



Infection Control Management Project

Volume 10: Basic Rules for Community Midwives to Prevent Infections

1. Protocols
2. Reference Text
3. Tool for Monitoring

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Infection Control Management Project

Volume 11: Basic Rules for Community Midwives to Prevent Infections

Prepared by AAA Team

Adapted From:

A Book for Midwives, Chapter 5. Hesperian Foundation, 2009

WHO Poster, How to Handwash & How to Hand rub, October 2006



Infection Control Guidelines for Midwives

You MUST:

1. Clean your hands and wear protective clothing
2. Clean the space and bedding
3. Clean and sterilize tools
4. Get rid of wastes safely

Reference Text

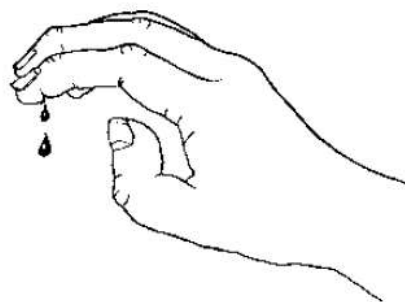
Preventing infection saves lives

Infection makes people sick and can even kill them. It is one of the most common causes of death after childbirth. Procedures that involve putting medical tools inside a woman's womb, like inserting an intrauterine device (IUD) or doing manual vacuum aspiration (MVA), can also cause infection. Much of the work of a midwife, and any procedure inside the womb (invasive procedure), can only be safe if you are able to follow the steps outlined below to prevent infection.

This volume explains how to avoid infection by killing or controlling harmful germs. Germs are organisms that carry sickness. Germs are everywhere, but they are so small that they can only be seen with a microscope. The dangerous germs in blood, stool, body fluids (like semen and amniotic waters), and dirt can cause serious sickness when they get into someone's body.



Germs can live tools, even tools that look clean



Germs live in body fluids, like blood

Infection is caused by Germs

Some sicknesses, like arthritis, diabetes, asthma, and epilepsy, are not caused by germs. They cannot be passed from one person to another. Other sicknesses, like measles, hepatitis, tetanus, womb infection, HIV/AIDS, and the flu, are called infections and are caused by germs. People get sick when the germs that cause these infections get inside their bodies.

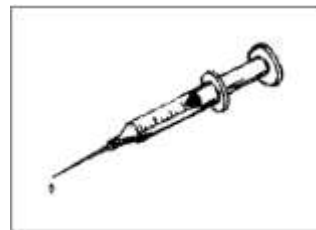
How do Germs get into the body

Germs can get inside the body in different ways.

Some germs pass through semen or vaginal mucus (body fluids) when people have sex. HIV and other sexually transmitted infections like chlamydia and gonorrhea can spread this way.

Given picture not acceptable to MNCH representative, new illustration to be made

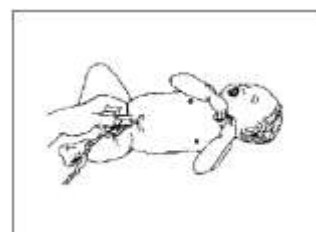
Some germs pass through blood when the blood or body fluid of an infected person get into a cut or through the skin — like with a needle that has been used for piercing or injections. HIV/AIDS, hepatitis B, and hepatitis C can spread this way.



Some germs live in dirty water and pass when people drink it. Cholera and diarrheal diseases spread this way.



Some germs live in dirt, on skin, or in the air, and are not dangerous unless they get into a person's blood. These germs can get into the blood when an instrument that has germs on it is used inside a woman's womb, or to cut the skin or a baby's cord. Tetanus and womb infection can spread this way.



Some germs pass through the air when a sick person coughs or sneezes. Colds, flu, and tuberculosis can spread this way.



Keep sick people away from births

One simple thing midwives can do to prevent infection is to keep sick people away from women who are pregnant or giving birth. Keep anyone who has a sore throat, cough, fever, or other illness that passes through germs away from births. And do not let anyone with a sore on his or her hands or face touch a new baby.



If you are sick but you must go to a birth, you can cover your mouth and nose with a scarf, a folded cloth or a mask. Wash your hands often and cover your mouth when you sneeze or cough. Be sure to wash your hands after each time you sneeze or cough. Try not to touch the new baby too much.

