

Section 6

Dispose of Waste Safely



This section describes how to:

- Dispose of liquid waste and patient excreta in an isolated latrine or toilet.
- Use an incinerator to burn contaminated waste.
- Use a pit to burn contaminated waste.
- Maintain security of the disposal site.



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Direct, unprotected contact during disposal of infectious waste can result in accidental transmission of VHF. For this reason, all contaminated waste produced in the care of the VHF patient must be disposed of safely. All non-reusable items should be destroyed so they cannot be used again. Burning should be carried out at least daily.

6.1 What Needs Disposal

When VHF is suspected, disinfect and dispose of:

- Infectious blood and other body fluids such as urine, faeces, and vomitus
- Disposable needles and syringes and disposable or non-reusable protective clothing
- Treatment materials and dressings
- Non-reusable gloves
- Laboratory supplies and biological samples
- Used disinfectants.

Recommended Disposal Methods: Liquid waste, including patient excreta, can be disposed of in an isolated latrine or toilet set aside for VHF cases. Burning is the recommended method for disposal of other VHF-contaminated waste. A safe and inexpensive disposal system can be made by using an incinerator or a pit for burning.

- A latrine or toilet that joins the patient's isolation room can be used to receive the disinfected bedpan contents from the VHF patient. The latrine or toilet should be isolated. Access should be restricted to health facility staff trained to work in the VHF isolation area. Isolating the patient area is described in Section 3.5.



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- Incinerators are containers with holes for ventilation to allow air to enter and exit the container. This allows the fire to reach temperatures high enough to completely destroy all biological materials. Use flammable fuel (such as diesel fuel) to speed the burning process and keep the temperatures high.

Incineration is recommended for disposal of:

- Needles and syringes
 - Used treatment materials and dressings
 - Non-reusable protective clothing
 - Laboratory supplies.
- When an incinerator is not available, burn waste in a pit. Use fuel to accelerate the burning and ensure that all waste is completely destroyed.

Use a pit to dispose of:

- Disinfected body fluids such as urine, faeces, and vomitus when no designated latrine or toilet is available.
- Used disinfectants. If it is not possible to dispose of used disinfectants in a latrine or toilet, burn the used disinfectant together with flammable items (disposable gowns or masks, for example). Burning with the flammable items will help keep the temperature of the fire hot enough to boil off the liquids.

Note: All staff who are likely to handle infectious material should know and use VHF Isolation Precautions. Reinforce with all health facility staff the importance of handling infectious waste safely.

6.2 Select Staff to Supervise Waste Disposal and Burning

Select a person with authority who will:

- Oversee all the disposal procedures, including preparation of the incinerator and pit.
- Train and supervise the staff who carry out waste disposal.
- Make a schedule for collecting and burning disposable waste.
- Supervise the collection and burning to make sure it is carried out safely.

6.3 Train and Supervise Staff to Carry Out Waste Disposal

The cleaning staff who do the disposal tasks should understand the purpose of safe disposal, know how to wear protective clothing, and know clearly how to carry out waste disposal safely.

After the cleaning staff is selected:

1. Describe the risks of VHF transmission. Explain that health facility staff who carry out waste disposal should wear protective clothing including a plastic apron and at least two pairs of gloves. Wear thick gloves as the outer pair of gloves.
2. Describe the disposal procedures that cleaning staff will carry out:
 - Bring the containers of infectious waste from the isolation and cleaning areas to the disposal site. Discard the items in the incinerator or burning pit.
 - Pour fuel on the waste in the incinerator or over the pit. Light the fire.



