Alberta Health Services

PROCEDURE

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BIOMEDICAL WASTE

SCOPE
Provincial

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NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- To outline Alberta Health Services' (AHS) procedures for handling, transporting, and disposing of **biomedical waste** in a safe and efficient manner.
- To prevent environmental contamination, disease transmission, and/or injury to patients, clients, residents, clients, the public, **AHS People** (including physicians, volunteers, and other contracted service providers).

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, Students, Volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS

1. General

1.1 Biomedical waste requires special handling, **treatment**, and **disposal** due to environmental, health and safety, and aesthetic concerns:

a) Prion Disease (classic **Creutzfeldt-Jacob Disease**), Cytotoxic, Hazardous and Non-Hazardous **Medication wastes** are generally considered separate from the biomedical waste stream, but are included in this procedure.

b) For the purpose of this procedure Prion Disease is referred to in its classic form: Creutzfeldt-Jacob Disease (CJD). For information regarding

precautions for segregation, labeling, and disposal see Section 12 of this document below.

1.2 The following are types of biomedical waste:

a) **animal waste** (only considered biomedical waste when contaminated with organisms listed as reportable diseases under the *Health of Animals Act* (Canada) and *Health of Animals Regulations* (Canada);

b) **human anatomic waste**;

c) **human blood and body fluid waste**;

d) CJD waste;

e) **microbiological waste**; and

f) **contaminated sharps waste**.

1.3 All wastes shall be handled, transported, and disposed of in accordance with all **regulatory requirements**.

2. Exclusions

2.1 It is not necessary or practical to treat all health care waste as biomedical waste. Certain materials are excluded from biomedical waste and should be **segregated** and disposed of into other waste streams (as appropriate) including, but not limited to:

a) waste that is household in origin;

b) waste that is otherwise controlled in accordance with the *Health of Animals Act* (Canada) or *Health of Animals Regulations* (Canada) (i.e., Animal Waste that is not contaminated with organisms listed as reportable diseases under this Act and Regulations);

c) waste that is generated in **food handling**, general building maintenance, or office administration activities;

d) **general waste** from clients on isolation procedures; and

e) **non-contaminated sharps**.

2.2 See Appendix A for additional information regarding health care waste materials that may be disposed of as general waste.

3. Health & Safety

3.1 Biomedical waste shall always be handled in a safe and efficient manner that minimizes the likelihood of spills, leaks, or exposure.

3.2 Education and training for all AHS People who are required to handle, store, or dispose of biomedical waste materials shall be completed in accordance with AHS *Waste Management Policy* (#ESM-01).

3.3 Appropriate Personal Protective Equipment (PPE) shall be worn when handling or transporting biomedical waste.

3.4 The need for PPE shall be identified as part of completing the Hazard Identification, Assessment and Control (HIAC) process. AHS People shall speak to their manager if appropriate PPE cannot be located or is not readily available. PPE includes, but is not limited to:

a) gloves (e.g. puncture resistant, disposable, waterproof);

b) apron or gown;

c) safety glasses, safety goggles or face shield;

d) mask; and/or

e) protective footwear (e.g. shoe covers).

3.5 AHS *Hand Hygiene Policy* (#PS-02) shall be followed at all times. Information on Infection Prevention & Control (IPC) Hand Hygiene and PPE resources are available through the AHS external website and Insite. Additional information on Respiratory Protective Equipment (RPE) is available on Insite.

3.6 AHS People shall immediately report any waste related hazards or incidents, such as improper packaging, leaks, spills, and/or accidental exposure (including any symptoms or infections that may be related to exposure of biomedical waste) through the AHS MySafetyNet reporting system and shall follow all applicable AHS policies and procedures, including the Workplace Health & Safety Policy, *Emergency Response Codes* Policy, and the *Occupational Exposure to Blood and Body Fluids* Policy.

4. Biomedical Waste Containers

4.1 Biomedical waste shall be handled in a safe and efficient manner that minimizes the likelihood of spills, leaks, or exposure.

