

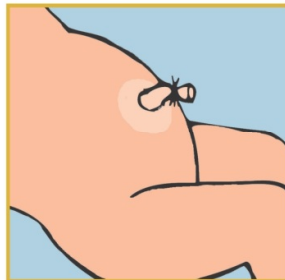


Government of Nepal
Ministry of Health & Population
Department of Health Service

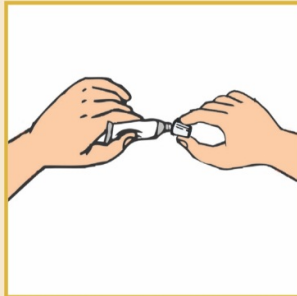


4% Chlorhexidine Gel (Navi Malam)

Use of 4% Chlorhexidine to prevent infection in newborn



- CHX can prevent cord infection in newborn babies
- Apply CHX immediately after cord cutting
- Single application is adequate
- Use the all gel of the tube



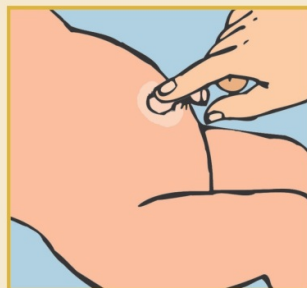
1. Use the sharp protuberance of the lid to break the inner shield of the tube



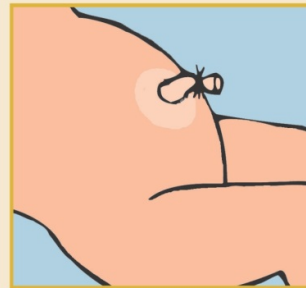
2. Wash hands properly with soap and water before application of CHX



6. Apply 4% CHX gel on the stump and the surrounding areas of the cord



4. Spread the gel gently on the stump and surrounding areas using index finger



5. After applying CHX gel, apply nothing on the cord and keep the cord clean and dry





7.1% Chlorhexidine Digluconate w/v Training Manual



Government of Nepal
Ministry of Health and Population,
Department of Health Services
Family Health Division/ Child Health Division



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Chlorhexidine 4% gel and its background:

Neonatal mortality is still high in Nepal at 33 neonatal deaths per 1000 live births. This has resulted in 3 neonatal deaths per hour and 23,000 neonatal deaths in a year in Nepal. One of the major causes of neonatal mortality is umbilical cord infection.

Chlorhexidine Digluconate 7.1% w/v gel (CHX) is a broad spectrum antiseptic that is safe and effective for reducing bacterial colonization on the skin and umbilical stump of newborns. Pooled analysis of different studies have shown that application of CHX on the umbilical cord immediately after cord cutting helps prevent infection by 68% and reduces neonatal mortality by 23%.

With ethical approval from the National Health Research Council (NHRC), and leadership from Family Health Division (FHD) and technical and financial support from Nepal Family Health Program II (NFHP II) and Plan Nepal, CHX was piloted in four districts in Nepal (Banke, Bajhang and Jumla (NFHP II) and Parsa (Plan Nepal) in 2009/2010 as a part of essential newborn care. After encouraging results of CHX coverage and compliance study done in those four districts.

Government Nepal approved to scale up CHX as a national program on Dec, 2011 as a part of essential newborn care integrating with ongoing government program. At almost the same time CHX has been included in essential drug list of Department of Drug Administration (DDA). CHX is being scaled up as a key bag in use of Misoprostol to prevent PPH at home birth districts. CHX is going to integrate with SBA training curriculum. CHX has been already incorporated in Community Based Neonatal Care Program (CBNCP).

Objective of CHX Program:

- To reduce neonatal mortality
- To reduce neonatal sepsis
- To integrate CHX in the existing public health programs like CB-NCP, Misoprostol and Skill Birth Attendance (SBA).

Objective of CHX Orientation:

- To use CHX for umbilical cord care
- To apply CHX to all neonates regardless of place of delivery (Home or Health Institution)

Expected Outcome:

At the end of this orientation the participants will be able to do the following:

- State the importance of CHX and its role in preventing infection
- Demonstrate application procedure of CHX using CHX doll
- Demonstrate six steps of hand washing technique
- Able to demonstrate counseling skill regarding CHX to pregnant woman and her family at eight months of pregnancy and provide CHX.
- Female community Health Volunteers (FCHVs) will be capable to demonstrate proper application of CHX, hand washing technique, counseling and distribution of CHX to pregnant mothers

Training Curriculum:

This is a day training program comprising of CHX background, discuss evidence, review on cause of neonatal mortality, introduction of CHX and its need, hand washing technique, application procedure of CHX, role of health workers and FCHVs, role of Health Facility Operation and Management Committee (HFOMC), CHX distribution mechanism and

recording and reporting system.

