

When to use this checklist: **Planning phase**

Human waste needs to be managed to prevent aerosolization of fluid and contamination of the environment. Each inpatient area must have at least one closed human-waste management system where staff can decant or discard human waste (solid or liquid). If toilets are used, they must be installed in the room dedicated to use of the toilet. Bedpan cleaning wands (spray wands) and toilet taps are not to be used for rinsing receptacles. Use this information sheet to assist in choosing and validating the most appropriate human waste system for the facility or area.

[Definitions](#) and [references](#) may be accessed at the end of this document.

## Waste Management System

System	Pros	Cons	Technical requirements
<b>Bag-type bedpan liner</b>	<ul style="list-style-type: none"> <li>▪ Contains a product to gel liquid waste, making it safe to transport waste to disposal site</li> <li>▪ Disposable into regular solid-waste stream. Does not need to be disposed of into the biomedical-waste stream</li> <li>▪ Not flushable:               <ul style="list-style-type: none"> <li>○ Decrease potential contamination of patient/client/resident washrooms</li> <li>○ Decreased exposure of health care providers to contamination</li> </ul> </li> <li>▪ No installation of infrastructure, repairs or maintenance required</li> <li>▪ Not affected by power outage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consumable product:               <ul style="list-style-type: none"> <li>○ Ongoing operating cost to purchase bedpan liners</li> </ul> </li> <li>▪ Needs adequate storage for and convenient access to disposable bag-type bedpan liners</li> <li>▪ Adds to solid-waste stream</li> <li>▪ Requires a support (e.g. bedpan or commode):               <ul style="list-style-type: none"> <li>○ Support can be disposable or reusable. Reusable support will require reprocessing prior to use by next patient / client/resident</li> </ul> </li> <li>▪ Need a contingency plan for outbreaks (increased usage) and interrupted supplier service</li> </ul>	<ul style="list-style-type: none"> <li>▪ None</li> </ul>

CRMD Information Sheet:  
**Comparing human-waste management systems**

System	Pros	Cons	Technical requirements
<b>Macerator</b>	<ul style="list-style-type: none"> <li>▪ Uses disposable paper-based receptacle with or without a reusable support</li> <li>▪ Disposable paper-based receptacle may contain a product to gel liquid waste, making transport of waste to disposal site safer</li> <li>▪ Waste slurry goes into sanitary sewer               <ul style="list-style-type: none"> <li>○ No dumping of waste into toilets:</li> <li>○ Decreased potential contamination of patient/client/resident washroom</li> </ul> </li> <li>▪ Decreased potential exposure of health care provider to contamination</li> <li>▪ Macerator lid seals so no aerosolization of waste</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consumable product:               <ul style="list-style-type: none"> <li>○ Ongoing operating cost to purchase the disposable paper-based receptacle</li> <li>○ Need adequate storage for and convenient access to disposable items</li> </ul> </li> <li>▪ May need additional purchase of a product to gel liquid waste used for safe transport of waste to disposal site</li> <li>▪ Process in place for cleaning up a spill while in transit to macerator or in the soiled utility room</li> <li>▪ Reusable support will require reprocessing between patients/clients/residents</li> <li>▪ Must ensure internal / municipal plumbing and sanitary sewer systems are sufficient to accept the waste slurry:               <ul style="list-style-type: none"> <li>○ Potential to clog plumbing and sewer systems</li> </ul> </li> <li>▪ Increased volumes of water needed (amount of water needed per flush depends on macerator)</li> <li>▪ Energy cost may increase due to running the unit(s).</li> <li>▪ Need to ensure alternate power supply in case of power outage</li> <li>▪ Significant capital for purchase of macerator(s) and their installation:               <ul style="list-style-type: none"> <li>○ Number of macerators required will depend on patient / client / resident population and physical configuration of the facility</li> </ul> </li> <li>▪ Must be careful that only disposable paper-based receptacle- and/or macerator-specific wipes go into the macerator</li> <li>▪ Requires ongoing repairs (e.g. due to placement of incompatible items in unit) and preventive maintenance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Access to adequate water supply and drain with sufficient diameter pipe to meet the manufacturer's requirements</li> <li>▪ Volume of water required for each flush is macerator specific</li> <li>▪ Access to an electric supply</li> </ul>

CRMD Information Sheet:  
**Comparing human-waste management systems**

System	Pros	Cons	Technical requirements
<b>Washer-disinfector</b>	<ul style="list-style-type: none"> <li>▪ Use reusable bedpans, urinals, basins</li> <li>▪ No dumping of waste into toilets:               <ul style="list-style-type: none"> <li>○ Decreased potential contamination of patient / client / resident washrooms</li> <li>○ Decreased potential exposure of health care providers to contamination</li> </ul> </li> <li>▪ Washer-disinfector has door that seals so there is no aerosolization of waste</li> </ul>	<ul style="list-style-type: none"> <li>▪ Need adequate storage for and convenient access to sufficient number of bedpans</li> <li>▪ Risk of cross-contamination if bedpans are not for single patient / client / resident</li> <li>▪ Transport of bedpans or urinals through the corridors poses a risk of spills, and workplace and staff contamination</li> <li>▪ Requires process for cleaning up a spill while in transit to washer-disinfector or in the soiled utility room</li> <li>▪ Significant capital for purchase of washer-disinfector(s) and installation:               <ul style="list-style-type: none"> <li>○ Number of washer-disinfector(s) required depends on patient/client/resident population and the physical configuration of the facility</li> </ul> </li> <li>▪ Requires ongoing repairs (e.g. due to placement of incompatible items in unit) and preventive maintenance</li> <li>▪ Thermal conditions, as outlined in the European Standards (EN), of 80°C for 60 seconds for disinfection of human-waste containers was ineffective for killing <i>Clostridium difficile</i> spores</li> <li>▪ To kill spores, an alkaline detergent must be added to the cleaning/disinfection process</li> <li>▪ Requires a process to ensure the washer-disinfector has reached the required mechanical parameters (print out) and retention of records by user</li> <li>▪ Need to ensure alternate power supply in case of power outage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Access to a water supply and drain with sufficient diameter pipe to meet the manufacturer's requirements</li> <li>▪ Access to an electric supply</li> </ul>

## Definitions

**Macerator:** A device that uses mechanical chopping and water to dispose of a disposable receptacle and human waste (feces, urine, vomit) into the sanitary sewer.

**Washer-disinfector:** A washing system that removes soil and cleans medical equipment and devices prior to high-level disinfection or sterilization. A washer-disinfector provides low-level disinfection. Non-critical medical equipment and devices that do not require high-level disinfection or sterilization may be reprocessed in a washer-disinfector (e.g., bedpans).

## References

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