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# Technical Report

## Report on the Regional Meeting for Francophone West Africa on the use of Chlorhexidine for Umbilical Cord Care

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Meba Kagone  
Maggie Murphy

December 31, 2013

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Health Logistics

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## Acronyms

CWG	Chlorhexidine Working Group
DRC	Democratic Republic of the Congo
JSI	John Snow, Inc.
MSH	Management Sciences for Health
MOH	Ministry of Health
NGO	Nongovernmental Organization
UNCoLSC	United Nations Commission on Life-Saving Commodities
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WAHO	West African Health Organization
WHO	World Health Organization

## Background

The United Nations Commission on Life-Saving Commodities (UNCoLSC) identified 13 lifesaving commodities, which, if more widely available and accessible, could save the lives of more than 6 million women and children<sup>1</sup>. Chlorhexidine, one of the 13 commodities, has been shown to reduce neonatal mortality by 23% and severe infections by 68%.

The Chlorhexidine Working Group (CWG) was formed in 2007 as the implementing group for the use of chlorhexidine for umbilical cord care. The CWG is an international collaboration of organizations dedicated to advancing the use of 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) for umbilical cord care through advocacy and technical assistance. JSI is a member of the CWG, which is chaired by PATH.

The UNCoLSC work plan for chlorhexidine has 3 outcomes:

1. Increase awareness and use of the product as part of essential newborn care
2. Establish product supply
3. Develop and disseminate guidance/tools

In order to achieve the first outcome, the CWG identified the following priority countries/regions: Democratic Republic of the Congo (DRC), Francophone West Africa, Liberia, Madagascar and Nigeria. JSI was identified to organize a meeting of representatives from four West African Francophone countries to discuss the use of chlorhexidine digluconate 7.1% in newborn umbilical cord care. JSI led the planning and the implementation of the meeting with the participation from the CWG members. Four countries in Francophone West Africa (Burkina Faso, Côte d'Ivoire, Niger and Senegal) were selected by the CWG as the target countries for the regional meeting based on several criteria. These criteria included: neonatal mortality rates, the number of neonatal deaths, the percentage of births taking place at home, and expressed interest in the introduction of chlorhexidine into their neonatal health programs. In addition to the target country representatives, the meeting also featured delegates from three countries who are already in the process of or have already started introducing chlorhexidine: DRC, Madagascar and Nigeria. The meeting took place in Ouagadougou, Burkina Faso from December 2-3, 2013.

## Purpose of the Meeting

The purpose of the meeting was to:

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<sup>1</sup> "Lifesaving Commodities." United National Foundation. 2013. Available at: <http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/life-saving-commodities>

- Raise participant awareness of the benefits of the use of 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) for umbilical cord care;
- Encourage country participants to introduce chlorhexidine for umbilical cord care in their country programs.

The primary objectives of the meeting were:

1. To present evidence from recent research relating to the efficacy and programmatic outcomes of using a 7.1% chlorhexidine digluconate product for umbilical cord care.
2. To share programmatic experience from the DRC, Madagascar and Nigeria.
3. To assist country policymakers to identify next steps for introduction of chlorhexidine for umbilical cord care as per need.

## Meeting Participants

Meeting participants included representatives from the target West African countries, delegates from countries presenting their experiences in implementing chlorhexidine for umbilical cord care, and representatives and facilitators from CWG member organizations. The final participant list included participants from Burkina Faso, Côte d'Ivoire, Niger, Senegal, DRC, Madagascar and Nigeria. Other participants came from JSI, Management Sciences for Health (MSH), PATH Senegal, Save the Children, WAHO and WHO. Unfortunately, the four UNICEF country office representatives could not attend the meeting.

JSI invited three representatives from each of the four target countries, including the Director of Maternal and Child Health at the Ministry of Health (MOH), the person responsible for the neonatal health program at the MOH, and a representative from a nongovernmental organization (NGO) supporting neonatal health. All of the delegations from the target countries included these members, aside from Senegal, as the Director of Reproductive Health and Child Survival at the MOH in Senegal could not participate in the meeting.

The meeting also included delegates from countries already implementing chlorhexidine programs. A representative from the MOH represented the experience from Madagascar. The Project Director of the Targeted States High Impact Project (TSHIP) from Nigeria presented the experience from Sokoto State, since the Sokoto State Government official was unable to attend. For DRC, the Director of Family Health, the Director of the Pharmacy Department and a representative from MSH DRC presented on the status of implementation of chlorhexidine in DRC.

There were four facilitators of the meeting, three from JSI and one from Save the Children.

Please see Appendix A for the full list of participants and their respective organizations.

## Implementation of the meeting

To meet the workshop objectives, the first day of the meeting was organized to enable participants to share information and discuss the current newborn health situation as well as the evidence and experience of implementing chlorhexidine programs. On the second day, participants from the target countries worked to develop a situation analysis and workplan for chlorhexidine implementation. Please see Appendix B for the full agenda.

### *Opening ceremony*

The permanent secretary of the Ministry of Health in Burkina Faso addressed and welcomed the participants during an opening ceremony. He said that the MOH of Burkina Faso has been reflecting on the use of chlorhexidine for newborn umbilical cord care, but has not reached a conclusion about whether or not to adopt the approach. He stated that WHO has issued a list of 13 drugs for maternal and child health which includes chlorhexidine. He further stressed that the discussion which will be held during the current meeting, especially the scientific evidence, will help the MOH to make its decision about whether to introduce chlorhexidine for newborn umbilical cord care. He urged the participants to ask questions in order to understand the scientific evidence and share the information with their institutions upon their return to their respective countries. His participation showed that the Ministry of Health is interested in the use of chlorhexidine in the newborn health care program of Burkina Faso.