4.2 Waste containers shall meet all regulatory specifications and labelling requirements. See Appendix B for additional information on biomedical waste containers.

4.3 Waste containers shall be handled with care and shall not be re-opened once sealed.

4.4 Biomedical waste containers shall only be used to dispose of designated waste, and shall not be used to dispose of any other waste streams otherwise identified in this procedure. Depending on the site, information regarding acceptable biomedical waste may be found on posters, printed on the biomedical waste containers, or on cardboard inserts which accompany the biomedical waste containers. Information on appropriate biomedical waste can also be found by contacting the local Linen and Environment Services (LES) manager.

5. Biomedical Waste Segregation

5.1 Waste identified within this procedure shall be segregated from other waste streams at the point-of-origin. If waste materials are inadvertently mixed with other waste streams (with the exception of hazardous chemical waste), the entire contents shall be treated and disposed of as biomedical waste.

a) In the event that biomedical waste comes into contact with hazardous chemical waste, the entire contents shall be treated and disposed of as hazardous chemical waste.

5.2 Appropriate segregation of waste materials is important to maintain safety, efficiency and cost controls, as biomedical waste represents (on a dollars per kilogram basis) the highest cost to AHS for waste disposal.

5.3 Animal Waste:

a) The handling and disposal of animal waste is subject to the *Health of Animals Act* (Canada) and the *Health of Animals Regulations* (Canada).

b) Animal waste shall be placed in either an orange or red biomedical waste container.

5.4 **Cytotoxic Waste** Container:

a) Cytotoxic waste (considered known hazardous medication) shall be placed within a red biomedical waste container or red sharps container with a cytotoxic label. (See Appendix B)

5.5 Hazardous Medication:

a) There are three (3) hazardous medication classifications;

(i) Known hazardous medication - mainly antineoplastic medication as per National Institute for Occupational Safety and Health (NIOSH) Group 1 (Antineoplastic drugs), predominantly used in the treatment of cancer (chemotherapy) and in some cases, used for the treatment of other conditions (e.g., psoriasis, rheumatoid arthritis).

(ii) Potential hazardous medication mainly non-antineoplastic medication as per NIOSH Group 2. These medication meet one or more criteria for a hazardous medication. Have or shows the capacity to become or develop into something in the future.

(iii) Reproductive hazardous medication mainly non-antineoplastic medication as per NIOSH Group 3. These medication may pose a risk only for certain individuals, that is men and women, with a potential to conceive, and women who are pregnant or breastfeeding.

b) Hazardous medication waste shall be placed within a red biomedical waste container or white pharmaceutical waste container.

5.6 Human Anatomic Waste:

a) Human anatomic waste shall be placed within a red biomedical waste container.

b) As per the Canadian Standards Association (CSA) standard for the *Handling of Waste Materials in Health Care Facilities and Veterinary Health Care Facilities* (#Z317.10-09), human anatomic waste is to be treated with respect. For this reason, human and animal wastes should not be intermixed and should be placed in separate waste containers.

5.7 Human Blood and Body Fluids:

a) Unless it has been treated and/or alternately disposed of in accordance with regulatory requirements, liquid waste materials within this category shall be contained in a sealed, single use container (such as pleurevacs, phlebotomy blood collection tubes, etc.) and then disposed of in a yellow biomedical waste container.

b) For additional protection and elimination of spills it is recommended that health care facilities:

(i) solidify large volumes of blood and body fluids (i.e. more than 500 mL) using an AHS-approved solidifier (e.g. Red Z, Isolyser); and

(ii) use cardboard inserts (where available) to securely hold containers filled with liquid waste materials upright.

c) Unless it has been treated and alternately disposed of in accordance with regulatory requirements, any other waste material within this category shall be placed within a yellow biomedical waste container. Examples of these materials include, but are not limited to:

(i) bandages, gauze, disposable linens or drapes (that are saturated or dripping with blood, or release blood upon compression);

(ii) plastic IV bags containing blood; and

(iii) blood filter tubing filled with blood (with needles removed and disposed of as contaminated sharps waste).

