

Use of Chlorhexidine for Cord Care

Social Behavior Change Communication

Experience from Nepal



2017
Kathmandu, Nepal

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Acronyms

ANC	Antenatal Care
BCC	Behavior Change Communication
BPP	Birth Preparedness Package
C4D	Communication for Development
CBIMNCI	Community Based Integrated Management of Newborn and Childhood Illness
CHD	Child Health Division
DHO	District Health Office
DHS	Demographic Health Survey
DPHO	District Public Health Office
EE	Entertainment Education
EPI	Expanded Program on Immunization
FAQ	Frequently Asked Questions
FCHV	Female Community Health Volunteer
FHD	Family Health Division
GGMS	Ghar Ghar ma Swasthya
H2RA	Hard to Reach Area
HMG	Health Mothers Group
HMIS	Health Management Information System
IPC	Interpersonal Communication
LMIS	Logistics Management Information System
MIDSON	Midwifery Society of Nepal
MoH	Ministry of Health
NEPAS	Nepal Pediatric Society
NESOG	National Society of Obstetricians and Gynecologists
NHEICC	National Health Education Information and Communication Center
PESON	Perinatal Society of Nepal

PSA	Public Service Announcement
PW	Pregnant Women
PWG	Pregnant Women's Group
RDW	Recently Delivered Women
SBC	Social Behavior Change Communication
SMNSC	Safe Motherhood and Newborn Sub-Committee
TSV	Technical Support Visit
TVC	Television Commercial

Definition of terminologies

Advocacy	A continuous and adaptive process for gathering, organizing, and formulating information into an argument to be communicated through various interpersonal and media channels for raising resources or gaining political and social leadership acceptance and commitment to a development program and preparing society for its acceptance.
Attitude	Personal disposition towards a particular subject or situation. It is how we generally feel about a particular situation.
Audience	People or community segment to whom a communication message or campaign is tailored
Audience Segmentation	The division of a large audience group (e.g. mothers) into subgroups such as recently delivered women and pregnant women. Audiences may be segmented into primary and secondary audiences with the primary audience being the people who typically practice a behavior of interest (mothers) and the secondary audience is made up of the people who influence the decision-making or practices of people in the primary audience (mothers-in-law, husband).
Behavior Barriers	A difficulty or obstacle that people face that prevents them from practicing a more desired behavior. These barriers can be perceived or part of a person's worldview, such as a feeling of personal risk in trying a behavior, or they can be physical, such as lack of transportation or financial resources to accomplish an action or the barriers might be cultural or religious in nature.
Behavior Change Communication (BCC)	Behavior change communication (BCC) is the strategic use of communication to achieve positive health outcomes. BCC is a theory-based, research-based, interactive process to develop tailored messages and approaches, using a variety of population-appropriate communication channels, to motivate sustained individual- and community- level changes in knowledge, attitudes, and behaviors.
Channels	A medium through which a message is transmitted to its intended audience. (E.g. Print media or electronic media).
Chlorhexidine	Chlorhexidine - a broad spectrum antiseptic that is safe and effective for reducing bacterial colonization on the skin and umbilical stump of newborns.
FCHV	The term Female Community Health Volunteer denotes a self-motivated person, selected by a Health Mothers' Group for supporting various health activities conducted by local public health institutions, and who commit themselves to work as a volunteer for a certain period of time and who have been trained as per the basic curriculum of the FCHV program.
Hard to reach	'Hard to reach' audiences have been defined as "inaccessible to most wanted services". Due to reasons like low socio-economic conditions or status, low level literacy, being members of ethnic minorities/religions or living in difficult to reach geographical areas they are deprived of even basic health services.
Information, Education	A combination of communication strategies, approaches and methods actively used to empower people towards desirable behavior. IEC focuses on

and Communication (IEC)	knowledge, information, and skills, using approaches that focus on individuals and is based on the assumption that individuals have substantial control over their behaviors and practices.
Mass Media	Mass media means technology that is intended to reach a mass audience. It is the primary means of communication used to reach the vast majority of the general public. The most common platforms for mass media are newspapers, magazines, radio, television, and the Internet.
Material	A format in which the communication or message is conveyed through a specific channel or medium. The format can be printed materials used for interpersonal communication (e.g. leaflet, flyer, brochure, counseling card), or it can be multi-media (i.e. Audio-visual or print for a newspaper, magazine, radio and TV) or other formats such as testimonials, songs, music, sermons, speeches, SMS, video, comics.
Message	A communication transmitted from sender to receiver that relays meaning. A message may be verbal or non-verbal, written, audio, or visual. It should be gender sensitive, culturally sensitive, audience friendly and simple.
Newborns	Babies below the age of 28 days
Omphalitis	Infection on the umbilical cord
SBCC	SBCC for health is a research-based, consultative process that uses communication to promote and facilitate behavior change and support the requisite social change for the purpose of improving health outcomes. To achieve social and behavior change, SBCC is driven by epidemiological evidence and client perspectives and needs. SBCC is guided by a comprehensive ecological theory that incorporates both individual level change and change at broader environmental and structural levels.

Introduction

Every year, approximately 3 million newborns die globally and infection causes approximately 27% of these deaths [1]. The problem is more severe in developing countries. Ninety-nine percent of neonatal deaths occur in developing countries, mostly at home, and are attributable primarily to infections, birth asphyxia, and complications of prematurity [2,3]. Low birth weight and sepsis are important underlying factors in neonatal mortality and contribute to an estimated 60% to 80% of neonatal deaths in low-resource settings [4]. Recent research suggests that improved care of LBW infants and prevention of infection has the potential to improve newborn survival significantly [5, 6].