### *Overview of the newborn health situation*

After the opening ceremony, each of the four target countries presented an overview of the newborn health situation and the current cord care practices in their country. Below is a summary of key information presented by each country:

- Burkina Faso
  - The percentage of births with a skilled attendant is 82.1%.
  - The neonatal mortality rate is 28 per 1,000 live births.
  - 32% of neonatal deaths are due to severe infection.
  - Prenatal consultations are offered for free and the package of neonatal and obstetrical emergency care is subsidized 80% by the government.
  - Official policy is for dry cord care, however there is still the practice of applying alcohol and shea butter to the umbilical cord.
  - Burkina has no past experience with the use of chlorhexidine for umbilical cord care and the 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) is not currently available.
- Côte d'Ivoire
  - The percentage of births with a skilled attendant is 59%.

- The neonatal mortality rate is 38 per 1,000 live births.
- 30.3% of neonatal deaths are due to infection and 62% of those deaths are due to umbilical cord infections.
- Current policy is for 60% alcohol use on the umbilical cord by trained providers, but there are still traditional practices of using shea butter, palm oil and other substances on the cord.
- Côte d'Ivoire has no past experience with the use of chlorhexidine for umbilical cord care and there has been no discussion of its introduction.
- Niger
  - The percentage of births with a skilled attendant is 70%.
  - The neonatal mortality rate is 24 per 1,000 live births.
  - 71% of neonatal deaths are due to infection, asphyxia and prematurity.
  - Current policy is for dry cord care, however the use of cow dung and other substances on the cord is common.
  - Niger currently uses 5% chlorhexidine for disinfection of hands and cuts as well as medical instruments; however there is no past experience with the use of chlorhexidine for umbilical cord care.
- Senegal
  - There is a high rate of deliveries at home.
  - The neonatal mortality rate is 24 per 1,000 live births and the target is 15 per 1,000 live births by 2015.
  - There is significant regional variation in neonatal mortality rates.
  - 25% of neonatal deaths are due to infections and pneumonia.
  - There is a current program to promote the maternal and neonatal care at home and the continuity of care from the health facilities to the home and the community.
  - In the recent past, there has been a transition to dry cord care in Senegal with the exception of private facilities.
  - Senegal attended the conference on the 13 life-saving commodities and is currently discussing a revision of the dry cord care guidelines with specialists.

### ***Sharing evidence for the use of chlorhexidine***

The first key objective of the meeting was to raise participant awareness of the benefits of the use of 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) for umbilical cord care. From the presentations of the newborn health status of each of the four target countries it was evident that the representatives of the countries had very little knowledge about the use of chlorhexidine in newborn umbilical care, with the exception of Senegal which is a Pathfinder

country and has created a UNCoLSC country plan including chlorhexidine. The four target countries had heard about chlorhexidine use in newborn health through the list of 13 essential medicines issued by WHO, but they did not know the specifics about how chlorhexidine was used.

Burkina Faso, Niger and Senegal were implementing the dry cord care policy advised by WHO. It appears from the country presentations on newborn health status, that up to now the countries have not seen noticeable progress in the reduction of neonatal deaths due to infection. All of the countries mentioned during their presentations that they were eager to hear the scientific evidence supporting the use of chlorhexidine for umbilical cord care and how chlorhexidine is currently being used in other countries.

In order to convince the country participants of the effectiveness of the use of chlorhexidine for umbilical cord care and to give them more information about its implementation in country programs, the following presentations were given (which are included as appendices to this report):

- Overview of evidence for the use of chlorhexidine for umbilical cord care
- Programmatic consideration for the introduction of chlorhexidine
- Experience of countries using chlorhexidine (DRC, Madagascar and Nigeria)

The time allocated to the presentation on the scientific evidence for the use of chlorhexidine was extended to allow sufficient time to answer all questions and comments from the participants. The session was ended when a consensus was reached among all participants that the evidence was convincing and all of them agreed to move forward, thereby achieving the first meeting objective.

After the presentation on the scientific evidence for the use of chlorhexidine, participants requested more clarification regarding the use of gel versus spray and the duration of use. Information on the non-inferiority study of gel versus liquid chlorhexidine was shared with participants and it was clearly stated that gel is as effective as liquid. Information was also provided on the fact that the evidence clearly shows that early application of chlorhexidine (in the first 24 hours after birth) is the most important determinant of mortality reduction, but that each country can decide whether to use a single day application or multiple day application. Multiple day application did show reduction in visible omphalitis. One country suggested offering chlorhexidine in spray form to allow for easier application. The discussion also clarified that it is extremely important to use the correct dose of chlorhexidine and that the 5% chlorhexidine currently available in many countries is not the appropriate dosage and therefore will likely not give the same outcome as the use of 7.1% chlorhexidine.

### ***Programmatic considerations and examples of chlorhexidine introduction***

The presentation on the programmatic considerations for chlorhexidine discussed the different stages of the scale-up of the use of chlorhexidine, including the pilot phase, introduction and scale up, and the considerations for governance, products, and services during each of these phases. After this presentation, many of the participants' questions related to supply chain management and availability of products. Specifically, if the product is to be integrated into existing supply chains or into existing delivery care kits, how can the product be integrated, and how can supply chain challenges that already exist be addressed to allow for the availability of this product? A question was also raised about why the WHO cord care recommendations have not been updated if WHO is a member of the CWG. The facilitators shared the information that WHO is currently revising their recommendations and the new recommendations should be shared in 2014, but that in the meantime, WHO has added 7.1% chlorhexidine digluconate to the 2013 model list of essential medicines specifically for umbilical cord care.

The second key objective of the meeting was to share programmatic experience from the DRC, Madagascar and Nigeria, which was achieved through presentations from each of the countries. The presentations from the example countries gave information on the context of each country, the steps taken in the process of introducing chlorhexidine, including the initial steps taken to sensitize decision-makers about the intervention, and the current status of chlorhexidine implementation in each country. The DRC presentation was made by the representative from the National Reproductive Health Program, the Nigeria presentation by the TSHIP representative, and the Madagascar presentation by the Director, Maternal, Child and Reproductive Health of the Ministry of Health. After these presentations, the primary observation made by the participants was that all countries where chlorhexidine was implemented had strong support for external technical assistance through a project funded by international donors; therefore, the participants wondered whether they will be able to implement a chlorhexidine program without external support. WAHO also mentioned that since Nigeria is very close to many of the target countries (specifically Niger) that it may be important to fund study tours to Nigeria as part of the sensitization and planning process.