Anyone may carry germs that cause sickness

People do not always know that they have an infection. And there is no way to tell for sure what germs a person has just by looking at her. Some people have germs in their blood or other body fluids but do not seem sick. To be safe, and to stop the spread of dangerous infections like hepatitis and HIV/AIDS, health workers must treat everyone as if they might have dangerous germs in their body fluids. Health workers can prevent germs from spreading:

- by wearing gloves and other protective clothing, to prevent blood and other body fluids that contain germs from getting on themselves or others.
- by cleaning and sterilizing the tools they use during births and other procedures.



Note: Good general health can help avoid infection. Healthy eating, enough rest, and emotional and spiritual well-being are all important for staying healthy. Sometimes they are enough to help people fight germs that get inside the body so the person does not get sick.

But during birth and invasive medical procedures, a woman's body is more open and vulnerable to infection, and good general health is usually not enough. Germs that are usually kept out of the body can get into the womb. Any cut in the skin also makes a person more vulnerable to infection because the skin usually helps keep germs out of the body. Even an injection can cause an infection if the syringe has harmful germs on it.

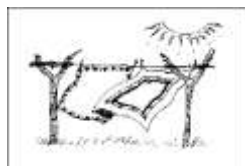
Prevent infection by keeping germs away

Here are the basic rules to prevent infection.



Clean your hands and wear protective clothing.

Wash your hands often and wear protective clothing to prevent spreading germs from one person to another and to keep germs away from yourself.



Clean the space and bedding.

Clean the area where births and exams happen, to keep germs away.



Clean and sterilize tools.

Wash and sterilize tools to kill any germs on them.



Get rid of wastes safely.

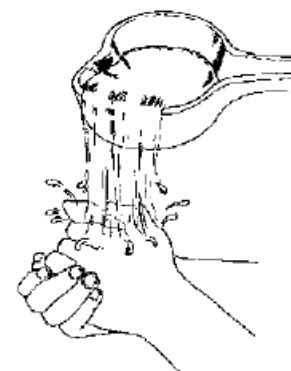
Throw away waste products carefully to prevent people in the community from getting sick from the germs left on them.

1. Clean your hands and wear protective clothing

1a. Wash your hands often

Washing your hands is one of the most important things you can do to prevent infection. It prevents you from spreading germs to another person, and it helps protect you from germs, too. If you can do nothing else to prevent infection, you must wash your hands.

Wash your hands with soap and clean water. Be sure to rinse all the soap off. When you wash your hands, and especially when you rinse them, use clean water that is flowing, not water sitting in a bowl. When you wash your hands in a bowl, the germs that come off into the water will get back onto your hands again.

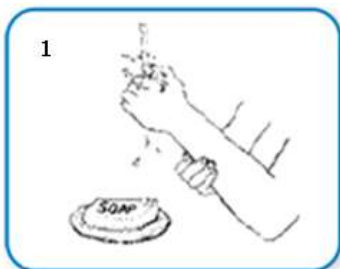


- Wash your hands each time before you touch a woman's body.
- Wash after you touch her body, or after you touch anything that has her blood or fluid on it (like the placenta).
- Wash before you put on gloves and after you take gloves off.

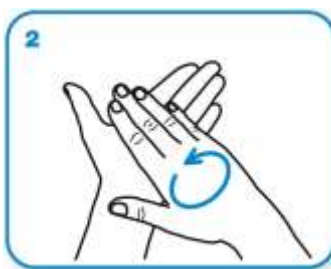
Normal hand washing removes most germs. But sometimes to remove more germs, you should wash your hands for a full 3 minutes, and scrub under your fingernails.

How to do a 3-minute Handwash

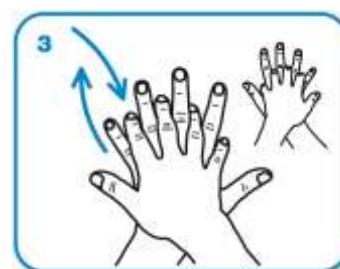
Before you start, take off your rings, bracelets and other jewelry



1
Wash your hands and arms with soap and clean water up to your elbows



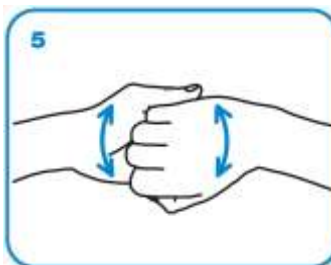
2
Rub hands palm to palm



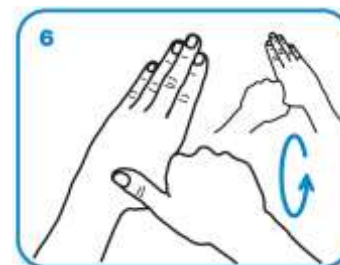
3
Right palm over left dorsum with interlaced fingers and vice versa



