



Infection Control Management Project

Volume 11: Guidelines for

Infection Control in General Practice

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

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Infection Control Management Project

Volume 12: Guidelines for Infection Control in General Practice

Adapted by AAA Team from:

1. Performance Standards for Primary Health Care At Rural Health Care At Rural Health Centers/Basic Health Units, Prepared by Pride Project, USAID, Jhpiego, International Rescue Committee, Management Sciences for Health
2. Practical Guidelines for Infection Control In Health Care Facilities, WHO, 2004
3. Safe Management of Bio-medical Sharps Waste in India, WHO, 2005
4. Safe Management of Wastes From Health-Care Activities (1999): WHO, 1999.
5. The National Infection Control Guidelines, 2006. The National AIDS Control Program, Ministry of Health, Pakistan
6. WHO Poster, How to Handwash & How to Hand rub, October 2006



Protocol for Infection Prevention in General Practice

ALL STAFF IN THE CLINIC MUST:

1. Make certain that the **facility is clean**
2. Ensure adequate **supply of safe water for drinking and healthcare purposes.**
3. **Maintain hand hygiene**, for preventing cross-contamination.
4. Have **personal protective equipment** available (masks, aprons, eyewear, gloves, shoes) and use them.
5. **Prevent Needle/Sharp injuries** and use containers for sharps disposal and dispose them safely
6. Ensure that **clean supplies** are available (gauze, cotton wool, instruments, plastic containers etc)
7. Ensure that **antiseptics, disinfectants** are available
8. Perform **decontamination of instruments** and other articles.
9. Have **separate area** for instrument cleaning where **cleaning of instruments** and other items is performed properly
10. Make sure that there is a proper area for **instruments processing** where sterilization/HLD processes are performed properly
11. Follow that **waste** is collected and disposed off properly

Reference Text

Standard Precautions as advocated by WHO for health care facilities

Treating all patients in the health care facility with the same basic level of “standard” precautions involves work practices that are essential to provide a high level of protection to patients, health care workers and visitors.

These include the following:

- Hand washing and antisepsis (hand hygiene);
- Use of personal protective equipment when handling blood, body substances, excretions and secretions;
- Appropriate handling of patient care equipment and soiled linen;
- Prevention of needlestick/sharp injuries;
- Environmental cleaning and spills-management; and
- Appropriate handling of waste.

1. Ensure Cleanliness of Facility

All areas of the General Practitioner’s Clinic which includes waiting area, doctor’s room, pharmacy/dispensing area, instrument processing area, and storing cupboards must be kept clean. This means that there is NO dust, cobwebs, blood, trash, used needles and syringes or bandages, etc on the floor, walls, roof or fixtures and furniture.

Routine cleaning is important to ensure a clean and dust-free clinic environment. The facility should be cleaned by wet mopping. Dry sweeping (*jharoo*) is not recommended. The use of a commonly used detergent solution improves the quality of cleaning.

Any areas visibly contaminated with blood or body fluids should be cleaned immediately with detergent and water. All horizontal surface areas should be cleaned daily.



2. Have Adequate Supply of Safe Water for Drinking and Healthcare

The Clinic should have provision for regular supply of adequate water for use. It is essential that this water is safe or made safe before use through purification process.

The water should be purified through products like Musaffa, PUR, Aquatab, etc. for drinking and for healthcare purposes, as the tap water is not safe. For drinking, store purified water in clean containers with tap (such as water cooler).

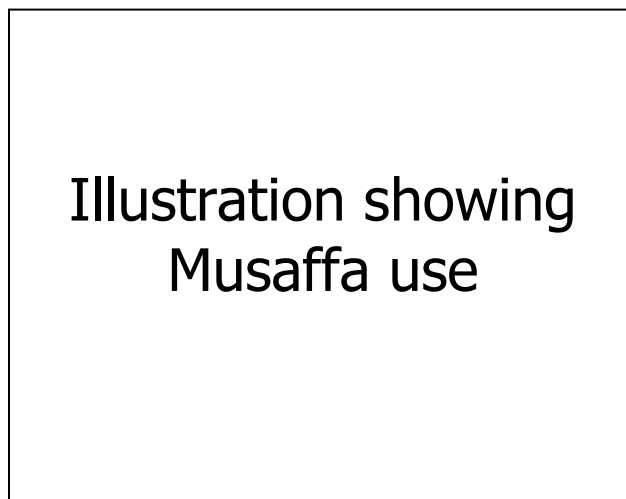


Illustration showing
Musaffa use

3. Maintain Hand Hygiene

Wash hands with soap and water when visibly soiled, otherwise use **hand rub**.

