



Life
Saving
Commodities
Improving access,
saving lives

**Demand Generation for Reproductive, Maternal,
Newborn and Child Health Commodities**

AN ADAPTABLE COMMUNICATION STRATEGY FOR CHLORHEXIDINE

JULY 2014



USAID
FROM THE AMERICAN PEOPLE



**HEALTH
COMMUNICATION
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Acknowledgements

The USAID-funded Health Communication Capacity Collaborative (HC3)—based at the Center for Communication Programs within the Johns Hopkins Bloomberg School of Public Health—would like to acknowledge Carol Hooks (independent consultant) for authoring this strategy with contributions from Siobhan Brown (PATH), Dr. Manjari Quintanar-Solares (PATH), Anna Helland (JHU-CCP), Joanna Skinner (JHU-CCP), Kate McCracken (JHU-CCP) and Erin Portillo (JHU-CCP). HC3 thanks Kathleen Fox, Kim Martin, Katie Kuehn and Mark Beisser for their editing and layout support. HC3 would also like to thank Zarnaz Fouladi, Hope Hempstone and Stephanie Levy at USAID for their invaluable feedback, guidance, and support.

Suggested citation:

The Health Communication Capacity Collaborative HC3. (2014). *An adaptable communication strategy for chlorhexidine*. Baltimore: Johns Hopkins Bloomberg School of Public Health Center for Communication Programs.

The Demand Generation for Reproductive, Maternal, Newborn and Child Health Commodities activities are implemented by the Health Communication Capacity Collaborative (HC3) at Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP), with support from the RMNCH Trust Fund and the United States Agency for International Development (USAID), in partnership with Demand Generation sub-group of the UNCoLSC Demand, Access and Performance Technical Resource Team, including Population Services International (PSI), International Consortium on Emergency Contraception (ICEC), Jhpiego and other partners.

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Acronyms

ANC	Antenatal care
CBO	Community-based organization
CHW	Community health worker
DHS	Demographic and Health Surveys
EML	Essential medicines list
ENC	Essential newborn care
EWEC	Every Woman Every Child
HC3	Health Communication Capacity Collaborative
ICT	Information and communication technology
IPC	Interpersonal communication
JHU-CCP	Johns Hopkins Bloomberg School of Public Health Center for Communication Programs
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
NGO	Non-governmental organization
ORS	Oral rehydration salts
PPP	Public-private partnership
RMNCH	Reproductive, maternal, newborn and child health
SBA	Skilled birth attendant
SBCC	Social and behavior change communication
SM	Social marketing
SMS	Short message service
TBA	Traditional birth attendant
UN	United Nations
UNCoLSC	United Nations Commission on Life-Saving Commodities for Women's and Children's Health
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization

Introduction



Aim

To provide step-by-step guidance and illustrative content in creating a communication strategy to generate demand for **chlorhexidine**.

Intended User

This Adaptable Communication Strategy (the Strategy) is designed to be useful to multiple audiences, including staff from ministries of health, non-governmental organizations (NGOs) and community-based organizations (CBOs). The Strategy can support the efforts of communication professionals working directly on behavior change communication programs, as well as other professionals working in reproductive, maternal, newborn and child health (RMNCH) who need to create a demand generation component to support program activities.

What is a Communication Strategy?

A communication strategy provides a “road map” for local action targeted at behavior change and creates a consistent voice for the messages, materials and activities developed. It also ensures that activities and products work together to achieve the program goal and objectives. The final communication strategy should be used to guide content development of program materials, such as advocacy briefs, client leaflets, and job aides and tools for health providers, thereby ensuring consistent positioning and messaging across all activities.

The communication strategy, however, is not a static product. It must be responsive to an ever-changing environment. Adaptations may be necessary in order to respond to new research findings and data, unexpected events, changing priorities or unforeseen results. Communication strategies are essential in addressing priority or emergent health issues and allow for harmonization of priorities, approaches and messages among all the relevant organizations and stakeholders.

How to Use this Adaptable Communication Strategy

This Strategy forms part of a comprehensive Demand Generation Implementation Kit for Underutilized Commodities in RMNCH (the *I-Kit*) (<http://sbccimplementationkits.org/demandrmnch>). The *I-Kit* includes commodity-specific communication strategies designed to be easily adapted across multiple country contexts and integrated into existing RMNCH plans. The *I-Kit* also includes resources on four core cross-cutting demand generation areas: addressing the role of gender, a theory-based framework for media selection, utilizing information and communication technologies (ICTs) and new media, and leveraging public-private partnerships (PPPs).

This Strategy is not intended to serve as a “one-size-fits-all” model. It is designed as a quick-start foundation based on available evidence to provide guidance in answering the following questions:

- Where are we now?
- What is our vision?
- How are we going to achieve our vision?
- How do we know we achieved our vision?

Ideally, country-level teams would then integrate commodity-specific content tailored to the country context into existing or new RMNCH communication strategies for demand generation.

It is important to note that the strategy focuses on communication—typically, the product promotion component of a social marketing approach. If desired, the strategy can be integrated and expanded into a broader social marketing framework, addressing product, price and place.

Thirteen Life-Saving Commodities for Women and Children














In 2010, the United Nations (UN) Secretary-General’s *Global Strategy for Women’s and Children’s Health* (the Global Strategy) highlighted the impact that a lack of access to life-saving commodities has on the

health of women and children around the world. The Global Strategy called on the global community to save 16 million lives by 2015 by increasing access to and appropriate use of essential medicines, medical devices and health supplies that effectively address the leading avoidable causes of death during pregnancy, childbirth and childhood. Under the Every Woman Every Child (EWEC) movement, and in support of the Global Strategy and the Millennium Development Goals (MDGs) 4 and 5, the UN Commission on Life-Saving Commodities (UNCoLSC) for Women's and Children's Health (the Commission)

was formed in 2012 to catalyze and accelerate reduction in mortality rates of both women and children. The Commission identified 13 overlooked life-saving commodities across the RMNCH "Continuum of Care" that, if more widely accessed and properly used, could save the lives of more than six million¹ women and children. For additional background information on the Commission, please refer to <http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities>.

¹For assumptions used to estimate lives saved see UNCoLSC Commissioner's report (annex) (http://www.everywomaneverychild.org/images/UN_Commission_Report_September_2012_Final.pdf)

Figure 1: 13 Lifesaving Commodities

Reproductive Health			
			
Female Condom	Contraceptive Implants	Emergency Contraception	
Prevent HIV and unintended pregnancy: A female condom is a plastic pouch made of polyurethane that covers the cervix, the vagina, and part of the external genitals. Female condoms provide dual protection by preventing STI infection, including HIV, and unintended pregnancies.	Prevent unintended pregnancy: Contraceptive implants are small, thin, flexible plastic rods that are inserted into a woman's arm and release a progestin hormone into the body. These safe, highly effective, and quickly reversible contraceptives prevent pregnancy for 3-5 years.	Prevent unintended pregnancy: The emergency contraceptive pill (ECP) is the most widely available emergency contraceptive in developing countries. It is optimally taken in one dose of 1.5 mg as soon as possible after sexual activity. An alternative product of 0.75mg is also widely available.	
Maternal Health			
			
Oxytocin	Misoprostol	Magnesium Sulfate	
Post-partum hemorrhage: WHO recommends oxytocin as the uterotonic of choice for prevention and management of postpartum hemorrhage.	Post-partum hemorrhage: In settings where skilled birth attendants are not present and oxytocin is unavailable, misoprostol (600 micrograms orally) is recommended.	Eclampsia and severe pre-eclampsia: WHO recommends MgSO ₄ as the most effective treatment for women with eclampsia and severe pre-eclampsia.	
Child Health			
			
Amoxicillin	Oral Rehydration Salts	Zinc	
Pneumonia: Amoxicillin is an antibiotic that is used to treat pneumonia in children under five. Amoxicillin is prepared in 250mg scored, dispersible tablet (DT) in a blister pack of 10 DTs.	Diarrhea: Oral rehydration salts (ORS) is a glucose-electrolyte solution given orally to prevent dehydration from diarrhea. ORS is packaged in sachets of powder to be diluted in 200 ml, 500 ml or 1 liter of fluid, prepared to an appropriate flavor.	Diarrhea: Replenishment with zinc can reduce the duration and severity of diarrheal episodes. Zinc is prepared either in 20 mg scored, taste masked, dispersible tablets or oral solutions at concentration of 10 mg/5ml.	
Newborn Health			
			
Injectable Antibiotics	Antenatal Corticosteroids	Chlorhexidine	Resuscitation
Prevent newborn sepsis: WHO recommends benzylpenicillin and gentamicin, in separate injections, as first-line therapy for presumptive treatment in newborns at risk of bacterial infection.	Prevent Pre-term RDS: ANC are given to pregnant women who are at risk of preterm delivery to prevent respiratory distress syndrome in babies born in preterm labor.	Prevent umbilical cord infection: Chlorhexidine digluconate is a low cost antiseptic for care of the umbilical cord stump that is effective against neonatal infections.	Treat asphyxia: Birth asphyxia, or the failure of a newborn to start breathing after birth can be treated with resuscitation devices.

Demand Generation: An Overview



What is Demand Generation?

Demand generation increases awareness of and demand for health products or services among an intended audience through social and behavior change communication (SBCC) and social marketing (SM) techniques. Demand generation can occur in three ways:

- **Creating new users**—convincing members of the intended audience to adopt new behaviors, products or services.
- **Increasing demand among existing users**—convincing current users to increase or sustain the practice of the promoted behavior and/or to increase or sustain the use of promoted products or services.
- **Taking market share from competing behaviors** (e.g., convincing caregivers to seek health care immediately, instead of not seeking care until their health situation has severely deteriorated or has been compromised) and products or services (e.g., convincing caregivers to use oral rehydration salts (ORS) and zinc instead of other anti-diarrheal medicines).

When well designed and implemented, demand generation programs can help countries reach the goal of increased utilization of the commodities by:

- Creating informed and voluntary demand for health commodities and services.
- Helping health care providers and clients interact with each other in an effective manner.

- Shifting social and cultural norms that can influence individual and collective behavior related to commodity uptake.
- Encouraging correct and appropriate use of commodities by individuals and service providers alike.

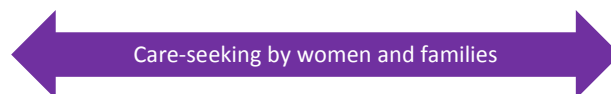
In order to be most effective, demand generation efforts should be matched with efforts to improve logistics and expand services, increase access to commodities, and train and equip providers, in order to meet increased demand for products and/or services. Without these simultaneous improvements, the intended audience may become discouraged and demand could then decrease. Therefore, it is highly advisable to coordinate and collaborate with appropriate partners when forming demand generation communication strategies and programs.

Who are the Audiences of Demand Generation Programs for the 13 Life Saving-Commodities?

Reducing maternal and child morbidity and mortality through increased demand for and use of RMNCH commodities depends on the collaboration of households, communities and societies, including mothers, fathers and other family members, community- and facility-based health workers, leaders and policy makers. Some of the commodities are more provider-focused in terms of demand and utilization, but all depend on the care-seeking behaviors of women and families.

Figure 2: Audiences of Demand Generation

Provider-focused	Provider and End-user
<input type="checkbox"/> Oxytocin	<input type="checkbox"/> Female condoms
<input type="checkbox"/> Magnesium sulfate	<input type="checkbox"/> Implants
<input type="checkbox"/> Injectable antibiotics	<input type="checkbox"/> Emergency contraception
<input type="checkbox"/> Antenatal corticosteroids	<input type="checkbox"/> Misoprostol
<input type="checkbox"/> Resuscitation equipment	<input type="checkbox"/> Chlorhexidine
<input type="checkbox"/> Amoxicillin	<input type="checkbox"/> ORS
	<input type="checkbox"/> Zinc



Key Concepts and Definitions in Demand Generation

Social and Behavior Change Communication (SBCC). SBCC promotes and facilitates behavior change and supports broader social change for the purpose of improving health outcomes. SBCC is guided by a comprehensive ecological theory that incorporates both individual-level change and change at the family, community, environmental and structural levels. A strategic SBCC approach follows a systematic process to analyze a problem in order to define key barriers and motivators to change, and then design and implement a comprehensive set of interventions to support and encourage positive behaviors. A communication strategy provides the guiding design for SBCC campaigns and interventions, ensuring communication objectives are set, intended audiences are identified, and consistent messages are determined for all materials and activities.

Social Marketing (SM). SM seeks to develop and integrate marketing concepts (product, price, place and promotion) with other approaches to influence behaviors that benefit individuals and communities for the greater social good. (http://socialmarketingblogs.com/r_craig_lefebvres_social/2013/10/a-consensus-definition-of-social-marketing.html)

Channels and Approaches

Advocacy. Advocacy processes operate at the political, social and individual levels and work to mobilize resources and political and social commitment for social and/or policy change. Advocacy aims to create an enabling environment to encourage equitable resource allocation and to remove barriers to policy implementation.

Community Mobilization. Community mobilization is a capacity-building process through which individuals, groups or organizations design, conduct and evaluate activities on a participatory and sustained basis. Successful community mobilization works to solve problems at the community level by increasing the ability of communities to successfully identify and address their needs.

Entertainment Education. Entertainment education is a research-based communication process or strategy of deliberately designing and implementing entertaining educational programs that capture audience attention in order to increase knowledge about a social issue, create favorable attitudes, shift social norms and change behavior.

Information and Communication Technologies (ICTs). ICTs refer to electronic and digital technologies that enable communication and promote the interactive exchange of information. ICTs are a type of media, which include mobile and smart phones, short message service (SMS), and social media such as Facebook and Twitter.