5.8 Medication/Pharmaceutical Waste:

a) Medication/pharmaceutical waste shall be placed in a red biomedical waste container or white pharmaceutical waste container. Consideration shall be given when disposing of liquid Medication/pharmaceutical waste to solidifying using an AHS-approved solidifier (e.g. Red Z, Isolyser) prior to disposal.

5.9 Microbiological Waste:

a) Unless it has been treated (e.g. autoclaved) and alternately disposed of in accordance with regulatory requirements, liquid microbiological waste shall be placed into a leak-proof container and then placed within a yellow biomedical waste container.

b) Unless it has been treated and alternately disposed of in accordance with regulatory requirements, solid microbiological waste shall be placed within a yellow biomedical waste container.

5.10 Contaminated Sharps Waste:

a) **Sharps** shall be disposed of in a yellow biomedical sharps container.

b) To prevent injuries, needles shall be disposed of immediately after use.

c) Sharps shall never be forcibly pushed into the container.

d) Larger pieces of glass that are contaminated with human blood or body fluids that may not easily fit into smaller sharps container should be placed within a yellow biomedical waste container that is equipped with a sealable lid.

e) When approximately three-quarters (3/4) full, the sharps container shall be properly sealed. If the container does not have a snap lid, the lid shall be taped securely shut and disposed of in a yellow biomedical waste container.

f) Sharps containers shall not be overfilled.

g) Sharps that are contaminated with cytotoxic agents shall be treated and disposed of as cytotoxic waste.

5.11 Waste Materials Containing Confidential Patient Information:

a) A patient's personally identifiable health information shall be protected in accordance with the *Health Information Act* (Alberta) and AHS information and privacy policies.

b) Adhesive labels on waste items that have patient information shall be removed where it is safe and appropriate to do so prior to disposal and disposed of as confidential paper waste.

c) If a patient's information cannot be removed, the entire waste item shall be disposed of as biomedical waste (in a yellow biomedical waste container) to ensure that patient information is protected.

d) As biomedical waste represents a significantly higher cost per kilogram to AHS than other waste streams, when safe and practical to do so staff are strongly encouraged to take all reasonable steps to remove labels and separate into the general and confidential waste streams.

6. Packaging and Labeling

6.1 Improper packaging poses a significant risk to patients, clients, visitors and AHS People as it increases the risk of exposure and or injury. It is the responsibility of the waste generator (the individual unit or area) to ensure that biomedical waste is properly packaged and labelled.

6.2 Biomedical waste containers shall always be stored in the upright position.

6.3 Biomedical waste containers shall not be filled beyond three-quarter (3/4) capacity or over 22 kilograms.

6.4 When present, plastic liner bags shall be securely tied when three-quarters (3/4) full and the biomedical waste container shall be carefully and securely sealed. Tying the bag prior to sealing the container decreases the risk of spills and leaks (e.g. biomedical waste cardboard box).

6.5 Once sealed, affix the unit or area-specific bar-code labels to the top of the biomedical waste container, unless directed to place otherwise. The purpose of the bar-code label is to monitor the volume generated by each unit and to track the source of the material in the event of an accident or injury. All biomedical waste containers require a bar-code label.

6.6 Cytotoxic waste container(s) shall display the "Cytotoxic" symbol and affix the unit or area-specific bar-code labels to the top of the waste container.

6.7 Hazardous medication waste container shall display on the lid the unit or area-specific bar-code labels to the top of the waste container.

6.8 Medication/pharmaceutical waste container shall display on the lid the unit or area-specific bar-code labels to the top of the waste container.

6.9 The bar-code label shall not be folded or bent as this disfigures the bar-code and could prevent it from being scanned properly.

6.10 If a new biomedical waste generating area or unit is established, or an existing one is moved from one location to another, the unit/area shall order updated bar code labels from LES.

7. Collection

7.1 Handling of biomedical waste containers should be minimized and done with caution in order to prevent damage to the containers, spills and/or exposure.