Before handwashing, remove ALL wrist and hand jewellery. Cover cuts and abrasions with waterproof dressings. Keep fingernails short, clean and free from nail polish.

The purpose of handwashing is to mechanically remove soil and debris from the skin, and reduce the number of transient microorganisms. **Handwashing with plain soap and clean water is as effective as washing with antimicrobial soaps.**

Handwashing should be done before:

X

- Examining a client/patient
- Wearing gloves for any routine procedure/examination

Handwashing should be done after:

- Any situation in which hands may become contaminated, such as:
 - Handling soiled instruments and other items,
 - Touching mucous membranes, blood, or other body fluids (secretions or excretions), and
 - Having contact with a client.
- Removing gloves

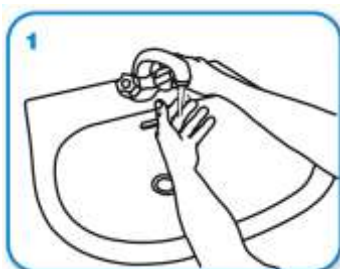
An emollient hand cream or any vegetable oil can be applied to protect skin from the drying effects of regular hand decontamination. In case of irritation, try a different product or just plain instead of carbolic or medicated soaps.

Popular commercial products (such as Safeguard, Bodyguard, Lifebouy) have no proven extra efficacy than normal soap. These may alter hand flora increasing resistance of organisms.

Method of Handwashing

Wash hands only when visibly soiled! Otherwise, use handrub!

Duration of procedure: 40-60 sec.



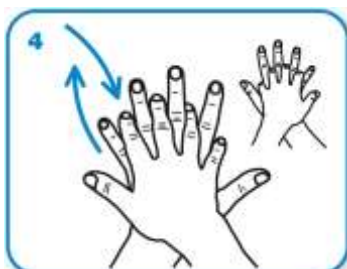
Wet hands with water



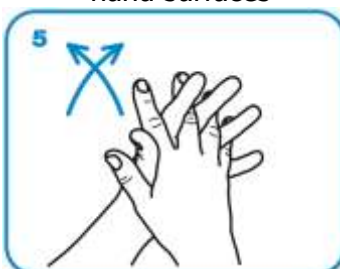
Apply enough soap to cover all hand surfaces



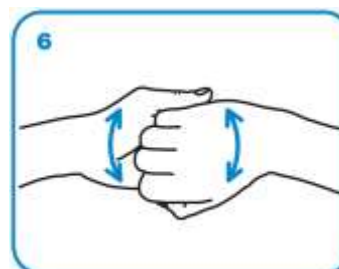
Rub hands palm to palm



Right palm over left dorsum with interlaced fingers and vice versa



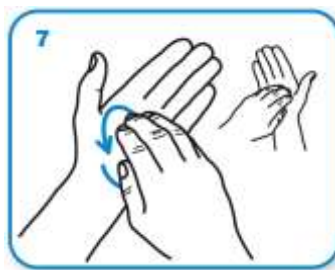
Palm to palm fingers interlaced



Backs of fingers to opposing palms with fingers interlocked



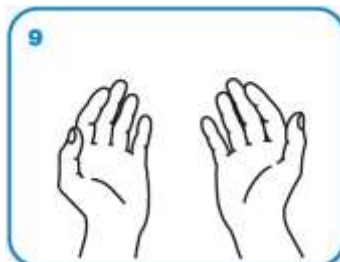
Rotational rubbing of left thumb clasped in right palm and vice versa



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



Rinse hands with water



And your hands are safe

Perform Antiseptic Hand Rub before touching each patient. Use of an antiseptic hand rub is more effective in killing transient and resident flora than handwashing with antimicrobial agents or plain soap and water. It is quick and convenient to perform, and gives a greater initial reduction in hand flora. Antiseptic hand rubs also contain a small amount of an emollient such as glycerin, propylene glycol, or sorbitol that protects and softens skin.

