision was taken to scale up country wide. These initiatives have improved the availability of health products, meeting the requirement of health workers and beneficiaries. The roundtable participants noted that these initiatives benefited from political commitment from the highest level (Minister of Health), from a technical expertise brought by partners and dedicated funding.

Other contributing factors identified include the in-depth analysis of needs and feasibility, the maintenance of financial efforts, training of those involved, the professionalization of supply chain managers, strong information from health workers at different levels and the beneficiary population. Among the limiting factors, we can cite: the limited financial resources for scaling up, the reticence to change from some health workers, and the insufficient adoption of these changes in organizing work.

In conclusion, it was agreed that the initiatives for optimizing the supply chain had to be preceded by a strong situational analysis in particular to support the choice of models to implement.

7.2 Roundtable 2: Managing Cold Chain Equipment

The objective of this roundtable was to share country experiences (Cote d'Ivoire and Guinea) regarding a maintenance plan, renewal, and contractualization experiences with the private sector in.

Moderators: Mr. Ousmane DIA, JSI; and Mr. Serge GANIVET, UNICEF

Reporters: Mr. Claude MANGOBO, AMP, and Mr. Harou MOUSSA, WHO

Panelists: Dr. Samah YOMBOUNO, CNPEV Guinea; Dr. BROU Aka, DCPEV, Côte d'Ivoire; Mr. Didier MAHUNDE, Logistician EPI DRC, Mr. KIASSA, DIEM Guinea; and Mr. Hamadou DICKO, Gavi secretariat.

Two countries presented their experiences in the development of cold chain renovation and expansion plans. A good knowledge of the equipment used in the program through an inventory and the context of their acquisition are necessary. The renovation plan takes into account the introduction of new vaccines and the creation of new establishments or population growth. To help choose the new technologies, an evaluation of vaccine storage sites is a determining factor.

The experience of these countries in equipment maintenance highlighted pertinent elements. Everyone was reminded that the first responsibility of maintenance is the user of the equipment. His training and supervision are paramount, including for solar powered equipment. Also, training technicians to carry out maintenance is considered a necessity in order to guarantee the smooth running and sustainability of the equipment.

The roundtable participants decided on the necessity of including the Health Ministries' infrastructure, equipment and maintenance departments in the management of the equipment. The leadership of these services has to be involved in the acquisition process of cold chain equipment, the development and implementation of maintenance plans and establishment of fast-track processes of equipment reform at the same level as other biomedical equipment.

On the other hand, the participants highlighted the important of having an after-sales service of cold chain equipment in countries to encourage the availability of spare parts and the application of guarantees. They have engaged manufacturers to provide even better equipment with a longer, more suitable guarantee.

7.3. Roundtable 3: Managing Human Resources and Leadership

The areas addressed during this roundtable are the following: professionalization, training, coordination and leadership

Moderators: Dr. Yves MONGBO, WAHO

Reporters: Mr. Claude MANGOBO, AMP; and Mr. Harou MOUSSA, WHO

Panelists: Mr. Jean Jacques KABLAN, WAHO; Dr TRAORE Idrissa, Benin LOGIVAC Center; Dr. KIEMA Beranger; EPI Burkina Faso; Mrs. Dorothy LEAB, UNICEF consultant; Dr. DABO Moustapha, EPI Guinea; Dr. Ndeye BASSABI, EPI Benin; and Dr. Ghislaine DJIDJOHO, *MSH*.

WAHO has implemented the harmonization of the training curriculum for health logisticians for the Masters level 2 and is working on the definition of profiles and areas of competencies to assure the complementary nature of the supply chain management and to enable the cohabitation between professionals. It has been highlighted that the countries' commitment to the professionalization of health logisticians passes through an extensive recognition process of the profession and its enrollment in the list of public function jobs, the definition of

a competency framework and the revision of organigrams to assure a complementary and interactive approach with other health professionals, and the definition of career profiles of health logisticians.