Overall, the presentations were well received by the participants as reflected in the evaluation results. According to these results (see Appendix C), 88% of the respondents stated that the technical presentations and discussions were useful or extremely useful. Many respondents also mentioned in the comments section that the presentations on the scientific evidence and the country experiences were the aspects of the meeting that they most appreciated.

After the presentations, all participants were convinced that their countries should introduce chlorhexidine for umbilical cord care into their newborn health programs, and therefore, they were ready to work on a plan for chlorhexidine introduction.

### *Planning for introduction*

The third objective of the meeting, to assist country policymakers to identify next steps for introduction of chlorhexidine for umbilical cord care, was the focus of the second day of the meeting. First, country participants analyzed the situation of their countries in the following areas: governance, services, and products, and then this analysis was used to create country-level plans, including short term steps, to promote the introduction of chlorhexidine.

At the request of the facilitators, participants from each target country formed a small group to work together to analyze the situation and to develop the plan to introduce chlorhexidine. The facilitators, the representatives of all institutions present at the meeting (JSI, MSH, Save the Children, WAHO and WHO) and the DRC and Madagascar MOH representatives joined the different country groups to help them analyze the situation and develop the plans. They used the JSI framework for planning to scale-up chlorhexidine to guide the country situation analysis and a template developed by the facilitators to develop their plans.

Each country presented their situation analysis and their country plans in order to receive feedback from the group. The individual plans for each country are in Appendix D. These draft plans must be presented back to their colleagues, supervisors and decision makers in their respective countries before they can be finalized. These draft plans will serve also to advocate for the introduction of chlorhexidine in their countries.

Several interesting points were raised during the presentation of the situation analysis and the country plans. In Burkina Faso, the rate of assisted births is relatively high and they would not be willing to introduce a community-based chlorhexidine intervention as this would not align with their policy to promote institutional births. If Burkina Faso is to introduce the use of chlorhexidine, it would only be used at health facilities and would not be used at the community level. Several of the countries mentioned the need for a study tour to another country, both to help to solidify support for chlorhexidine and also to be able to see how implementation has been executed in other countries to inform introduction plans. Senegal is in a unique position relative to the other three target countries in that Senegal created an UNCoLSC plan and has already made some progress on discussions of the use of chlorhexidine internally. Senegal included in their plan a study on the effectiveness of chlorhexidine versus dry cord care. Other participants raised concerns about this study, specifically being able to have a large enough sample size for statistical power and the timeline and cost implications, and suggested that if Senegal would like to execute such a study, that mortality should not be the outcome under study.

The WAHO representative stated that WAHO would like to receive and review the finalized country plans and insisted that those plans must be of good quality in order for WAHO to

consider supporting selected activities in those plans. For example, WAHO could support or help to advocate for financial support for a study tour to another country to learn more about the implementation of chlorhexidine.

The issue of technical support to finalize the plan was raised and needs to be further discussed. Technical assistance may also be needed to help the participants to advocate for chlorhexidine introduction in their countries. The issue of availability of technical and programmatic documents was also highlighted by participants. To respond to this issue, the facilitators presented the chlorhexidine page of the Healthy Newborn Network website and highlighted specific documents that the participants had in their binders and on their flash drives from the website which could be useful for advocacy and in-country dissemination. However, most information in this website is in English and therefore not accessible to francophone readers. One suggestion was that if francophone readers found interesting information on the website that needed to be translated into French, that they can forward the document to the facilitators of the meeting who will contact the CWG to discuss possibility of translation. MSH also stated that they had translated many documents for DRC which are not currently on the website and that this is an area for follow-up.

## **Conclusions, Recommendations, and the Way Forward**

### **Conclusions**

The Francophone West Africa regional meeting on the introduction of chlorhexidine 7.1% for umbilical cord care into newborn health care programs was completed with success. All of the four target country participants have agreed to draft plans to introduce chlorhexidine in their country programs for umbilical cord care in order to reduce their respective neonatal mortality rates. The plans that they drafted need to be finalized upon their return to their respective countries. Although the participants are convinced about the effectiveness of chlorhexidine, they may need support to advocate for the introduction when they return to their countries. This support may include assistance with finalizing their plans, access to additional documentation, and technical support. For the implementation of their plans, they will need financial and technical support.

### **Recommendations**

Key recommendations that should be addressed in follow-up to the meeting include:

- WHO should issue complementary policy documents on chlorhexidine to support the list of 13 life-saving commodities. The recommendations for cord care should also be

revised as the current WHO policy is still advocating for dry cord care policy in most situations.

- CWG members should ensure that staff of their respective organizations are consistent in their messages to countries regarding umbilical cord care policy.
- There is a need to look closely at the newborn health care kits in certain countries to ensure availability of all elements of the kit at service delivery points. Adding chlorhexidine to this kit will add another logistics challenge that must be addressed.
- PATH will follow up with Senegal regarding their need to do a study on the effectiveness of chlorhexidine versus dry cord care and respond to the question of the validity of that study.
- CWG will examine the possibility of providing in-country technical assistance to the countries to finalize their plans and to advocate for the introduction of chlorhexidine.
- CWG/JSI will follow up with WAHO to inquire about their willingness to support country plans. There is a need to follow up with WAHO to review the plans and provide assistance, depending on their available resources.
- CWG/JSI will follow up with WAHO to request them to issue a statement to support the introduction of chlorhexidine for umbilical cord care in the 15 countries of the Economic Community of West African States (ECOWAS).

### Action Items and Suggestions

The meeting organizers will provide feedback to PATH and the wider CWG on the results of the meeting and the recommendations. In order to maintain the momentum created by this meeting in the respective countries and to ensure that chlorhexidine stays on the health agenda, the CWG should consider providing support for the following:

- Short-term support to finalize the respective country action plans;
- Follow-up with WAHO on their ability to support chlorhexidine introduction in the region, specifically funding opportunities and the possibility of issuing a formal statement in support of chlorhexidine for umbilical cord care;
- Translation of additional technical documents into French as needed and as requested by the target countries;
- Longer-term support to assist countries as needed with in-country technical assistance to implement their respective action plans.