Nepal has significantly improved its health status, including improvements in maternal and child health indicators between two Demographic Health Surveys (2006 and 2011). As compared to other indicators, reduction of neonatal mortality remained stagnant at 33 per thousand live births during the period between the two DHSs (7, 8). The Multiple Indicator Cluster Survey (MICS) 2014 showed neonatal mortality to be 23 per thousand live births [9]. Each hour at least two to three neonates lose their lives and more than 21,000 neonates die per year.

In Nepal, approximately 45% of women give birth at home [9], mostly in unhygienic conditions, and 41% of babies have had some substance applied to their umbilical cord stump, usually oil, ointment, turmeric, or ash, which can lead to infections [8]. Some infections in newborns result from exposure of the umbilical cord stump to invasive bacteria leading to serious illnesses, like sepsis.

Johns Hopkins University conducted the first Randomized Controlled Trial (RCT) on the use of Chlorhexidine for the newborn cord care in Nepal from 2002 to 2006. This RCT showed Chlorhexidine to be effective in reducing neonatal mortality by 34% and prevent severe omphalitis by 75% [10].

Chlorhexidine is a broad-spectrum topical antiseptic that is effective against gram positive and gram negative bacteria, as well as some viruses, including HIV. It has been proven to be effective in reducing bacterial colonization on the skin and umbilical stumps of newborns.

The study finding brought a new avenue for improving cord care practices and thus reducing neonatal mortality and morbidity. The Nepal government approved the use of Chlorhexidine as a part of essential newborn care in 2011 and since then, the program has been scaled up with the technical support of the USAID-funded JSI/Chlorhexidine Navi Care Program (CNCP). Nepal's Neonatal Health Strategy (2004) identified social behavior change communication (SBCC) as one of the strategic interventions to address neonatal health problems. The national communication strategy for Maternal, Newborn and Child Health (2011-2016) has emphasized SBCC as the major component to increase knowledge and improve practices that contribute to the reduction of morbidity and mortality by improving health, survival, growth and development of under five children in Nepal.

JSI Research & Training Institute, Inc./Chlorhexidine Navi (Cord) Care Program (JSI/CNCP) is funded as a part of Saving Lives at Birth: A Grand Challenge for Development through USAID, from 30th

September 2011 to 29th September 2017. Chlorhexidine service will be available throughout the country by September 2017.

As a part of the Chlorhexidine program, advocacy is a major component for reaching policy makers, academics, the private sector, and professional societies using different appropriate fora, i.e. formation of a technical working group, Chlorhexidine presentations at different professional conferences, and partners' meetings.

All service providers receive Chlorhexidine orientation as a part of essential newborn care, integrating with ongoing government maternal, child and newborn health programs. After receiving training, health facilities start using Chlorhexidine at birthing centers as well as providing counselling to pregnant women using poster, doll and job aid. They also do advance distribution of Chlorhexidine gel along with the "how to use Chlorhexidine" job aid to pregnant women in the 8th month of pregnancy. The Chlorhexidine reminder poster is also displayed in the postnatal ward to remind service providers to give proper counseling about the importance of Chlorhexidine use and precautions to be taken at home after discharge.

As a community component, all FCHVs receive training on Chlorhexidine use and distribution to pregnant women and/or their family, along with proper counseling on the correct Chlorhexidine application procedure in the case of home delivery. Each FCHV receives a doll, Chlorhexidine tubes, "How to use Chlorhexidine" job aid to distribute to pregnant women, and posters for use in Mother's Group Meetings and Pregnant Women's Group Meetings.

Need for SBCC Interventions

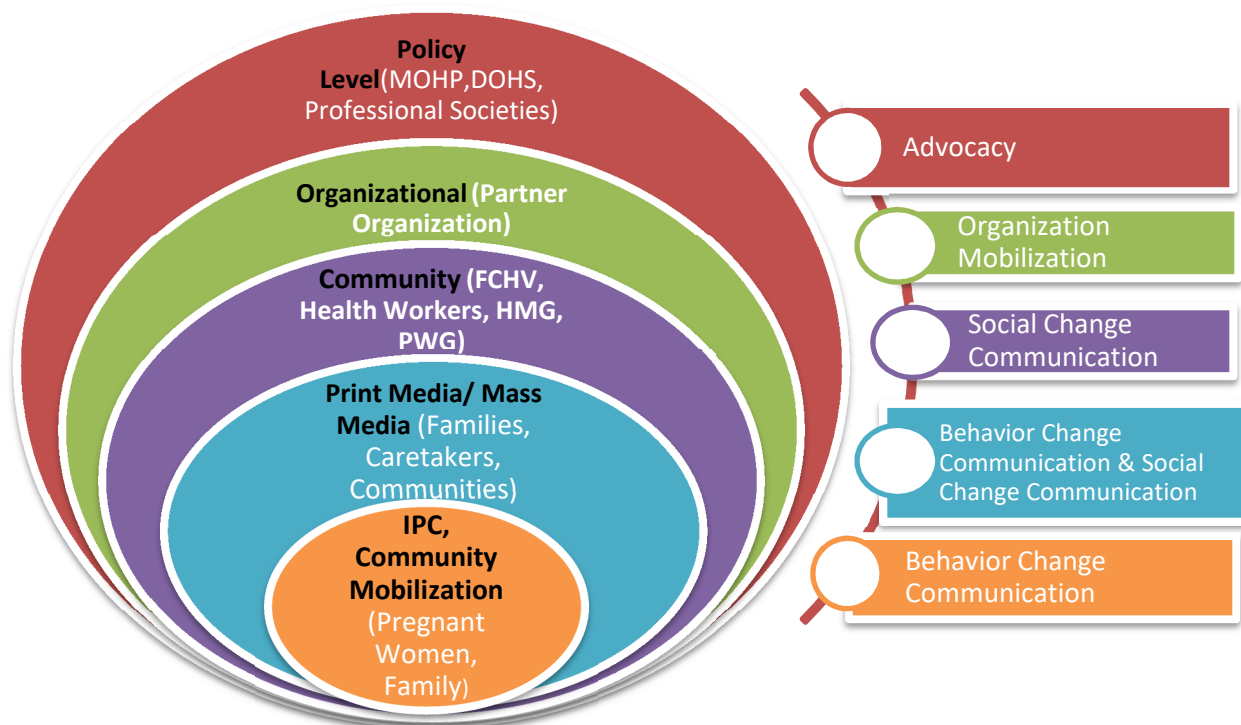
Neonatal mortality is high in Nepal and infection is the leading cause of neonatal deaths. Different traditional and cultural practices have contributed to the high rates of infection. The Chlorhexidine program was introduced by the government of Nepal as one intervention to prevent infections and decrease mortality. Since Chlorhexidine was a new intervention for Nepal, awareness building and demand generation for health workers, FCHVs, and end users were essential.