7.2 Biomedical waste shall be moved within a facility along a designated transfer route to mitigate exposure to patients, clients, visitors, and AHS People. Detailed information on designated transfer routes is dictated by local site protocols and shall comply with section 7.3 of this procedure.

7.3 AHS facilities shall have designated corridor and elevator routes for transporting biomedical waste within the facility:

a) The department responsible for waste pick up within the facility is responsible for documenting these routes.

b) Planned routes minimize the passage through patient care and other clean areas.

c) Linen and Environmental Services (LES) Managers shall ensure AHS Peoples collecting and transporting biomedical waste within the facility shall be **trained** on appropriate routes prior to collecting waste containers.

d) Documents identifying designated routes shall be available to staff required to collect and move biomedical waste.

7.4 Biomedical waste containers shall be collected by properly trained staff and removed to **final storage areas** on a daily basis. At minimum:

a) If it is not practical to collect biomedical waste on a daily basis, **collection** may be done on a lesser frequency provided that this has been pre-arranged with the department responsible for waste pick-up and provided the situation does not result in a nuisance (e.g. odour or clutter) or present a risk or hazard to patients, visitors, clients, or AHS People.

b) Sharps containers that are being temporarily stored in **primary storage** areas do not need to be picked up daily; however, once the sharps container is approximately three-quarters (3/4) full, it shall promptly be disposed of within a yellow biomedical waste container so that it can be collected and removed to final storage.

7.5 Other waste streams being collected and transported within AHS facilities shall not be collected and transported with biomedical waste.

7.6 Biomedical waste containers that are being transported, or have been removed to final storage, shall not be re-opened.

8. Carts

8.1 LES shall ensure that carts used to collect and move biomedical waste through the health care facility shall be:

a) capable of containing the waste;

b) designed to prevent spillage and leakage;

c) constructed of materials that permit effective cleaning and disinfection; and

d) designed to minimize the physical strain of loading and unloading materials.

8.2 Carts that are used to collect and transport biomedical waste shall be cleaned weekly, at minimum, or if visibly soiled in the event of a leak or spill during collection and/or transportation.

8.3 Carts should be disinfected in the event of a leak or spill during collection and/or transportation.

9. Storage Areas

9.1 All waste storage areas shall comply with regulatory requirements (e.g. building and fire codes).

9.2 Biomedical waste in primary storage areas shall be removed promptly in order to remove a potential source of infection and to protect patients, visitors, clients, and AHS People, from exposure. Biomedical waste (excluding sharps containers) shall not be stored in patient or client rooms.

9.3 Biomedical waste may be temporarily stored in **secondary storage areas**, out of the way of general traffic, prior to being removed to the final storage area.

9.4 Final storage areas shall:

a) restrict access to AHS People who have been authorized by the waste generating department;

b) be completely enclosed and kept locked at all times when unoccupied;

c) be separate from supply rooms or food handling areas;

d) be properly identified as containing biomedical waste and shall have the biohazard symbol on the door;

e) be utilized to store biomedical waste only;

f) be accessible to on-site waste hauling equipment; and

g) be emptied out and cleaned and disinfected on an annual basis (at minimum) or more frequently if a leak or spill occurs.

9.5 Biomedical waste containers/bins (including boxes and pails) shall be stacked so that they are stable, safe, and easy to lift. Biomedical waste containers should be stacked no more than two (2) units high, depending on the size of the containers.

9.6 Facilities refrigerating or freezing biomedical waste shall ensure written processes are in place in order to be prepared to handle excess waste, or in the case that either refrigeration or disposal facilities or equipment become inoperative. This may include, but is in no way limited to, scheduling additional pick-up times with the waste vendor once the storage room reaches a pre-determined capacity.

10. Storage

10.1 Anatomic waste shall be stored at a temperature of four (4) degrees Celsius (°C) or lower unless contained in formaldehyde.

10.2 It is recommended that biomedical waste being stored for more than four (4) days, with the exception of sharps waste, should be stored at a temperature of four (4) degrees Celsius (°C) or lower.

