Cytotoxic Waste Sorting, Handling and Disposal

Environmental Services Operating Standards Manual

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Approved by:
Corporate Director, Environmental Supports

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Next Review
December 2020

Purpose
This Operating Standard provides guidance for the appropriate steps for the sorting, handling and disposal of cytotoxic waste to ensure safety and cleanliness.

The disposal of cytotoxic waste must comply with all governmental acts, provincial regulations and municipal by-laws, to ensure the safety of employees handling the material. The disposal of cytotoxic waste must align with the AHS/Covenant Health Cytotoxic Drug Manual. Cytotoxic waste is incinerated, requiring appropriate packaging and labelling to enter the correct waste stream.

Applicability
This Operating Standard applies to all Covenant Health employees and other persons acting on behalf of Covenant Health who are responsible for the handling, removal, transporting, and storage of cytotoxic waste. This waste category encompasses any items contaminated with cytotoxic agents.

Responsibility
All Covenant Health employees are required to follow the steps outlined for handling and disposal of cytotoxic waste in order to maintain a clean and safe environment.

Principles
A standard process for handling and disposing of cytotoxic waste ensures an environment that protects the health and safety of employees, patients/residents and visitors.

Procedures
TOOLS NEEDED
Appropriate Personal Protective Equipment (PPE), waste cart, keys, cytotoxic waste containers and labels.

SAFETY PRACTICES
- Always follow safe work practices, including proper manual handling practices (i.e. proper procedures for reaching, bending, etc.), as per staff training.
- Hand Hygiene and PPE resources are available through the Covenant Health website: Hand Hygiene /Policy/vi-10.pdf
- Donning PPE
- Doffing PPE
- Change gloves and other PPE if they are visibly soiled or damaged.
Sorting of Cytotoxic Waste
1. Waste must be sorted at the time of generation. It cannot be stored for later sorting.
2. Don appropriate PPE as per risk assessment.
3. Refer to facility and department guidelines on sorting waste into appropriate waste streams.
4. Place cytotoxic waste in a rigid red plastic pail or biomedical waste box lined with a red liner.
   Always take the cytotoxic waste pail to the patient’s bedside for immediate disposal of cytotoxic waste.
   a. Incontinent products and linens (including disposable PPE) soiled with urine or stool from a patient receiving cytotoxic medication within the previous 48 hours should be handled with disposable gloves and discarded into a biomedical waste disposal box lined with a red biomedical plastic bag. Refer to Cytotoxic Drug Manual. Certain medications require precautions for greater than 48 hours. It is the responsibility of qualified personnel to be aware of these exceptions and follow appropriate precautions.
5. Ensure a cytotoxic waste container is available where cytotoxic medications are prepared/poured, manipulated or administered and the patient-care unit has a cytotoxic spill kit on hand or is aware of the location of the nearest spill kit. A cytotoxic waste container may be kept in the patient’s room but away from the bedside or in another predetermined designated area. Cytotoxic containers shall be safely closed or fastened while in the patient’s room. When the cytotoxic container is full or no longer required, the container should be stored with the lid securely sealed in a designated area (usually the dirty utility room) until picked up by environmental services for incineration.
6. Do not fill containers more than ¾ full or above the fill line.

Handling of Cytotoxic Waste
1. As per site specific practice, check for cytotoxic sign on the door or ask the nurse if cytotoxic material is present in the room. Cytotoxic waste requires double gloving prior to handling.
2. Perform hand hygiene. Don PPE as per risk assessment. Gloves used to handle cytotoxic waste must be disposed of in a cytotoxic waste container.
3. Check that cytotoxic waste container (see Appendix A) is closed and secured. Cytotoxic waste containers must be sealed and secured prior to being moved.
4. Inspect cytotoxic waste container for noticeable damage to the container or leakage prior to removal. If the container is leaking, or if there is a spill, notify the Hospitality Services/Environmental Services Supervisor or Manager as per site specific requirements.
5. Inspect cytotoxic waste container for anything protruding from the container prior to removal.
6. All incidents involving needle stick injuries and exposure to blood and/or body fluid as the result of improper or unsafe handling or disposal of biomedical waste or clinical sharps must be reported as per site specific requirements (e.g. OHS Incident Reporting).
7. Inspect cytotoxic waste container for proper labeling. Cytotoxic waste container must be properly labeled (see Appendix A) with bar code and cytotoxic waste label prior to removing the container. If the container is not properly labeled, notify unit supervisor and do not remove.
8. Pressure must never be placed on the waste to push it and not the container. Prior to storage (in a soiled utility room) nursing staff will seal the container
with a lid provided. A biomedical waste barcode label must be applied to the lid. Who applies the label varies by site.