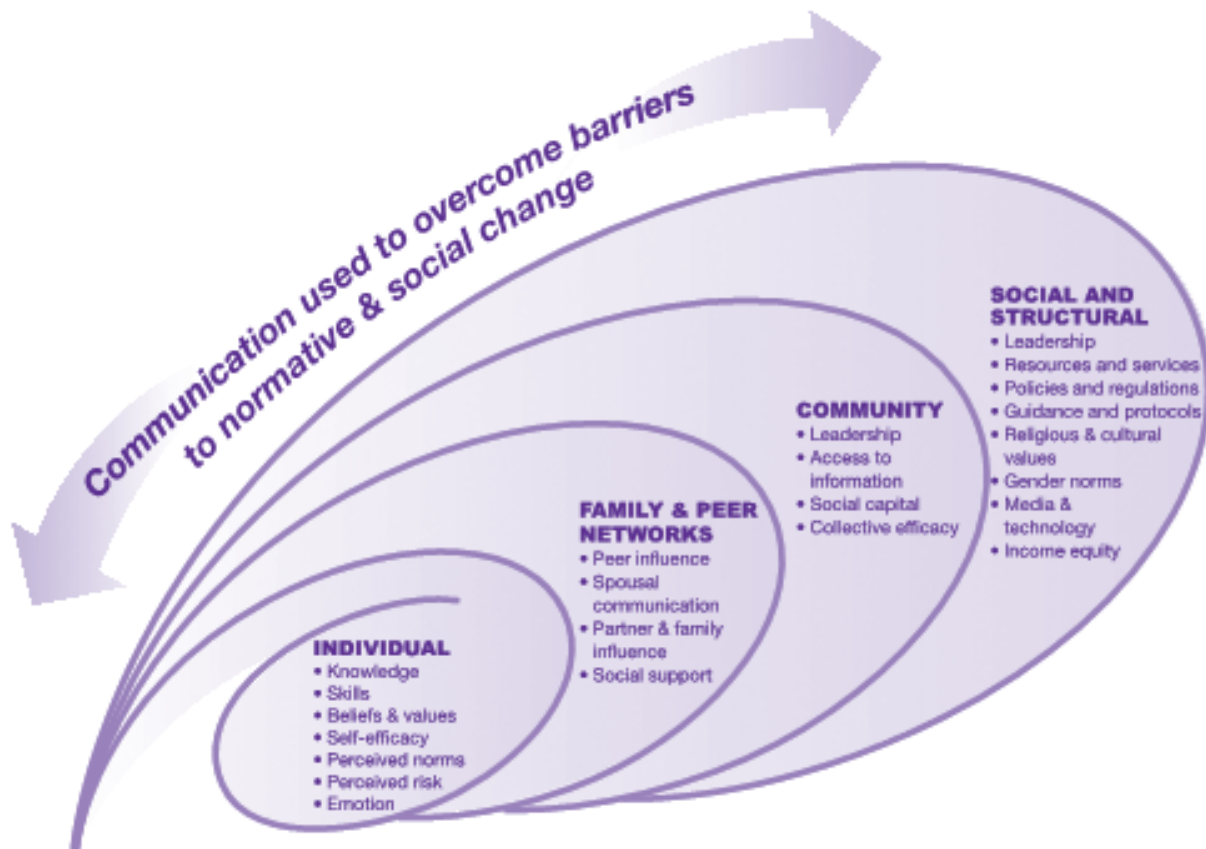
Interpersonal Communication (IPC). IPC is based on one-to-one communication, including, for example, parent-child communication, peer-to-peer communication, counselor-client communication, or communication with a community or religious leader.

Mass and Traditional Media. Mass media reaches audiences through radio, television and newspaper formats. Traditional media is usually implemented within community settings and includes drama, puppet shows, music and dance. Media campaigns that follow the principles of effective campaign design and are well executed can have a significant effect on health knowledge, beliefs, attitudes and behaviors.

Conceptual Framework

This Strategy uses the social ecological framework to guide its strategic design. This model recognizes that behaviors related to demand for care and treatment take place within a complex web of social and cultural influences and views individuals as nested within a system of socio-cultural relationships—families, social networks, communities, nations—that are influenced by and have influence on their physical environments (Bronfenbrenner, 1979; Kincaid, Figueroa, Storey,

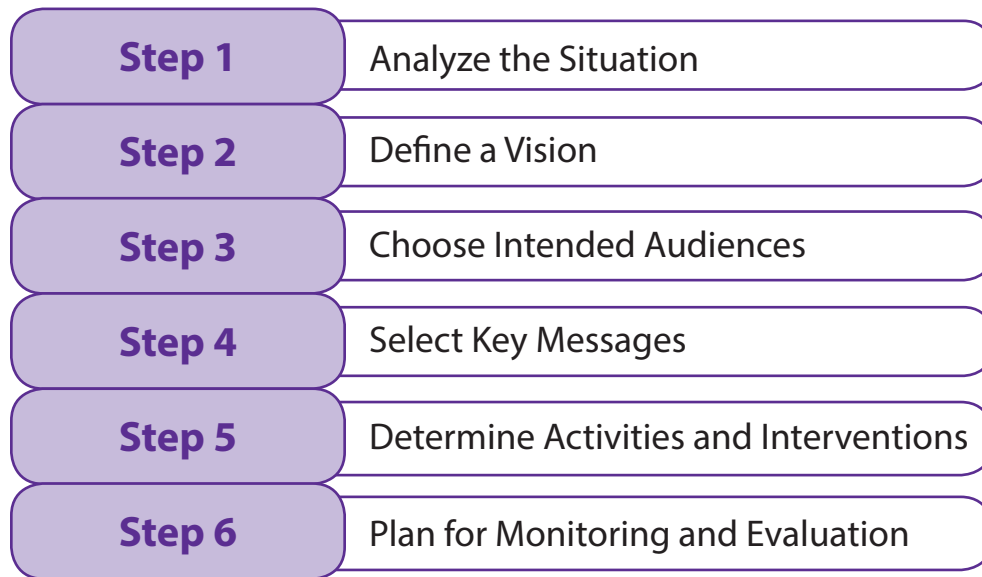
& Underwood, 2007). Within this framework, individuals' decisions and behaviors, relating to an increase in demand and utilization, are understood to depend on their own characteristics, as well as the social and environmental contexts within which they live. Applying this model in each stage of the communication strategy development helps to ensure that all determinants of behavior are considered and addressed.



Adaptable Communication Strategy: Structure and Guidance



This strategy presents a six-step process to guide country-level adaptation based on local situation analysis and formative research:



Explanations of each step begin below. Illustrative content for each step is provided in the following section.

Who Should Be Involved in Strategy Development?

Developing a communication strategy typically involves convening a group of stakeholders—ideally including representatives of the government, health area experts, marketing or communication specialists, and members of intended audiences—to review existing data, identify key audiences, and develop messaging and appropriate communication channels. Other potential partners may include private sector representatives for the formation of public-private partnerships, which can be used to strengthen a demand generation program, based on the needs and opportunities within an individual country context.

Step 1: Analyze the Situation

What is a situation analysis?

The situation analysis focuses on gaining a deeper understanding of the challenges and barriers to address within a specific context that influence the current demand and utilization of a priority

RMNCH commodity, including those affected and their perceived needs; social and cultural norms; potential constraints on and facilitators for individual and collective change; and media access and use by the intended audiences. It also examines the status of the life-saving commodity, including relevant policies, regulations, manufacturing, prices, supply chains, availability, level of knowledge (provider and end user) and level of use (provider and end user). In short, the situation analysis answers the question: “Where are we now?”

The situation analysis should also examine the attitudes, values, interests, aspirations and lifestyle of the intended audiences. This information, called psychographics, allows for a better understanding of what motivates and what hinders the intended audiences’ decisions and actions. Psychographics provide character sketches of the intended audiences that go beyond demographic information (sex, age, education, parity, etc.) and help to build a fuller picture of the audiences as individuals and how they may be nested within and influenced by their community.

Why conduct a situation analysis?

A comprehensive situation analysis is essential as it provides a detailed picture of the current state of

the commodity, needs and barriers which will direct the design and implementation decisions of the strategy and ultimately affect the level of success in generating demand and use.

How to conduct a situation analysis

As noted above, conducting a situation analysis typically involves convening a group of stakeholders and reviewing existing data in order to identify key information. A global synthesis of evidence conducted for each of the 13 underutilized commodities can provide a global view of available information and lessons learned from other country contexts (available at <http://sbccimplementationkits.org/demandrmnch/evidence-synthesis>). Additional sources of country-specific secondary data may include Demographic and Health Surveys (DHS) (<http://www.measuredhs.com/>), Multiple Indicator Cluster Surveys (MICS) (http://www.unicef.org/statistics/index_24302.html), quantitative and qualitative research conducted by NGOs, or private sector market research, where available, such as Nielson (<http://www.nielson.com/us/en.html>). RMNCH policies and guidelines also may assist in analyzing the situation.

If existing data—particularly on social and behavioral drivers—is not sufficient, outdated or does not provide enough insight into priority audiences, it may be necessary to conduct additional primary formative research in the form of focus groups, interviews or informal visits to communities and homes. For all provider audiences, it may be especially important to conduct formative research around provider attitudes and other drivers to provider behavior. Similarly, for all audiences (providers and end users), it may be especially important to conduct formative research to develop realistic psychographics.

What are the key questions?

The situation analysis has two main sections:

- Health and Commodity Context
- Audience and Communication Analysis

Health and Commodity Context

Following is an example of a set of questions to consider when analyzing the health and commodity-specific context relevant to chlorhexidine:

- What is the neonatal mortality rate in your country? How many neonatal deaths result from infection?
- Are there particular regions, areas or populations where neonatal infections and death are common?
- What proportion of infections is due to contamination of the umbilical cord stump?
- What are the prevailing cord care practices?
- What are the hygienic conditions in homes? In facilities?
- What percentage of births occurs at home? In public and/or private facilities?
- Are local studies needed to assess the effectiveness of chlorhexidine in reducing neonatal mortality or will studies from other countries suffice?
- Is 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) for umbilical cord care available? If so, is it available in gel, liquid or both presentations? What other concentrations of chlorhexidine are available for other purposes?
- What is the availability of chlorhexidine by region/district? What is the number of private sector vs. public sector clinics stocking chlorhexidine by region/district?
- If not available in the concentration recommended for cord care, what are the options for making it available at community level? At the facility level (public and private)?
- Is chlorhexidine registered in country? What brands? If not registered, what is the registration process—e.g., time, requirements?
- Are any efforts underway to add 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) for umbilical cord care to the country's essential medicines list (EML)?
- What regulations or policies govern supply, distribution, and availability? How may these affect demand?
- Are clean birth kits sold or otherwise distributed?
- What would be the options, advantages and disadvantages of adding 7.1 percent chlorhexidine digluconate to clean birth kits or providing it alongside clean birth kits?
- What is the price of chlorhexidine in the private and public sector? What are the costs of services associated with counseling, and administration?
- If available in the concentration recommended for cord care, at what levels is chlorhexidine being used for cord care? Is it being used in homes and communities? At both public and private hospitals/clinics?

- What are the current programs/projects (government and non-governmental) promoting chlorhexidine use for umbilical cord care, if any? In what regions/districts are they working? What are their challenges to increasing chlorhexidine uptake?

Audience and Communication Analysis

Below is an example of a set of questions to consider when conducting audience and communication analysis:

Knowledge and Attitudes

- What is the rationale behind cord care practices in the community?
- What do the various cadres of health care providers—including pharmacists, traditional birth attendants (TBAs), community health workers (CHWs) and health promoters (HPs)—know and teach about cord care?
- In a given area, who performs the first cord care and who does it day-to-day?
- In a given area, who most influences cord care? What opportunities exist for others to influence cord care?
- What do pregnant women, mothers, grandmothers, other family members and other community-level influencers believe and do about cord care?
- What proportion of women, families and other audiences is aware of chlorhexidine?
- What proportion of women, families and other audiences has accurate knowledge about chlorhexidine?
- How do providers, women and their families perceive chlorhexidine for cord care as compared to other methods (modern and traditional) of cord care?
- Is there any confusion among providers and end users about the different uses of chlorhexidine at various concentrations?
- What are the perceived barriers to accessing and using chlorhexidine for providers, women, their families and other influencing audiences?
- Are there common misconceptions or misinformation about chlorhexidine?
- How much are women/families willing to pay for chlorhexidine for cord care?

Normative and Structural Considerations

- What are the official national or local-level

- guidelines for cord care at health facilities?
- What are the official national or local-level guidelines for cord care for home and community births?
- To what extent and in what way does typical cord care practice deviate from the guidelines, at health facilities and at home births?
- What is the current context for advancing/improving newborn care? (Are there existing programs/activities that could/should successfully integrate chlorhexidine for cord care?)
- What are the opportunities and obstacles for making adequate quantities of 7.1 percent chlorhexidine digluconate available for cord care?
- What have proven to be the most effective channels for reaching women, families and providers with information about improving newborn care?
- What are the gender norms in country among couples, both married and unmarried, and how do these affect chlorhexidine use?
- How does the level of income affect use of chlorhexidine? Do poorer women and couples have access to both information and product?

Service Provision

- What are the current practices at each level of the health system—e.g., health post, health center, mobile health workers, hospitals—for preventing umbilical cord infection?
- What are the challenges or barriers to supplying 7.1 percent chlorhexidine digluconate to caregivers through antenatal care (ANC), CHWs and facilities?
- How can chlorhexidine for cord care best be integrated into facility deliveries and post-delivery instructions provided after facility deliveries?
- How feasible is it for facilities to work with TBAs to teach and distribute chlorhexidine for cord care after home and community births?
- Do counseling guidelines ensure adequate information on chlorhexidine, including side effects and use?
- Do providers have adequate skills to counsel, prescribe and/or administer chlorhexidine?
- Are newborn health services integrated with other services, such as maternal health services?

Media and Communication

- Do couples communicate about using chlorhexidine or similar commodities?
- Through what channels—including media and interpersonal—do providers, women and their families prefer to receive health-related information?
- What channels can support the level of communication needed to increase knowledge of cord care and demand for chlorhexidine?
- What communication materials and programs already exist related to chlorhexidine?
- What is the technical and organizational capacity of media partners?

Psychographics

- What do providers and women and their families value? What are their core beliefs?
- Who and what influences providers and women and their families’ decisions and behaviors?
- What dreams do providers and women and their families have? What do they aspire to in life? What dreams do they have for their child(ren)?
- What are providers and women and their families’ biggest worries? What fears keep them up at night?

- How do providers and women and their families spend their days? Where do they go? What do they do? What are their hobbies and habits?
- How do providers and women and their families perceive themselves? How do they want to be perceived by others?

How to use the situation analysis

After conducting a situation analysis, program managers should be able to identify the key implications or challenges from the data. What are the reasons that chlorhexidine is not being utilized? What do potential users—end user, health care providers and health educators—believe about the commodity? Finally, select only a few key factors that the demand generation strategy will address. While it is tempting to address all factors, communications programs will be more successful if they focus on the top few factors that will have the biggest impact given available resources.

It can be helpful to organize the collected information—in order to distill the most important information—using a simple table organized by intended audience, such as the one below.

	Current Behaviors	Primary Barriers to Desired Behavior	Primary Benefits of Desired Behavior
End user/ community members (e.g. women, men, caregivers)			
Providers (including public and private, clinic- and community-based)			

In order to maintain an actionable focus throughout the strategy design, it is also helpful to synthesize the implications of this information. Population Services International’s Global Social Marketing Department

offers the following series of questions to guide the development of a situation analysis and the selection of strategic priorities to be addressed by the demand generation strategy:

What?	So What?	Now What?
Data Collection: Key facts collected during the situation analysis.	Data Analysis: Possible implications that the facts may have on the demand generation strategies.	Strategic Priorities: Identify which implications to address in the demand generation strategy. Limit to three to five strategic priorities in order to focus the plan.
Example:		
Mothers and service providers around the world have a strong desire to apply something to the umbilical cord stump. In the absence of a specifically recommended product, they will use a variety of traditional and/or non-traditional substances. Putting nothing on the stump in some cultures and communities is seen as unacceptable.	Traditional and/or non-traditional substances are applied to the cord stump for a number of reasons, including, but not limited to: preventing or treating infection; drying, lubricating, softening, protecting; or healing the cord stump; accelerating cord detachment; and following traditional practices. However, not all of these substances are clean or hygienic, and potentially increase risk of infection.	Position chlorhexidine as the best substance for cord care, building on existing desires to apply something to the umbilical cord stump following birth.