Training Methodology:

This is a participatory training methodology focusing more on discussion, demonstration, hands on practice, question/answer, observation and role play.

Training materials:

- CHX tube
- CHX job aid
- Baby doll with dress
- Trainer's Manual
- Marker pen
- News print
- Scissors
- masking tape
- Pencil ,eraser and pencil sharpener
- Participants attendance sheet
- CHX recording forms
- Ward register
- Banner

Evaluation:

Evaluation of participants is done by question/ answer and discussion.

Agenda for the training

Time	Contents	Responsible Person
10:00-10:20	Welcome and registration	
10:20-10:30	Introduction	
10:30-10:40	Objective of the program	
10:40-10:50	Objective of the orientation	
10:50-11:20	Highlighted neo-natal situation of Nepal	
11:20-11:35	Tea break	
11:35- 11:55	CHX Background	
11:55-12:25	Discussion on several study results of CHX application	
12:25-12:45	CHX and its importance	
12:45-1:15	Hand washing technique	
1:15-2:15	Refreshment	
2:15- 3:15	Practical sessions on application procedure	
3:15-3:30	Role of health worker	
3:30-3:40	Role of female community health volunteer	
3:40-3:50	Role of HFOMC	
3:50-4:10	Distribution Mechanism of CHX	
4:10-4:40	Recording and Reporting	
4:40-5:00	Discussion, evaluation and Closure	

For health facility level training power-point presentation will be done for community level training newsprint will be done.

Lesson Plan:

Total duration: 5 hours				
Chlorhexidine orientation				
Time	Objective	Contents	Training Activity/ Method	Training Tools
10 minutes	All the participants will register their name	Registration	Register names of participants	Register, copy and pen
10 minutes	Participants and facilitator will introduce each other	Introduction	The participants and facilitators introduce themselves describing about their current work and responsibility.	
10 minutes	Participants will be welcomed and know about the program objective	Welcome and program objective	<ul style="list-style-type: none"> • Welcome the participants/ guests • Share program and training objectives, give overview of the program, and expected outcome of the orientation Note: The orientation program can be formal/informal according to the setting.	
10 minutes	The participants will be familiar with the objective of orientation	Objective of the orientation	<ul style="list-style-type: none"> • The facilitator reads out objective of the program prepared in a news-print 	News-print/power point of objective of the program.
20 minutes	At the end of this session the participants will be aware on neonatal health situation	Neo natal situation in Nepal	<ul style="list-style-type: none"> • Start the training by narrating the story of Jamuna and her daughter and relate it with the actual neonatal health situation in the participant's respective community. • Relate story of Jamuna and her daughter with neonatal health situation and discuss about it in the community. • Ask the participants about the traditional cord care practices prevalent in the community. Inform about the ill effects of 	Jamuna and her daughter's story. Neonatal health situation in Nepal

Total duration: 5 hours				
Chlorhexidine orientation				
Time	Objective	Contents	Training Activity/ Method	Training Tools
			<p>those practices on neonatal health.</p> <ul style="list-style-type: none"> • Ask if the participants have heard/ seen neonatal death in the past 6 months in their community. If yes probe about the cause of death. • Discuss about four major causes of neonatal mortality written in a news-print or show power point. Compare the answers given by the participants and the points written in the news print. • Relate about CHX and umbilical cord care with major causes of neonatal mortality including umbilical cord infection. 	
20 minutes	The participants will be able to state five essential new borne care messages	Review about 5 essential new born care messages	<ul style="list-style-type: none"> • Discuss about 5 essential new born care messages included at the back cover of this manual. • Relate use of CHX immediately after cord cutting and apply nothing else on the cord followed by dry cord care and continue with the session 	
20 minutes	At the end of this session the participants will know about CHX and its need	Introduction about CHX and its importance	<ul style="list-style-type: none"> • Distribute one tube of CHX to each participant. • Ask the participants to carefully observe the tube and read the pictorial instruction sheet inside the tube. Ask them what they have understood. 	CHX tube