Making antiseptic handrub: A non-irritating, antiseptic hand rub can be made by adding glycerin, propylene glycol, or sorbitol to alcohol (2 ml in 100 ml of 60-90 percent ethyl or isopropyl alcohol solution). Use 5 ml (about 1 teaspoonful) for each application, making sure that it comes into contact with all surfaces of the hands. Rub hands together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry (15-30 seconds).

DO NOT USE HANDRUB in case hands are visibly soiled, or potentially grossly contaminated with dirt or organic material. They must be washed with soap and water.

Do not use towels. Air dry hands.

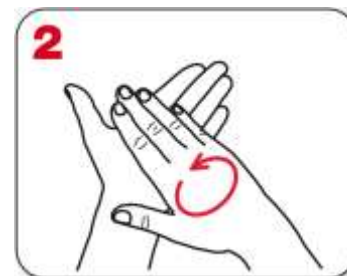
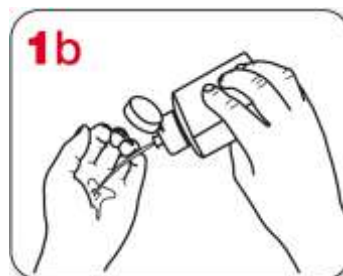
Method of Handrub

Wash hands only when visibly soiled! Otherwise, use handrub!

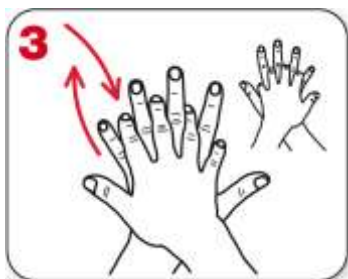
Duration of procedure: 30 sec.



Apply a handful of alcohol handrub in a cupped hand and cover all surfaces



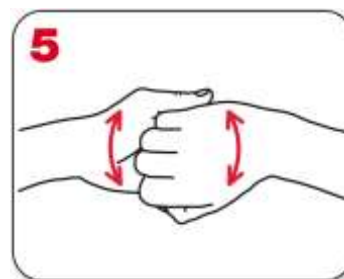
Rub hands palm to palm



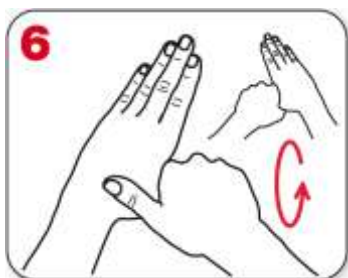
Right palm over left dorsum with interlaced fingers and vice versa



Palm to palm fingers interlaced



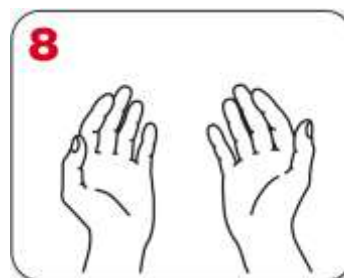
Backs of fingers to opposing palms with fingers interlocked



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



And your hands are safe

4. Use Personal Protective Equipment (PPE)

Protective barriers, referred to as personal protective equipment (PPE), are essential both for protecting patients/clients from micro-organisms present and staff working in the health care setting.

The Clinic should have available and ready to use PPE at ALL times that includes gloves, masks, eyewear, (face shields, goggles or glasses), and gowns. These must be used by doctor and paramedics for situations where they may have contact with blood, body fluids, excretions or secretions.

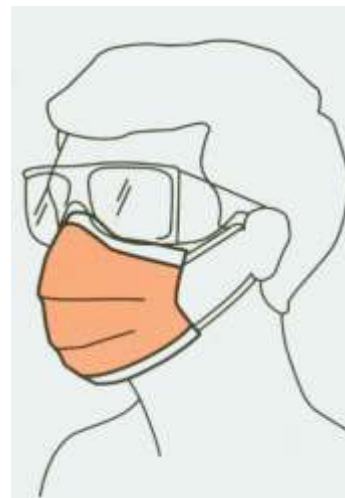
Gloves protect hands of healthcare workers from infectious materials and protect clients from microorganisms on health care providers' hands.