Source: Population Services International, n.d. *The DELTA companion: Marketing planning made easy.* (http://www.psi.org/sites/default/files/publication_files/DELTA%20Companion.pdf)

Step 2: Define a Vision

The vision anchors a communication strategy by stating what the program hopes to achieve. A vision statement sets forth the direction the strategy should follow and defines clearly and succinctly how the demand generation activities will affect the broader commodity and health environment. The vision should paint a mental picture of a desired scenario in the future.

The vision should be agreed upon by the stakeholders involved in the strategy design process and will thus be “shared” by all. This shared vision is a short statement that articulates what is important; illustrates what is desired in the future for the commodity once the demand generation strategy is successfully implemented; and clarifies the goal of the demand generation strategy. The shared vision ensures that all stakeholders are working toward the same goal and guides the strategy design and development process.

In addition, a true vision should be realistic, concrete, and be attainable given the resources available. The vision should also communicate enthusiasm, be inspirational, and foster commitment and dedication from stakeholders towards the shared goal. Some organizations call the vision the “Goal” or the “Primary Objective.”

An example of a vision statement for chlorhexidine is:
Through the use of chlorhexidine for umbilical cord care, a dramatic and sustained decrease in newborn sepsis, cord infection, and death will be achieved.

Step 3: Choose the Intended Audiences

Segment the Audiences

Segmentation is the process of identifying unique groups of people, within larger populations, which share similar interests and needs relative to the commodity. If the group shares common attributes, then the members are more likely to respond similarly to a given demand generation strategy.

Segmenting allows for targeted use of limited resources to those populations that would most affect increased demand. It ensures that the activities developed and implemented are the most effective and appropriate for specific audiences and are focused on customized messages and materials.

Using key findings collected from the situation analysis, the first step in audience segmentation is to answer the question, “Whose behavior must change in order to increase demand and appropriate use of the commodity?” Initial segmentation is often based on demographics, such as age, sex, marital status, education level, socio-economic status, employment and residence (urban/rural). Audiences can be further segmented by psychographics—people’s personalities, values, attitudes, interests and lifestyles.

Primary audiences are the key people to reach with messages. These may be the people who are directly affected and who would directly benefit from the use of the commodity. Or they may be the people who can make decisions on behalf of those who would

benefit from the commodity. Primary audiences may be further segmented into sub-audiences. For example, identifying specific segments of women of reproductive age who may share common attributes, such as young unmarried women, married women or high-parity women.

Influencing audiences are people who can impact or guide knowledge and behaviors of the primary audience, either directly or indirectly. Influencing audiences can include family members and people in the community, such as community leaders, but can also include people who shape social norms, influence policies or affect how people think about the commodity. Prioritizing key influencing audiences by an estimated power of influence related to increasing demand and uptake of the commodity is crucial. For example, male partners are a likely key influencing audience, but the level of influence (low, moderate, strong) may depend on country context and/or commodity and should be discussed among stakeholders. In order to prioritize influencing audiences, a table like the one below can be helpful.

	Primary Audience Influenced	Estimated Power of Influence (Low, Moderate, Strong)	Attitude Toward Use of Chlorhexidine or Similar Commodities
Influencing Audience 1			
Influencing Audience 2			

Primary or influencing audiences for demand generation may also include national, sub-national or community-level decision makers, such as legislators and religious leaders, as they can be instrumental in removing or creating access barriers or spreading misguided beliefs about the product.

Involving decision makers and influencers from the political and media realm—and carefully considering the legal and policy environment—is important to ensure demand generation efforts are not hindered by political or social barriers. *Scaling up lifesaving*

commodities for women, children and newborns: An advocacy toolkit (<http://www.path.org/publications/detail.php?i=2381>) provides advocacy resources to raise awareness and engage stakeholders in addressing commodity-related gaps in policy. Therefore, advocacy audiences are not included in this communication strategy.

Develop Audience Profiles

Audience profiles are the cornerstone of a communication strategy. They first help bring to life and personify each audience segment, which

subsequently guide communication messaging and activity planning. The profile should embody the characteristics of the specific audience, with a focus on telling the story of an imagined individual within the group who can neutrally represent the intended audience. Basing decisions on a representative, personalized example from a specific audience segment, rather than a collection of statistics or a mass of anonymous people, allows for more intimate knowledge of that audience segment and better defined and focused communication strategies. Therefore, the profile is important to ensure the messages are tailored to members of this selected group, resonate with them and motivate them to take action.

Audience profiles for each audience segment are developed using the information collected in the situation analysis. The profile consists of a paragraph that should include details on psychographics such as current behaviors, motivation, emotions, values, attitudes, preferred sources of information and access to communication channels as well as socio-demographic information such as age, income level, religion, sex, and place of residence. The profile should exemplify the primary barriers to the desired behavior relative to the audience segment. The profile may include the name of this individual or a photo that represents this person to help visualize who this person is and tell his or her story. It is important to keep in mind that:

1. No two audience profiles look the same as the same data will not always be available for each audience segment.
2. The best profiles use qualitative research as a source.
3. Profiles are to be living documents and regularly updated when new information becomes available.

If the information gathered in the situation analysis lacks detail on a particular audience segment, additional research may need to be conducted to address the identified gaps. For example, for all provider audiences, it may be especially important to conduct formative research around provider attitudes and other drivers to provider behavior that could be used to better inform the audience profile and strategic design.

Step 4: Design Message Strategy (Objectives, Positioning, Key Messages)

The message strategy is one of the most important elements of a communication strategy. It drives the rest of the program and ensures synergy, consistency and coordination for the purposes of shared objectives and clear, harmonized messaging among all stakeholders and partners. A message strategy is designed for each primary and influencing audience and includes: (a) communication objectives, (b) positioning and (c) key messages. As previously mentioned, audience profiles are used to determine whether or not the objectives, positioning and key messages are appropriate for that individual.

(a) Objectives

Communication objectives are measurable statements that clearly and concisely state what the target audience should know (think), what they should believe (feel) and what they should do (behave), as well as the timeframe required for the change. “SMART” objectives are Specific, Measurable, Attainable, Relevant and Time-bound. Communication objectives should be derived from available evidence on the factors that drive or inhibit adoption by target users, as well as influencing audiences.

(b) Positioning

Positioning is the heart of the demand generation strategy and identifies the most compelling and unique benefit that the product offers the target audience. Positioning is often the emotional “hook” upon which the demand generation strategy hinges. Effective positioning moves beyond the functional benefits of the commodity and appeals to the target audience with emotional benefits.

Positioning presents the desired behavior in a way that is both persuasive and appealing to the intended audience. It provides direction for developing a memorable identity, shapes the development of messages and helps determine the communication channels to be used. Positioning ensures that messages have a consistent voice and that all planned activities reinforce each other for a cumulative effect.

As part of the positioning, a **key promise** is identified that highlights the main benefit associated with the proposed change. Changes in behavior, policies and social norms are made only because there is a perceived benefit to those changes. The benefit must outweigh the personal cost of the change.

An accompanying support statement, also called a “reason to believe” in marketing, describes why the audience should believe the promise. This could be based on data, peer testimonials, a statement from a reliable source or a demonstration. The key promise and support statement should include a balance of emotion and reason.

(c) Key Messages

Key messages outline the core information that will be conveyed to audiences in all materials and activities. Messages cut across all channels and must reinforce each other across these channels. When all approaches communicate iterative and harmonized key messages, effectiveness increases. Well-designed messages are specific to the audience of interest, and clearly reflect both a specific behavioral determinant and positioning. They also clearly describe the desired behavior, which must be “doable” for the audience. Key messages are not the text that appears in print materials (taglines) or the words that are used to define a campaign (slogans). Creative professionals are often hired to translate key messages into a creative brief, which is a document for creative agencies or internal teams that guides the development of communication materials or media products, including taglines and slogans.

It is important that key messages are always:

- Developed on the basis of country-specific formative research.
- Derived from context-specific, strategic choices regarding segmentation, targeting and positioning.
- Addressed to known drivers of and barriers to behavior change in the country context.
- Pre-tested with the target audience and refined based on audience engagement.

Step 5: Determine Activities and Interventions

Activities and interventions allow for communication of key messages through a variety of communication approaches and channels. Messaging and media selection (i.e. channels) are best considered and selected in cooperation in order to effectively transmit information to the intended audiences. Activities should be carefully selected based upon type of messaging, ability to reach the intended audience through a variety of media/channels, timeline, cost and available resources.

It is helpful to refer to findings from the situation analysis to guide selection of activities and interventions. A theory-based framework for media selection in demand generation programs (<http://sbccimplementationkits.org/demandrmnch/media-selection>) is a helpful guide to inform media selection decisions based on communications theory. Table 1 is an overview of the types of strategic approaches that can be used. Any demand generation program should include activities across a range of different intervention areas and communication channels, which communicate mutually reinforcing messages.

Replacing potentially harmful traditional practices can be highly sensitive, and great respect for tradition and traditional roles must be demonstrated. To date, chlorhexidine programs have found that understanding current local beliefs and practices is the most critical element to ensuring successful implementation of a chlorhexidine demand generation program. Additionally, demonstrating the commodity—using models to teach women how to apply chlorhexidine—and building the support of key influencers are also critical to a program’s success.

It also is important to consider linkages with other new or existing programs and systems, both those directly related to demand and those less closely connected but have an impact on demand or could be utilized to improve efficiency. The following are examples of potential areas for linkages when designing a demand generation program for chlorhexidine:

- Maternal health programs that may or may not emphasize essential newborn care, such as community-distribution and promotion of chlorhexidine for cord care
- Other newborn health programs that do not currently include chlorhexidine.
- Quality of care improvement initiatives for service providers/clinics.
- Supply chain management and market shaping.
- Pre-service education and existing continuing education or in-service refresher training initiatives for clinical and non-clinical providers.
- Private sector approaches [For a guide to PPPs in demand generation, see the “P for Partnership” tool (available at <http://sbccimplementationkits.org/demandrmnch/public-private-partnerships>); for supply chain management, see the Private sector engagement toolkit (available at http://www.everywomaneverychild.org/images/content/life-saving-commodities/Private_sector_engagement_A_%20toolkit_for_Supply_Chains_in_the_Modern_Context.pdf)].
- Private sector social franchises—especially those targeting women of reproductive age and children under 5 years.
- Non-child health programs such as antenatal/postnatal care, etc.—e.g., to provide counseling, disseminate materials—at both the clinic and community levels.

Table 1: Overview of Strategic Approaches that Can Be Used in Demand Generation

Advocacy: Advocacy operates at the political, social and individual levels, and works to mobilize resources and political and social commitment for social change and/or policy change. Advocacy aims to create an enabling environment at any level, including the community level—e.g., traditional government or local religious endorsement—to ask for greater resources, encourage allocating resources equitably and to remove barriers to policy implementation. Scaling up lifesaving commodities for women, children and newborns: An advocacy toolkit provides advocacy resources for utilizing the Commission platform to raise awareness and engage stakeholders in addressing commodity-related gaps in policy. See <http://www.path.org/publications/detail.php?i=2381>.

Community-Based Media: Community-based media reach communities through locally established outlets. Such outlets include local radio stations and community newsletters/newspapers, as well as activities such as rallies, public meetings, folk dramas and sporting events.

Community Mobilization: Community mobilization is a capacity-building process through which community individuals, groups or organizations plan, carry out and evaluate activities on a participatory and sustained basis to improve their lives, either on their own initiative or stimulated by others. A successful community mobilization effort not only works to solve problems, but also aims to increase the capacity of a community to successfully identify and address its own needs. For guidance on community mobilization see *How to mobilize communities for health and social change* (Howard-Grabman & Snetro, 2003), available at http://www.jhuccp.org/resource_center/publications/field_guides_tools/how-mobilize-communities-health-and-social-change-20.

Counseling: Counseling is based on one-to-one communication and is often done with a trusted and influential communicator such as a counselor, teacher or health provider. Counseling tools or job aids are usually also produced to help clients and counselors improve their interactions, with service providers trained to use the tools and aids.

Distance Learning: Distance learning provides a learning platform that does not require attendance at a specific location. Rather, the students access the course content either through a radio or via the internet and interact with their teacher and fellow classmates through letters, telephone calls, SMS texts, chat rooms or Internet sites. Distance learning courses can focus on training communication specialists, community mobilizers, health educators and service providers. Additional information on eLearning can be found at Global Health eLearning Center and PEPFAR eLearning Initiative.

Information and Communication Technologies (ICTs): ICTs are fast growing and evolving platforms for electronic and digital technologies, including computing and telecommunications technologies, which enable communication and promote the interactive exchange of information. ICTs also include mobile and smart phones, the use of SMS, and social media such as Facebook, Twitter, LinkedIn, blogs, e-Forums and chat rooms. This approach also includes websites, e-mails, listservs, eLearning, eToolkits and message boards. Digital media can disseminate tailored messages to the intended audience on a large scale while also receiving audience feedback and encouraging real-time conversations, combining mass communication and interpersonal interaction. A theory-based framework for media selection in demand generation programs (<http://sbccimplementationkits.org/demandrmnch/media-selection>) and Utilizing ICT in demand generation for reproductive, maternal, newborn and child health: Three case studies and recommendations for future programming (<http://sbccimplementationkits.org/demandrmnch/ict-case-studies>) are useful resources for program managers looking to utilize ICT in demand generation activities.

Interpersonal Communication (IPC)/Peer Communication: Interpersonal and peer communication are based on one-to-one communication. This could be peer-to-peer communication or communication with a community health worker (CHW), community leader or religious leader.

Mass Media: Mass media can reach large audiences cost-effectively through the formats of radio, television and newspapers. According to a review of mass media campaigns, mass media campaigns that follow the principles of effective campaign design and are well executed can have small to moderate effect size not only on health knowledge, beliefs and attitudes, but also on behavior (Noar, 2006). Given the potential to reach thousands of people, a small to moderate effect size will have a greater impact on public health than would an approach that has a large effect size, but only reaches a small number of people.

Social Mobilization: Social mobilization brings relevant sectors such as organizations, policy makers, networks and communities together to raise awareness, empower individuals and groups for action, and work toward creating an enabling environment and effecting positive behavior and/or social change.

Support Media/Mid-Media: Mid-media's reach is less than that of mass media and includes posters, brochures and billboards.

Step 6: Plan for Monitoring and Evaluation

Monitoring and Evaluation (M&E) is a critical piece of any program activity because it provides data on the program’s progress toward achieving set goals and objectives.