Objectives of the Chlorhexidine SBCC Interventions

1. To include Chlorhexidine in government policies, programs, strategies, and pre-service and in-service training curricula.
2. To create demand for Chlorhexidine and increase use both at health facilities and home births.

Theoretical Framework for Chlorhexidine SBCC

This figure presents the conceptual framework adopted from social ecological model for implementing the Chlorhexidine SBCC program.



,Figure 1: Theoretical Framework for Chlorhexidine SBC

This figure illustrates different layers of audiences in the hierarchal loop of communication for development. For any innovation, like use of Chlorhexidine for cord care, policy endorsement was key; so evidence based advocacy was needed, targeting the policy makers such as MoH, DoHS, professional societies, and academia. After policy endorsement, to implement the Chlorhexidine program organizational support was needed in-terms of both technical and financial inputs. In this regard, implementing partners worked together as a technical resource to oversee the implementation of the program at different levels, integrating Chlorhexidine with the ongoing programs.

Before Chlorhexidine program implementation began, we identified the key stakeholders of the program i.e. FCHVs, health workers, health mother's group, and pregnant women's group. They received program orientation as well as key commodities and supplies. With their new skills and knowledge on the Chlorhexidine program, they interacted with families, caretakers and communities about the importance and use of Chlorhexidine. During these interactions, they identified the current cord care practices (e.g. dry cord care versus using some substances on the cord) and mobilized the community towards the correct use of Chlorhexidine for cord care. Once pregnant women had

enough knowledge on the importance of the Chlorhexidine, they adopted using Chlorhexidine. This process is continuous and will be ongoing until Chlorhexidine access and use is universal in Nepal.

SBC for Chlorhexidine: Inception to Scale Up

The following section describes the approaches adopted while translating Social Behavior Change to action for Chlorhexidine service demand generation and communication