4
Palm to palm fingers interlaced



5
Backs of fingers to opposing palms with fingers interlocked



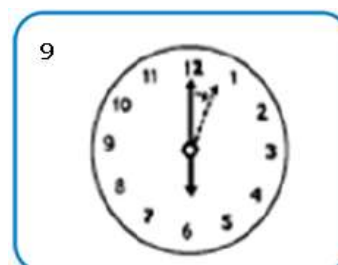
6
Rotational rubbing of left thumb clasped in right palm and vice versa



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



If you have a clean brush, scrub your fingernails.



Keep scrubbing, brushing and washing your hands and arms for 3 minutes! Spend most of this time on your hands.



Rinse with clean, running water



Dry your hands in the air instead of using a towel. Do not touch anything until your hands are dry.

Always do a 3-minute hand wash

Before you

1. touch the mother's vagina
2. do a pelvic examination
3. deliver the baby
4. sew up a tear

After you

1. clean up after the birth
2. touch any blood or other body fluids
3. urinate or pass stool



Clean Water: The water you use must be boiled before using it to wash your hands or to wash tools before a birth.

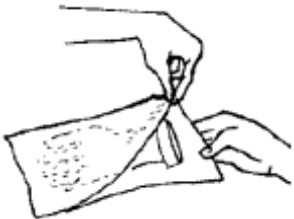







1b. Wear Gloves



Latex and other plastic gloves protect women from any germs that may be hiding under your fingernails or on your skin. They also protect you from getting infections. Wear clean gloves whenever you touch the mother's genitals, or any blood or body fluid.

If you are doing invasive procedures, or if you are touching any tools that have been sterilized, you must wear sterile gloves.

How to put on Gloves		
1	2	3
		
Open the package without touching the gloves. Do not touch the outside of a sterile glove with your hand or it will not be sterile anymore.	Carefully wash your hands. Let them dry in the air.	The gloves should be folded out at the cuff. Pick up one glove under the cuff on the inside of the glove and slip your hand into it. Do not touch the outside of the glove.
4	5	6
		
Wiggle your hand in while you pull with your finger tucked inside the glove.	Pick up the second glove by slipping your gloved fingers into the fold of the cuff. Slide your hand into the glove.	Once the gloves are on, do not touch anything that is not sterile — or the gloves will not be sterile anymore either!
Practice with the same pair of gloves over and over again until it feels easy.		

Remember:

If you carefully wash your hands,



and put on sterile gloves



and then scratch your head



your glove will not be sterile anymore

Of course, when you touch a woman you will get germs on your gloves, but do not move germs from one part of her body to another. For example, if you touch a woman's anus where there are many germs, do not put your fingers inside the vagina with the same gloves. Germs from the anus can make a woman sick if they get into the vagina or womb.

After you use a pair of gloves one time, throw them away, or sterilize them before you use them again.

1c. Wear Protective Clothing

Midwives must protect themselves from germs and infection. Germs that cause AIDS, hepatitis B and hepatitis C can infect you if an infected person's blood gets into a cut or opening in your skin — even a cut so small that you cannot see it. Keep blood and other body fluids off your clothing and skin, and if they do get onto you, wash them off right away with soap and water.



You do not need expensive equipment to keep body fluids off your skin, out of cuts, and out of your mouth and eyes. You can wear an apron or an extra shirt to keep fluid off your body. Protect your eyes with eyeglasses or plastic goggles. Cover your feet (wear shoes) so that you do not step into blood or other fluids.

Wash all your clothing after any blood, waters, or other body fluids gets on it. If you get body fluids in your eyes or mouth, rinse them for several minutes with clean water or saline (water with a little salt added).

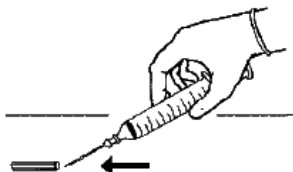
1d. Be careful with needles

If a syringe is used to give an injection, or a needle was used for sewing a vaginal tear, the needle has blood on it. If you accidentally stick yourself with that used needle, you will be

exposed to germs. Carry needles carefully with the point away from your body. Do not leave needles lying around. **Use each needle only once.**

How to avoid puncturing your skin with a needle

Do not use your hand to put the cap on the needle.