Although planning for M&E should be included in the communication strategy, avoid developing a complete monitoring plan at the time of strategy development—e.g., indicators, sample, tools, who will monitor, frequency of data collection. At the time of strategy development, focus on the indicators that should be incorporated into the program’s plan. M&E indicators should be developed based on formative research and should indicate whether the key messages and strategies are having the desired effect on the intended audience.

A full M&E plan should then be developed as a separate program document. Developing an M&E plan should outline what indicators to track, how

and when data will be collected, and what will happen to the data once they have been analyzed. A variety of data sources can be used to collect M&E data. It is important to assess the scope and context of the program to choose the most applicable methodology, as M&E activities vary in cost, staff and technology requirements. While some lower-cost M&E options will allow for identification of trends in demand for services, they may not be able to provide additional insight into the causal effects of activities and the function of the program. To measure cause and effect, larger program-specific data collection activities geared toward evaluation are needed. See Table 2 below for examples of low- and high-cost options.

While the collection of M&E data tends to receive the most attention, it is also critical to have a process for analysis and review of the collected data. M&E data should be used to inform program changes and new program development. It is best to build these M&E review processes into existing program management activities to allow for regular dissemination of M&E indicators.

Table 2: Examples of Low- and High-Cost Options of M&E for Demand Generation

Low-cost option: A low-cost option makes use of existing data sources and opportunities to gain insight into the program and its associations with changes in demand or uptake. However, it will only allow for the identification of trends and will not allow for the attribution of change to a given program or to program activities.

Illustrative data sources for a low-cost option include:

- Service statistics (information from clinics and providers, such as referral cards and attendance sheets).
- Communication channel statistics (information from television or radio stations on listenership of mass media activities).
- Omnibus surveys (addition of questions related to program exposure and impact to omnibus surveys).
- Provider self-reported data (small-scale surveys among providers about services rendered).
- Qualitative data (focus group discussions, in-depth interviews).
- Demographic and Health surveys (trends in contraceptive prevalence and method mix—about every five years).

High-cost option: A high-cost option makes use of representative program-specific surveys and other data collection methods to gain considerable insight into the effects of the program and the way in which it worked.

Illustrative data sources for a high-cost option include:

- Service statistics (information from clinics and providers, such as referral cards and attendance sheets).
- Communication channel statistics (information from television or radio stations on listenership of mass media activities).
- Provider self-reported data (surveys among providers about services rendered).
- Large, nationally representative program-specific surveys (focus on issues related to knowledge, perceptions, acceptability and use of amoxicillin for diarrhea).
- Qualitative data (focus group discussions, in-depth interviews, photo narrative, observation visits).
- Client exit interviews (exit interviews will assess user satisfaction with services delivered, including their perceptions, experience and intentions).
- Neonatal mortality studies (trends in neonatal mortality and its causes—every five years or as possible if causes are not adequately addressed in DHS).

Indicators

M&E indicators should include process, output, outcome and impact indicators.

Process Indicators	Program Output Indicators	Behavioral Outcome Indicators	Health Impact Indicators
Measure the extent to which demand creation activities were implemented as planned.	Measure changes in audiences' opportunity, ability and motivation to use chlorhexidine, and the extent to which these changes correlate with program exposure.	Measure changes in audiences' behavior and the extent to which these changes correlate with program exposure.	Measure changes in health outcomes.
Example: Number of counseling sessions conducted with pregnant women on the use of chlorhexidine to prevent umbilical cord infections	Example: Proportion of women who report that they know where to get chlorhexidine	Example: Proportion of babies receiving chlorhexidine within 2 hours of birth either at home or health facility	Example: Reduction in umbilical cord infections

Key issues to consider when developing indicators include:

Disaggregation: To increase the utility of M&E data, indicators should be disaggregated to facilitate more in-depth analysis of program performance. It is recommended that indicators are disaggregated by factors such as gender, age, geographic location, etc.

Bias: Common biases that programmers should be aware of when designing, implementing and interpreting M&E include:

- *Self-selection bias*—for example, a mother who has experienced a loss of a newborn may be more or less likely to respond to a survey about practices in newborn care.
- *Social desirability bias*—following exposure to health promotion initiatives, intended audiences may feel pressured to give “right answers” to survey questions—e.g., to report positive attitudes toward a commodity even though they do not really feel that way. As demand generation interventions are successful at shaping positive social norms, social desirability bias may become more of a challenge in M&E.

An Illustrative Communication Strategy for Chlorhexidine



Step 1: Analyze the Situation

Refer to page 15 for supporting guidance on this step, as well as “Step 1” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step1/>) for further resources.

Health and Commodity Context

**The majority of the information in this section is a global-level analysis for purposes of illustration. The country-specific situation analysis should be focused on the local context.*

Health Context

Neonatal mortality is highest by far in sub-Saharan Africa (32 per 1000 live births) and South Asia (31 per 1000 live births) (UNICEF, 2013). Globally, neonatal infections are estimated to account for over one million newborn deaths annually (over a third of the total burden). The newly cut umbilical cord is an entry point for bacteria. Unsafe cord care techniques can lead to cord infection (omphalitis)—that can spread to surrounding tissues and the blood stream; potentially life-threatening sepsis; and neonatal death by tetanus and other infections.

Since 1998, the World Health Organization (WHO) has advised use of antiseptics for cord care in unhygienic conditions. Unhygienic conditions are often found in places with high neonatal mortality. New recommendations (<http://apps.who.int/iris/handle/10665/97603>) published in 2013, strengthen that advice and specifically recommend using 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine). Newborn care policies—and cord care guidelines, more specifically—vary by country, and practices within countries often do not reflect national policy. This is particularly true with home and community births, but may also be the case for many facility births. Proper cord care may or may not be taught during ANC or in the hours after birth in health facilities.

For various reasons, health professionals might:

1. Not address cord care consistently.
2. Recommend sub-optimal cord care methods and substances.
3. Not be aware of certain harmful traditional cord care practices or the extent to which they are practiced.
4. Not have a chance to influence women who give birth at home or do not attend ANC.

Millions of mothers and health providers around the world continue to have a strong desire to apply something to the umbilical cord stump, and putting nothing on the cord stump is simply unacceptable in some cultures or communities. In the absence of a specifically recommended product, they use a variety of traditional and non-traditional substances. Substances are applied to the cord stump for a number of reasons, including, but not limited to preventing or treating infection; drying, lubricating, softening, protecting, or healing the cord stump; accelerating cord detachment; and following traditional practices. However, not all of the substances used for this purpose—or conditions in which they are applied (including facilities)—are clean or hygienic, and potentially increase risk of infection (Nepal Family Health Program & USAID, 2007; Waiswa et al., 2008).

Substances used vary by region and country. In sub-Saharan Africa, substances used have been found to include: breast milk, Vaseline®, cooking and motor oil, mabono (a wild fruit) oil, or cream from sour milk to lubricate the cord; baby powder, charcoal dust, dried cow dung, dried chicken droppings, dust from the threshold of the home, ash from a burnt pumpkin handle, crushed loma (wasp nest), or mud to dry the cord; breast milk, alcohol, python snake oil, banana, cow dung, mukunku (bark of a tree), traditional herbs and the

dirt from pounding stick to medicate the cord in the event of redness or pus; and methylated spirit, baby lotion, antibiotic ointments, menthol-containing creams, toothpaste, hot balms, shea butter, juice from the pou plant, salty water, soapy water and various herbal preparations for varied reasons (Herlighy et al., 2013; Joel-Medewase, Oyedeji, Elemile, & Oyedeji, 2008; Moyer et al., 2012; Opara, Jaja, & Okari, 2012; Waiswa et al., 2008). In South Asia, mustard seed oil, turmeric, hing, jwano, onion, garlic, butter, other oils, powder, penicillin, sindoor, ash (unspecified type), ash of cow dung, boric acid powder, coconut oil, homeopathic medicines, Dettol or Savlon (antiseptics), earth from clay ovens, heat, antibacterial ointments, ginger and chewed rice are among the substances found to be used for cord care (Alam et al., 2008; Nepal Family Health Program & USAID, 2007). Different substances may be applied at different times depending on the condition of the cord and may be applied alone or in combination. Many of the substances used are actually or potentially harmful when applied to the cord stump. Even substances that may seem to be benign or beneficial can become harmful if: 1) they are not prepared, stored and/or applied hygienically; and 2) they are contraindicated for certain groups, such as premature infants.

Chlorhexidine digluconate is a widely used, low-cost medicine effective against major agents of neonatal infection. Since its introduction in the 1950s, it has been used regularly as a surgical and oral antiseptic and has been carefully studied for safety and efficacy. WHO has recognized chlorhexidine as a suitable antimicrobial for cord care where necessary, especially as a replacement for harmful cord care practices. As described in more detail below, daily application of 7.1 percent chlorhexidine digluconate to the cord stump has been shown to reduce neonatal sepsis and death in community-level studies and to be an acceptable substitute for other substances.

Commodity Context

Product Summary

Drug	Chlorhexidine gluconate (also called chlorhexidine digluconate or just chlorhexidine)
Proposed indication	Antiseptic for umbilical cord care
Formulation	7.1 percent chlorhexidine digluconate aqueous solution or gel, delivering 4 percent chlorhexidine for umbilical cord care
Dose	3 g of gel for single day application (as currently practiced in Nepal) or 10 ml of aqueous solution for single day application
Average cost	Less than US \$0.50 for single day application

Chlorhexidine digluconate—used to make a variety of chlorhexidine finished products—is readily available on every inhabited continent at low cost. Dozens of manufacturers around the world make chlorhexidine-based products, at concentrations from < 1 percent to 20 percent for various applications. The finished product for care of the umbilical cord stump (7.1 percent chlorhexidine digluconate, delivering 4 percent chlorhexidine) has a very low cost for raw materials per baby. Chlorhexidine has no toxicity risks and virtually no potential for misuse. It has a long shelf life, requires no cold-chain storage and is extremely easy to apply with minimal training and no equipment. These factors make it suitable for hospitals and other health facilities, as well as community and home care. Few other interventions have demonstrated such potential for rapidly reducing newborn mortality across so many settings for such a low cost.

In July 2013, WHO included 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) for umbilical cord care on the WHO Model List of Essential Medicines for Children. In October 2013, WHO issued new recommendations for umbilical cord care that recommend daily application of 7.1 percent chlorhexidine digluconate to the umbilical cord stump for the first week of life in areas with high neonatal mortality.

Although chlorhexidine for cord care typically adds one to two days to the average time it takes for the cord

stump to fall off, antiseptics like chlorhexidine greatly reduce bacterial colonization and infiltration of white blood cells into the site—making the process cleaner and safer for the newborn (Ente & Penzer, 1991). Most women, families and communities value speedy detachment of the stump, so communication strategies, messages and materials should anticipate and address the issue of potential delay.

Where consumer research has been conducted, mothers have shown a strong latent demand for a purpose-made antiseptic like chlorhexidine, demonstrated the ability to use chlorhexidine correctly and accepted that chlorhexidine increases the time for cord detachment by 1–2 days.

Recent community-level randomized controlled trials in Nepal, Pakistan and Bangladesh, have shown that applying a 7.1 percent chlorhexidine digluconate (delivering 4 percent free chlorhexidine) product to the umbilical cord saves lives (Arifeen et al., 2012; Mullany et al., 2006; Soofi et al., 2012). Across the three countries, data from over 54,000 newborns showed an aggregate 23 percent reduction in neonatal mortality (not including deaths in the first few hours of life) and a 68 percent reduction in severe infections for the chlorhexidine intervention groups. These are some of the largest effect sizes seen in any neonatal intervention (UNCoLSC, 2012). Similar trials are underway in Tanzania and Zambia, with results expected in 2014. It is estimated that chlorhexidine has the potential to reduce overall newborn mortality risk by up to 18 percent, resulting in over half a million newborn lives saved (Hodgins, Pradhan, Khanal, Upreti, & KC, 2013; UNCoLSC, 2012).

Audience and Communication Analysis

A recent evidence review found 15 documents related to demand generation for chlorhexidine for cord care that met the inclusion criteria from both Africa and Asia (HC3, 2013).

Individual Level

In the literature reviewed, mothers were the principal providers for skin and cord care during the neonatal period. Traditional cord care practices and lack of access to knowledge about new interventions such as chlorhexidine are two key barriers to neonatal health and the scale up and use of the commodity. Research in Bangladesh and Nepal reveal several unhygienic cord care practices. In Bangladesh, more than half of families surveyed applied substances to the stump after cord cutting of which turmeric and boric powder were the most common (83 percent and 53 percent respectively). Other substances applied were mustard oil, ash, Dettol, coconut oil, Nebanol ointment, ginger and chewed rice (Alam et al., 2008). This research also showed that approximately 40 percent of newborns were bathed on the day of birth and umbilical stump care included bathing, skin massage with mustard oil, and heat massage on the umbilical stump (Alam et al., 2008). Similar traditional cord care practices were found in Nepal. The application of heated mustard oil mixed with different other substances over the cord stump, immediately after cutting the cord and during the first week of birth, was a very common practice in all the study castes (Nepal Family Health Program & USAID, 2007).

In the African studies reviewed, mothers also provided most newborn skin and cord care, and dry cord care was rare. In Nigeria, the mother's education level was the main predictor of beneficial cord care (Abullimhen-lyoha & Ibadin, 2012; Opara et al., 2012). In a study where most respondents gave birth in a facility, received antenatal care (ANC) and were advised about cord care, 95.3 percent of respondents cleaned the stump with methylated spirit, but 32.4 percent applied additional substances to the stump (Opara et al., 2012). The types of substances applied to cord stumps in Africa include antiseptics, liquids, oils, powders, ashes and herbal preparations. Nurses were most influential regarding cord care (51.3 percent), followed by the maternal grandmother (32 percent) and paternal grandmother (5.8 percent) (Abullimhen-lyoha & Ibadin, 2012). Other

practices have potential impact on the use of chlorhexidine, particularly with regard to the timing of the release of the cord stump. In Tanzania, mothers and babies stay at home until the cord falls off in order to protect the newborn from witchcraft (Mrisho et al., 2008).

Family/Community Level

The literature also showed that family and community norms strongly influence cord care practices. Deeply held beliefs about umbilical cords and their care need to be addressed community-wide. Two studies in Bangladesh found that mothers, grandmothers and other female caregivers feel that traditional practices—like the application of mustard oil to the cord—are essential to protect the neonate from cold and associated health problems (Alam et al., 2008; Winch et al., 2005). Also in Bangladesh, caregivers were concerned about the timing of separation of the umbilical cord and became worried if it did not fall off after seven days.

In Uganda, dry cord care was found to conflict with spiritual beliefs attached to the use of local herbs (Byaruhanga et al., 2011). In the countries studied, grandmothers play a key role in determining cord care practices, especially with young mothers. Other family and community members are also involved in newborn care, these include sisters, older children and neighbors. Family networks are a key source of information about cord care (Ayiasi et al., 2013). In Zambia and elsewhere, the length of time to cord detachment was of near-universal concern (Herlihy et al., 2013).