- Wear gloves (clean, non-sterile) when touching blood, body fluids, secretions, excretions or mucous membranes.
- Change gloves between contacts with different patients.



- Change gloves between tasks/ procedures on the same patient to prevent cross-contamination between different body sites. Hand decontamination (washing or alcohol rub) will be required between such tasks.
- Remove gloves immediately after use and before attending to another patient.
- Wash hands immediately after removing gloves. Use a plain soap, antimicrobial agent or antiseptic hand rub.
- Disposable gloves should not be reused, but should be disposed.

Masks should be large enough to cover the nose, lower face, jaw, and facial hair. They are worn in an attempt to contain the moisture droplets expelled when health care providers speak, cough, or sneeze, as well as prevent accidental splashes of blood or other contaminated body fluids from entering the health care provider's nose or mouth. Unless the masks are made of fluid-resistant materials, they are not effective in preventing either. Wear surgical masks rather than cotton material or gauze masks. Surgical masks have been designed to resist fluids to varying degrees depending on the design of the material in the mask. Do not reuse disposable masks.



Eyewear protects healthcare providers in the event of an accidental splash of blood or other body fluid by covering the eyes. Eyewear includes clear plastic goggles, safety glasses, etc. Prescription glasses or glasses with plain lenses also are acceptable. Masks and eyewear should be worn when performing any task in which an accidental splash into the face is likely (e.g., performing a surgical procedure or cleaning instruments). Decontaminate them according to the manufacturers' instructions.

Gowns (clean, non-sterile) should be worn to protect the skin and prevent soiling of clothing during procedures that are likely to generate splashes of blood, body fluids, secretions or excretions such as incision and drainage of abscess. Impermeable gowns are preferable.

5. Prevent Needle/Sharp Injuries

Take care to prevent injuries when using needles, scalpels and other sharp instruments.

- Use needle and syringe only once
- Keep handling to a minimum. **DO NOT** pass directly from hand to hand.
- **Do not recap or bend needles** prior to disposal.
- Do not disassemble the needle and syringe after use.
- **Mutilate** prior to disposal to prevent any unauthorized reuse by using needle cutters/destroyers.
- Dispose of the used disposable syringes and needles, scalpel blades and other sharp items in a **puncture-resistant container with a lid that closes.**



The puncture proof sharp containers can be made from cardboard box, used tin box, or hard plastic bottles that are closed.

Make only a small opening in the box for disposing off sharps. These sharp containers should be available in dressing/injection rooms, EPI vaccination rooms, examination rooms, labor and birth rooms, wards and laboratories, i.e. such containers must be located in ALL patient care and laboratory areas where they are very easily accessible to personnel working in these locations. They should be closed and immediately replaced when $\frac{3}{4}$ full.



6. Availability and Use of Clean Supplies

Clean supplies should be available at all the necessary sites in ready to use form. These include gauze or cotton wool, instruments, pick-up forceps in separate dry covered containers without antiseptics.

7. Availability and Use of Antiseptics and Disinfectants

The clinic must have sufficient amount of antiseptics and disinfectants. Antiseptics include alcohol (spirit), Chlorhexidine gluconate 2 – 4 % (Savlon), or Povidon+Iodine (Pyodine). Disinfectants include chlorine solution or powder. Besides these, the clinic must have supplies like commonly used detergents, mops and cleaning clothes.

8. Perform Decontamination and Cleaning of Instruments

The decontamination of instruments and other articles must be performed properly at the site of use immediately after it is used and before cleaning. The decontamination should be done with 0.5% chlorine solution. A new chlorine solution should be prepared at the beginning of each day. Plastic containers should be used for decontamination. Instruments and other items should be soaked in the 0.5% chlorine solution for at least 10 minutes before being taken to the washing basin.

Chlorine solution on 0.5% is prepared by mixing 1 part of 5% bleach (commercially available domestic bleach) with 9 parts of water.

Use deep sink/basin with running water for washing instruments and a counter/separate space for instrument drying, and a closed shelf for storing clean items.