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- Watch the burning carefully.
 - Move waste frequently as it burns to be sure all items burn completely.
 - If any items remain, repeat the burning procedures.
 - When burning ends, remove ashes from incinerator and bury them in a pit.
 - When the pit is nearly full of ash, cover it with soil. Waste should not be near the surface. It should take about half a meter of soil to close the pit.
 - Build a new pit when the old pit is full.
3. Show the cleaning staff how to:
- Wear protective clothing with one pair of thick or kitchen gloves over an inner pair of thin gloves.
 - Collect and carry the buckets of infectious waste from the isolation area to the disposal area.
 - Collect and dispose of liquid waste in an isolated latrine or toilet. If no latrine or toilet can be isolated, burn the liquid waste in the pit.
 - Place the infectious waste in the incinerator or pit for burning.
 - Douse the infectious waste with fuel (such as diesel fuel) and burn it.
 - Watch the burning from beginning to end to make sure all the waste items are burned before letting the fire go out.

6.4 Select Site for Burning VHF-Contaminated Waste

Select a burning site on the health facility grounds. It should be located away from the normal traffic flow. To help maintain security and prevent unauthorized access, the site should not be in public view or in an area where it will attract a crowd. The ash from the burning is not infectious, and it can be placed in a pit and buried.

6.5 Use Incinerator to Burn VHF-Contaminated Waste

If an incinerator is available on the health facility's grounds, and it can be set aside for VHF-contaminated waste, use diesel fuel during burning to make sure all the waste is completely destroyed.

If no incinerator is available, make one from an empty 220-litre (55-gallon) oil or fuel drum.

1. Gather the following supplies:

- 220-litre (55-gallon) drum
- Chisel or other sharp instrument (an awl, for example) to cut metal
- Hammer
- 0.5 mm or 1.0 mm metal wire
- The piece cut out from the top of the drum or a wire screen or grill about 1 cm thick
- Metal rods or bars 4 cm or 5 cm x 2 cm.



Fig. 54. A 220-litre drum

2. Cut open the drum by removing the top in one piece. Save the top cutaway piece.
3. Hammer the edges of the drum so they are not sharp.
4. Cut three half-moon openings just below the open end of the drum.



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5. Turn the drum and put the open end on the ground. The bottom of the drum is now the top.
6. Cut four holes on the sides of the drum. These holes are for threading the two metal rods through the drum so that they form an X or cross inside the drum. The crossed rods will support a platform used for holding the infectious material to be burned.

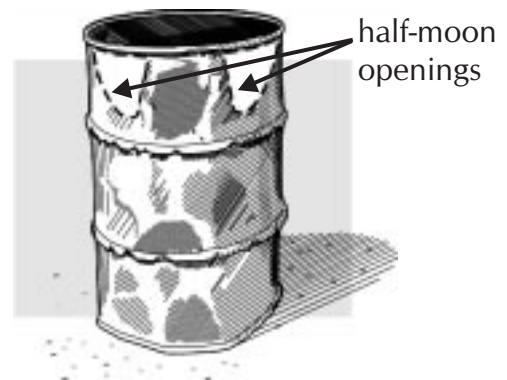


Fig. 55. Turn the drum and put the open end on the ground

To cut the holes for the rods:
Just above the half moon openings (about one-third of the height of the drum), cut a hole the same size as the diameter of the metal rod. Directly across from the hole, on the other side of the drum, cut a second hole so that a rod can be threaded through the two holes. Repeat the steps and make two more holes on opposite sides of the drum. Thread each rod through the holes to make an X or cross.

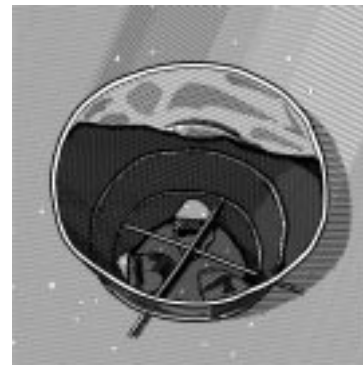


Fig. 56. Place the rods across the drum

7. Use the top piece of the drum that was cut away in step 2 to make the platform. It will rest on the crossed rods and hold the infectious material to be burned. The platform also lets air come in from the bottom of the drum so that the temperatures at the bottom are high enough to completely burn the material.

To make the platform: Punch holes in the cutaway top piece of the drum. Make enough holes so it looks like a sieve. Save the platform to use in Step 10.