Society Level

At the society level, it is important to consider if and how much autonomy mothers have to make decisions about health care, including where and with whom to give birth, and how to care for the cord stump. Lack of access to a source of chlorhexidine is also a significant factor. In Bangladesh, India and Nepal, a majority of births take place at home, often with the help of untrained or minimally trained birth attendants who are not knowledgeable about, or equipped with, chlorhexidine. Chlorhexidine, when available, is also not usually included in the clean delivery kits for home births.

Health System Level

Barriers are also present at the health system level. Although financing for chlorhexidine is a barrier, a study conducted in rural Bangladesh highlighted the willingness of 1717 couples to pay for three types of topical antiseptic products (single-dose liquid, multi-dose liquid and gel preparation) containing 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) that could prevent umbilical cord infections in newborns (RTM International, 2009). The majority of respondents were not willing to pay the preset prices asked for any of the products, but all respondents were willing to pay some amount of money for the product they preferred. Most respondents were also willing to borrow money to cope with higher prices in order to prevent neonatal infection, which indicates a high level of motivation among these potential users. The study found that a unit price of multi-dose 7.1 percent chlorhexidine digluconate liquid between Taka 15–25 (US \$0.21–0.35) would be affordable to the primary intended population in rural Bangladesh (ICDDR, 2012). Sold at this price, this product would be expected to generate a large market. Pre-market research in Bangladesh showed that pharmacists were interested in distributing chlorhexidine provided that it was recommended by physicians (RTM International, 2009).

Chlorhexidine—at the recommended concentration for umbilical cord care—would be considered a new intervention and would need to be classified by national regulatory agencies as a medicine—potentially adding regulatory hurdles to overcome before it could become widely available. Additionally, standard treatment guidelines and national EMLs would have to be revised to include chlorhexidine for cord care.

In general, ANC and skilled providers were found to play a limited role in teaching about cord care or newborn care overall. The quality of ANC—including health education and especially newborn care education—were

major impediments to beneficial cord care (Ayiasi et al., 2013). In Egypt, only half of mothers received newborn care advice during ANC visits, and only half of these received advice on cord care (Darmstadt et al., 2008). Given the large proportion of home births, especially in rural areas, health systems may need to be willing and able to work with traditional birth attendants (TBAs) to improve cord care and other essential newborn care (ENC) practices. A disconnect found between health providers and communities indicates a need for providers and communities to work together to develop strategies to improve care and outcomes (Moyer et al., 2012). In Uganda, communities and providers found recommended newborn care practices acceptable, but barriers such as pregnant women not understanding the value of early and frequent ANC visits when they did not feel sick, the cost of drugs and supplies, the lack of post-natal care, and the rejection of dry cord care by both health providers and parents, often prevented the uptake of recommended newborn care practices (Waiswa et al., 2008).

Production and Distribution

Chlorhexidine can be delivered through existing health services and initiatives such as antenatal and delivery care, and postnatal care in the first days and week of life. It can also be provided through retail outlets such as pharmacies, providers working in public facilities and/or communities (e.g., traditional birth attendants), and community health workers who have contact with pregnant women.

Efforts are underway to expand production of 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) in the developing world in order to meet expected demand.

The formulation of the chlorhexidine product should also be considered before large-scale dissemination. Results of two studies in Nepal indicate that chlorhexidine in the form of a gel, liquid or lotion was most acceptable to users (ICDDR, 2012; Nepal Family Health Program & USAID, 2007). Results from a hospital-based randomized trial of chlorhexidine gel and solution suggest that satisfaction and compliance were high for both products, and that the gel formulation was not inferior to the liquid (ICDDR, 2012). The formulations of chlorhexidine available on the market are an aqueous solution (liquid) and a gel. It is strongly recommended that countries conduct a user preference study prior to selecting the formulation for distribution.

Example of Table to Organize Key Information

	Current Behaviors	Primary Barriers to Desired Behavior	Primary Benefits of Desired Behavior
End user/ community members (e.g., women, men, caregivers)	Millions of mothers and health providers around the world apply a variety of traditional and non-traditional substances to the umbilical cord stump for any number of clinical and cultural reasons. However, not all substances adequately protect the infant and the site from infection.	Very limited knowledge of new interventions for neonatal health. Prevalence of/preference for culturally significant cord treatments. Low levels of attended or facility births. Unwillingness to pay (full price) for the commodity. One- to two-day delay for cord to fall off.	Very effective in preventing neonatal sepsis and death. Acceptable substitute for other substances. Zero-toxicity and virtually no possibility for misuse.
Providers (public and private, clinic- and community- based)	Low levels of promotion and insertion/use of chlorhexidine.	Low levels of knowledge of commodity. Poor availability of commodity.	Method easily incorporated into clean delivery kits. Multiple levels of service providers can administer.

Step 2: Define a Vision

Refer to page 19 for supporting guidance on this step, as well as “Step 2” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step2/>) for further resources.

Illustrative Vision

Through the use of chlorhexidine for umbilical cord care, a dramatic and sustained decrease in newborn sepsis, cord infection and death will be achieved.

Step 3: Choose the Intended Audiences

Refer to page 19 for supporting guidance on this step, as well as “Step 3” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step3/>) for further resources.

Primary and Secondary Audience Segments

(with rationale for segment selection)

Primary Audiences

- **Primary audience 1: Pregnant women**– Pregnant women are the primary caretakers of newborns. Informing women of how to care for their newborn properly and how to help prevent serious infections is crucial to the infant’s survival. Pregnant women can be segmented into smaller audiences according to where they live, their level of education, age and other factors, depending on what communication channels best reach them and what characteristics matter in terms of newborn care behaviors.
- **Primary audience 2: Grandmothers and family members who provide newborn care**– Often a mother is supported by relatives in caring for newborns, and the advice and knowledge of family elders and those in good family standing is highly valued when making decisions that directly impact the health of the new baby. Therefore, it is important to reach this audience with best practices for cord care, particularly in the context of social norms and cultural practices related to the care of new babies.
- **Primary audience 3: Traditional birth attendants (TBAs) and community health workers (CHWs)**– TBAs and CHWs are frontline workers in their communities and often have a deep understanding of the local customs. In some settings, TBAs can have a lot of influence over newborn care practices. It is important to note that any intervention targeting TBAs and CHWs with the goal of improving newborn health would need to cover more than cord care and address the full ENC protocol—e.g., breastfeeding initiation, wiping instead of washing the baby, skin-to skin contact—for better impact. Supervisors need to have a clear understanding of any new roles or information these workers are being asked to provide to their communities. It might be necessary to conduct additional research on biases and other drivers of provider behavior that could be used inform the audience profile and strategic design.
- **Primary audience 4: Skilled birth attendants (SBAs)**– SBAs receive specific training to ensure safe delivery for mother and child. If they are from a different part of the country, for example, they might not have a deep understanding of the customs where they practice, so they need to ensure they are well informed. They can have a strong influence on newborn care practices. It is important to note that any intervention targeting SBAs with the goal of improving newborn health should address the full ENC protocol. It might be necessary to conduct additional research around provider practices, biases and other drivers of behavior that could be used inform the audience profile and strategic design.

Influencing Audiences

- **Influencing audience 1: Antenatal care providers**– ANC providers have close contact with expectant mothers during their pregnancy, and can play an important role in helping mothers prepare for healthy caregiving and prevention of infection once the baby has been delivered. Messages for ANC providers should be centered on helping mothers prevent neonatal sepsis and cord infection through proper chlorhexidine use and delivering with a skilled and equipped birth attendant.
- **Influencing audience 2: Fathers and community members (in the context of meanings assigned to cord care outcomes and, for fathers, the cost)**– While pregnancy and newborn caregiving may be seen as traditionally “women’s responsibilities,” the father of the child is often the decision maker on expenditures related to caring for the newborn. Community members and leaders can be crucial in disseminating information and helping change community norms.

- **Influencing audience 3: Retail pharmacists or social marketers**— Pharmacies and social marketing are potentially important distribution channels for chlorhexidine. Objectives and messages should be tailored to the roles of pharmacies and social marketers in the area and address their needs, such as concern for profit and fast-moving inventory.

It will be necessary to conduct additional research around local population health-seeking behaviors and providers of newborn care, such as identifying who is likely to provide cord care immediately after birth and for the days that follow, and use this research to define the primary and influencing audiences and inform the audience profiles and strategic design. The people who most influence newborn care will vary by and within countries, and may differ between the public, faith-based and private sectors. With cord care, it is also important to consider meanings assigned to various aspects of the cord—for example, its condition, how long it takes to fall off, where it falls and vulnerabilities related to it. If, for example, delays in the cord falling off are perceived to mean that the husband is cheating, it will be very important to sensitize the mother, husband and community at large to the fact that chlorhexidine typically causes a delay—so to avoid blame and consequences.

Audience Profiles

Primary Audience 1: Pregnant Women



Halima, 34, expectant mother living outside of Abuja, Nigeria

Halima is pregnant and married, with 3 boys, ages 9, 6, and 4 years. Her first child died at home soon after birth. Halima had her next child at the district hospital and the third one at home alone because the baby came too fast. The next time, she stayed with a relative who lived closer to the health center as her due date approached. Halima keeps a small vegetable plot and owns a few chickens; she earns extra money selling vegetables and eggs. She wants her children to attend school so she saves her money carefully. Her husband has gone to the capital city to look for better work and he comes home some weekends; he sends money when he can, to her mobile phone. Halima's house has an old latrine and she gets water from a nearby stream. Halima attends the community health talks when the health worker comes several times a year. She has been preparing for some time for the birth of this child. Even though she is six months pregnant, she has not yet had time to go and wait at the ANC clinic. She plans to do so this month. The nearest health center is 10 kilometers away and she plans to deliver there. For her other children, she cleaned the umbilical cord with salty water daily until it fell off, as advised by her mother-in-law.



Mercy, 19, Ganze, Kenya

Mercy is 19 years old, married and pregnant with her first child. She completed primary school and then worked on her family's farm until she married. Now she sells grains and flour in the market. Her nearest health center is 20 kilometers from where she lives. She has made two ANC visits so far and expects her baby to be born in four months. She does not know if she will be able to deliver at the health center because it is so far away. Her older sisters have all delivered at home. She is a little bit afraid because she has known or heard of several women who either died in childbirth or lost their child within months. She is looking forward to being the best mother she can be. Her mother and older sisters give her lots of advice. The custom in her family is to put breast milk on the umbilical cord every day until it falls off.

Primary Audience 2: Grandmothers and Family Members who Provide Newborn Care



Mrs. Tiwari, 57, grandmother, Deoghar District, Jharkhand State, India

Mrs. Tiwari is very proud that her son is married, has one child plus a new one on the way and that he has a job to provide for his family. Her daughter-in-law is respectful and is good at keeping the home, and they get along well. Mrs. Tiwari raised four healthy children by asking her own mother-in-law for advice and remedies, and she expects her daughter-in-law to now consult with her on how to deliver and care for the new baby. Her family has a long tradition of applying mustard oil to the umbilical cord stump after birth and until it falls off. She is certain that this protects the child. Mrs. Tiwari cares about her family's reputation and does not want her daughter-in-law to stray from tradition or have to keep the newborn hidden for too long in case the neighbors begin to comment. Ms. Tiwari listens to the radio and speaks to her friends at the temple each morning, and they share stories about their families.

Primary Audience 2: Grandmothers and Family Members who Provide Newborn Care (continued)



Ngone, 40, older sister, Zinguinchor, Senegal

Ngone is 40 years old and has given birth to eight children with the help of a traditional birth attendant. One of her children died within weeks of his birth. Another died before age 3. Some of her deliveries were difficult, but she and most of her children survived. She believes the old ways are good ways since they have worked for generations. When the government opened a health center in her village, she began taking her children for immunization. Nonetheless, she rarely seeks health care at the government facility, preferring to seek assistance from her long-trusted healer. She is helping her much younger sister prepare for the birth of her first child and will be there when the child is born.

Primary Audience 3: Traditional Birth Attendants and Community Health Workers



Nora, traditional birth attendant in Copán Ruinas, Honduras

Nora has been delivering babies in her village for 10 years, following in the footsteps of her mother and grandmother, and their mothers and grandmothers before them. She has received limited training from a local NGO, focusing on the use of a clean delivery kit and referring women with danger signs. Delivering babies provides income and prestige for her, and she is very concerned about the welfare of women and children in her village. She is happy to refer her women for prenatal care, but she does not feel that the health center staff value what she does. She does not normally give new mothers advice on cord care, nor does she follow up with women if the delivery is normal. Sometimes she is consulted if the mother or baby has a problem in the days after birth.



Kanta, community health worker outside of Dhaka, Bangladesh

Kanta is a community health worker in Bangladesh. She is a mother with two children, ages 7 and 10 years, and after attending several health education sessions, she was invited to be a community health worker. Kanta was trained by an NGO to distribute mosquito nets several years ago and recently received training on ENC. She visits households and gives talks in the communities to educate pregnant women and young mothers. Kanta is proud that women consult her on their children's health and she is now recognized and welcomed in all the villages she visits. She welcomes the idea of selling chlorhexidine for cord care to help new mothers and further increase her income. Kanta enjoys her work even though she has to travel in the hot sun or the rain and only earns a small amount from each product. Mothers are often reluctant to buy from her, saying that traditional treatments are less expensive, so Kanta spends a lot of time trying to convince community leaders and others about the right treatments. She would like more information to explain why chlorhexidine is better and safer.

Primary Audience 4: Extended Family Members and Community Members



Tanvi, nurse-midwife, Rajasthan, India

Tanvi has been delivering babies at the health center for 15 years. She likes her work and tends to have good social status and recognition in the community. Women who deliver with her bring their own supplies, based on a list given during ANC visits. Given the limited supplies available at the health center, she has little choice but to use what the women bring. She has learned that 7.1 percent chlorhexidine digluconate is now part of essential cord care, but has not received any training or information in its use. She does not see the women after they deliver and go home, so she does not spend much time educating them about how to care for their new babies. She believes they learn how to do that at the ANC clinic and from relatives who have given birth before. She cares about the women and her reputation, so does everything she can to make sure the deliveries are successful.



Dr. Indira Khan, MBBS, FICOG, OB/GYN, Lahore, Pakistan

Dr. Khan is proud of what she has accomplished in life, including her education and her position as a doctor in one of the busiest health facilities in Lahore, and a small private clinic she operates evenings and weekends. She stays updated in medical education by attending conferences and government trainings, and she is a member of the local medical doctors association. She cares about her patients, especially the young mothers and mothers-to-be, and she wants to give them the best possible care. However, Dr. Khan sees more than 50 patients a day, including several deliveries. She may not spend as much time as she would like educating her patients about the medicine she prescribes or how to prevent illnesses in the future. She has noticed that quite a few of the women she delivers bring in their babies back to the hospital with cord infection—after they have tried several home remedies. She wonders why CHWs and ANC nurses do not do a better job educating mothers about newborn care. She is unaware of the extent to which her patients apply other substances to the cord stump and what some of those substances are.

