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WASTE DISPOSAL IN CLINICAL PROCEDURES AT RESOURCE LIMITED HEALTH CARE FACILITY

It is essential for the hospital to have protocols for dealing with biological waste and contaminated materials. All staff must be familiar with them and follow them.

- All **biological waste** must be carefully stored and disposed of safely.
- **Contaminated materials** such as blood bags, dirty dressings and disposable needles are potentially hazardous and must be treated accordingly.
- If biological waste and contaminated materials are not disposed of properly, staff and members of the community could be exposed to infectious material and become infected.
- The disposal of **biohazardous materials** is time consuming and expensive, so it is important to separate non-contaminated material such as waste paper, packaging and non-sterile but not biologically contaminated materials. **Only 15% to 20% of medical waste are considered infectious.**
- Make **separate disposal containers** available where waste is created so that staff can sort the waste as it is being discarded. **A three color coding system** with **black** for non infectious waste, **red or yellow** for infectious and **yellow** for sharps is recommended.
- **Organize things** in a way to discourage the need for people to be in contact with contaminated waste.
- All infected waste should then be treated of by **steam sterilization or high temperature incineration** equipped with emission control devices. Whenever feasible plastic material such as syringes or blood bags should not be incinerated.
- Burying waste is the only option in some areas where not controlled landfill exists. If this is the case, you should do as much as possible to protect the burying site to prevent access and to avoid environmental pollution, especially for underground water sources.
- Prior to burying for safety **infected waste can be disinfected** by soaking in a 0.5% hypochlorite solution for at least 30 minutes.



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- Do not mix waste **chemicals**, unless you are certain that a chemical reaction will not take place. This is essential to prevent any unwanted or dangerous reactions between the chemicals, which could endanger laboratory staff. Always follow local guidelines on the disposal of waste chemicals to ensure that chemical contamination of the surrounding land or water supply does not occur.
- Provide a **safe system for getting rid of disposable items** such as scalpel blades or needles. The risk of injury with sharp objects increases with the distance they are carried and the amount they are manipulated.
- A container for the **safe disposal of sharp objects** should be:
 - ▶ Well labeled
 - ▶ Puncture proof
 - ▶ Watertight
 - ▶ Break resistant (a glass container could break and provide a serious hazard to the person cleaning up the mess)
 - ▶ Opening large enough to pass needles and scalpel blades, but never large enough for someone to reach into
 - ▶ Secured to a surface, such as a wall or counter, to ensure stability during use
 - ▶ Removable for disposal.
- These containers must then be disposed of safely. *(They can be steam sterilized, then shredded and disposed of to a controlled land fill with municipal waste, encapsulated in a pit or any other options according to national protocols approved by the public health department and ministry of environment.)*
- Health-care workers and waste handlers should wear protective equipment such as gloves, apron, mask and be immunized against HBV.
- A budget line for a safe waste management should be systematically included when planning a medical activity.

References

1. WHO Surgical Care at the District Hospital Manual 2003
2. WHO Management of Solid Health-Care Waste at Primary Health-Care Centers : a decision-making guide 2005