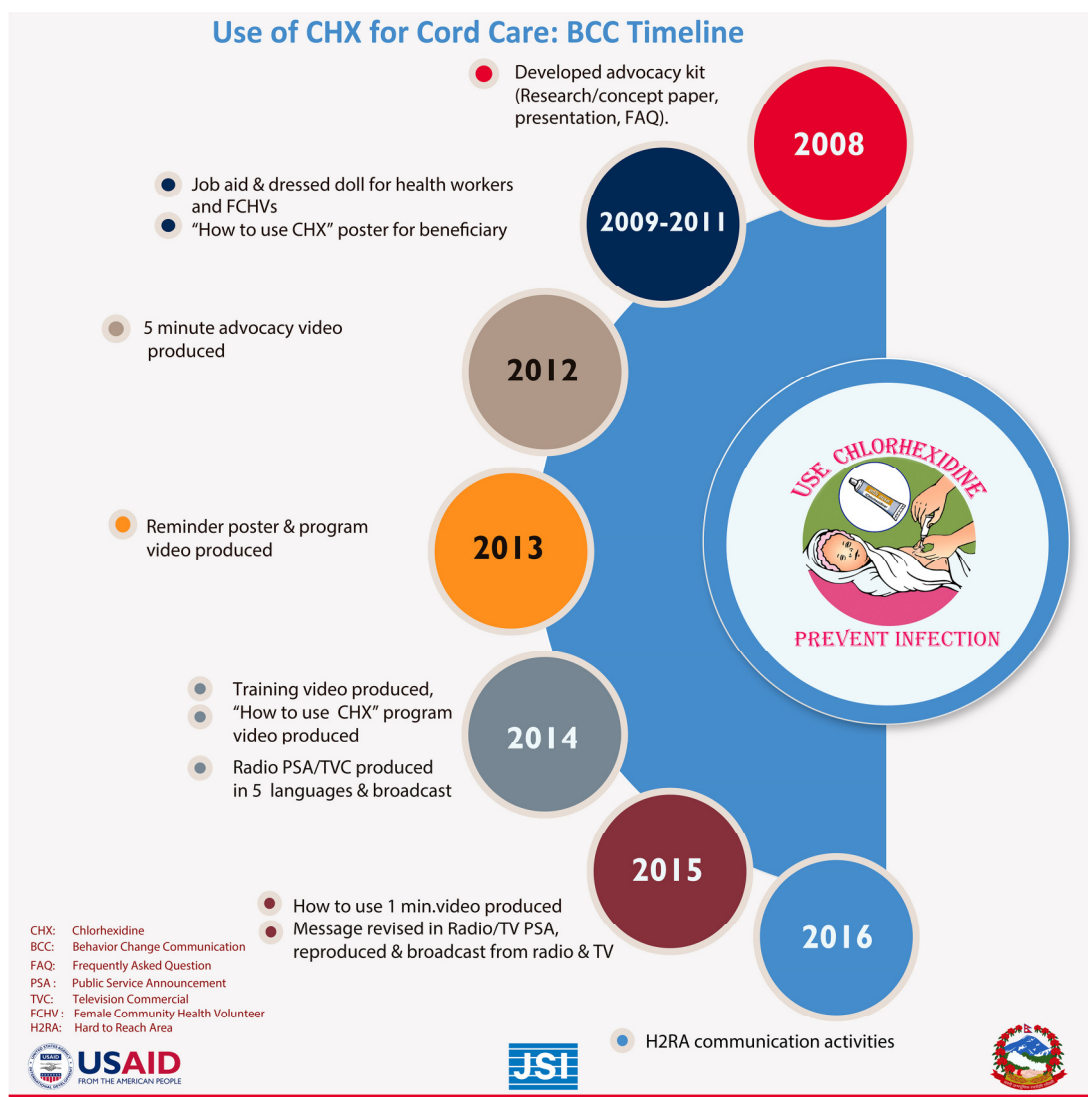


Figure 2: SBCC timeline for use of Chlorhexidine

Initially, advocacy tools (research paper, concept paper, presentation, and FAQ sheet) were developed for one-on-one, evidence-based communication during the start of the pilot phase in 2008. During the acceptability study of Chlorhexidine in Banke district between 2009 & 2010, a job aid and dressed doll were designed and pretested for counselling to pregnant women. Based on the feedback from frontline health workers and FCHVs, the necessary modifications were done. The application poster was developed in 2011 and printed in a bigger size, on flex, with more illustrations.

In 2012, a five-minute advocacy video was developed. It was shown in the first meeting of the Global Chlorhexidine working group and in the UN commission for life-saving commodities' workshop. Based on the mid-term assessment conducted in 2013, babies delivered at health facilities received

Chlorhexidine, but the knowledge among the recently delivered women (RDW) about Chlorhexidine use was low. The mothers were not informed by the health workers about the application, nor its importance and precautions for good cord care to be taken at home. Without information caretakers might revert to traditional cord care practices and parent's anxiety might increase simply because of delayed cord separation after Chlorhexidine application. Based on these findings, it was recommended to use the reminder poster in the postnatal ward. The main objective of the reminder poster was to keep reminding the health workers to counsel the RDWs and their family members about the use of Chlorhexidine and the precautions that need to be taken at home after leaving the health facility.

In 2013, USAID contracted the Chlorhexidine SBCC program to FHI's Ghar Ghar ma Swastha (GGMS) project. The GGMS project endorsed communication materials from the government. With technical assistance from JSI and leadership from NHEICC, the GGMS project developed television and radio messages. The NHEICC technical committee approved print and audio-visual materials in different local and regional languages in 2014.

In 2014, a Chlorhexidine training video was developed and used for capacity building and training/orientation for health workers and FCHVs. The Chlorhexidine application procedure video was developed during the same year to facilitate the training/orientation. Likewise, a one-minute Chlorhexidine application procedure video was developed after the April 25th, 2015 earthquake and included into the disaster response media kit.

JSI-CNCP started implementing the SBCC media campaign from September 2015. Both national and local media broadcast the Chlorhexidine message. One hundred and seventeen local radio stations in 68 districts, including the national radio station Kantipur FM and Image FM stations, have been broadcasting the Chlorhexidine message. Both community and health facility targeted messages are being broadcast from the media. National television stations, including Kantipur TV and Nepal TV, are also broadcasting the Chlorhexidine message in their prime time news bulletin and popular entertainment programs. Television prime time news bulletins and radio programs were sponsored, as a complimentary package, to increase the visibility of the product and messages.

Recent Technical Support Visit (TSV) data revealed that 20 percent of the target population is still unreached by existing communication activities. With the objective of reaching the unreached population, JSI-CNCP has started a more targeted program, including specific communication activities for hard-to-reach areas (H2RA) in 2016. Different community and school based SBCC interventions have been designed as part of the H2RA approach. A community based interaction, with dialogue among Health Facility Management Committees, School Management Committees and teachers was organized. To reach the marginalized and excluded communities, a one-day Chlorhexidine orientation program is planned for Health Mothers' Groups. JSI-CNCP developed pamphlets and stickers for use at transportation and money transfer outlets in remote areas in an effort to reach remote communities.

Integration of Chlorhexidine into Essential Newborn SBCC

NHEICC, with the support of JSI-CNCP, decided to incorporate Chlorhexidine-related communication messages into existing MNH SBCC materials. The integration was done across all media (print, audio and audiovisual). Apart from these, one application poster and one reminder poster were designed, pre-tested and approved by the Chlorhexidine thematic working group and thus endorsed by the NHEICC.

The Chlorhexidine SBC messages were incorporated into the government's Birth Preparedness Package (BPP) action card. The BPP action card is distributed to pregnant women by the health workers from ANC clinics and by the FCHVs during home visits. Similarly, the Chlorhexidine SBC messages are also included with the essential newborn care messages, i.e. FCHV flipchart for CBIMNCI program.

All key stakeholders were involved in this process. Supporting partners - Care Nepal, Save the Children, Health Right International, UNICEF, ADRA and One Heart Worldwide - have been printing and using the same approved IEC/ BCC materials in the districts where they implement programs.

Barriers and Mitigation Strategies

Advocacy Barriers: Frequent changes in government leadership positions, such as division heads and program managers at district level, create a gap in coordination for program implementation. At the time when the Chlorhexidine program was in the early inception phase, the program faced a challenge for policy adaptation due to the WHO recommendation for dry cord care.

Mitigation strategy: Timely identification of changes in leadership and direct and early orientation to those leaders about the program became a regular part of the implementation process. Chlorhexidine-SBCC messages were broadcast on national media to target policy makers. Presentations on the Chlorhexidine program were given at appropriate professional conferences and meetings.