Influencing Audience 1: Antenatal Care Providers



Sadia, ANC nurse, 27, Chittagong, Bangladesh

Sadia works at a local health center and provides screening to all pregnant women in the community. She is often overwhelmed by the number of women to see in a day, and she knows that people complain about long lines and waiting. As a result, she sometimes takes shortcuts in the way she does her work or gives patients limited information about what to do or expect during pregnancy and childbirth. She is unsure how often neonatal sepsis or serious cord infection occurs in her area and unaware of 7.1 percent chlorhexidine digluconate as a simple, cost-effective way to prevent it. She knows that although she is meant to see mothers four times during their pregnancy, they may: 1) delay the first visit, 2) receive ANC care from multiple care settings or 3) skip visits. As a result, she is also unsure of the next time she will see her clients, as it is unlikely that she provides all four ANC screening visits to the same woman. Typically, she does not mention newborn care during visits before month six or seven of gestation because she does not think the mother-to-be will remember anyway. Nor does she typically ask women where they intend to deliver or advise them to deliver with a skilled attendant. She is unsure what women in the community traditionally put on umbilical cord stumps (she is from another part of the country) and has found that, in general, women rarely cease traditional practices despite advice from health care providers.

Influencing Audience 2: Fathers and Community Members



Marco, married father, 30, Atauro, Timore-Leste

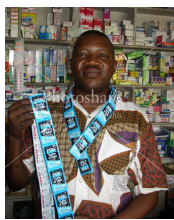
Marco has two children, ages 8 months and 3 years. He works in construction, and has been working consistently during the past few years. He is happy and proud that his wife is expecting their third child, but they do not normally discuss the pregnancy or what happens at her ANC visits—that is the women's domain. He is proud that his children are healthy and that he is able to support his wife so she can be dedicated to managing the home and taking care of the children. He is responsible for making decisions for and about his family on everything from health care to education to regular purchases. Marco gives his wife money for food and supplies when she asks for it, and he wants to know how she is spending their income. Marco relies on his wife to know how to prepare for birth and take care of their children's healthcare but he worries that she spends too much money on medicines, since his own mother used home remedies to care for him and his siblings. He has never accompanied his wife to the health center and rarely goes there for himself. Marco's wife knows she will have to have all the supplies she needs ready whether she gives birth at home or at the health center. Marco's mother is helping and advising her, as she always has. His friends and neighbors consult the pharmacist when they need health supplies and health care.



Lin, female community leader, 40, Thanlyin township, Myanmar

Lin leads a local women's group and has five children. She wants to see the condition and position of women in her community improve. Her group holds monthly meetings where they discuss what is and is not going well. They also share solutions and things they have learned. Each month they focus on a specific topic in addition to open discussion on whatever attendees are concerned about at that time. Group members also contribute a small sum of money each month to give to the member whose turn it is to receive. The women use this money for special purchases—for example, seeds, equipment, preparing for a new child, health care or large household items. Lin knows the life history of everyone in the group and regularly pays them visits, listens and gives advice. She has seen too many babies in her village die within the weeks after birth. She believes in some traditional ways, but she also sees the value in modern ways, including modern health care.

Influencing Audience 3: Retail Pharmacists or Social Marketers



Sam Mussa, pharmacy manager, 42, rural northern Nigeria

Sam manages a small pharmacy and shop. His brother is a trained pharmacist and owns several pharmacies in the region. Sam prides himself on having learned about medicine and treatment of common illnesses working with his brother. He knows that the community respects his knowledge and that his pharmacy is often the first place families come for medical advice. He was trained on clean delivery kits and treatment of childhood illnesses by NGO programs, and he appreciates the job aids that the NGOs give him to help explain it to pregnant women preparing for birth. Pregnant women come to him to get supplies they need for delivery and for cleaning the umbilical cord. He usually recommends methylated spirits for cleaning the cord stump. When caregivers come with prescriptions from doctors or when they know what medicine they want, he will just sell them what they ask for, but if they ask his advice, he will offer several options. Pharmacy companies sometimes provide promotional materials—like pens and note pads—to decorate his shop. These representatives are knowledgeable and friendly, and they offer him incentives to prescribe the medicines they promote, so he regularly follows their advice.



Martha, social marketer outside Kampala, Uganda

Martha manages a mid-sized kiosk in a suburb of Kampala. She has lived in the community all her life and people trust her advice and the products she sells. People often come to her kiosk because the pharmacy is too far away. She earns money selling a variety of medicines, such as ORS and zinc, which helps support her children's education. She has not heard about chlorhexidine for umbilical cord care and does not know what to recommend for cord care when families ask.

Step 4: Design Message Strategy

Refer to page 20 for supporting guidance on this step, as well as “Step 4” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step4/>) for further resources.

Primary Audience 1: Pregnant Women

Objectives

By 2015, increase the percentage of women (15 to 49 years), at all levels of parity and marital status, who:

1. Are aware that using 7.1 percent chlorhexidine digluconate alone on the umbilical cord stump protects the newborn better than traditionally applied substances.
2. Are motivated and have the self-efficacy to ask the ANC provider, CHW, TBA or pharmacist about cord care and chlorhexidine.
3. Are willing to pay a reasonable amount for 7.1 percent chlorhexidine digluconate for cord care.
4. Have correctly used 7.1 percent chlorhexidine digluconate to prevent umbilical cord infection.
5. Have not used any substance other than chlorhexidine for cord care with their most recent child.
6. Would recommend chlorhexidine to a relative or friend to protect the newborn’s health.

Positioning

Chlorhexidine is a best buy for newborn health. It does everything a mother wants cord care to do—including fighting infection—and gets the baby off to a great start in life.

Key Promise

Using chlorhexidine for cord care helps protect your baby, keeping him or her safe from infection and possibly even death.

Support Statement

In communities like yours—where oils, powders, pastes or other substances are normally applied to the umbilical cord stump—applying chlorhexidine instead has decreased the number of babies who have died from infections caused by bacteria that came into contact with the newly cut umbilical cord stump. Mothers in these communities sing the praises of chlorhexidine for cord care. Nurses and doctors recommend it as one of the best things women can do for their newborns.

Key Messages

Key messages must be tailored to the specific socio-cultural context. Different regions or ethnic groups have different reasons for their cord care practices and different beliefs around outcomes (such as how long the cord remains attached). To be effective, messages must address relevant benefits, concerns and practices. Key information should also be provided in a simple, easy-to-understand and non-threatening, respectful way.

Examples of key messages include:

- All mothers want to do their best to protect their babies.
- Cord care is one of the first things mothers do for their babies once they are born.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Chlorhexidine for cord care is the best and only thing that should be applied to the cord stump.
- Newborns are more likely to survive and be healthy when chlorhexidine is the only thing applied to their cord stump.

Key Messages (continued)

- In communities like yours, where mothers use chlorhexidine for cord care, more babies survive and they are healthier.
- Mothers have tried many different things to protect the cord and protect the newborn from cord-related infections. Chlorhexidine for cord care is the only thing you need.
- Chlorhexidine for cord care gives your baby a healthy start in life.
- Chlorhexidine keeps the cord clean and prevents infection.
- Putting chlorhexidine on your baby's cord every day could save his/her life. (Country teams will determine the specific time frame for application, whether single or multiple day application chlorhexidine.)
- Make chlorhexidine a part of your birth preparation. Have it ready when the child is born because it is most effective when applied on the day of birth.
- After cutting the cord, apply chlorhexidine to the tip of the cord, the stump and around the base of the stump daily or as recommended by a health care provider.
- You can get chlorhexidine for cord care from [the ANC clinic, a TBA, a CHW, a pharmacy]. Chlorhexidine may be applied to the umbilical cord stump by health facility staff if you deliver at a health care facility.
- Chlorhexidine for cord care is free [or very low cost, especially considering how effective it is].
- Ask your ANC provider, CHW, pharmacy or midwife about chlorhexidine and where you can get it.
- Using chlorhexidine might make it take a day or two longer for the cord to fall off. Taking a little longer is normal and will not hurt the baby.
- Allowing for an extra one to two days for the cord to fall off is a small price to pay for the health of your baby and gives you extra time to devote to just him/her. It can also save time and money because the cord will not get infected and need care—and medicines—from outside the home.
- Giving birth with a skilled birth attendant can help keep you and your baby safe.
- Go with the baby to the health center for post-natal care to make sure everything is okay with both of you and learn more about how to care for both of you after delivery.

Primary Audience 2: Grandmothers and Family Members who Provide Newborn Care

Objectives

By the year 2015, increase the percentage of grandmothers and family members who:

1. Know that chlorhexidine for cord care is an effective replacement for traditional cord care practices (and practices they see as modern such as talcum powder or methylated spirits).
2. Believe that chlorhexidine for cord care increases the chances of the newborn's survival.
3. Approve of the use of chlorhexidine to prevent neonatal sepsis and cord infection.
4. Accept that using chlorhexidine for cord care will likely cause a delay of one or two days for the cord to fall off and this is not a poor reflection on the parents or grandparents.
5. Use chlorhexidine and no other substance when they care for the cord stump.
6. Recommend that their daughter/daughter-in-law/relative use chlorhexidine for cord care instead of any other substance.
7. Recommend that their daughter/daughter-in-law/relative deliver with a skilled birth attendant.

Positioning

Generations have sought the best ways to care for the umbilical cord stump and some ways have worked better than others. Now there is a proven way to reduce newborn deaths related to cord infection—chlorhexidine for cord care. Chlorhexidine is the new and best way to keep the baby healthy!

Key Promise

If the baby's cord is cared for with chlorhexidine instead of other substances, his/her chances of survival improve considerably. The baby's mother will respect and appreciate you for helping her make and carry out this choice.

Support Statement

Grandmothers and aunts play a critical role in newborn care. In many communities, they are helping the expectant mother in their family choose chlorhexidine instead of other substances to protect and heal the cord stump—one of the first and most important choices made for the newborn. In these communities, fewer babies are dying from infections acquired through the cord stump. Supportive caregivers are proud of the impact they are having on their families.

Key Messages

Key messages for grandmothers and other caregivers should focus on benefits of chlorhexidine and their role in cord care. Examples of key messages include:

- Too many babies die in your community due to neonatal sepsis.
- You can help make sure your new grandchild/family member survives by encouraging the mother of the newborn to use chlorhexidine for cord care.
- The idea behind traditional cord care is a good one. Now there is something new you can put on the cord stump that works even better.
- You have the power to help your family by ensuring that your daughter/daughter-in-law/family member has chlorhexidine for cord care ready right after the cord is cut.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Chlorhexidine for cord care is an important part of newborn care. Make it one of the first choices your family makes for the new baby.
- Chlorhexidine for cord care has proven to be the best and only thing to put on the cord stump.
- Chlorhexidine might make the cord take a day or two longer to fall off. This is normal and should not be a cause for concern. Protecting the newborn is more than worth the extra time.

Key Messages (continued)

- Encourage your daughter-in-law/relative to attend ANC and to give birth in a health facility or with a skilled attendant. This decision has saved millions of lives.
- Before the baby is due, help your family decide where the mother will deliver, what supplies she needs and how to get to the health center, if needed.
- Encourage your daughter/daughter-in-law/relative to go with the baby for post-natal care.

Primary Audience 3: Traditional Birth Attendants and Community Health Workers

Objectives

By the year 2015, increase the percentage of TBAs and CHWs who:

1. Believe that chlorhexidine can prevent umbilical cord infection.
2. Are confident that they can correctly teach women how to use chlorhexidine to prevent umbilical cord infection.
3. Are confident that they can educate family members and others about umbilical cord infection, and the safety and effectiveness of using chlorhexidine to prevent it.
4. Are able to discuss cord care practices with the patient/client and family members and recommend chlorhexidine.
5. Know where to get chlorhexidine and either have a supply on hand or advise pregnant clients to have it for delivery.
6. Apply chlorhexidine to the newborn's umbilical cord stump in view of the mother and teach her how to do it.

Positioning

Chlorhexidine for cord care is a life-saving medicine for newborn care that respected providers like you can offer to pregnant women and new mothers.

Key Promise

Applying chlorhexidine immediately after the birth and teaching new mothers how to care for the umbilical cord stump with chlorhexidine, instead of other substances, will improve newborns' chances for survival and earn you esteem and appreciation. Your reputation as a provider who delivers healthy babies will grow.

Support Statement

The Ministry of Health recommends use of chlorhexidine for cord care as a replacement for other cord care practices in order to improve neonatal health and reduce neonatal deaths. Health workers and TBAs in many communities are successfully using and supplying chlorhexidine to help families care for newborns. Helping save newborn lives in this way makes them proud and improves relationships with the community.

Key Messages

Key messages for TBAs and CHWs should be focused on confident, capable providers that believe in the appropriateness, safety, and effectiveness of chlorhexidine for cord care. Examples of key messages include:

- Too many newborns get very sick or die because of neonatal sepsis and cord stump infection.
- Newborns deserve the best possible care, even if it involves changing old customs.
- The MOH now recommends 7.1 percent chlorhexidine digluconate as the best way to protect the umbilical cord from infection.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Chlorhexidine for cord care is inexpensive, has a long shelf life, and does not require refrigeration.
- Women can get chlorhexidine for cord care at ANC clinics, or it can be bought from _____. It is very inexpensive, especially compared to treating cord infection.
- Chlorhexidine for cord care is a special service you can provide your clients.
- Many families, communities and community-level health providers are now using chlorhexidine for cord care instead of other substances such as methylated spirits, breast milk, oils and pastes. More babies are surviving in these communities. You can join them and help improve newborn survival in your own community.

Key Messages (continued)

- Counsel women that using chlorhexidine for cord care will likely make it take a day or two longer for the cord stump to fall off and that this is normal. Help them practice explaining this to their male partner and other family members.
- Advise women to put only chlorhexidine on the cord stump—nothing else.
- If possible, also counsel family members and male partners about only using chlorhexidine and about the likely delay in cord separation.
- Tell women and their families about other aspects of good newborn and post-partum care as well, and help them practice what they learn.
- As more mothers and babies in your care survive, the community will respect you even more.

Primary Audience 4: Skilled Birth Attendants

Objectives

By the year 2015, increase the percentage of providers who:

1. Believe that chlorhexidine can prevent umbilical cord infection.
2. Are confident that they can correctly teach women how to use chlorhexidine to prevent umbilical cord infection.
3. Are confident that they can educate family members and others about umbilical cord infection and the safety and effectiveness of using chlorhexidine to prevent it.
4. Are able to discuss cord care practices with the patient/client and family members respectfully and come to agreement on a plan that is beneficial and not harmful to the newborn.
5. Know where to get chlorhexidine and either have a supply on hand or advise pregnant clients to have it for delivery.
6. Apply chlorhexidine to the newborn's umbilical cord stump in view of the mother and teach her how to do it.