## Appendix A: Participant List

Country	Name	Title	Organization/ Structure	Email	Tel	2-Dec	3-Dec
Burkina Faso	Karidiatou Carine Gnangao/Ouat tara	Attaché de santé	Direction of Family Health	<a href="mailto:doserge2003@yahoo.fr">doserge2003@yahoo.fr</a>	(226) 71 13 15 33/ 76 58 25 17	X	
Burkina Faso	Issa Bara	Pharmacist	Direction of Family Health	<a href="mailto:baraissa@hotmail.com">baraissa@hotmail.com</a>	(226) 70 26 08 63	X	X
Burkina Faso	Michel Akotionga	President	The Society of Gynecologists and Obstetricians of Burkina Faso	<a href="mailto:akotiongamichel@yahoo.fr">akotiongamichel@yahoo.fr</a>	(226) 70213838	X	X
Burkina Faso	Nathalie Roos	Junior Professional Officer/Maternal and Newborn Health	WHO Office/Burkina Faso	<a href="mailto:roosn@who.int">roosn@who.int</a>	(226) 61 73 62 84	X	X
Burkina Faso	Souleymane Zan	Officer for maternal and neonatal health program	WHO office/Burkina Faso	<a href="mailto:zans@who.int">zans@who.int</a>	(226) 70236476	X	X

Burkina Faso	Fousséni Dao	Officer for the Infant and Adolescent Health Program	WHO office/Burkina Faso	<a href="mailto:daof@who.int">daof@who.int</a>	(226) 70263346	X	
Burkina Faso	Aissa Ado Bouwaye	Professional Officer of Maternal and Newborn Health	West African Health Organization (WAHO)	<a href="mailto:abouwaye@wahooas.org">abouwaye@wahooas.org</a> <a href="mailto:attadjira09@yahoo.fr">attadjira09@yahoo.fr</a>	Bureau/Office: 00 (226) 20 97 57 75 (226) 76 88 27 47 (226) 75 75 90 90 (227) 96 26 31 31	X	X
Burkina Faso	Samba Sidibe	Finance Officer	JSI	<a href="mailto:samba_sidibe@jsi.com">samba_sidibe@jsi.com</a>	(226) 50 33 33 15	X	X
Cote d'Ivoire	Madeleine Bourgoïn epse Diomande	Deputy Director	National Infant Health and Child Survival Program at the Ministry of Health and HIV/AIDS Prevention	<a href="mailto:mbourgoin2006@yahoo.fr">mbourgoin2006@yahoo.fr</a>	(225) 202 12 221 (225) 059 54 505	X	X
Cote d'Ivoire	Kone Seidou	Doctor (Gynecologist and Obstetrician)		<a href="mailto:docteurkone@yahoo.fr">docteurkone@yahoo.fr</a>	(225) 05 67 57 48/ 20 32 24 15	X	X

Cote d'Ivoire	Kouame Nguessan Solange épse Gnamke	Mid-Wife Specialist ; Secretary General of NGO Save 2 lives	Save 2 lives	<a href="mailto:solangevilasco@yahoo.fr">solangevilasco@yahoo.fr</a>	(225) 07 45 39 38	X	X
Democratic Republic of Congo	Guy Mukumpuri Aniaka	Head of the Division of Maternity at low risk division	National Reproductive Health Program/Ministry of Public Health	<a href="mailto:guymukumpuri@yahoo.fr">guymukumpuri@yahoo.fr</a>	(243) 817 77 09 91 (243) 976 89 74 50	X	X
Democratic Republic of Congo	Daniel Ngeleka Mutolo	Director	Direction of Pharmacy and Medicines	<a href="mailto:dangelemutolo@yahoo.fr">dangelemutolo@yahoo.fr</a>	(243) 99 813 97 87	X	X
Democratic Republic of Congo	Cyrille Massamba	Technical Advisor FP/RH	Management Sciences for Health (MSH)	<a href="mailto:cmassamba@msh.org">cmassamba@msh.org</a>	(243) 971 016 179	X	X
Madagascar	Marie Georgette Ravoniarisoa	Director of Maternal, Child and Reproductive Health	Ministry of Health	<a href="mailto:marigeoravo@gmail.com">marigeoravo@gmail.com</a>	(261) 032 04 013 46(261) 033 02 422 06	X	X

Niger	Aminata Konaté Tinni	Pediatrician, Head of the Maternal and Neonatal health division at the Ministry of Health.	Maternal and Neonatal health division at the Ministry of Health	aminatinni@gmail.com	(227) 99 60 76 08	X	X
Niger	Sabo Sahabi	Pediatrician, Head Doctor at the Pediatric Service	Regional Hospital Center of Tahoua	sabobi2006@yahoo.fr	(227) 96 97 97 69/90635362	X	X
Niger	Moumouni Kamayé	Neonatal Pediatrician, Civil Society and teacher at the Faculty of Health Sciences	Civil Society	kamaye_m@yahoo.fr	(227) 96556318/91666457	X	X
Nigeria	Nosa Orobaton	Chief of Party	Targeted States High Impact Project/JSI	<a href="mailto:Norobaton@tshipnigeria.org">Norobaton@tshipnigeria.org</a>	(234) 813 626 0446	X	
Senegal	Marietou Diop	Head of the neonatal office	The Direction of Reproductive Health and Child Survival	<a href="mailto:diop.yatou@gmail.com">diop.yatou@gmail.com</a>	(221) 77 547 84 57	X	X