Instead, use the needle to pick up the cap.



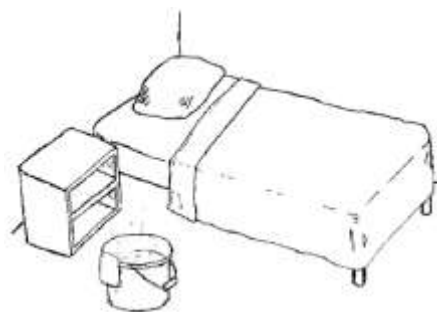
Note: If you do get stuck by a needle, immediately wash the area with soap and water or alcohol and dispose of the needle properly. Do not use it on another person.

2. Clean the space and bedding

2a. Clean the space

The home should be cleaned carefully — especially the area where the baby will be born or where procedures such as a pelvic exam will be done.

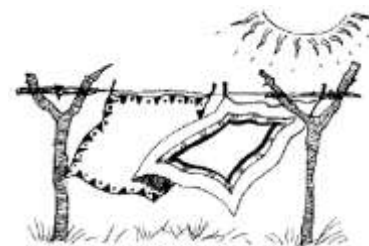
Sweep these areas free of dust and dirt, and wash surfaces with soap and water. Put your tools or birth kit on a clean surface.



Move animals out of the house and do not do any medical procedures in places where animals sleep or pass stool, or where people urinate or pass stool. If the floor in the house is made of animal waste (dung), do not let the woman's body or any of your tools touch the floor. Dung has many germs in it that can easily spread to pregnant women. You can cover the floor with clean straw, cloth, or plastic.

2b. Clean or sterilize the bedding

Wash cloth for covering the bed (bedding) in soap and water, and dry it thoroughly by hanging it in the sun or ironing it. Do not dry bedding on the ground; it will pick up germs.



Store bedding to keep germs away

If you are not going to use the bedding right away, keep it clean and dry until you are ready to use it. Put it in a clean bag or wrap it in clean paper and store it in a clean, dry place.

Note: Do not store bedding that is damp or wet. Germs will come back!

Other kinds of underpadding

Sometimes there is no bed or bedding. The birth or procedure happens on the floor. In these cases, it is useful to have some kind of underpadding. This protects the baby and the mother from the germs and dirt that are on the floor. Find a way to clean the underpadding before it is used. For example, banana leaves can be washed with a disinfectant solution, and then smoked or dried in the sun. Cloth rags or sacks can be boiled and then dried.

Spread the plastic given in your kit over the clean bedding or underbedding.




3. Clean and sterilize tools

All the tools used at a birth, examination, or procedure must be cleaned and sterilized. Cleaning and sterilizing the tools gets rid of germs. This protects women from getting sick.

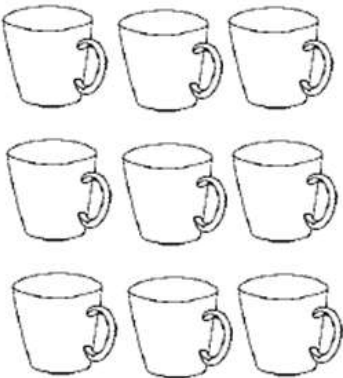
3a. Soak your tools

Tools that have been used must be soaked for at least 10 minutes in 0.5% bleach solution.

How to make a disinfecting 0.5% bleach solution



Use 1 part of 5% bleach



9 parts of clean water

Mix them in a container and 0.5% bleach solution will be ready.

Mix just enough solution for 1 day. **Do not use it again the next day.** It will not be strong enough to kill germs anymore.

3b. Clean your tools

- All tools and equipment you use at a birth or a procedure must be clean.
- Wash them well after each birth, using a brush to remove any blood or dirt in the hinges or rough edges of your tools.
- Clean off any rust, and get rid of tools that are dull or damaged.
- To protect yourself, wear heavy rubber gloves when you clean your tools.



Carefully wash all the dirt off your tools

After everything is washed, any tools that you use inside a woman's body must also be sterilized to kill germs.

3c. Sterilize your tools

To sterilize means to kill all the germs on something. If your tools are sterilized, they will not spread germs to women when you use them. This will protect women from getting infections.