The person cleaning instruments must comply with following recommendations:

- Wear utility gloves, eyewear protection or face shield, plastic aprons and enclosed shoes
- Use a soft brush, detergent (without acid or ammonia) and 0.5% chlorine solution in the detergent water
- Scrub instruments and other items under the surface of water completely removing blood and other foreign matter
- Rinse the instruments and other items thoroughly with water
- Allow instruments and other items to air dry
- Wash hands with running water and soap for 10-15 seconds and dry

Never wash instruments with bare hands

9. Conduct Instrument Processing

The instrument processing in clinic can be done through the HLD process. Boiling is a good HLD process and should be done as follows:

- Immerse all clean and disassembled instruments totally in water
- Close the lid of the container
- Boil the instruments for 20 minutes starting from the time a rolling boiling begins
- After 20 minutes, remove the instruments with HLD forceps and store them in HLD containers
- Do not leave boiled instruments in the water that has stopped boiling

10. Waste Collection and Disposal

Waste is to be collected in leak proof containers which should be emptied in thick card box when $\frac{3}{4}$ full. Leak proof containers should be placed in the doctor's room and pharmacy/dispensing area.

The waste should be disposed of in the following manner:

- Containers with sharps (such as cut needles, broken glass etc.) should not be thrown into the community garbage bin. There is need to develop link with a private or a government hospital that has facilities for its **incineration or burial**.

General waste	Discard in community dustbin
Contaminated liquid waste (blood, urine, faeces and other body fluids)	Emptied in a toilet or sink from which they could be drained into a sewer system. The toilet/sink should be rinsed with water after the waste has been emptied.
Sharps containers	Containers with sharps (such as cut needles, broken glass etc.) and solid contaminated waste should not be thrown into the community garbage bin. There is need to develop link with a private or a government hospital that has facilities for its incineration or burial. Alternatively, the doctors' organizations should work with the municipal governments to institute a collection system from their clinics.
Contaminated solid waste (used dressings and other materials contaminated with blood and organic matter)	

Sharp containers and contaminated solid waste can be **encapsulated** by the general practitioner in the clinic. When the container with sharps or contaminated solid waste is $\frac{3}{4}$ full, a material such as cement or clay should be poured until it is completely filled. Allow the material to harden. Then send it for burial to a hospital or handed over to municipal collectors.

In case sharps and contaminated solid waste cannot be sent for incineration or burial, then an option is to decontaminate them by submerging them in 0.5% bleach solution for 10-20 minutes. Only after decontamination, they can be thrown in the community dust bin.

Monitoring Tool for a GP Clinic

Performance Standard	Verification Criteria	Yes, No	Comments
1. Cleanliness of the Facility	Verify absence of visible dust, cobwebs, blood, trash, used needles and syringes in all areas of the clinic		
	<ul style="list-style-type: none"> • Doctor's room 		
	<ul style="list-style-type: none"> • Pharmacy or dispensing area 		
	<ul style="list-style-type: none"> • Waiting area 		
2. Adequate supply of safe water for drinking and other uses	Observe the provision of water for the Clinic		
	<ul style="list-style-type: none"> • Tap water available 		
	<ul style="list-style-type: none"> • Overhead and underground water tanks are clean 		
	<ul style="list-style-type: none"> • Drinking water is purified and kept properly 		
3. Hand Hygiene is practiced	Verify and observe		
	<ul style="list-style-type: none"> • Soap is available 		
	<ul style="list-style-type: none"> • Antiseptic hand rub is available 		
	<ul style="list-style-type: none"> • Hand rub/handwash is performed before touching each patient 		
	<ul style="list-style-type: none"> • Handwash is done after situations where hands are contaminated 		
4. Type and use of Containers for Sharps	Verify whether:		
	<ul style="list-style-type: none"> • The sharps containers are puncture-proof (cardboard box, hard plastic containers or 		

	cans that are closed) with only small opening for disposing of syringes with needle		
	<ul style="list-style-type: none"> • Sharp containers are all less than ¾ full 		
	<ul style="list-style-type: none"> • Empty and new containers are available <ul style="list-style-type: none"> ○ Examination room ○ Pharmacy or lab area 		
5. Availability and usage of Personal protective equipment	Verify whether the following are available and ready for use:		
	<ul style="list-style-type: none"> • Disposable gloves 		
	<ul style="list-style-type: none"> • Gowns 		
	<ul style="list-style-type: none"> • Eye wear 		
	<ul style="list-style-type: none"> • Heavy gloves for cleaning instruments 		
6. Availability of clean supplies	Verify whether:		
	<ul style="list-style-type: none"> • Gauze and cotton is kept in dry covered containers without an antiseptic 		
	<ul style="list-style-type: none"> • Instruments and other items are kept in dry covered containers without antiseptics 		
	<ul style="list-style-type: none"> • Pick-up forceps are kept in dry covered containers without antiseptics 		
7. Availability of Antiseptics and Disinfectants	Verify whether the following are available in the clinic in sufficient amounts:		
	Antiseptics:		
	<ul style="list-style-type: none"> • Alcohol (spirit), ethyl or isopropyl alcohol 		