Organizational Barrier: Frequent changes in program priorities among partners, as well as the short-term presence of some implementing partners in the districts, were barriers to coordination. Frequent changes of district-level focal persons required continuous and additional efforts to orient them and bring them on board. The government has abolished the position of health education technician, who used to be responsible for all SBCC activities at the district level. Because of this, the SBCC program activities for all programs in the district are not receiving enough attention.

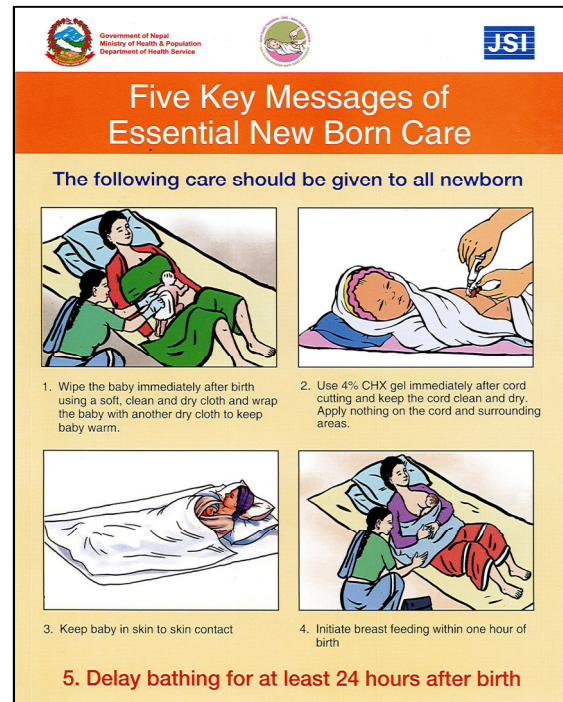


Figure 3: Example of an integrated tool for essential newborn care including

Mitigation Strategy: The Chlorhexidine program conducted quarterly partners' meetings to share lessons learned, best practices and program implementation challenges which helped to minimize duplication in the program implementation and maximize resources. At the district level, the CBIMNCI focal person is also looking after the Chlorhexidine program so s/he was made responsible for all Chlorhexidine SBC activities.

Low access and use of mass media: National radio and television are effective tools for advocacy but are very costly. Around 500 radio stations are currently operating in Nepal. Due to the volume of radio stations, each with their own languages and cultural variation, audiences are often fragmented. Thus, selecting the appropriate medium for disseminating SBC interventions is another challenge, as the Nepalese media industry doesn't have demographic information for their listeners or viewers.

Mitigation strategy: Local and community radio stations were selected based on strength, capacity and popularity at the local level. Chlorhexidine SBCC messages were produced in different local and regional languages and broadcast from selected local radio stations to overcome the challenges of choice, language and culture.

Challenge at end user level: According to MICS 2014 (9) 2 out of 5 deliveries occur at home. From our TSVs about half of home deliveries do not use Chlorhexidine, either due to lack of knowledge and/or lack of access to the commodity. The most reliable and consistent method for educating communities about the benefits of Chlorhexidine is the mobilization of FCHVs. The FCHVs use face-to-face communication to educate mothers and families through direct contact or through Health Mother's group meetings. However, the recent FCHV survey (11) showed that only 46% of mothers group meetings are held regularly, so all pregnant women are still not reached. In addition, there are also geographical barriers for both FCHVs reaching the homes of pregnant women and pregnant women accessing the health services.

Mitigation strategy: The importance of Chlorhexidine reaching the hands of pregnant women was emphasized during training and orientation for frontline health workers and FCHVs. A H2RA strategy has now been adopted to try to reach those women who have not yet heard about the importance of Chlorhexidine and different approaches are being implemented, i.e. wall painting, street drama, miking, school health program and notices where there are transportation services and money transfer outlets.

Key SBCC Strategies

1. Advocacy

After the RCT results from Sarlahi were published, JSI-CNCP developed and/or used various evidence-based advocacy tools (e.g. RCT publication, presentation, video, Chlorhexidine presentation, FAQ sheet) to conduct one-on-one advocacy with policy makers, professional societies, academia, service providers, implementing partners and donors. As a result of this advocacy, Chlorhexidine was approved and adopted as a government intervention to reduce newborn mortality.

Chlorhexidine program advocacy was conducted in different national forums including programs of different professional societies i.e. NESOG, PESON, NEPAS, MIDSON, SMNSC, Chlorhexidine technical working group, and the national child health working group. At the international level, JSI is a member of the global Chlorhexidine working group and also provides support to related projects through the JSI-Chlorhexidine thematic working group. The SLAB annual meeting in Washington, DC is another important forum for Chlorhexidine advocacy.

2. Organization mobilization

Chlorhexidine isn't a stand-alone or vertical program, but rather an integral part of essential newborn care. With the government leadership, Chlorhexidine was implemented at health facility and community level and integrated with ongoing systems and channels. Thus, coordination with the DHO/DPHO, local health facilities, front line health workers, FCHVs, and partner organizations, was essential in order to maximize the combined effort and ensure sustainable implementation. Strong communication was an essential part of building stakeholder buy in and ongoing program coordination. Ensuring that the Chlorhexidine program implementation was included in appropriate government policies and programs, such as the Nepal Every Newborn Action Plan, Community-based IMNCI, Skilled Birth Attendant and Auxiliary Nurse Midwife training curricula, etc. was a critical part of program sustainability. Meanwhile, the Chlorhexidine-SBCC materials developed in partnership with the JSI-CNCP team have been printed and distributed by various implementing partners using government distribution channels.