Total duration: 5 hours				
Chlorhexidine orientation				
Time	Objective	Contents	Training Activity/ Method	Training Tools
			<ul style="list-style-type: none"> • Mention in detail about CHX its need, importance, application procedure and advantage. 	
10 minutes	At the end of this session the participants will review about hand washing technique.	Hand washing technique	<ul style="list-style-type: none"> • Ask if the participants remember the six step hand washing technique and necessary preparations to be done before hand washing. 	Soap and water
1 hour	At the end of this session the participants will learn about the application procedure of CHX on the umbilical stump	CHX application procedure on the umbilical cord.	<ul style="list-style-type: none"> • Demonstrate about the application procedure of CHX on the umbilical cord of baby doll • Divide the participants into different groups and give one doll to each group ask them to act out as a pregnant woman and FCHV. The FCHV is supposed to counsel the pregnant woman and apply CHX on the doll. After all the participants have applied CHX, ask if they have any queries 	Doll and CHX packet
10 minutes	At the end of this session the participants will know about role and responsibility of health workers in CHX program	Role and responsibilities of health worker	<ul style="list-style-type: none"> • Discuss with the participants about the role and responsibilities of health worker in CHX program and note down important points generated from group discussion in a news-print • Display the roles and responsibilities of health worker in news print from page----of CHX manual.-- 	Roles and responsibility of Health worker written in a news print.

Total duration: 5 hours				
Chlorhexidine orientation				
Time	Objective	Contents	Training Activity/ Method	Training Tools
10 minutes	At the end of this session the participants will know about role and responsibility of FCHVs in CHX program	Role and responsibilities of FCHVs in CHX program.	<ul style="list-style-type: none"> • Discuss with the participants about the role and responsibilities of FCHVs and note down important points generated by discussion in a news- print. • Display in a news print about the roles and responsibilities of FCHVs from page of CHX manual- men 	Roles and responsibility of FCHVs written in a news print.
10 minutes	At the end of this session the participants will know about role and responsibility of Health Facility Operation Management Committee in CHX program	Role and responsibilities of Health Management Committee in	<ul style="list-style-type: none"> • Discuss with the participants about the role and responsibilities of Health Management Committee in CHX program and note down important points generated by discussion in a news- print. • Display in a news print about the roles and responsibilities of Health Facility Operation Management Committees from page----- of CHX manual. 	Roles and responsibility of Health Management Committee written in a news print.
20 minutes	The participants will know the distribution mechanism of CHX.	Distribution Mechanism of CHX.	Discuss about distribution mechanism of CHX written in the news- print.	Distribution mechanism of CHX written in News print.
30 minutes	At the end of this session the participants will know about recording and reporting system of CHX.	Recording and reporting	<ul style="list-style-type: none"> • The facilitator explains about the recording and reporting format of CHX. • Mention about correct way to fill up the form • Make them practice to fill up the forms 	CB-NCP forms and formats, pencil and eraser

Total duration: 5 hours				
Chlorhexidine orientation				
Time	Objective	Contents	Training Activity/ Method	Training Tools
25 minutes	Participants will be evaluated and their feedback will be collected	Discussion, Queries, evaluation and closing of the orientation	<ul style="list-style-type: none"> • Ensure about proper understanding of contents by the participants. • Close the orientation by thanking all the individuals who have supported during the program duration. Also request all the participants to apply knowledge into practice. 	

References:

Causes of Neonatal Mortality:

According to different studies conducted in Nepal, following are the main causes of neonatal mortality:

- Infection
- Birth Asphyxia
- Low Birth Weight/ prematurity
- Hypothermia

Introduction to CHX and its importance:

Navi Malam is Nepali name for 7.1% w/v Chlorhexidine digluconate antiseptic. This antiseptic gel is to be used only on the umbilical area of neonates and is to be used immediately after cord cutting in the umbilical stump and surrounding area. Single application of all content of the tube is sufficient. Application of CHX gel helps prevent bacterial infection for a long period of time. Use of CHX gel has no side effects. It is easy to use. CHX is 3 gram small tube. Use of CHX is helpful in replacing other harmful traditional cord care practices. CHX is made available to all the FCHVs and will be available in local pharmacies as well.

Application Procedure of CHX:

- Use CHX gel on umbilical stump and spread it using index finger around the abdominal area that comes in contact with umbilical stump.
- Single application is enough
- Wash hands properly with soap and water before piercing the tube
- Use sharp protuberance of the lid to pierce tube. Before application of CHX, ensure the baby is warm and is wrapped properly exposing only the naval area.
- Six steps hand washing before use of CHX
- Pour all of CHX immediately after cord cutting
- Gel takes 2-3 minutes to dry and cover it by light clothes so as to avoid wiping.
- Place baby in Kangaroo Mother Care (KMC) after the gel has been dried.

Role and Responsibility of a Health Worker:

- Participate in CHX training program.
- Provide training to all the FCHVs
- Counsel about CHX, its importance and use to pregnant mothers who have come for ANC check up
- Counsel to pregnant women who comes for ANC checkup
- Ensure use of CHX at home birth during post natal visit
- Apply CHX to each babies born to the facility
- Ensure stock of CHX in health facility
- Ensure proper knowledge and understanding of CHX among the FCHVs.
- Monitor and supervise FCHVs regularly
- Assist FCHVs if they have any difficulties regarding CHX.
- Discuss about CHX with FCHVs during monthly meeting and provide CHX tubes in case of stock out to the FCHVs.
- Submit reports collected from FCHVs
- Keep a record of all the services provided in the CB-NCP recording form.