The regional training strategy for health logisticians developed in 2012 included academic training with degrees and short professional training developed for countries' evolving needs. The participants decided that the entry profiles in degree courses should allow access to health professionals but also to technicians in commercial and industrial logistics, and to assure training for workers destined to intervene at a peripheral level. The doctorate training perspectives will allow for the promotion of research in the area of logistical health. The participants insisted on the necessity of including countries, training institutes and professional organizations in the harmonization initiatives of the training curricula and the definition of the competency frameworks and on the collaboration between training institutes.

Several countries have shared their experience of creating national logistical groups. They can be used as important leverage to influence decision makers on strategic decisions and the mobilization of resources. This leadership should be ensured at different levels of the health system.

The perspectives cover the support of the establishment of national logistical working groups, the optimization of their functioning and the support of their institutionalization.

7.4. Roundtable 4: Sustainable Financing of the Supply Chain

The objective of this roundtable was to share country experiences (Cote d'Ivoire and DRC) in the planning process and budgetary payment, the different sources of finance (innovative and private) to mobilize for financing the supply chain.

Moderators: Dr. Joseph BIEY, WHO

Reporters: Dr. Jean Martial KOUAME and Dr Abdoul Aziz GBAYA

Panelists: Dr. Marthe Sylvie ESSENGUE ELOUMA, Gavi ; Dr. Awa TOURE, African Development Bank ; Mrs. Mariama GUEYE, PATH ; Mme LATTHRO, Ministry of Economy and Finance, Côte d'Ivoire; Dr. COULIBALY, ACAME; and Mr. Benjamin MATTATA, EPI DRC.

Late disbursement of funds has been identified as one of the barriers to immunization and the supply chain. The enforcement procedure of public expenses often proves long and

difficult, and the constraints linked to the State Treasury can lead to late disbursement. The solutions outlined to improvement payments include a better control by the EPI's financial services of the mechanisms that will work with the funds registered in the budget and the anticipation of cash needs. Also outlined: the annual program of the finance laws for the total credit necessary for immunization, and its translation into the annual budget; dialogue with all stakeholders with a view to establishing a cash disbursement plan that is likely to guarantee the continual provision of supplies.

The advocacy led by the members of parliament from DRC, the Budget Minister and the Prime Minister, contributed to the growth of the annual budgets allocated to the EPI and the securing spending. The parliamentary network prepared a framework law which will class the EPI expenses as binding expenditure. In Senegal, advocacy for financing contributed to the creation of a foundation to secure funds to purchase vaccines; to include the private sector in the supply chain; to take into account the EVM improvement plans in the Comprehensive Multi-Year Plan and National Program of Health Development; and the mobilization of MPs to allocate state-funding for immunization.

Beyond complementary catalyst funding from other state and partners resources, Gavi collaborates with the states for financial sustainability through respecting the national mechanism for financial management and programming, by obtaining countries' commitment for their contribution as soon as the introduction of new vaccines has been signed by the Finance Ministries, and securing countries' commitment to pay the matching contribution of the state without compromising the other traditional vaccines. Gavi contributes to program evaluations for financial management and supply, training programs for the supply chain and technical assistance to countries through partners.

The roundtable participants decided that the diversity of financial sources and their increase will also include innovative financing such as taxes or voluntary contributions and local financing. The feasibility of these financial mechanisms in the countries will have the engagement of political decision makers at the highest level, dialogue and interactive awareness raising between the Ministry of Health and the Finance Ministry and feasibility studies on the capacity of innovative financial mobilization.

8. Country Working Groups

During the country working groups the countries' delegations developed a draft road map to guide the implementation of capacity strengthening for the supply chain for health and immunization. On the basis of the presentations and the discussions from the roundtables, the delegations delineated the four themes of the conference by specifying the area of action, the priority actions, the actors involved, measurable indicators and deadlines.

The road maps were gathered together and are available in the annex.