10.3 Caution with the temperature should be exercised as glass or plastic items in the waste containers may fracture at lower temperatures.

10.4 Facilities that refrigerate or freeze biomedical waste should have established written processes outlining the maximum **storage** time of refrigerated or frozen biomedical waste based on storage capacity, rate of waste generation, and regulatory requirements (if applicable).

11. Treatment and Disposal

11.1 Anatomic waste shall be transported off-site by a licensed carrier and incinerated.

11.2 The handling and disposal of animal waste is subject to the *Health of Animals Act* (Canada) and the *Health of Animals Regulations* (Canada).

11.3 Human Blood and Body Fluids

a) In accordance with applicable legislation, human blood and body fluids may be treated by either steam autoclaving or chemical decontamination.

It may then be disposed of into the **sanitary sewer**, provided that this is compliant with regulatory requirements (e.g. waste water bylaws), otherwise, it shall be disposed of as biomedical waste.

b) Provided that the process is compliant with regulatory requirements, blood and body fluids may be disposed of in the sanitary sewer without treatment.

c) Any liquid human blood or body fluid waste being disposed of into the sanitary sewer should be carefully poured down a drain connected to the sewer, taking care to eliminate spills or the formation of aerosols.

d) Liquid blood and body waste may be treated by adding an AHS-approved solidifier (e.g. Red Z, Isolyser). It may then be disposed of into the landfill (as general waste), provided that this is compliant with regulatory requirements. Otherwise, it shall be disposed of as biomedical waste.

11.4 Non-Anatomic Biomedical Waste:

a) In accordance with applicable legislation, non-anatomic biomedical waste may be treated by steam autoclaving and then disposed of into the landfill (as general waste), provided that this is compliant with regulatory requirements.

b) Untreated non-anatomic biomedical waste shall be transported off-site by a licensed carrier and incinerated.

11.5 While it is technically acceptable to dispose of some types of treated biomedical waste in a landfill, LES and the waste generating departments should work closely with service providers and landfill operators prior to disposing of these waste materials in order to ensure that the service providers and landfill operators are educated on the nature and handling of the waste, and shall accept the waste for transportation and disposal. In some cases, landfill operators may specify more stringent standards or conditions before accepting treated biomedical waste.

11.6 New technologies for the treatment of biomedical waste shall be reviewed and approved by AHS and applicable regulatory authorities prior to implementation and use at AHS.

a) See “Summary of Treatment & Disposal Options for Biomedical Waste” for more information.

12. Prion Disease (Classic Creutzfeldt-Jacob Disease)

12.1 Agents that cause CJD resist all routine inactivation procedures commonly used in health care facilities. As such, biomedical waste materials that are known or are reasonably expected to contain CJD, shall be controlled by following all applicable regulatory requirements for special handling, containment, labelling,

collection, storage, transportation, and disposal and in accordance with the AHS *Prion Disease (Creutzfeldt-Jacob Disease) Precautions for the Surgical Patient (Adult or Child)* Policy (PS-03).

12.2 For more information consult the local Infection Prevention and Control (IPC) representative.

12.3 Handling

a) LES shall be notified by the waste generator that there is waste material that is CJD precaution and LES shall notify the biomedical waste vendor indicating the same.

12.4 Packaging & Labeling

a) Container – Red biomedical waste pail or red sealable container [*if larger containers are required contact Waste Management].

b) Labeling – the waste generator shall label container(s) with the 'UN3373' label (see Figure 1 below).

Figure 1 – UN3373 Label

c) If using a container that already has a pre-printed UN# on it, be sure to cover that with the UN3373 label (Figure 1 above). AND, using a permanent maker clearly write the words "CJD Precaution" on the lid. Contact Environmental Services for the correct label.

d) Waste generating staff also need to ensure that they clearly indicate on the exterior of the container a 24-hour contact number (999-999-9999) of a person who can provide technical information on the waste material in the event that there are questions or if there is an incident.

e) If required, the Shipping Name is UN3373 – Biological Substance, Category B.