What do we mean when we say "sterile"?

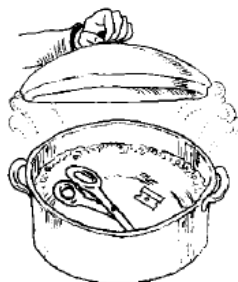
Sterilize means kill **all** the germs that cause infections. To sterilize a tool you must use boiling or pressure steaming.

Disinfect means to kill **most** of the germs that cause infections. Some soaps and cleaning products are called "disinfectant." But to disinfect medical tools or instruments you cannot simply clean something with a disinfectant soap — you must boil, steam, or soak the tool in disinfectant chemicals. This kind of disinfection is called High Level Disinfection (HLD).

Sterilize everything that will go inside a woman's body, will cut her skin, or will be used to cut the cord at birth.

Sterilize these items:

- scissors
- clamps or hemostats
- gauze



- compress cloths
- bulb syringe or mucus trap
- speculums, in some cases

Note: You do not need to sterilize tools that are used only on the outside of the body. Stethoscopes, measuring tape, and blood pressure cuffs must be clean but do not need to be sterile.



When you sterilize a tool, the germs on it are killed and it is safe to use. But if that tool touches anything (including the bed, a table, or you!) it is no longer sterile. Germs from whatever it touched are on it, and those germs can cause an infection when the tool is used.

The next few pages explain 2 different ways to sterilize your tools: baking, pressure steaming, boiling, steaming, and soaking in chemicals. Baking and pressure steaming are best — they kill the most germs. If you cannot use either of those methods, boiling, steaming, or using disinfectant chemicals is fine. Use the ways that work best for you.

WARNING! If you cannot sterilize your tools, then do not use them. Unsterilized tools will do more harm than good.

Pressure steaming

Use pressure steaming to sterilize metal tools or rubber or plastic equipment. If you have a pressure cooking pot, you can sterilize your tools.



Put a steamer basket and water in the pressure cooking pot. Put your tools into the steamer, close the lid on the pot, and put the pot on a flame to boil.

After it comes to a boil, cook at 15 or 20 pounds of pressure for 20 minutes.

After sterilizing tools, let them dry. Do not touch them, or they will not be sterile anymore!

Use sterilized tongs, chopsticks, or spoons to pick the tools out of the pot. Move them directly to a sterilized container. Remember, if the tool touches anything, including your hands, it is no longer sterile.

Boiling

Use boiling to sterilize metal tools, rubber or plastic equipment (like mucus bulbs), and cloth.

After you wash and rinse your tools, cover with water and boil for 20 minutes.

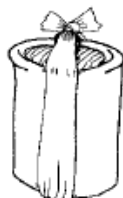
Start counting the 20 minutes when the water starts boiling.



Use sterilized tongs, chopsticks, or spoons to pick the tools out of the pot. Move them directly to a sterilized container. Remember, anything you touch is no longer sterile.



Let the tools dry in the sterilized container. Cover the container with a sterilized cloth or paper to keep dust out.



When the tools are all dry, put the lid on the container and seal it with tape or some other material to keep the germs out.

Storing tools and supplies

At some births there will be plenty of time to sterilize your tools and equipment at the mother's house. But at other births, you may not have time. For this reason, try to sterilize your tools and equipment at home and keep them in a sterilized container in your kit. A metal box or pot with a tight-fitting lid is best. Do not touch the inside of the container.

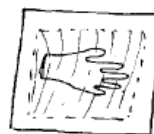


Some equipment needs special care

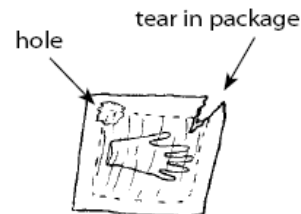
Sterile packets

Gauze, compresses, gloves, and other equipment sometimes come in sterile packets. Because the inside of the packet is sterile too, you can use this equipment directly out of the packet.

But remember: once you take something out of its sterile packet and use it, or if the packet gets wet or gets holes in it, the equipment is not sterile anymore.



This glove is sterile.

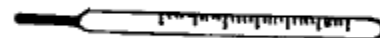


This glove is not sterile.

Things in sterile packets are meant to be used only once and then thrown away (disposable).