3. Capacity building of health workers and FCHVs

All health service providers and FCHVs received orientation on Chlorhexidine as a part of essential newborn care. They are trained with hands-on practice on dolls and real case simulations. Chlorhexidine implementation partners, along with government staff, provided onsite training, coaching, and follow-up. Once health workers and FCHVs are trained on Chlorhexidine they take the initiative to inform and educate Health Mother Groups, Pregnant women's groups and communities about the use and importance of Chlorhexidine for cord care.

4. Mass media



To provide Chlorhexidine-SBCC messages to the ultimate users, both national and local mass media needed to be mobilized. To target health workers and communities, different broadcasting media including national television and local radio stations had to be used to build awareness about the Chlorhexidine program. Printed materials (posters and job aids) were also produced and distributed.

5. Community mobilization and interpersonal communication

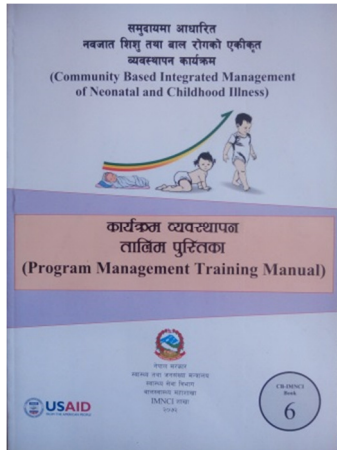
The Chlorhexidine program utilized multiple channels (FCHVs, mother's groups, EPI clinics, ANC clinics and MCH clinics) for counseling pregnant women and their family members on the correct use and importance of Chlorhexidine. For IPC, different tools are used, including a demonstration of Chlorhexidine use on dressed dolls, a “how-to-use Chlorhexidine” poster, and an application job aid.


Communication implementation matrix

1. Advocacy for the Chlorhexidine program utilizing appropriate national and international fora


Target audience	Message	Objectives	Communication materials	Channels	Outcomes
Policy makers, professional societies, academia, implementing partners and donors both at national and international level	Chlorhexidine is a simple and cost-effective intervention which can help to reduce newborn mortality by 23% and prevent serious infection by 68%.	<ul style="list-style-type: none"> To endorse the use of Chlorhexidine as a part of essential newborn care To integrate Chlorhexidine program into government policies, programs, strategies, and protocols 	<p>Journal articles, blogs, presentations, technical briefs, FAQ sheets, advocacy video, printed materials and website.</p> <p>THE LANCET</p>  <p>(Journal article)</p>  <p>(Chlorhexidine Introduction video)</p>	Professional conferences, meetings, Chlorhexidine Global Working Group, and JSI thematic working group	MOH/ GON endorsed the use of Chlorhexidine as a part of essential newborn care, integrating Chlorhexidine with other ongoing programs.

2. Organization mobilization for integration of Chlorhexidine messages into the ongoing government program and system

Target audience	Message	Objectives	Communication materials	Channels	Outcomes
Division heads and program managers	<ul style="list-style-type: none"> Chlorhexidine is a simple, cost-effective intervention that can help to reduce newborn mortality by 23% and prevent serious infection by 68%. Chlorhexidine isn't a vertical stand alone program It is a part of essential newborn care. Chlorhexidine can be scaled up and integrated with ongoing government MNCH programs. 	<ul style="list-style-type: none"> Scale up and integrate Chlorhexidine into other MNCH programs. Ownership and capacity building for MOH. Better likelihood that the program will be sustained. 	<ul style="list-style-type: none"> CBIMNCI training package, SBA training curriculum, HMIS & LMIS.  <p><i>(CBIMNCI program management training manual which includes Chlorhexidine)</i></p>	<ul style="list-style-type: none"> Person-to-person communication, workshops, and seminars 	Consistent messages were developed and approved; IEC/BCC materials distributed using government channels. Partner organizations also supported printing and distribution of IEC/BCC materials.
Implementing partners and NGOs	<ul style="list-style-type: none"> Chlorhexidine is a simple and cost 	<ul style="list-style-type: none"> To maximize common efforts 	<ul style="list-style-type: none"> Progress report sharing and sharing of lessons learned and 	Technical working group meeting,	

	<p>effective intervention that can help to reduce newborn mortality by 23% and prevents serious infection by 68%.</p> <ul style="list-style-type: none"> • Scale up opportunities in other countries. • Chlorhexidine can be scaled up, integrated with ongoing government MNCH programs. 	<p>for scale up of program</p> <ul style="list-style-type: none"> • Targeting hard to reach populations • To minimize duplication in program implementation. 	<p>best practices.</p>  <p><i>(Technical working group meeting)</i></p>	<p>Chlorhexidine partners' meeting</p>	
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3. Social Behavior Change Communication through capacity building of health workers and FCHV and fostering community interactions

Target audience	Message	Objectives	Communication materials	Channels	Outcomes
Health workers and FCHVs	<ul style="list-style-type: none"> Using Chlorhexidine for cord care prevents infections in newborns Use of Chlorhexidine should replace traditional cord care practices All babies should have Chlorhexidine applied irrespective of birthplace Five-steps Chlorhexidine application procedure 	<ul style="list-style-type: none"> To initiate the service for use of Chlorhexidine at both the health facility and community To distribute Chlorhexidine in advance of delivery To counsel service seekers To develop ownership of the program 	<ul style="list-style-type: none"> CBIMNCI poster, application poster, reminder poster, Job aid, radio and TV messages, diary, calendar, BPP action card, curricula of ANM and SBA.  <p><i>(Reminder poster)</i></p>	<ul style="list-style-type: none"> IPC, Mass media and print media 	<ul style="list-style-type: none"> Chlorhexidine services are initiated at both the health facility and community levels. Counseling to the pregnant woman and her family by health workers about the use and importance of Chlorhexidine during the ANC visit using doll, demonstration posters and job aids Advance distribution of Chlorhexidine (during ANC) along with the job aid.