Positioning

Chlorhexidine for cord care is a state-of-the-art, life-saving element of newborn care that respected providers like you can offer to pregnant women and new mothers.

Key Promise

Applying chlorhexidine immediately after the birth and teaching new mothers how to care for the umbilical cord stump with chlorhexidine, instead of other substances, will improve newborns' chances for survival, and earn you esteem and appreciation. Your reputation as a provider who delivers healthy babies will grow.

Support Statement

The World Health Organization (WHO) recommends 7.1 percent chlorhexidine digluconate for cord care in places with high neonatal mortality and traditional cord care practices that are or could be harmful. Recent community-level randomized controlled trials in Bangladesh Nepal and Pakistan have shown that applying a 7.1 percent chlorhexidine digluconate to the umbilical cord saves lives (Mullany et al., 2006; Soofi et al., 2012). Across the three countries, data from over 54,000 newborns showed an aggregate 23 percent reduction in neonatal mortality (not including deaths in the first few hours of life) and a 68 percent reduction in severe infections for the chlorhexidine intervention groups. These are some of the largest effect sizes seen in any neonatal intervention (UNCoLSC, 2012). It is estimated that chlorhexidine has the potential to reduce overall newborn mortality risk by up to 18 percent, resulting in over half a million newborn lives saved (Hodgins et al., 2013; UNCoLSC, 2012).

Key Messages

Key messages for providers should be focused on confident, capable providers that believe in the appropriateness, safety and effectiveness of chlorhexidine for cord care. Examples of key messages include:

- Too many newborns get very sick or die because of neonatal sepsis and cord stump infection.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Where used, chlorhexidine has prevented about one-quarter of newborn deaths and two-thirds of severe neonatal infections. This is a difference worth making, and you can play a key role in making it.
- The MoH and WHO now recommend 7.1 percent chlorhexidine digluconate as the best way to protect the umbilical cord from infection.
- Chlorhexidine for cord care is safer and more effective than alcohols and has been found acceptable to mothers who feel a strong need to put something on the umbilical cord stump.

Key Messages (continued)

- Chlorhexidine for cord care is inexpensive, has a long shelf life and does not require refrigeration.
- Many health care providers are now using chlorhexidine for cord care in areas where neonatal mortality is high. More babies are surviving in these communities.
- Ask clients and colleagues what mothers in the area normally do to the cord stump after delivery and in the following days.
- Newborns deserve the best possible care, even if it involves effort to overcome old customs.
- Apply chlorhexidine shortly after the birth and, where the MoH recommends multiple-day application, show the mother how to apply chlorhexidine at home.
- Chlorhexidine for cord care is available at [ANC clinics] or women can buy it from _____. It is very inexpensive, especially compared to treating cord infection.
- Counsel pregnant women that using chlorhexidine for cord care will likely make it take a day or two longer for the cord stump to fall off and that this is normal. Help them practice explaining this to their male partner and other family members.
- Advise pregnant women not to put anything else on the cord stump. Help them convince family members that chlorhexidine is the only thing to use.
- If possible, counsel family members and male partners on the use of chlorhexidine for cord care. Remember to tell pregnant women and their families about other aspects of good newborn and post-partum care as well, and help them practice what they learn.
- Verify that the ANC clinic is teaching the most-up-to-date newborn care practices, including chlorhexidine for cord care.
- As more mothers and babies in your care survive, the community will respect and trust you and your health facility even more.

Influencing Audience 1: Antenatal Care Providers

Objectives

By 2015, increase the percentage of ANC providers who:

1. Are aware of the incidence of cord infection seen at their facility.
2. Are aware that 7.1 percent chlorhexidine digluconate is a safe and effective method for preventing cord infection.
3. Are aware of substances women in their catchment area normally used for cord care.
4. Report feeling confident that they can teach and negotiate with clients to replace traditional substances with chlorhexidine for cord care.
5. Regularly teach and demonstrate chlorhexidine for cord care as part of teaching about essential newborn care.
6. Distribute chlorhexidine for cord care to ANC attendees by month seven of gestation.
7. Recommend that clients deliver with a skilled attendant so they get the best mother and newborn care and advice available.
8. Believe that providing chlorhexidine to prevent umbilical cord infection makes them better health care providers.

Positioning

Chlorhexidine for cord care is a state-of-the-art, life-saving element of newborn care. It is culturally and medically acceptable, easy-to-teach and inexpensive way for respected professionals to significantly improve newborn survival.

Key Promise

The ANC provider's role is crucial even after birth. Teaching new mothers how to care for the umbilical cord stump with chlorhexidine instead of other substances will improve newborns' chances for survival and earn you esteem and appreciation. Asking about their plans and practices and addressing them respectfully will help them trust you more. Your reputation as a knowledgeable and respectful provider who helps families have healthy babies will grow.

Support Statement

WHO and the MoH recommend 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) for cord care in places with high neonatal mortality. Recent community-level randomized controlled trials in Bangladesh, Nepal and Pakistan have shown that applying chlorhexidine to the umbilical cord saves lives (Mullany et al., 2006; Soofi et al., 2012). Among 54,000 newborns in these countries, there were almost 25 percent fewer neonatal deaths and more than two-thirds fewer severe infections. These are more impressive results than seen in almost any intervention for newborns (UNCoLSC, 2012). It is estimated that chlorhexidine has the potential to save over half a million newborn lives (Hodgins et al., 2013; UNCoLSC, 2012).

New mothers respect ANC providers and take their advice seriously. ANC providers play a crucial role in improving newborn care practices in their catchment areas.

Key Messages

Key messages for ANC providers should focus on their crucial role in encouraging safe cord care practices and beneficial newborn care in general. Examples of key messages include:

- Neonatal sepsis and cord infection is a big and serious problem here, causing unnecessary suffering and deaths. [Provide local statistics if possible.]

Key Messages (continued)

- Mothers in your community might put various substances on the cord stump to keep it dry, keep it from being too dry, improve its appearance, make it fall off faster, reduce the newborn's vulnerability or treat signs of infection. Ask mothers what they plan to do and why. Use this information to encourage them to use chlorhexidine instead.
- WHO and the Ministry of Health now recommend 7.1 percent chlorhexidine digluconate for cord care in areas with high neonatal mortality (30 or more neonatal deaths per 1000 live births).
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Chlorhexidine for cord care is safer and more effective than methylated spirits and other substances and has been found acceptable to mothers who feel a strong need to put something on the umbilical cord stump.
- Where used, chlorhexidine has prevented around one-quarter of newborn deaths and two-thirds of severe neonatal infections. This is a difference worth making and you can play a key role in making it.
- Distributing chlorhexidine for cord care at ANC clinics will help make sure as many new mothers as possible have it when the baby is born.
- Chlorhexidine for cord care is very inexpensive, especially compared to treating cord infection.
- Teach every expectant mother about chlorhexidine for cord care, regardless of how far along her pregnancy is. It is never too early, since you do not know if you will see her again.
- Chlorhexidine for cord care is inexpensive, has a long shelf life and does not require refrigeration.
- Give all expectant mothers the recommended amount of chlorhexidine for cord care at no later than seven months of gestation.
- Counsel women that using chlorhexidine for cord care will likely make it take a day or two longer for the cord stump to fall off and that this is normal. Help them practice explaining this to their male partner and other family members.
- If possible, counsel family members and male partners on the life-saving benefits of chlorhexidine as well.
- Remember to tell women and their families about other aspects of good newborn and post-partum care as well, and help them practice what they learn.
- Teaching about and providing chlorhexidine for cord care makes you a better ANC provider and helps you save lives.
- As more mothers and babies in your care survive and thrive, communities will value ANC and your services more.
- Encourage your clients to prepare for delivery and to plan to deliver with a skilled birth attendant to help ensure the health of mother and child.

Influencing Audience 2: Fathers and Community Members

Objectives

By the end of 2015, increase the percentage of fathers and community leaders who:

1. Recommend that pregnant women attend ANC clinics.
2. Recommend that women give birth with a skilled birth attendant whenever possible.
3. Have heard of chlorhexidine for cord care.
4. Believe that chlorhexidine can protect the cord and child better than substances traditionally applied to the cord stump until it falls off.
5. Understand and accept that it will likely take an extra day or two for the cord to fall off when chlorhexidine is used.
6. [Community members] encourage women to have chlorhexidine for cord care on hand at childbirth.
7. [Fathers] are willing to pay a reasonable sum for chlorhexidine for cord care.

Positioning

Children are the future of your family and community. Chlorhexidine for cord care is inexpensive, safe and highly effective in ensuring the child gets a healthy start in life. You can be proud of giving the newborn a chance at a bright future.

Key Promise

Using chlorhexidine for cord care improves the chances of the newborn's survival. You will be proud and happy that your partner/community made the change.

Support Statement

In communities where chlorhexidine is being used for cord care, fewer newborns are getting infections, fewer are dying and more are getting a good start to a life full of possibilities. You can play a role in making this happen [for your family].

Key Messages

Key messages for fathers and community members should focus on their roles as well as the benefits of chlorhexidine. Examples of key messages include:

- You play a critical role in improving child survival in your family and community.
- Ensuring that newborns have what they need for a healthy start in life is one very important thing you can do.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Chlorhexidine for cord care is safer than other substances applied to the cord stump, more effective at preventing cord infection and newborn deaths, and inexpensive. It is a "best buy" in newborn care.
- Save lives. Switch to chlorhexidine for cord care.
- Talk to your partner/community about the benefits of chlorhexidine for cord care. People who know about chlorhexidine for cord care use chlorhexidine for cord care and their babies stay healthier.
- Chlorhexidine for cord care might make it take 1–2 days longer for the cord stump to fall off. This is normal and is not a cause for concern.
- Invite a health provider to come speak to your community about saving newborn lives and to listen to what challenges your community faces.
- Chlorhexidine for cord care is available for free at the health center or at very low cost from _____.
- Be like other men in your community who protect the health of their babies by ensuring the mother has chlorhexidine when it comes time for her to deliver.
- Encourage your partner/community members to attend ANC clinics.
- Encourage your partner/community members to deliver with a skilled attendant.

Influencing Audience 3: Retail Pharmacists or Social Marketers

Objectives

By the end of 2015, increase the percentage of pharmacy staff and social marketers who:

1. Believe that chlorhexidine can prevent umbilical cord infection
2. Believe that marketing chlorhexidine for cord care will provide additional revenue and improve family/community well-being
3. Are confident that they can correctly teach women how to use chlorhexidine to prevent umbilical cord infection
4. Are confident that they can educate family members, TBAs, and others about umbilical cord infection and the benefits of using chlorhexidine to prevent it
5. Maintain a supply of and market chlorhexidine for cord care or advise pregnant customers, TBAs and others to have it for delivery.

Positioning

Chlorhexidine for cord care is a state-of-the-art, life-saving element of newborn care that retailers like you can offer to pregnant women and new mothers to increase revenue and help your community.

Key Promise

Chlorhexidine for cord care is easy to stock and sell for extra income and will help you help your community. You will be seen as keeping up with important health care innovations.

Support Statement

The MoH recommends use of chlorhexidine for cord care as a replacement for other cord care practices in order to improve neonatal health and reduce neonatal deaths. WHO recommends 7.1 percent chlorhexidine digluconate for cord care and has added it to the EML. Recent community-level randomized controlled trials in Bangladesh, Nepal and Pakistan, have shown that applying a 7.1 percent chlorhexidine digluconate to the umbilical cord saves lives (Mullany et al., 2006; Soofi et al., 2012). Across the three countries, data from over 54,000 newborns showed an aggregate 23 percent reduction in neonatal mortality (not including deaths in the first few hours of life) and a 68 percent reduction in severe infections for the chlorhexidine intervention groups. These are some of the largest effect sizes seen in any neonatal intervention (UNCoLSC, 2012). It is estimated that chlorhexidine has the potential to reduce overall newborn mortality risk by up to 18 percent, resulting in over half a million newborn lives saved (Hodgins et al., 2013; UNCoLSC, 2012). Drug sellers in many communities are successfully supplying chlorhexidine for cord care. Helping save newborn lives in this way improves relationships with the community.

Key Messages

Key messages for retailers and social marketing should emphasize the sales potential as well as the benefits to the community. Examples of key messages include:

- Too many newborns get very sick or die because of neonatal sepsis and cord stump infection.
- Chlorhexidine for cord care is an inexpensive gel or liquid applied to the cord stump daily [or as recommended by the MOH] to protect the newborn from infection.
- Strong latent demand exists for something safe and effective to apply to the umbilical cord stump. You can help stimulate and meet that demand by promoting the use of chlorhexidine.
- WHO, the MoH and physicians now recommend 7.1 percent chlorhexidine digluconate (delivering 4 percent chlorhexidine) to prevent cord infection. This is the only concentration of chlorhexidine recommended for cord care.
- Chlorhexidine for cord care is inexpensive to retailers, has a long shelf life and does not require refrigeration.

Key Messages (continued)

- Studies have shown that women and families are willing to pay a reasonable price for chlorhexidine for cord care since they value its life-saving effects.
- Chlorhexidine for cord care is safer and more effective than other substances applied to the cord in your community, including other antiseptics. Families in many communities are now using chlorhexidine for cord care instead of other substances such as methylated spirits, breast milk, oils and pastes, and more babies there are surviving because of it.
- Counsel women that using chlorhexidine for cord care will protect the cord from infection and that chlorhexidine should be applied shortly after birth (and, where the MoH has designated multiple day application, daily at home).
- Counsel women that using chlorhexidine for cord care might mean it will take a day or two longer for the cord stump to fall off, which is normal. Help them practice explaining this to their male partner and other family members.
- As more babies in your area survive because of chlorhexidine, demand for chlorhexidine for cord care will increase.
- Market chlorhexidine for cord care alongside clean birth kits for an easy sell that also benefits families and the community.
- Consider working with TBAs to get chlorhexidine for cord care to more expectant mothers in time for delivery.

Step 5: Determine Activities and Interventions

Refer to page 21 for supporting guidance on this step, as well as “Step 5” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step5/>) for further resources.

Suggested approaches, activities and illustrative examples are presented here as appropriate choices for communicating to primary and influencing audiences about care seeking and treatment with chlorhexidine. These suggestions are a starting point, and close collaboration with communication and creative professionals can help ensure that design and execution are innovative and compelling. Messaging about chlorhexidine should be integrated into essential newborn care social and behavior change efforts.

A review of chlorhexidine introduction/demonstration studies suggests the following as components of successful chlorhexidine interventions:

1. Develop, disseminate and train providers in the use of materials to be used in group and individual counseling and education—e.g., doll with cord stump, posters, leaflets.
2. Train TBAs, CHWs, ANC providers and skilled birth attendants in interpersonal communication about chlorhexidine and provide appropriate job aids, as part of newborn care training.
3. Reach out to family members, especially grandmothers and other potential caregivers, with information about chlorhexidine for cord care.
4. Ensure a consistent supply of chlorhexidine in the appropriate formulation and packaging [policy/manufacturing].
5. Implement interventions to assist TBAs and other community-level providers to promote chlorhexidine for cord care—e.g., clean birth kit including chlorhexidine and instructions for its use.
6. Include or associate chlorhexidine for cord care with clean delivery kits [determined at the country-level].