9. Closing Session

Further to the group sessions, country participants and partners met in a plenary session to formulate the call to action for strengthening health and immunization supply chain (attached as an annex). The draft call to action was presented to allow each participant from country groups and technical and financial partners to amend the preliminary document. This text based on consensus is addressed to national authorities as well as technical and financial partners, and to the civil society and partners from the private sector. The head of country delegation and partners made a commitment to present the call to action to their respective authorities and financial and technical partners, so that it can serve as an advocacy tool for leadership and supply chain sustainability.

10. Official Closing of the Conference

The closing ceremony started with a speech from Dr Sylvie Essengue Elouma on behalf of the Gavi secretariat. Subsequently, Dr. Blanchard Mukengeshayi Kupa, Chair of the conference and Secretary General of the Ministry of Health, representing the Minister of Health of the Democratic Republic of Congo, read the call to action for strengthening health and immunization supply chain in Africa. The reading was followed by closing remarks from Dr. Joseph Niangue, representing the Minister of Health and Public Hygiene of Côte d'Ivoire, her Excellency Dr. Raymonde Goudou Coffie. Dr. Niangue commended the efforts and commitment that led to the different outcomes, particularly the call to action, and he guaranteed that the call will be favorably echoed by decision-makers. He concluded his speech by extending thanks, on behalf of Dr. Raymonde Goudou Coffie, Minister of Health and Public Hygiene, for the organization of those intense brainstorming days, and he declared the regional conference on leadership for health and immunization supply chain closed.

11. Communication

A special attention was paid to communication to ensure a large dissemination of the work and outcomes of the conference. A team, composed of two communication officers from AMP, which was reinforced by a press officer and a communication firm, was mobilized during the preparatory phase, the conduct, and the dissemination of the outcomes of the conference. The communication activities were jointly coordinated with the Gavi secretariat. Prior to the conference, the AMP communication team prepared a visual identity for the conference by designing a logo, which represents the different elements that are a part of the health supply chain. For visual homogeneity purposes, the logo was included on all presentations as well as the marketing supports conceived for this event (guide, T-shirt, etc.). The team also designed banners, and prepared and formatted the conference presentation brochure, in addition to drafting the speeches of the delegates from the ministry of health of Cote d'Ivoire and the Democratic Republic of Congo. In addition, they sketched the preliminary version of the call to action.

Besides, the AMP communication team formulated a public relations strategy to ensure greater visibility of the conference at the regional level. They prepared the list of media to be invited based on their geographical coverage and interest for health issues. The selected media included daily newspapers and websites (*Fraternité Matin*, *Soir info*, *L'Inter*, *Le Patriote*, *Notre Voix*, *Le nouveau Réveil*, and *Abidjan.net*), regional press agencies (Apanews, AIP, *Afrique Presse*), and radio and television stations (RFI, *Afrikatv.net*, RTI, and Africa24). The press release was prepared jointly with the communication department of Gavi, the Vaccine Alliance. It is important to note that most of the journalists who had been invited were present at the event. Four additional media also came without any formal invitation: *Radio Côte d'Ivoire*, German radio *Deutsche Welle*, *La Tribune de l'information*, and Radio Vibe.

The press conference, held after the closing ceremony of the conference, was an opportunity for the representative of the Minister of Health of Côte d'Ivoire, the Gavi representative, and AMP Executive Director, to share their views on the challenges of health supply chain and the outcomes of the conference.

A live tweet from l'[AMP](#) and from [Centre LOGIVAC Bénin](#) accounts was launched at the opening of the conference and maintained throughout the event. In addition, [Gavi](#) closely followed the conference and retweeted several posts. The live tweet generated about 3000 impressions on the AMP account during those two days (impressions refer to number of

times a tweet has been delivered to the twitter stream of a particular user account while he/she was using it). The engagement rate (interaction between a user and a tweet regardless of its nature) often reached 11% depending on the tweets.

At the closing of the conference, the communication team prepared articles for publication in the WHO Global Immunization New (GIN) and on the Technet21 website.