FCHVs	<ul style="list-style-type: none"> • Counseling and advance distribution of Chlorhexidine to the pregnant women. • Application Procedure: <ul style="list-style-type: none"> ▪ Wash hands properly with soap and water before application of Chlorhexidine. Use the sharp protuberance of the lid to break the inner shield of the tube. ▪ Apply 4% gel on the stump and the surrounding areas of the cord. ▪ Spread the gel gently on the stump and surrounding areas using index finger. ▪ After applying Chlorhexidine gel, apply nothing on the cord and keep the cord clean and dry. ▪ Record and report Chlorhexidine use in 	<ul style="list-style-type: none"> • To improve knowledge and skills of FCHVs on counseling and Chlorhexidine use. • To ensure proper distribution of Chlorhexidine and information 	<ul style="list-style-type: none"> • Dressed dolls for demonstration of application, Job aids, “how-to- use Chlorhexidine” poster, training manual, FCHV register, CBIMNCI flip chart <div data-bbox="951 574 1146 846" data-label="Image"> </div> <div data-bbox="951 867 1169 1105" data-label="Image"> </div> <p>(How to use Chlorhexidine job aid)</p> <p>(Doll)</p>	<ul style="list-style-type: none"> • Orientations, review, on-site coaching, meetings, TSV 	
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	FCHV register.		(CBIMNCI flip chart)		
					

4. Mass Media for social and behavior change communication

Target audience	Message	Objective	Communication materials	Channels	Outcomes
PW, RDW, family members, and FCHVs	<p>Community Message:</p> <ul style="list-style-type: none"> All births should take place in a health facility. For all the deliveries in health facilities, and those that occur on the way to the health facility or any other place, Chlorhexidine gel should be applied to the umbilical cord of every newborn. It prevents the newborn from getting Infection. <p>Health Facility Message:</p> <ul style="list-style-type: none"> Chlorhexidine is applied on the tip, stump, and surrounding skin of the umbilical cord. Health Workers and FCHVs 	<ul style="list-style-type: none"> Demand generation for Chlorhexidine Strengthening counseling services 	<ul style="list-style-type: none"> Radio-television PSA in 8 different local and ethnic languages, job aids, reminder poster, application poster, radio sponsored programs <p>(Application poster)</p>	Local radio and national television	Increased the demand and use of Chlorhexidine at community and health facility.

	<p>distribute Chlorhexidine during the 8th month of pregnancy.</p> <ul style="list-style-type: none"> • Before applying, wash hands with soap and water. • Apply Chlorhexidine gel all at once. • After applying Chlorhexidine nothing else should be applied on the cord. Keep it dry and clean. 		 <p>(Television Commercial)</p>		
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5. Community mobilization and interpersonal communication for individual and family behavior change

Target audience	Message	Objective	Communication materials	Channels	Outcomes
Pregnant woman & family members	Use Chlorhexidine immediately after cord cutting, apply nothing else and keep the cord dry and clean.	Application of Chlorhexidine after cord cutting. Avoid traditional cord care practices.	<p>Job aid, instruction sheet, application poster, personal & group counseling</p>  <p>(FCHV conducting mothers group meeting)</p>	<ul style="list-style-type: none"> • Interpersonal communication & group communication • Health mother's group meeting • Pregnant women's group meeting 	Increased use of Chlorhexidine and increased demand for Chlorhexidine to improve the cord care practices.

Use of mass media for SBCC

JSI/CNCP broadcast television commercials (TVC) about Chlorhexidine from national television stations, i.e., Nepal Television (state-owned) and Kantipur Television (the most popular private channel), which have wide viewership and reach across the entire country. Prime time, especially in between and before news bulletins and popular programs, was allocated for the placement of TVC broadcasting to maximize high media mileage. TVCs were broadcast on a regular basis, at a frequency of 10 times a day, continuously for five phases. Each phase consisted of three months of broadcasting followed by a one-month break for evaluation and monitoring. The broadcasting campaign, that was started in September 2015 and ended in June 2017, broadcast television spots a total of 5321 times.

Radio messages about Chlorhexidine were produced in 8 different regional and ethnic languages and broadcast from local radio stations in JSI/CNCP's program districts. A total of 120 local radio stations, covering 68 districts, broadcast the message of Chlorhexidine in 5 different phases, each phase lasting for three months. Radio messages about Chlorhexidine were broadcast approximately 423,720 times from local and national radio stations. Simultaneously, radio spots were broadcast on popular private radio stations i.e., Kantipur FM and Image FM that have reach across the country. National stations broadcast a total of 3,600 radio spots. In addition, popular serial radio programs were also used to deliver the message of Chlorhexidine.


Printed materials were produced and distributed for supporting the interpersonal level of communication and community mobilization during the period of SBCC intervention. The Chlorhexidine application job aid, which instructs users on the correct application of Chlorhexidine, was printed and 1,100,000 copies were distributed with Chlorhexidine to pregnant women during ANC counseling and home visits by FCHVs. A total of 8525 "How to use Chlorhexidine" application posters were distributed at health facility and community-level for educating users on the correct use of Chlorhexidine. A total of 6,380 reminder posters were displayed at health facilities, with the objective of reminding the service providers to inform mothers and caretakers of newborns that their baby had Chlorhexidine applied to the umbilical cord.