	<ul style="list-style-type: none"> Chlorhexidine gluconate (2-4%) (e.g. Salvon) or Pyodine 		
	Disinfectant:		
	<ul style="list-style-type: none"> Chlorine solution (0.5%) 		
8. Decontamination and cleaning of Instruments	<ul style="list-style-type: none"> Verify whether concentration of chlorine solution is 0.5% There is at least one deep sink/basin with running water for washing instruments 		
9. Cleaning of Instruments and Other Items	Verify whether the person cleaning the instruments complies with the following steps:		
	Wears:		
	<ul style="list-style-type: none"> Utility gloves 		
	<ul style="list-style-type: none"> Eyewear protection or face shield 		
	<ul style="list-style-type: none"> Plastic apron 		
	<ul style="list-style-type: none"> Shoes 		
	Uses:		
	<ul style="list-style-type: none"> Soft brush 		
	<ul style="list-style-type: none"> Detergent (liquid or powder, without acid or ammonia) 		
	<ul style="list-style-type: none"> 0.5% chlorine solution in the detergent water 		
	<ul style="list-style-type: none"> Scrubs instruments and other items under the surface of water, completely removing all blood and other foreign matter 		
	<ul style="list-style-type: none"> Disassembles instruments and other items with multiple parts, and cleans in the grooves, teeth and joints with a brush 		

	<ul style="list-style-type: none"> Rinses the instruments and other items thoroughly with clean water 		
	<ul style="list-style-type: none"> Allows instruments and other items to air-dry, or dries with a clean towel (if autoclaving) 		
	<ul style="list-style-type: none"> Washes hands with running water and soap for 10-15 seconds and dries 		
10. Instrument Processing	Verify whether clinic has:		
	<ul style="list-style-type: none"> Has at least one boiler in working order 		
11. Sterilization/HLD Process is performed Properly	Verify whether the HLD cycles listed below are followed:		
	Boiling		
	<ul style="list-style-type: none"> All cleaned, disassembled instruments are totally immersed in water before lid is closed 		
	<ul style="list-style-type: none"> The lid is closed 		
	<ul style="list-style-type: none"> Do not add anything to the pot after timing starts 		
	<ul style="list-style-type: none"> Instruments are boiled for 20 minutes <u>starting from the time a rolling boil begins</u> 		
	<ul style="list-style-type: none"> After 20 minutes, instruments are removed with HLD or sterile forceps and stored in HLD containers 		
	<ul style="list-style-type: none"> Boiled instruments are not left in water that has stopped boiling 		

12. Waste Collection	Verify whether the person collecting waste complies with the following steps:			
	<ul style="list-style-type: none"> • Wears: <ul style="list-style-type: none"> ○ Utility gloves ○ Eye protection ○ Shoes 			
	<ul style="list-style-type: none"> • Collects waste in leak proof containers 			
	<ul style="list-style-type: none"> • Collects waste when the container is $\frac{3}{4}$ full 			
	<ul style="list-style-type: none"> • Collection person washes hands with soap and water after removing gloves and other personal protective equipment 			
	13. Waste Disposing	Verify whether:		
	<ul style="list-style-type: none"> • Contaminated liquid waste (blood, urine, faeces and other body fluids) are disposed of in the following manner: <ul style="list-style-type: none"> ○ Emptied into a toilet or sink from which water can be drained into a sewer system ○ The sink is rinsed with water after the waste has been emptied • Containers with sharps are sent for incineration or burial to a hospital or a municipality system. • Solid waste (used dressings and other materials contaminated with blood and organic matter) containers are sent for incineration or burial to a hospital or a municipality system. 			