Senegal	Modou Guèye	Assistant Head Clinician of Pediatrics/Neonatology	Cheikh Anta DIOP University in Dakar	<a href="mailto:modougueye2009@yahoo.fr">modougueye2009@yahoo.fr</a>	(221) 77 450 30 60	X	X
Senegal	Phillippe Guinot	Country Director	PATH Senegal	<a href="mailto:pguinot@path.org">pguinot@path.org</a>	(221) 77 197 75 33	X	X
USA	Steve Hodgins	Senior Technical Advisor for Newborn Health	Save the Children	<a href="mailto:shodgins@savechildren.org">shodgins@savechildren.org</a>	001 202-640-6630	X	X
USA	Suzanne Diarra	Senior Technical Advisor	Management Sciences for Health (MSH)	<a href="mailto:sdiarra@msh.org">sdiarra@msh.org</a>	001 703-310-3558	X	X
USA	Meba Kagone	Regional Manager	JSI	<a href="mailto:meba_kagone@jsi.com">meba_kagone@jsi.com</a>	001 202-310-5094	X	X
USA	Maggie Murphy	Program Officer	JSI	<a href="mailto:maggie_murphy@jsi.com">maggie_murphy@jsi.com</a>	001 202-310-5247	X	X
USA	Mary Carnell	Director Maternal, Newborn and Child Health Center	JSI	<a href="mailto:mary_carnell@jsi.com">mary_carnell@jsi.com</a>	001 202-657-1971	X	X

## Appendix B: Meeting Agenda

<i>December 2, 2013</i>	
<b>Time</b>	<b>Session</b>
8:00 a.m.– 9:00 a.m.	<b>Registration</b>
	<b>Chair:</b> <i>Meba Kagone, John Snow Inc. (JSI)</i>
9:00 a.m.– 10:00 a.m.	<b>Opening Ceremony</b> <i>Secretary General of the Ministry of Health of Burkina Faso</i>
10:00 a.m.– 10:15 a.m.	<b>Break</b>
10:15 a.m.– 10:20 a.m.	<b>Welcome and Objectives</b> <i>Facilitator: Meba Kagone, JSI</i>
10:20 a.m.– 11:20 a.m.	<b>Session 1: Newborn Health Status in Participant Countries</b> <i>Facilitator: Meba Kagone, JSI</i>
	<ul style="list-style-type: none"> <li>• <i>Burkina Faso (10 minutes)</i></li> <li>• <i>Côte d'Ivoire (10 minutes)</i></li> <li>• <i>Niger (10 minutes)</i></li> <li>• <i>Senegal (10 minutes)</i></li> <li>• <i>Question and Answer (20 minutes)</i></li> </ul>
11:20 a.m.– 12:30 a.m.	<b>Session 2: Overview of Evidence for the use of Chlorhexidine for umbilical cord care</b> <i>Facilitator: Steve Hodgins, Save the Children</i>
12:30 p.m.– 1:30 p.m.	<b>Lunch</b>
1:30 p.m.– 2:30 p.m.	<b>Session 3: Programmatic Considerations for the Introduction of Chlorhexidine</b> <i>Facilitator: Meba Kagone, JSI</i>
2:30 p.m.– 3:30 p.m.	<b>Session 4: Experiences from DRC, Madagascar and Nigeria</b> <i>Facilitator: Mary Carnell, JSI</i>
	<ul style="list-style-type: none"> <li>• <i>DRC (25 minutes)</i></li> <li>• <i>Madagascar (25 minutes)</i></li> <li>• <i>Questions and Answers (10 minutes)</i></li> </ul>
3:30 p.m.– 4:00 p.m.	<b>Break and Networking</b>
4:00 p.m.–	<b>Session 4: Continued</b> <i>Facilitator: Mary Carnell, JSI</i>

5:00 p.m.	
	<ul style="list-style-type: none"> <li>• Nigeria (50 minutes – Includes time for translation)</li> <li>• Questions and Answers (10 minutes)</li> </ul>
5:00 p.m.– 5:20 p.m.	<b>Summary of the Day</b>
<b>December 3, 2013</b>	
<b>Time</b>	<b>Session</b>
8:00 a.m.– 8:15 a.m.	<b>Summary of activities of December 2nd</b> <i>Facilitator: Meba Kagone, JSI</i>
	<b>Chair: Aissa Bouwaye</b> , West African Health Organization (WAHO)
8:15 p.m.– 9:45 p.m.	<b>Session 1: Country Group Work for Situation Analysis</b> <i>Facilitator: Mary Carnell, JSI</i>
9:45 a.m.– 10:05 a.m.	<b>Session 2: Presentation of country situation analysis</b> <i>Facilitator: Meba Kagone, JSI</i>
	<ul style="list-style-type: none"> <li>• Burkina Faso (10 minutes)</li> <li>• Côte d'Ivoire (10 minutes)</li> </ul>
10:05 a.m.– 10:20 a.m.	<b>Break</b>
10:20 a.m.– 10:40 a.m.	<b>Session 2: Continued</b> <i>Facilitator: Meba Kagone, JSI</i>
	<ul style="list-style-type: none"> <li>• Niger (10 minutes)</li> <li>• Senegal (10 minutes)</li> </ul>
10:40 a.m.– 11:40 a.m.	<b>Session 3: Group Work for Development of Country Plans Based on Situation Analysis</b> <i>Facilitator: Steve Hodgins, Save the Children</i>
11:40 a.m.– 12:40 a.m.	<b>Session 4: Presentation of Country Plans and Discussion</b> <i>Facilitator: Mary Carnell, JSI</i>
	<ul style="list-style-type: none"> <li>• Burkina Faso (30 minutes)</li> <li>• Côte d'Ivoire (30 minutes)</li> </ul>
12:40 p.m.– 1:40 p.m.	<b>Lunch</b>
1:40 p.m.– 2:40 p.m.	<b>Session 4: Continued</b> <i>Facilitator: Mary Carnell, JSI</i>
	<ul style="list-style-type: none"> <li>• Niger (30 minutes)</li> <li>• Senegal (30 minutes)</li> </ul>
2:40 p.m.– 3:10 p.m.	<b>Session 5: Next Steps and Follow-up</b> <i>Facilitator: Meba Kagone and Maggie Murphy, JSI</i>
	<ul style="list-style-type: none"> <li>• Including an Overview of Healthy Newborn Network website and resources</li> </ul>
3:10 p.m.–	<b>Evaluation and Closing Program</b>