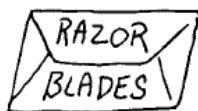
Thermometers

Wash the thermometer in soap and rinse with cool, clean water before and after you use it. Do not use hot water because the thermometer may break.



Razor blades

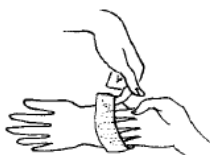
Razor blades for cutting cords come inside of a sterile packet in your delivery kit.



Never reuse razor blades — dispose off after cutting the cord.

Gloves

Most plastic gloves can be boiled or steamed, but some will fall apart in the water. Get strong gloves that can be boiled and reused a few times.



Only touch the inside of the glove.

Before boiling or steaming gloves, turn the cuff inside out. After sterilizing a glove, touch only the inside part of it. If you touch the outside, it will not be sterile anymore.

If the gloves you have cannot be boiled, wash them carefully and soak them in bleach or medical alcohol. Then rinse them in clean water before using them again.

Mucus bulb (bulb syringe)

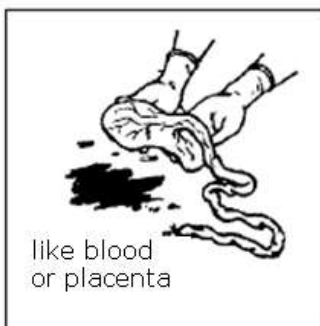
When you wash out a mucus bulb, make sure to fill it with soapy water and then squeeze the water out. Do this several times. Then rinse it out well. If you sterilize the mucus bulb by boiling, make sure to let water into the inside of the bulb before boiling and then squeeze out all the water afterward.



4. Get rid of wastes safely

There are three different kinds of waste after a birth or procedure:

body wastes



sharp wastes



other wastes



These wastes carry germs and can spread infections to you and to people in the family and community. Wear gloves when you touch wastes, and get rid of them carefully.

Body wastes

The simplest way to dispose of body wastes is to bury them deep in the ground.

In many communities, families bury the placenta, sometimes with other special objects. Burying the placenta is an important ritual for many people, and is also a way to protect the community from germs that may grow in the placenta.

Sharp wastes

Sharp wastes must be put into a container so they will not injure anyone who finds them. A container made of metal or heavy plastic, with a lid or tape to close it, works well.



When the container is half full, add bleach if possible, then seal it closed and bury it deep in the ground.

Other wastes

Other wastes, like plastic gloves or cloth soaked in blood, should be disinfected and then buried deep in the ground. You can disinfect them by soaking them in bleach for 10 minutes.

WARNING! Do not burn plastic gloves, syringes, or any other plastics. Burning plastic wastes is dangerous — when plastic burns, it makes smoke and ash that is very poisonous.

Burying wastes

Find a place away from where people get their drinking water and away from where children play. Dig a safe waste pit to bury wastes.



Monitoring Tool

CMW supervisor should visit the home where birth has taken place as soon as possible after the delivery and check with the family if the CMW did the following.

If possible to observe directly, she should attend some deliveries with the CMW.

#	Activity (Ask the family, if CMW.....)	Yes	No	Comment
1.	Cleaned the area where baby was born.			
2.	Swept the area free of dust and dirt and washed surface with soap and water.			
3.	Spread washed (with soap and water) and sun dried or ironed covering sheet on the bed or underpadding			
4.	Spread the plastic sheet provided in the kit over the clean bedding.			
5.	Washed hands with soap and water for 3 minutes.			
6.	Rinsed soap off hands with clean running water			
7.	Dried her hands in the air instead of using a towel			
8.	Wore gloves before touching the mother's genitals or any blood or body fluids			
9.	Wore an extra shirt or apron to keep fluid off her body			
10.	Protected her eyes with eye glasses or plastic goggles			
11.	Covered her feet with shoes			
12.	Used needles and syringe once only			
13.	Used a new blade for cutting the cord			
14.	Sterilized scissors, clamps, hemostats, gauze, compressed clothes, bulb syringe or mucous traps and speculum before delivery			
15.	These were boiled for at least 20 minutes after the water started boiling			
16.	Or she brought sterilized tools from her home, packed in a container			

17.	Used items are in sterile packets in delivery kits only once and then disposed them off			
18.	Washed thermometer with soap and rinsed with cool clean water, before and after use			
19.	Disposed body waste, sharp wastes and other wastes safely by burying them in a place away from where children play			