12.5 Storage

a) CJD waste shall be stored at a temperature of four (4) degrees Celsius (°C) or lower. CJD waste shall be stored in the biomedical waste storage cooler to the side, away from the other biomedical waste materials (where possible) to alert the biomedical waste vendor that special handling (on their end) is required.

12.6 Disposal

a) CJD waste shall be transported off-site by a licensed carrier and incinerated.

13. Transportation of Dangerous Goods (TDG)

13.1 Biomedical waste is not regulated as a **hazardous waste** in Alberta, but is a class 6.2 dangerous good under the federal *Transportation of Dangerous Goods Regulation* (TDGR); therefore, biomedical waste shall be transported by a licensed carrier, using an appropriate transport vehicle in accordance with the TDGR.

13.2 All biomedical waste containers and/or pails shall be counted and/or weighed prior to being transferred to a licensed carrier and being transported off-site for final disposal (i.e. incineration).

13.3 Weight logs shall be used by LES to verify that shipping weights match the weight that is charged by the carrier, prior to approving and submitting invoices for payment.

13.4 Each facility shall receive a waste shipping document from the licensed carrier to confirm the number of containers and/or pails of biomedical waste removed for final disposal:

a) The shipping document(s) for biomedical waste shall be signed by a designated authority representing the facility or site after all biomedical waste has been loaded into the vehicle.

b) The designated authority shall have completed appropriate TDG training and received certification to prepare biomedical waste for shipment.

13.5 AHS People in Home Care or Public Health who are transporting sharps containers and/or small oxygen cylinders in their vehicles are exempt from transportation of dangerous goods documentation, placarding, and training certification.

13.6 AHS People in Home Care and Public Health who are transporting sharps containers in their vehicles are required to ensure the sharps container is labelled “Exempt Human Specimen” and ensure the container/oxygen tanks is secured to limit/prevent movement while transporting.

14. Records Retention

14.1 Information and records pertaining to biomedical waste shall be maintained in accordance with regulatory requirements and the AHS *Records Management* Policy (#1133) and *Records Retention Schedule* (#1133-01).

DEFINITIONS

AHS People means Alberta Health Services employees, members of the medical and midwifery staffs, Students, Residents, Volunteers, and other persons acting on behalf of AHS (including contracted service providers as necessary).

Animal waste means all animal tissues, organs, body parts, carcasses, bedding, fluid blood and blood products, items saturated or dripping with blood, body fluids contaminated with blood and body fluids removed for diagnosis or removed during surgery, treatment or autopsy. Animal waste does not include teeth, hair, nails, hooves, and feathers.

Biomedical waste means solids, liquids, laboratory waste and sharps that are generated within a health care or veterinary facility, and that require special handling and disposal because they represent a risk of disease transmission.

Collection means the accumulation of waste from several primary or intermediate storage sites for movement to a waste-holding area, or from several waste-holding areas for movement to final storage.

Container(s) means any receptacle for the storage of waste.

Contaminated sharps waste means clinical and laboratory materials capable of puncturing, cutting or tearing skin (such as needles, pasteur pipettes, lancets, scalpels, blades and laboratory glass) and have come into contact with blood or body fluids or microorganisms. Drug vials and ampoules are not considered contaminated sharps.

Cytotoxic waste means any waste material that has become contaminated with cytotoxic agents, such as anti-neoplastic or chemotherapy drugs or hazardous medications, during preparation, handling or administration.

Creutzfeldt-Jacob Disease/ Transmissible Spongiform Encephalopathies (CJD/TSE) means a rare neuro-degenerative disease caused by an abnormal Prion protein that causes surrounding proteins to change their shape resulting in pre-senile dementia, myoclonus and progressive motor dysfunction.

Disposal means the removal of waste, treated waste, or residue from a facility, off-site waste treatment facility, or transfer station to a final location. Disposal includes placement in a landfill or discharge to a sanitary sewer.

General waste means any waste material that is not hazardous, does not contain an infectious substance, and which can be safely disposed of into a Class II landfill site.