3:45 p.m.	<i>Facilitator: Meba Kagone, JSI</i>
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## Appendix C: Meeting Evaluation Results

Question 1: In general, are you satisfied with the meeting?					Total Responses
Not at all	A little	Satisfied	Very Satisfied	Extremely Satisfied	
		4 (25%)	10 (63%)	2 (13%)	16
<b>Comments:</b> <ul style="list-style-type: none"> <li>• Very interesting for neonatal survival</li> <li>• I was surprised by the organization as from the first day everything was ready</li> <li>• The sharing of experiences of other countries encourages us and can help us move forward</li> <li>• Very good balance between group work and presentations</li> <li>• Not at all stressful</li> <li>• The use of chlorhexidine is a very simple intervention having a large impact on neonatal health</li> <li>• Very satisfied because the workshop was an opportunity to have more information and evidence on 7.1% chlorhexidine</li> </ul>					
Question 2: How well was this meeting organized?					
Very Poorly	Poorly	Average	Well Organized	Very well organized	
		1 (6%)	8 (50%)	7 (44%)	16
<b>Comments:</b> <ul style="list-style-type: none"> <li>• Well organized, organizers were humble with a good capacity to transmit information and coordinate meetings</li> <li>• Warm welcome, electronic and hard copies of materials available, satisfactory facilitation and active participation from countries</li> <li>• Perfect!</li> <li>• Good control over the timing of presentations</li> <li>• Good organization as the tickets and other documents, especially the working documents, were shared on time. Only weakness is the hotel which is old and not very comfortable rooms given the high price.</li> </ul>					
Question 3: How useful were the technical presentations and discussions in the meeting?					
Not very useful	A little useful	Moderately Useful	Useful	Very useful	

		<b>2 (13%)</b>	<b>6 (38%)</b>	<b>8 (50%)</b>	16
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• In order to outline well the subject</li> <li>• If we are able to include chlorhexidine in umbilical cord care in our country, we will surely reduce neonatal mortality.</li> <li>• Very useful, but it's a shame that not all of the documents were translated from English to French</li> <li>• Scientific evidence for chlorhexidine was clearly presented by the experts</li> <li>• The presentations from countries who have already introduced the product, DRC, Madagascar and Nigeria were clear and were significant.</li> </ul>					
<b>Question 4: How well did the meeting prepare you to share the evidence on the use of chlorhexidine for umbilical cord care?</b>					
Very Poorly	Poorly	<b>Satisfactorily</b>	<b>Very Well</b>	<b>Extremely well</b>	
		<b>3 (19%)</b>	<b>10 (63%)</b>	<b>3 (19%)</b>	16
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• But need technical support during the awareness raising activity</li> <li>• Scientific evidence</li> <li>• No factor was neglected</li> <li>• This helped me a lot to do the action plan</li> </ul>					
<b>Question 5: How likely is it that your country will introduce chlorhexidine in its newborn care program?</b>					
Very unlikely	Unlikely	<b>Likely</b>	<b>Very Likely</b>	<b>Extremely Likely</b>	
		<b>3 (20%)</b>	<b>12 (80%)</b>		15
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• The scientific evidence is correct and we have to continue to accelerate the reduction of neonatal mortality for the survival of our children</li> <li>• The country has already accepted the introduction of chlorhexidine for umbilical cord care</li> <li>• We need to elaborate a plan for the introduction of chlorhexidine and implement it</li> <li>• The secretary general is already convinced and the Director General of Health gives particular attention to this question</li> <li>• It is already introduced and accepted, but the problem is the progression</li> </ul>					

<b>Question 6: Were you satisfied with the amount of information that you received on the use of chlorhexidine for umbilical cord care ?</b>					
Very Unsatisfied	Unsatisfied	Satisfied	Very Satisfied	Extremely Satisfied	
		<b>4 (25%)</b>	<b>10 (63%)</b>	<b>2 (13%)</b>	16
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• But need a study tour, preferably in Nepal, to learn from their experience</li> <li>• The information was very enriching and will help us to follow the process until the end</li> <li>• I have enough of the elements to implement the plan for the introduction of 7.1% chlorhexidine</li> <li>• The information on undesirable effects was not discussed</li> </ul>					
<b>Question 7: What did you learn during this meeting that you would be able to apply when you go back?</b>					15 (94%)
<ul style="list-style-type: none"> <li>• Promotion of the evidence on the use of chlorhexidine for umbilical cord care</li> <li>• Chlorhexidine digluconate 7.1% and the benefits of the use of chlorhexidine (research and programmatic results)</li> <li>• Use of chlorhexidine for umbilical cord care for newborns</li> <li>• Safety of the product for use on the umbilical cord ; simplicity of use</li> <li>• We were taught as part of the situation analysis, made an action plan</li> <li>• Importance of chlorhexidine on morbidity related to cord infections</li> <li>• Seek more information on the form of chlorhexidine to use</li> <li>• The support from the technical group is going to be strengthened; become involved in the scale-up ; sharing of the information and experience from other countries</li> <li>• The experience of Nigeria, the results of the principal studies on chlorhexidine</li> <li>• Try to convince the minister of health to become engaged to introduce chlorhexidine into their policy</li> <li>• Finalization of our plan (for sustainability)</li> <li>• The programmatic considerations for the introduction of 7.1% chlorhexidine and scale-up</li> <li>• Advocacy for the use of chlorhexidine</li> <li>• The programming and finalization of our plan</li> <li>• Experiences of different countries and evidence of the use of chlorhexidine</li> </ul>					
<b>Question 8: What did you like most?</b>					16 (100%)
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• Experience of African countries</li> <li>• The exchanges between countries with “pilot” experiences, help to introduce chlorhexidine and friendliness during the meeting.</li> <li>• The sharing of experienced from other countries – the rigor of the management of</li> </ul>					