12. Conclusion

The Health and Immunization Supply Chain Leadership Regional Conference was an opportunity to gather high-level country representatives, who work in close collaboration with ministers of health of participating countries, as well as other technical partners. The discussions and presentations allowed participants to reflect on different issues related to supply chain, which hinder country health systems by reducing access to quality, effective, and efficient health products and services.

The conference, which was shaped on plenary sessions and roundtables, put an emphasis on sharing country experience, especially with regards to:

- Supply chain optimization;
- Management of cold chain equipment;
- Human resources and leadership; and
- Funding and sustainability of supply chain.

The roadmaps developed by the country delegations, will contribute to implementing the call to action to strengthen health and immunization supply chain in Africa. Gavi Partners will support countries by monitoring activity implementation.

13. Annexes

- Annex 1: Terms of reference of the steering committee
- Annex 2: Agenda of the conference
- Annex 3: Call to action
- Annex 4: List of participants

Annex 1: Terms of reference of the Steering Committee

Mode of operation

The steering committee meets virtually by teleconference for the preparation of the conference (about an hour every two weeks). The steering committee secretariat will prepare the SC meeting and sent all appropriate documentation at least five days in advance to facilitate their review. The secretariat will share meeting minutes and all relevant information to the SC members. It is expected that each member of the SC will give technical and scientific perspective to the various questions.

Tasks

- Review the terms of reference of the conference, including the agenda, methodology, and list of participants;
- Provide technical and scientific input for the development of background documents and other documents to be used during and after the conference (i.e.: situation analysis, communication, facilitators guidelines, power point presentation, declaration/call to action, and conference report)
- Provide guidance on dissemination of information concerning the regional conference and its outcomes at national, regional and global levels.

Role and responsibilities

The secretariat of steering committee is managed by AMP. It convenes the steering committee, and provides background documentation, and meeting minutes to the SC.

The secretariat will conduct a situation analysis in the country in relation to the four themes developed by the conference. It will identify experiences and lessons learnt by countries that could be shared during the conference. The secretariat will develop a facilitation guide that will be used during the conference, and liaise with the organization committee in charge of administrative and logistics aspects of the conference.

Steering committee members are encouraged to take an active part in the preparation and facilitation of the conference. In particular, members and their institution can take the lead in the development and facilitation of one of the four themes to be developed during the conference. They will be supported in this activity by the secretariat which will provide data and reference document, and support country mobilization.

Key dates and activities

Date	Method	Activities
13 April 2016	Teleconference (genesis)	Meeting with the steering committee member's to discuss the agenda and the four themes of the conference.
27 April, 2016	Teleconference (genesis)	Amendment and validation of the protocol for the situation analysis; identification of partners' leaders for each theme.
May 11, 2016	Teleconference (genesis)	Presentation of the preliminary results of the situational analysis; Set-up of thematic sub-groups.
May 25, 2016	Teleconference (genesis)	Analysis of the financial and logistic situation. Validation of the agenda and data collection matrix.
June12, 2016	Face-to-face	Review of the introductory presentations, roadmap, and call to action of the conference.

Annex 2: Health and Vaccination Supply Chain Leadership Regional Conference Agenda

Monday, 13 June, 2016

8:30 9:00 **Registration**

Introductory Session

9:00 10:30 **Opening Remarks**

- | | |
|--|--|
| <ul style="list-style-type: none"> - Welcome and housekeeping announcements – AMP - Welcome address – AMP - Opening remarks <ul style="list-style-type: none"> o Gavi o WAHO o DRC Ministry of Public Health o Cote d’Ivoire Ministry of Health and Public Hygiene - Objectives and agenda - AMP - Group photo | Ministry of Health Cote d'Ivoire and DRC;
Gavi; AMP; WAHO |
|--|--|