Hazardous medication means medication that can pose a health risk from exposure in the workplace due to the medication's inherent toxicity.

Human anatomic waste means any biomedical waste that pertains to the human body.

Human blood and body fluids means human fluid blood and blood products, items saturated or dripping with blood, body fluids contaminated with blood, and body fluids removed for diagnosis during surgery, treatment or autopsy, but does not include urine, feces, saliva, human bile (vomit), or tears.

> **Note:** The *Occupational Exposure to Blood and Body Fluids Policy (#1111)* defines body fluids differently. For the purposes of determining what shall be disposed of as biomedical waste, the definition in this policy shall apply.

Medication/ pharmaceutical waste means any medication or medicinal chemical that is unusable including products that me be outdated; potentially contaminated, stored improperly and/or partially used.

Microbiological waste means laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human or animal cell cultures used in research, and laboratory material that has come into contact with any of these.

Non-contaminated sharps means a material that can puncture, penetrate, or cut the skin and that has not come into contact with blood and body fluids.

Regulatory requirements means all acts, legislations, regulations and bylaws.

Sanitary sewer means a sewer to dispose of sewage but not water from ground, surface, or storm.

Segregated (segregation) means the separation of wastes, according to classification, at the point of generation and prior to storage.

Sharps means items used in medical care diagnosis or research that are capable of causing punctures, cuts or tears in skin or mucous membranes. Sharps include hypodermic, surgical, suture, or IV (intravenous) needles, syringes with needles, pasteur pipettes, lancets, scalpels, blades and laboratory glass.

Storage means the accumulation of wastes after segregation into a specified container(s).

Storage areas means:

- **Primary storage areas** are where the waste originates and is segregated into the appropriate waste container (e.g., patient rooms, laboratories, operating rooms, etc.).
- **Secondary storage areas** are where the waste is temporarily stored before being transported to the final storage area (e.g. soiled utility rooms). This also includes the means by which the waste is transported.

- **Final storage areas** are where the waste is transported to and stored just prior to disposal (e.g. on-site Biomedical Waste Refrigerator/Freezer or other designated final storage area).

Trained means to teach a particular skill or type of behaviour through practice and instruction over a period of time.

Treatment means a process to change the biological or chemical character of waste to eliminate or significantly reduce potential infectious substances or harm contained in the waste. (*e.g. incineration, autoclave*)

REFERENCES

- Appendix A - *Examples of Items that can go into General Waste*
- Appendix B - *Container Specifications & Symbols*
- Appendix C - *Summary of Treatment & Disposal Options for Biomedical Waste*
- Alberta Health Services Governance Documents:
  - Emergency Response Codes Policy (#1132)
  - Enterprise Risk Management Policy (#1125)
  - Hand Hygiene Policy (#PS-02)
  - Hazardous Chemical Waste Procedure (#ESM-01-02)
  - Occupational Exposure to Blood and Body Fluids (#1111)
  - Prion Disease (Creutzfeldt-Jacob Disease) Precautions for the Surgical Patient (Adult or Child) Policy (#PS-03)
  - Records Management Policy (#1133)
  - Records Retention Schedule Standard of Practice (#1133-01)
  - Waste Management Policy (#ESM-01)
  - Workplace Health & Safety Policy (#1121)
- Alberta Health Services Forms:
  - Hazardous Waste Disposal Form (#18960)
  - Request for Hazardous Material Service Order Form (#18961)
- Alberta Health Services Resources:
  - Hazardous Medication Personal Protective Equipment (PPE) Guide and List
- Non-Alberta Health Services Documents:
  - Canadian Environmental Protection Act
  - Canadian Standards Association (CSA) Handling of Waste Materials in Health Care Facilities and Veterinary Health Care Facilities (CSA-Z317.10-1 [R2007]).
  - Environmental Protection and Enhancement Act (Alberta): Waste Control Regulation
  - Health of Animals Act (Canada)
  - Transportation of Dangerous Goods Act (Canada)
  - Occupational Health and Safety Act (Alberta)
  - Public Health Act (Alberta): Nuisance and General Sanitation Regulation