In areas where traditional healers are regularly consulted, it might be useful/necessary to reach out to them given that chlorhexidine use for cord care will reduce the need for their services.

Depending on country context, it may also be important to have interventions that address policy and practice (including pre-service education), supply and monitoring.

Mass Media

Intervention Area	Illustrative Activities	Purpose	Intended Audience
Short-form mass media	Develop Radio and TV spots on chlorhexidine (e.g., of real women talking about how happy they were to have chlorhexidine and of grandmothers who wish they had known about chlorhexidine in time to save their grandchild, women of all social strata who switched from traditional methods to chlorhexidine; emphasis on how much nicer, cleaner and safer it is).	To increase product/brand awareness and knowledge of benefits.	Pregnant women/ new mothers Grandmothers Fathers Communities Secondary: Health providers (facility- and community-level)
Long-form mass media	<ul style="list-style-type: none"> Integrate newborn care including chlorhexidine into multi-episode radio drama serial on RMNCH. Produce radio call-in shows that include chlorhexidine for cord care as a newborn care topic. Develop and produce radio distance learning programs on safe birth and ENC including chlorhexidine for cord care, for CHWs, TBAs and facility-based providers that model positive behaviors and relationships with communities and referral facilities. 	<p>To depict desired behaviors.</p> <p>To stimulate social dialogue about everyone's role in protecting maternal and child health.</p> <p>To shift social norms around assisted childbirth.</p>	Pregnant women/ new mothers Grandmothers and other caregivers Fathers Communities Providers Pharmacy owners and staff
Print media	<ul style="list-style-type: none"> Develop/adapt take home brochures/leaflets on chlorhexidine (including where to get it), stickers to remind women to obtain and use chlorhexidine. Posters, point of sale materials. 	<p>To increase product knowledge.</p> <p>To increase knowledge of and remind audiences where to find quality services.</p>	Pregnant women/ new mothers Fathers Facility-based providers Pharmacy owners and staff

Mass Media (continued)

Intervention Area	Illustrative Activities	Purpose	Intended Audience
Digital media and mHealth	<ul style="list-style-type: none"> • Produce SMS service on chlorhexidine benefits, reminders to obtain and use it, reminders to seek ANC, where to obtain chlorhexidine (in the context of safe birth/newborn health messaging). • Host newborn health hotline (phone and/or SMS-based). • Where appropriate, social media pages on essential newborn care/ newborn health for peer-to-peer support and social marketing. • Develop short video clips and short FAQs that model chlorhexidine promotion and education (accessible on basic and smart phones). • Develop SMS messages reminding pregnant women to include chlorhexidine in their birthing supplies. 	<p>To increase product/brand awareness.</p> <p>To stimulate social dialogue.</p> <p>To increase knowledge and skills.</p>	<p>Pregnant women/ new mothers Fathers CHWs Facility-based providers Pharmacy owners and staff</p>

Clinic-, Pharmacy- and Drug Shop-Based Services

Intervention Area	Illustrative Activities	Purpose	Intended Audience
Clinic services	<ul style="list-style-type: none"> • Develop and disseminate cord care guidelines that include chlorhexidine. • Train providers in ENC practices including chlorhexidine. • Discuss cord care and chlorhexidine during ANC education sessions. • Teach songs about ENC including chlorhexidine during ANC education sessions. • Hold ENC practice sessions for people waiting for ANC services. • Develop flipchart for group and individual education. • Develop clean birth and ENC video for clinic waiting room. • Develop chlorhexidine job aids (instructions, ENC checklists, etc.) on when and how to use chlorhexidine for cord care. • Develop low- and non-literate materials for take-home chlorhexidine. • Distribute clean delivery kits that include chlorhexidine for cord care. • Develop posters for awareness, teaching and reminding. 	<p>To increase product awareness/knowledge.</p> <p>To establish quality standards to ensure good service for clients.</p> <p>To improve provider-client interaction.</p>	Pregnant women ANC providers Skilled birth attendants
Social franchising/ service promotion	<p><i>Consider all of the above activities with private-sector health facilities</i></p> <ul style="list-style-type: none"> • Establish or strengthen a network of social franchise providers with ENC quality standards; use a logo marketed as a symbol of high quality, low cost, respectful care for mother and newborn. • Establish network of pharmacies to stock, dispense and instruct on chlorhexidine use. • Develop and disseminate materials to pharmacies on chlorhexidine benefits and use. • Train pharmacy workers to promote and educate about chlorhexidine for cord care. • Promote logo through mass media. 	<p><i>All of the above</i></p> <p>To establish a recognized symbol for high quality newborn health care.</p> <p>To ensure consistent supply.</p> <p>To promote quality brand of chlorhexidine.</p>	Pharmacy/ franchise owners and staff

Community-Based Services, Outreach and Community Approaches

Intervention Area	Illustrative Activities	Purpose	Intended Audience
TBA outreach	<ul style="list-style-type: none"> • Train TBAs to use and educate mothers on safe birth and ENC including chlorhexidine. • Develop/adapt materials and job aides (practice dolls, flipbooks, pictorial checklists, etc.) to provide guidance on counseling on clean delivery and ENC including chlorhexidine. • Develop meaningful, useful reminder for TBAs to use safe delivery and ENC including chlorhexidine (e.g., birthing cloth, carrying case, scarf, etc.). • Develop certificate or laminated card denoting TBA as having completed safe birth/ENC training. • Establish reward system for TBAs educating and referring pregnant women for ANC and skilled delivery. 	<p>To improve knowledge and skills.</p> <p>To improve linkages with health system/facilities.</p> <p>To acknowledge TBA value.</p> <p>To encourage skilled delivery.</p>	TBAs
CHW outreach	<ul style="list-style-type: none"> • Train CHWs to conduct community-based counseling, education and referral for safe birth and ENC. • Establish CHW radio listening groups for distance learning program. • Develop/adapt materials and job aides (practice dolls, flipbooks, pamphlets, checklists, referral cards, etc.) to provide guidance on counseling on clean delivery and ENC including chlorhexidine. • Develop songs, logos, buttons, badges and other items that support the central positioning and promotion of quality and acceptability. 	<p>To improve knowledge and skills.</p> <p>To provide peer-supported learning opportunities.</p> <p>To ensure quality counseling, education and referral.</p> <p>To promote quality services.</p> <p>To provide incentives.</p>	CHWs
CHW/TBA administration/distribution	<ul style="list-style-type: none"> • Train and equip TBAs for clean delivery and ENC including chlorhexidine. • Supply TBAs and CHWs with clean delivery kits including chlorhexidine. • Train CHWs to counsel pregnant women and distribute chlorhexidine to women by 32 weeks with low-literate take-away instructions on usage. • Develop an easy-to-keep-and-carry instructions job aid. • Establish/update supportive supervision for CHWs and, where applicable, TBAs. • Develop sticker to remind pregnant women to get and use chlorhexidine. • Develop pictorial pamphlet with key messages for new mother/family. 	<p>To improve knowledge and skills.</p> <p>To enable seamless distribution and, where appropriate, income.</p> <p>To ensure quality counseling, education, and referral.</p>	Pregnant women Fathers/families TBAs and CHWs

Community-Based Services, Outreach and Community Approaches (continued)

Intervention Area	Illustrative Activities	Purpose	Intended Audience
Community approaches	<ul style="list-style-type: none"> • Hold community dialogues around newborn health, including chlorhexidine for cord care (and misoprostol, ORS, etc.) using satisfied users, grandmothers, and other family members as key advocates. • Invite respected nurses and midwives to speak and answer questions. • Organize discussion groups for women, grandmothers, and other family members and community leaders as appropriate. • Use community events to promote safe birth, clean delivery and ENC including chlorhexidine. 	<p>To encourage social dialogue on preventing maternal and neonatal deaths.</p> <p>To increase social support for safe birth and ENC.</p> <p>To create/improve environment for cultural shift.</p> <p>To increase correct use of chlorhexidine.</p>	Pregnant women Grandmothers Fathers Communities TBAs
Champions	<ul style="list-style-type: none"> • Identify satisfied users as community advocates. • Identify “everyday heroes”—e.g., grandmothers in the community who support ENC and are helping to ensure the health of their families—and celebrate them at community events and through community and mass media. • Identify women and family members who have suffered the loss of a newborn and want to save other families from such tragedy. Have them speak at community meetings, in mass media, at work where appropriate and one-on-one with their neighbors. 	<p>To encourage social dialogue on preventing neonatal deaths.</p> <p>To increase social support for clean delivery and ENC.</p>	Women Grandmothers and other caregivers Fathers and communities

Structural

Intervention Area	Illustrative Activities	Purpose	Intended Audience
Policy and guidelines	<ul style="list-style-type: none"> Disseminate guidelines for use of chlorhexidine for cord care in appropriate situations. Disseminate policy/guidelines to pharmaceutical companies. Update monitoring and supervision tools to include ENC/chlorhexidine for cord care. Twitter feed on international, national, and local impact of implementing chlorhexidine for cord care, implementation tips and other relevant information. <p><i>Scaling up lifesaving commodities for women, children, and newborns: An advocacy toolkit provides advocacy resources for utilizing the Commission platform to raise awareness and engage stakeholders in addressing commodity-related gaps in policy. See: http://www.path.org/publications/detail.php?i=2381.</i></p>	<p>To increase knowledge.</p> <p>To ensure consistent availability of chlorhexidine.</p> <p>To ensure practice matches policy.</p>	Health district and facility decision makers and implementers
Pre-service training	Integrate chlorhexidine for cord care into pre-service training for all providers, including pharmacists, doctors, nurses, midwives and CHWs.	To increase awareness and practice.	Pharmacists, doctors, nurses, midwives, CHWs
Digital/distance learning	<ul style="list-style-type: none"> Develop distance learning module (radio, online, post, or other) for clinicians, preferably integrated into an existing newborn health distance learning program. Develop short video clips and print FAQs that model education and counseling that can be disseminated via, video, smartphones, tablets and online. Use Twitter or other social media as a discussion forum to share program implementation ideas, problems and solutions. 	To increase and refresh knowledge and skills.	ANC providers Skilled birth attendants Supervisors of CHWs
Other continuing education	<ul style="list-style-type: none"> Offer ENC workshops and online courses that include the new cord care guidelines. Disseminate updated cord care job aids. 	To increase awareness and improve practice.	Professional associations for health providers

Step 6: Plan for Monitoring and Evaluation (M&E)

Refer to page 24 for supporting guidance on this step, as well as “Step 6” on the Demand Generation Implementation Kit (<http://sbccimplementationkits.org/demandrmnch/ch-step6/>) for further resources.

The following illustrative indicators are examples of useful indicators for measuring program inputs, outputs, outcomes and impact.

Potential minimum set of program indicators

(adapted from Case study: Chlorhexidine for umbilical cord care, 2012.)

- Proportion of public and private facilities with chlorhexidine in stock.
- Proportion of wholesale and retail pharmacies stocking chlorhexidine.
- Proportion of caregivers recommending the use of chlorhexidine.
- Proportion of consumers using chlorhexidine for cord care.
- Proportion of babies receiving chlorhexidine at health facility (for facility births).
- Proportion of babies receiving chlorhexidine at home (for home births).
- Proportion of babies receiving chlorhexidine within two hours of birth either at home or health facility.
- Proportion of chlorhexidine use consistent with local guidelines.
- Proportion of mothers who report applying chlorhexidine and no other substance to the cord.
- Neonatal mortality rate.
- Proportion of neonatal mortality from infection.

Facilities

- Quantity of 7.1 percent chlorhexidine digluconate used for cord care (by place of use). (Monitoring)
- Incidence of other antiseptics being used for cord care. (Monitoring)
- Incidence of traditional substances being used for cord care. (Monitoring)
- Quantity of 7.1 percent chlorhexidine digluconate distributed through ANC clinics. (Monitoring)
- Quantity of 7.1 percent chlorhexidine digluconate provided to community-based workers (CHWs, TBAs). (Monitoring)
- Number of copies of updated cord care guidelines disseminated. (Evaluation)
- Number or proportion of monitoring and supervision tools updated to include ENC/chlorhexidine for cord care. (Evaluation)
- Number of updated clinical guidelines disseminated. (Monitoring)
- Number of pre-service curricula updated. (Monitoring)
- Number of CHW and other training manuals updated. (Monitoring)
- Number or proportion of retail pharmacies that supply chlorhexidine for cord care. (Monitoring)
- Sales of chlorhexidine at retail pharmacies/outlets. (Monitoring)

Women

- Proportion of women who report they have correctly used chlorhexidine for cord care. (Evaluation)
- Proportion of women who report that they know where to get chlorhexidine. (Evaluation)
- Proportion of women who report that chlorhexidine is the best choice for cord care. (Evaluation)
- Proportion of women who know that chlorhexidine for cord care can reduce cord infection. (Evaluation)
- Proportion of women who report they would be willing to use chlorhexidine with their next child. (Evaluation)
- Proportion of women who report they would recommend chlorhexidine for cord care to a relative or

friend. (Evaluation)

- Proportion of women who report being satisfied with chlorhexidine for cord care. (Evaluation)
- Proportion of women who find a short delay in cord separation due to chlorhexidine acceptable. (Evaluation)
- Proportion of new mothers who delivered with a skilled birth attendant. (Evaluation)

Providers

- Proportion of facility-based providers who have or have seen [updated] guidelines on cord care. (Evaluation)
- Number or proportion of providers trained to use chlorhexidine for cord care. (Monitoring)
- Number or proportion of providers who know how to administer chlorhexidine for cord care. (Evaluation)
- Proportion of providers who apply chlorhexidine to the newly cut umbilical cord. (Monitoring)
- Number or proportion of households visited by community-level providers to discuss newborn care including chlorhexidine for cord care. (Monitoring source – provider self-reported data)
- Number or proportion of private pharmacies that stock chlorhexidine formulated and packaged for cord care. (Evaluation)
- Quantity of chlorhexidine distributed by TBAs/CHWs. (Monitoring)
- Proportion of ANC providers/CHWs who report they recommend chlorhexidine to all pregnant clients. (Evaluation)

Fathers, grandmothers and other family members

- Proportion of fathers/grandmothers who know that neonatal sepsis is a leading cause of newborn deaths. (Evaluation)
- Proportion of fathers/grandmothers who report they have heard of chlorhexidine. (Evaluation)
- Proportion of fathers/grandmothers who know that chlorhexidine can prevent cord infection. (Evaluation)
- Proportion of fathers/grandmothers who accept a delay in cord detachment due to chlorhexidine. (Evaluation)
- Proportion of fathers who report willingness to pay a reasonable price for chlorhexidine for cord care. (Evaluation)
- Proportion of fathers/grandmothers who report applying chlorhexidine instead of other substances during cord care. (Evaluation)

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