Chlorhexidine communication intervention targeting hard to reach areas

Though an intensive communication campaign has been implemented with strategic planning to reach the targeted population, the effectiveness of a mass media-oriented communication campaign remained limited to inform and persuade the hard to reach population. Limited access to information by the rural population is a key challenge to making informed choices. Even though universal coverage is the objective of the program,

still 20% of newborns do not have Chlorhexidine applied to their umbilical cord (TSV findings). The blanket, non-targeted approach of the communication program is not adequate in the context of Nepal. In order to reach those unreached communities, a new and targeted approach was developed and utilized. The 20% of the target population that hasn't been reached hasn't been clearly identified. Our approach is to identify the unreached population and make a targeted communication intervention to reach such communities. As a part of reaching the unreached, we have planned different localized activities i.e. a one day Chlorhexidine orientation to school health management committees and health facility management committees, school teachers and marginalized communities; wall painting of Chlorhexidine message in hard to reach communities, miking (using hand-held loudspeaker), local drama/street theatre, use of stickers and pamphlets on local vehicles and money transfer outlets to reach out to members of H2RA or marginalized communities.

Communication implementation matrix for H2RA

Target audience	Message	Objective	Communication materials	Channel	Outcome
Unreached target communities	<p>Community Message:</p> <ul style="list-style-type: none"> • All births should take place in a health facility. For all the deliveries in health facilities, and those that occur on the way to the health facility or any other place, Chlorhexidine gel should be applied to the umbilical cord of every newborn. • Chlorhexidine prevents newborn from getting infection. • Chlorhexidine is applied on the tip, stump, and surrounding skin of the umbilical cord. • Health Workers and FCHVs distribute Chlorhexidine during the 8th month of pregnancy. • Before applying, wash hands with soap and water. • Chlorhexidine gel is applied all at once. • After applying 	Demand generation for Chlorhexidine among those who are hard to reach	<p>Posters, stickers, banners, technical briefs</p>  <p>(Sticker for sticking on public vehicles)</p>	Transport ads, local drama, miking, school health program, wall painting, mobilization of local leaders i.e. school teachers, traditional healers.	Reached the unreached communities to inform and educate about the use of Chlorhexidine for cord care. Increased demand for and use of Chlorhexidine in H2RAs.

	Chlorhexidine apply nothing on the cord. Keep it dry and clean.				
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SBCC monitoring and evaluation

Monitoring and evaluation of communication activities was part of the project monitoring system. Communication activities were monitored regularly, using questionnaires related to media access and use. Questions were designed to find out if the respondents had ever heard about Chlorhexidine through mass media and they were asked about all sources of Chlorhexidine information. The availability and display of the reminder poster, application poster and job aids were monitored both at health facility and community levels respectively. Radio and television message reach was also monitored, as a part of regular program monitoring. Message broadcasting was regularly monitored by field and central staff, using the recordings of the program. Monitoring data were analyzed periodically, results shared and discussed and SBCC activities and approaches were modified based on the findings.

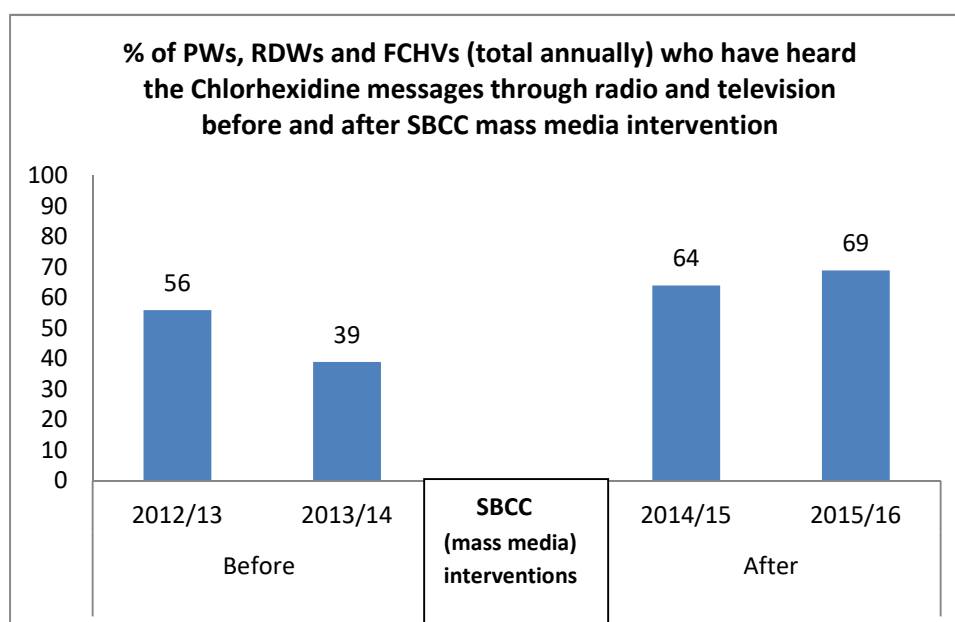


Figure 4: Radio & TV message reach

TSV data collected from program implemented districts revealed an increase in the number of PW/RDWs and FCHVs who had received the message of Chlorhexidine from radio and television. In the year 2013/14 only 39 percent of PW/RDWs and FCHVs reported having heard a message about Chlorhexidine through mass media, including radio and television. This ratio had increased to 64 and 69 percent in the years 2015 and 2016 after the intensive mass media communication campaign of Chlorhexidine, broadcast from national and local radio stations and national television.

Lessons learned from the Chlorhexidine SBCC program

1. For effective program implementation, demand creation and service provision should go together.
2. Whenever program leadership changes there is a need for timely identification and rapid organization of program orientation for the new leaders, in addition to regular program updates.
3. Regular partners' meetings are key to ensure consistent messaging, allocation of resources and regular monitoring.
4. Chlorhexidine messages can be easily integrated into existing health education materials.
5. To implement the program, we shouldn't wait for a formal SBCC plan. Learning by doing and changing and adapting tools, based on learning experience, can contribute to the development of a SBCC working guideline.
6. Localized, flexible and multiple approaches are needed to reach the unreached communities.

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