**On-Site Movement or Transportation of Cytotoxic Waste**
1. Collect cytotoxic waste from designated areas/locations. Using designated routes, pick cytotoxic waste from designated areas (e.g. soiled utility room). DO NOT stack waste containers higher than two (2) boxes high when transporting. Cytotoxic waste can be collected with other biomedical waste items but shall not be collected with general waste.
2. Follow proper hand hygiene protocol. Change gloves when visibly soiled or damaged or if moving from a ‘dirty’ task to a ‘clean’ task or between areas. Handling of cytotoxic waste requires double gloving.
3. Transport the designated cytotoxic waste hauling cart (refer to Appendix B) to biomedical waste holding room (e.g. refrigerated storage room). Use designated service elevators (where required) to the appropriate floor location where the waste holding area (e.g. refrigerated storage room) is located.
4. Transportation of cytotoxic waste requires immediate access to a spill kit.

**Storage of Cytotoxic Waste**
1. Unlock cytotoxic waste holding area (i.e. biomedical storage refrigerator). Holding area must be kept locked when unoccupied.
2. Unload cytotoxic waste containers from the designated waste hauling cart into the waste holding area (e.g. refrigerated storage room). Cytotoxic waste containers must be stacked to ensure they are stable, safe and easy to lift.
3. Lock biomedical waste holding room waste holding area. Check that refrigerator temperature is set at 4°C or lower. Report temperature issues to FM&E.
4. Remove (Doff) PPE. Perform hand hygiene.

**Preparing Cytotoxic Waste for Shipment (site specific requirement)**
1. Count the number of boxes and pails in the designated holding area, including biomedical, cytotoxic, medication, and anatomical.
2. Record the number of boxes, date, and time in the log book. Follow site specific protocol for the log book.

**Definitions**

**Cytotoxic Waste** consists of any item that has become contaminated with cytotoxic agents. This includes needles, syringes, IV bags and tubing, vials, ampoules, gowns, blue pads, linens contaminated with bodily fluids within the first 48 hour cautionary period, gloves and masks, hair covers, medication cups, shoe covers, paper towels, plastic liners, leftover portions of drugs or medication, and any empty cytotoxic drug container.

**References**
- AHS Practice Support Document ES-PROT-WM-001
- Covenant Health Waste Management (3.1.3.5)
- Covenant Health Biomedical Waste Handling and Disposal (3.1.3.7)
- Covenant Health Cytotoxic Waste Poster
- Hand Hygiene (VI-10)
- Cytotoxic Drug Manual, June 2017
- Refer to the product monograph.
Appendix A

Examples of Cytotoxic Waste Collection Containers

<table>
<thead>
<tr>
<th>Cytotoxic Sharps Container (red)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Cytotoxic Sharps Container" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cytotoxic Label</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image2" alt="Cytotoxic Label" /></td>
</tr>
</tbody>
</table>

Appendix B

Examples of Tools and Equipment used for handling Cytotoxic Waste

<table>
<thead>
<tr>
<th>Transport Cart/Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferably a flat deck type of cart/truck</td>
</tr>
<tr>
<td><img src="image3" alt="Transport Cart/Truck" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>As per risk assessment <strong>double gloving required for cytotoxic waste handling</strong></td>
</tr>
<tr>
<td><img src="image4" alt="Gloves" /></td>
</tr>
</tbody>
</table>
## Appendix C

### Table 2: WHEN and WHAT Equipment to Wear

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>GLOVES</th>
<th>GOWN</th>
<th>EYE PROTECTION</th>
<th>RESPIRATORY PROTECTION</th>
<th>HEAD AND SHOE PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>crushing or splitting tablets, opening capsules and preparing oral liquid preparations or IV admixtures1</td>
<td>TWO pairs of gloves</td>
<td>Disposable moisture-resistant, long-sleeved gown (DMR-gown)</td>
<td>Goggles or Face Shield</td>
<td>N-95 mask</td>
<td>If potential for splash, spill or aerosolization</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>TWO pairs of gloves</td>
<td>DMR-gown If potential for splash, spill or aerosolization</td>
<td>Goggles or Face Shield If potential for splash, spill or aerosolization</td>
<td>N-95 mask If potential for splash, spill or aerosolization</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Spill Clean-Up</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>TWO pairs of gloves</td>
<td>DMR-gown</td>
<td>Goggles or Face Shield</td>
<td>N-95 mask</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Waste Disposal</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(includes PPE, supplies IV bags &amp; lines, drug &amp; cytotoxic human waste)</td>
<td>TWO pairs of gloves</td>
<td>DMR-gown If waste is not contained and/or there is a risk of spread or spill.</td>
<td>Goggles or Face Shield If waste is not contained and/or there is a risk of spread or spill.</td>
<td>N-95 mask If waste is not contained and/or there is a risk of spread or spill.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1. Should be completed in pharmacy whenever possible but if necessary to do outside of pharmacy, follow chart