<p>the work</p> <ul style="list-style-type: none"> <li>• Contribution of chlorhexidine in the reduction of neonatal mortality</li> <li>• All of the presentations in general</li> <li>• The organization was exceptional. For one month you have coordinated the organization of the meeting which has become a reality</li> <li>• The article on the efficacy of chlorhexidine and the sharing of experiences</li> <li>• Cordiale and relaxed atmosphere; country experiences: DRC, Madagascar, Nigeria</li> <li>• The sharing of country experiences; interventions of the facilitators on what is chlorhexidine; the methodology</li> <li>• The experience of Nigeria, the studies executed on chlorhexidine</li> <li>• The presentation of Steve Hodgins and the presentation on misoprostol and chlorhexidine in Nigeria and all of the resources and additional information</li> <li>• All of the aspects were satisfactory</li> <li>• Availability of the facilitators to share information and experiences</li> <li>• Everything was good, especially the introduction of experiences of certain countries</li> <li>• The sharing of country experiences</li> </ul>	
<p><b>Question 9: What could be improved?</b></p>	<p>11 (69%)</p>
<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• The availability of JSI to follow-up with participants</li> <li>• All of the documents in French for the francophones</li> <li>• Time was short</li> <li>• Increase the duration by one day</li> <li>• Next time, put all of the final presentations on the flash drive</li> <li>• Preparation of the workshop, administrative aspects, etc.</li> <li>• It is not missing any improvements</li> <li>• For francophone countries it would be good to translate the documentation into French</li> <li>• Include the aspects related to undesirable effects of chlorhexidine</li> <li>• The hotel, especially the rooms. Pay the per diem in dollars instead of in FCFA</li> <li>• More time for the preparation of the action plan and therefore 3 days and could be done in each country and to reduce the duration of the workshop</li> </ul>	
<p><b>Question 10: If there are any other comments you care to make, please write them here.</b></p>	<p>10 (63%)</p>
<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• Sincere thanks for all of the efforts to reduce neonatal mortality in developing countries.</li> <li>• Congratulations to the organizers of this meeting and encourage them to multiply this meetings for the care of the mother and child in order to reduce infant and neonatal mortality</li> <li>• Associate other country partners to the meeting (WHO, UNICEF)</li> <li>• Very interesting in the environments of our respective countries</li> </ul>	

- You must follow-up with us and accompany us in the implementation of this packet of care in our countries
- Thank you for all of the support.
- Very nice facilitators ; efforts made to keep to the time
- Continue to disseminate these good practices to improve the health of the mother and child
- I suggest technical assistance from JSI to the countries to finalize their action plans
- Hotel unsatisfactory and hope to have a detailed plan on the roll out in mature countries (like Nepal) and notably on local production.

## Appendix D: Country Action Plans

### Burkina Faso

Objective, Strategies and Activities	Measures of Progress	Calendar – One Year				Necessary resources/ Person responsible
		Q 4 2013	Q 1 2014	Q 2 2014	Q 3 2014	
<b>Objective 1: Have the approval of political authorities (above all the Ministry of Health) for the introduction of chlorhexidine 7.1% for umbilical cord care in health facilities in order to reduce neonatal mortality.</b>						
Strategy 1.1: Show the advantages of using chlorhexidine for umbilical cord care in comparison to dry cord care in order to change the policy in Burkina Faso.						
Activity 1.1.1: Bring the file to the Division of Family Health (DSF) to demonstrate the evidence and to suggest the strategies for implementation in Burkina Faso.	The file has been elaborated in collaboration with stakeholders		X			Ms. Gngangao at DSF as the focal point (with the Director and the technical team)
Activity 1.1.2: Finalization of the file by the Director of DSF	The file is final		X			The Director of DSF
Activity 1.1.3: Submission of the file for approval by the Minister of Health	The file has been submitted		X			The Director General of Health
Activity 1.1.4: Explore the possibility of a study tout to a country that is using the product in health facilities in order to gain knowledge on the program (such as <i>Confidential</i>	The study tour has been completed and the report, including recommendations and lessons learned, has been submitted			X		Ms. Gngangao is the point of contact (with the DSF)

Liberia).						
Activity 1.1.5: Hold an awareness raising session on the use of chlorhexidine with the committee to elaborate the strategic plan for child survival.	A concept note of the meeting has been written.		X			Ms. Gngangao from DSF and Dr. Roos from WHO
Activity 1.1.6 : Research financial support with partners such as WHO, UNICEF, USAID (or partners funded by USAID), UNFPA, UNAIDS, etc.						
Activity 1.1.7: Research technical support from partners (such as Jhpiego, JSI, PSI, etc.)						
<b>Objective 2: In the case that the first objective is met, the second objective is to put into place the use of chlorhexidine for umbilical cord care in health facilities.</b>						
Strategy 2.1: Ensure that the product is registered in the country and that it is integrated into the National Essential Medicines List (NEML).						
Activity 2.1.1: Execute an acceptability study with service providers in order to choose the formulation of the product (gel or liquid).	The results are available			X		Dr. Issa Bara is the contact person (with DSF). Possibility to implicate PROMACO (social marketing program)
Activity 2.1.2: Ensure the registration of the product.	The product is registered			X		CAMEG (the central medical store) has to identify the supplier and the supplier should start the process.
Activity 2.1.3: Chlorhexidine is already on the NEML, but the dosage is not 7.1%. Insert the product into the NEML (it is	The product is inserted into the NEML.					