10:30 11:00 **Break**

Session 1: Overview and Opportunities

Cjairman: DRC Ministry of Health

11:00 13:00 **Overview and Opportunities**

- | | |
|---|---|
| Presentation of the situation and opportunities + significant experience from one country
<ul style="list-style-type: none"> - optimizing the logistical chains - managing cold chain equipment - developing human resources and leadership - supply chains sustainability and financing | Presentations: subject moderators + countries |
|---|---|

13:00 14:00 **Lunch**

Session 2: Defining Success

14:00 16:00 **Roundtables**

- | | |
|---|--|
| Objectives: Identifying success, challenges, conditions for success
<ul style="list-style-type: none"> - Optimizing supply chains | Subject moderators 1&2, 4-5 panelists per subject
<ul style="list-style-type: none"> - Managing cold chain equipment |
|---|--|

16:00 16:20 **Break**

16:20 17:00 **Roundtables Restitution**

- | | |
|---|------------------------|
| Defining success, the determinants for success, identifying obstacles | Subject moderators 1&2 |
|---|------------------------|

18:00 20:00 **Cocktail**

Day 2, 14 June

9:00 11:00 **Roundtables 2nd series** Subject moderators 3&4

Objectives: Identifying success, the challenges, the conditions for success

- Developing human resources and leadership - Sustainability and financing of supply chains

11:00 11:20 **Break**

11:20 12:00 **Roundtables Restitution** Subject moderators 3&4

Defining success, the determinants for success, identifying obstacles

Session 3: Recommendations for Action

12:00 13:00 **Country Work Groups**

Introduction and launch of Country Work Groups

AMP

Objectives: Define the ways and means to strengthen leadership for the supply chains; specify the country's commitment; revise the call for action

Expected results: Development of a roadmap per country and revision of the call to action

Method: Country groups

13:00 14:00 **Lunch**

14:00 15:00 **Country Work Groups**

Follow-on from the session

15:00 16:00 **Conclusive Roundtable**

DRC Ministry of Health

Objectives: List the ways and means to be successful; specify the country's commitment; approve the call to action

Expected Results: presentation of the road maps and the adoption of the call to action

16:00 16:30 **Closing Session**

Reading of the call to action

Ministry of Health Cote

Official end of the conference

d'Ivoire and DRC; Gavi; AMP

16:30 16:50 **Break**

Annex3: Call to action

Strengthening health and immunization supply chain in Africa

Recognizing that health supply chain is an essential link in health systems, while still being weak;

Reiterating the principles of the Declaration of Alma-Ata made in September 1978, particularly underlying health as a fundamental human right and the responsibility of governments to ensure public health;

Recalling the Ouagadougou declaration of April 30, 2008, on primary health care and health systems in Africa entitled « Achieving better health for Africa in the new millennium »;

Recalling the adoption of the Sustainable Development Goals in September 2015 by the United Nations, which goal number three is to “Ensure healthy lives and promote well-being for all” by 2030;

Recalling the call of action that the Immunization Practices Advisory Committee (IPAC) of the World Health Organization addressed to national program leaders and the international community inviting them to pursue their investments to support immunization supply chain so as to avoid compromising immunization programs results;

Acknowledging that immunization is broadly recognized as one of the most beneficial and profitable interventions in public health, and it is estimated to avoid 2.5 million deaths around the world;

Recognizing that one out of five children does not receive all the vaccine doses that he/she is entitled to. Besides, over the past decades, substantial investments were made to ensure that low and middle income countries have access to safe medication and vaccines, which are effective to protect communities against most common infectious diseases. In addition, the

availability and quality of these products are dependent on supply chains from the manufacturer to the most remote communities.

Acknowledging that in many countries, particularly in sub-Saharan Africa, supply chains are not adapted to respond to the challenges that health systems face. Consequently, those systems do not allow populations to fully benefit from new and better performing health products, which leads to financial losses and deaths that could have been avoided.