8. Pierce a series of holes (about 0.5 cm in diameter) on the sides of the drum and above the crossed rods to improve the draw of the fire.

9. Cut away half of the bottom of the drum (which is now the top of the incinerator and is facing up). Attach the wire loops to the cutaway half. Attach another loop for a handle to open the trap door. Items to be burned will be put in the incinerator through this door.
10. Place the platform you made in Step 7 inside the drum on top of the rods. Replace the incinerator if, as a result of the heat, large holes appear in the sides.

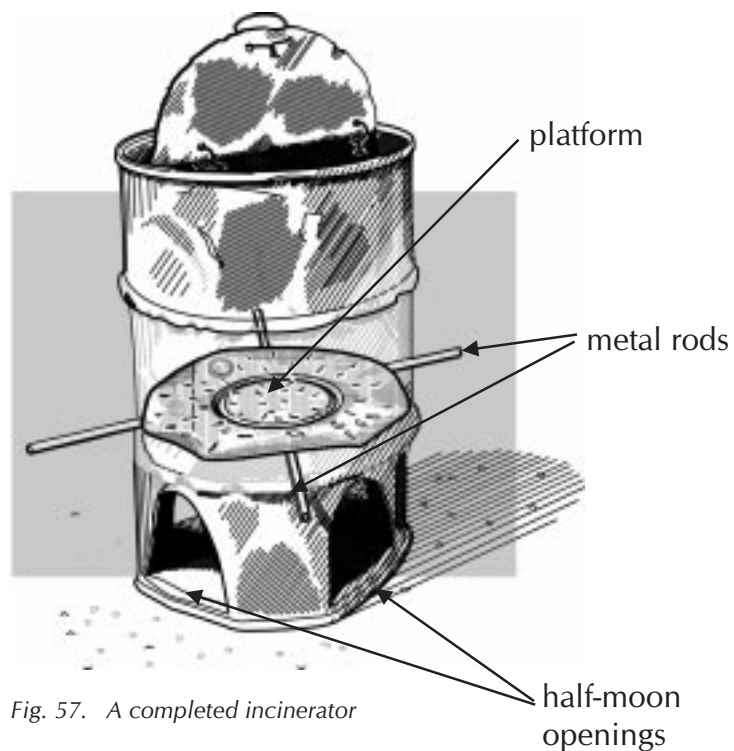


Fig. 57. A completed incinerator

To burn waste in the incinerator:

1. Place the infectious waste inside the top of the drum. Soak the waste in one litre of fuel.
2. Light the fire carefully.
3. Watch the fire and frequently mix the waste with the metal bars to be sure all of the waste is burned.
4. When the fire has gone out, empty the ashes into a pit.



6.6 Use Pit to Burn VHF-Contaminated Waste

If an incinerator is not available, make a pit for burning infectious waste.

1. Locate the pit far from the normal traffic flow of the health facility.
2. Dig a pit that is 2 meters deep. It should be wide enough to hold all contaminated waste material, including discarded liquids.

To burn waste in the pit:

1. Place the disinfected waste in the pit, including disinfected liquid waste that was not discarded in an isolated latrine or toilet.
2. Pour fuel (such as diesel fuel) on the waste. Carefully start the fire.
3. Watch the burning to make sure all the waste is completely destroyed.
4. When the fire has gone out, if any waste remains, repeat the steps for burning.
5. When no waste remains and the fire goes out, cover the ashes with soil.
6. Before the pit becomes completely full, cover it with soil so that no pieces of waste are visible or are too close to the surface. The pit should be closed when it can be covered by one-half meter of soil.
7. Dig a new pit.

6.7 Take Steps to Ensure Security of Burning Site

Maintain the security of the burning site to limit access to contaminated items. This is important since children could be tempted to pick up the interesting waste materials and use them for toys. Dogs, cats, and other animals may carry items beyond the health facility boundaries.

Tie a rope around the disposal area. Hang warning signs from the rope that tell people this is a dangerous area. Also station a guard to prevent unauthorized access to the disposal area.

Never leave unburned waste in the incinerator or the pit.



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