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probable that this will be during the 2016 revision).						
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## Côte d'Ivoire

Objectives, Strategy and Activities	Measures of Progress	Calendar – One year				Resources Needed/ Responsible
		Q 4 2013	Q 1 2014	Q 2 2014	Q 3 2014	
<b>Objective 1: Bring the Ministry of Health and AIDS Prevention (MOH) to introduce chlorhexidine for umbilical cord care for newborns.</b>						
Strategy 1.1:						
Activity 1.1.1: Hold a restitution meeting (including the Department of Community Health and Local Medical Care (DSCMP), the Department of Pharmacy and Medicines [DPM], the Pharmacy of Public Health [the central medical store- PSP], the National Program for the Development of Pharmaceutical Activity (PNADP) and Maternal and child programs/Cabinet)	Effectively hold the restitution meeting (report)	X				Team that attended the meeting
Activity 1.1.2: Organize a workshop for awareness raising on the introduction of chlorhexidine and the use of chlorhexidine for umbilical cord care for newborns (Cabinet, the central directorates, programs, partners, societies for scholars, professional associations, schools for training of health professionals, NGOs)  <b>NB: Support desired of a consultant.</b>	Effectively hold the restitution meeting (report)		X			DSCMP, DPM, PSP, PNDAP, Maternal and Child Health Programs  <b>Partners/JSI</b>
Activity 1.1.3: Draft a plan to introduce chlorhexidine for umbilical cord care of newborns:  Organize a study tour to share experiences of the implementation of chlorhexidine for umbilical cord care for newborns	Existence of a plan		X			Country working group on chlorhexidine
<del>Confidential</del> Use of the data contained on this sheet is subject to the restrictions on the title page of this document.			26			

<ul style="list-style-type: none"> <li>- Create a supply plan;</li> <li>- Create a guide for the use of chlorhexidine for umbilical cord care for newborns;</li> <li>- Create a monitoring and evaluation plan.;</li> <li>- Introduce chlorhexidine for umbilical cord care for newborns into guidelines and training documents ;</li> <li>- Training of trainers on the use of chlorhexidine for umbilical cord care of newborns.</li> </ul>						
<b>Objective 2: Bring the MOH to introduce chlorhexidine into the national essential medicine list (NEML)</b>						
<b>Strategy 2.1:</b>						
Activity 2.1.1: Advocate with DPM to introduce chlorhexidine into the NEML	Chlorhexidine is introduced into the NEML		X			Country working group on chlorhexidine

## Niger

Objectives, Strategies and Activities	Measures of Progress	Calendar – One Year				Resources Necessary / Responsible
		Q4 2013	Q 1 2014	Q 2 2014	Q 3 2014	
<b>Objective 1: Bring the political decision-makers to take the decision to introduce chlorhexidine into the packet of newborn care</b>						
Strategy 1.1: <b>Restitution of the regional meeting</b>						
Activity 1.1.1: Restitution to the Director General/Reproductive Health (DG/SR)	Report restitution	10 December				Participants to the regional meeting (MOH, University/Maternity Issaka Gazobi (MIG), Region)
Activity 1.1.2: Restitution to the Central Directors of the MOH	Report	17 December				Participants to the regional meeting (MOH, University/Maternity Issaka Gazobi (MIG), Region) plus the DG/SR
Activity 1.1.3: Restitution to Central Directors, partners, the Nigerian Association of Pediatricians (ASNIPED), the gynecologists and ONGs	Report	30/12/13				Directorate of maternal and child health (DSME)
Activity 1.1.4: Make a request to WAHO for a study tour to Sokoto in Nigeria composed of: the Secretary general (SG), DG/SR, Faculty of Health Sciences, Health schools	Report	10 December				DSME
<b>Objective 2: Establish a plan to introduce chlorhexidine in the country for umbilical cord care</b>						
Strategy 2.1: Identify a group to elaborate the implementation plan for the use of chlorhexidine for umbilical cord care in Niger						

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Activity 2.1.1: Relay training						DSME
Activity 2.1.2: Integrate chlorhexidine into modules on integrated management of childhood illnesses (IMCI), SEEN; PCIMC	Atelier de validation					DSME

## Senegal

**General Objective: Reduce neonatal mortality related to infections with the entry point of the umbilical cord in Senegal by 2015**

Objectives, Strategies, Activities	Measures of Progress	Calendar – One year				Resources Needed/Responsible
		Q 4 2013	Q 1 2014	Q 2 2014	Q 3 2014	
<b>Objective 1: Reduce morbidity related to omphalitis through the use of chlorhexidine for umbilical cord care.</b>						
Strategy 1.1: Make available chlorhexidine 7.1% (delivering 4% chlorhexidine) in the country						
Activity 1.1.1: Put into place a technical group for chlorhexidine		X				Ministry of Health and Social Action (MSAS)
Activity 1.1.2: Advocacy for the introduction of chlorhexidine into the list of essential medicines		X				Directorate of Reproductive Health and Child Survival (DSRSE)
Activity 1.1.3: Study on the selection of the form of chlorhexidine to use			X			DSRSE et National Pharmacy for Procurement (PNA)
Activity 1.1.4 : Identify local pharmaceutical manufacturers and others for local manufacturing of chlorhexidine.			X			DSRSE et PNA

Activity 1.1.5 : Orient manufacturers for the submission of request for market authorization				X		DSRSE et PNA
Activity 1.1.6 : Support the Department of Pharmacy and Medicines for the review of files for the request for market authorization			X	X		DSRSE
Activity 1.1.7: Acquisition or chlorhexidine					X	DSRSE, PNA, UNICEF
Activity 1.1.8: Introduction of the product in the PNA supply chain.					X	PNA
Strategy 2.1: Introduction of the use of chlorhexidine for umbilical cord care in health facilities, including private facilities.						
Activity 2.1.1: Evaluate the implementation and the results of the dry cord care policy and lessons learned.			X			DSRSE and University
Activity 2.1.2: Execute a comparative study on the use of chlorhexidine et dry cord care			X	X		DSRSE and University
Activity 2.1.3: Introduce the use of chlorhexidine into cord care, in the protocol and norms of the country				X		DSRSE
Activity 2.1.4: Train supervisors and service providers (public and private) on the use of chlorhexidine					X	DSRSE
Activity 2.1.5: Ensure the supervision of service providers at all levels : education for health, health centers and health posts						DSRSE

Activity 2.1.6: Make available the norms and protocol documents at all levels of service delivery.					X	DSRSE
Strategy 3.1: Introduction of the use of chlorhexidine for umbilical cord care at the community level						
Activity 3.1.1: Introduce chlorhexidine into the packet of community-based care			X			DSRSE and the community health unit
Activity 3.1.2: Train community actors (community health workers, Home-based care, etc.. .)					X	DSRSE and the community health unit
Activity 3.1.3: Raise awareness of community leaders on the benefits of the use of chlorhexidine.				X		DSRSE and the community health unit