Bearing in mind the evaluation conducted in 2014 in 57 countries benefiting from Gavi's support, and which unveiled that only 2% of medical outposts use recent, adapted, and functional equipment, and that 55% of equipment were poor performing or not functional. This evaluation concluded that the management of cold chain equipment is generally poor, and it impacts the availability and quality of costly vaccines as well as the efficacy of immunization services;

Acknowledging that supply chains should include competent and recognized staff who possess technical and managerial skills, and that national authorities should facilitate a professional environment allowing to recruit and retain qualified personnel assigned to managerial position with the responsibility to conceptualize, implement, and monitor effective supply chains;

Recognizing that the private sector can play a key role in the effective management of health and immunization supply chain, especially regarding installation and maintenance of cold chain equipment, energy supply, transportation, biomedical waste management, and communication for public and private partnerships; moreover, the private sector can play a role in allowing government entities to devote more time and efforts to accomplish their primary mission, which is to provide quality health services to populations;

Recognizing that the issue of financial sustainability of supply chains is crucial in a context of accelerated introduction of new vaccines and increased immunization coverage objectives of logistics systems, which are already weak.

This issue can be unfolded in three fundamental elements: efficiency of systems and resources used, budget and withdrawal planning process, and resource mobilization and diversification.

Acknowledging the Declaration on «Universal access to immunization as a cornerstone for health and development in Africa» published by African Ministers of Health, Finance, Education, Social Affairs and Local Government attending the ministerial Conference on Immunization in Africa, which took place from 24 to 25 February 2016 in Addis Ababa, Ethiopia;

Recognizing that improving immunization supply chain and logistics practices during the present “Decade of Vaccines” can lighten the burden of national programs, and allow to protect a greater number of people against diseases through affordable and better quality services;

Bearing in mind the proven results of the experiments undertaken in our countries and aiming at improving supply chains as well as opportunities offered by regional training institutes, technical partners, and private sector service providers;

Acknowledging the existing potential of our countries with regards to technical, human, and financial resources, and that the internal resource mobilization capacity is not fully used;

We, members of the delegations of the eleven countries (Benin, Burkina Faso, Cameroon, Cote d’Ivoire, Democratic Republic of Congo, Guinea, Guinea-Bissau, Mali, Niger, Senegal, and Togo) that benefit from Gavi’s support, together with partners to health development, participating to the regional conference on leadership for health and immunization supply chain, organized by Gavi, the Vaccine Alliance and the Agence de Médecine Préventive, on June 13 and 14, 2016, in Abidjan, Cote d’Ivoire;

Urge country leaders and stakeholders involved in the conference to translate their political commitment into actions, which would grant an institutional priority to financial and human investments in health and immunization supply chain as well as

cold chain equipment to ensure their long-term viability along with equitable and sustainable immunization coverage;

Make a strong plea to public and political authorities, technical and financial partners, and civil society together with the private sector, to make strong, collaborative, and effective, decisions aiming at renewing their endeavor and increasing their efforts to invest in health and immunization supply chain.

We call upon them to:

- Formulate and adopt innovative public policies to optimize health and immunization supply chain;
- Implement strategic plans to develop effective and sustainable health products supply chain, based on systemic and holistic analysis including a feasibility study on the integrating, outsourcing, and mutualizing of supply chains;
- Facilitate innovative synergies and partnerships among governments, local and regional partners, civil society, and the private sector, so as to increase and secure investments and current funding enabling effective and sustainable supply chains;
- Develop effective and pioneering resource mobilization strategies for supply chain based on principals to secure current resources, and also favoring diversification and increase of funding sources;
- During each national planning and budgeting period, build synergies among governments, regional and local partners, civil society and the private sector, to increase and secure the impact of financial, human, and technical aiming at ensuring sustainability of integrated supply chains;
- Set up a mechanism to monitoring on an annual basis the progressive replacement and revision of cold chain equipment on mid-term and long-term basis;
- Identify strategies to professionalize, integrate, and retain trained health logisticians, so as to guarantee continuity of service in the public health system.

The Conference,

Done in Abidjan, Cote d'Ivoire on June 14, 2016

Annex 4: List of Participants

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