Role and Responsibility of FCHVs:

- Participate in CHX training program.
- Identify pregnant woman of coverage area
- Discuss about CHX in Mother's group meeting in one's ward.
- Provide counseling to pregnant woman and her family regarding CHX.
- Providing CHX to pregnant woman in 8th month of pregnancy only after ensuring proper counseling
- Apply CHX to new born baby if she present during delivery, in case of absence ensure use of CHX during home visit
- Include information about CHX while filling out CB-NCP 1-2 form
- Refill for CHX from health facility in-case of stock out
- Submit report timely
- Bring along the filled form while coming to attend monthly meeting at health facilities.

Role and Responsibility of Health Facility Operation Management Committee:

- Participate in the orientation programs regarding CHX in one's VDC/ward.
- Inform people in the VDC, health institution, schools and all others who come to visit one's institution about CHX.
- Encourage to the FCHVs.
- Raise awareness during formal/informal meetings.
- Ensure CHX stock in the health facilities

Distribution Mechanism of CHX:

- Provide at least 3 CHX tubes to each during orientation
- Keep necessary stock of CHX in respective health institution
- Demand CHX from health facilities if necessary
- Provide CHX tube to pregnant woman at 8th month of pregnancy after ensuring proper counseling.
- Make CHX available in Clean Delivery kit and nearest pharmacies.
- Retrieve unused CHX from post-partum mothers at the time of field visit

Recording and Reporting:

- All the necessary information's are made available in the CB-NCP
 1. Received CHX Yes/No
 2. Application of CHX Yes/NO

Frequently Asked Questions:

- When and where CHX is used?
- What are its advantages
- What is its correct application procedure?
- When is it to be used?
- Where is it available?
- Is there any side effect of CHX

Jamuna and her daughter's Story

In a place called Tarkutar of Lamjung, Nepal there once lived Jamuna and her family. After waiting for a long time, Jamuna finally give birth to a beautiful baby girl. The family was ecstatic at birth of a healthy and beautiful baby girl. The grandmother used to give bath, massage and change clothes of the newborn. She even used to apply different stuffs on the umbilical area of the newborn. After few days though the umbilical area started to become swollen and red, the family also noticed pus around the area. Fearing someone's evil eye in the family's happiness, Jamuna took her daughter to the local shaman. The shaman however could not help her. Thus she took her daughter to nearby FCHV who suspected umbilical cord infection and suggested to quickly take the child to nearby health care centre.

In the health centre, health personnel quickly identified umbilical cord infection and outlined the reason for infection to be use of different stuff on the umbilical cord area. The health personnel then gave some oral(cotrimoxazole) and topical medicine(GV) and injectable (Gentamycin) and asked Jamuna to come for follow-up visit. After thorough check up of the baby the health personnel then advised Jamuna to not apply anything in the umbilical cord such as mustard oil, turmeric powder, ash etc. Health Personnel suggested dry cord care and also told about CHX, a new umbilical cord care regime; where single use of CHX immediately after cord cutting followed by dry cord care helps prevent umbilical cord infection. The health personnel then asked to spread awareness in the community so as to avoid such incidents in future.

Jamuna sighed in relief and thanked the health personnel, her family is again happy today to see their healthy beautiful newborn child.



Five Key Messages of Essential New Born Care

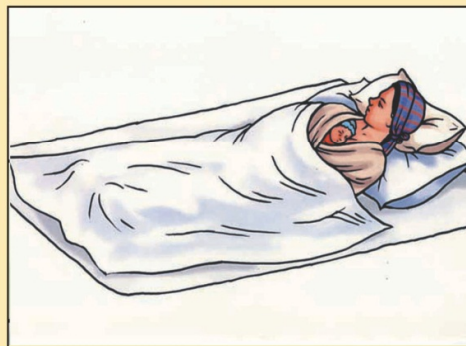
The following care should be given to all newborn



1. Wipe the baby immediately after birth using a soft, clean and dry cloth and wrap the baby with another dry cloth to keep baby warm.



2. Use 4% CHX gel immediately after cord cutting and keep the cord clean and dry. Apply nothing on the cord and surrounding areas.



3. Keep baby in skin to skin contact



4. Initiate breast feeding within one hour of birth

5. Delay bathing for at least 24 hours after birth