VERSION HISTORY

Date	Action Taken
September 12, 2019	Revised
Click here to enter a date	Optional: Choose an item

APPENDIX A

EXAMPLES OF ITEMS THAT CAN GO INTO GENERAL WASTE

Materials that come into contact with blood and body fluids can be safely disposed of into the general waste stream as long as they are not saturated or dripping, and do not contain pathogenic agents that may cause disease in humans exposed to the waste. Due to the sensitivities surrounding health care waste, consideration should be given items which are especially soiled or unsightly as to whether they should be disposed of in general waste or another more appropriate waste stream.

Health care facilities should work closely with service providers and landfill operators prior to disposing of these waste materials in order to ensure that the service providers and landfill operators are educated on the nature and handling of the waste, and will accept the waste for transportation and disposal.

Examples of items that may be safely disposed of as general waste include, but are not limited to:

- soiled dressings;
- sponges;
- surgery drapes;
- lavage tubes;
- dialysis wastes such as tubing filters, towels and disposable sheets;
- IV bags and tubing, empty or with residual blood;
- diapers;
- disposable pads;
- soiled feminine hygiene products;
- disposable gloves;
- catheters;
- specimen containers (*with no patient information*);
- casts;
- splints and orthotic devices / materials
- syringes without needles;
- empty medication containers or vials;
- lab coats and aprons;
- laboratory slides with tissue fixed (treated as glass waste); and
- pathological samples processed and fixed (paraffin blocks or slides are not considered viable unless infectious).

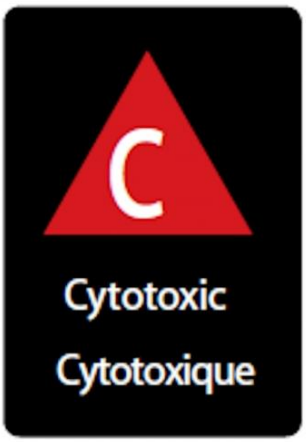
APPENDIX B

CONTAINER SPECIFICATIONS & SYMBOLS

All containers shall meet the requirements of the Transportation of Goods Regulations ("TDGR").

Biomedical Waste Type	Biomedical Waste Container Colour	Labelling
Animal Waste	ORANGE or RED	Biohazard Symbol
Contaminated Sharps	YELLOW	Biohazard Symbol*
Creutzfeldt-Jacob Disease ("CJD")	RED	Biohazard Symbol
Cytotoxic Waste	RED	Cytotoxic Symbol*
Hazardous Medication	RED or WHITE	Biohazard/Pharmaceutical Symbol
Human Anatomic	RED	Biohazard Symbol
Human Blood and Body Fluids	YELLOW	Biohazard Symbol
Medication/pharmaceutical Waste	RED or WHITE	Biohazard /Pharmaceutical Symbol
Microbiological Waste	YELLOW	Biohazard Symbol

*Cytotoxic sharps waste shall be labelled with the cytotoxic symbol.



Pictures from CSA Z317.10-15

Plastic Bags – Waste Holding shall:

- Be sturdy enough to resist puncture under conditions of use and at the point of disposal;
- Have a minimum thickness of three (3) millimetres; and
- Be labelled with a biohazard symbol.

Biomedical Containers shall:

- Be colour-coded (*see appendix B*);
- Be labelled with the biohazard symbol; and
- Be rigid, closable, leak-resistant and capable of being sealed.

Sharps Containers

There are several models of sharps containers that meet the criteria below; however, not all models are appropriate in all situations. A risk assessment of the tasks being performed shall guide the selection of an appropriate container.

Sharps Containers shall:

- Be located as close as is reasonably practicable to where sharps are used;
- Be sturdy enough to resist puncture under normal conditions of use and handling;
- Have a visible fill line (shall not be filled more than three-quarters (¾) full);
- Be closable (contained sharps shall not be able to fall out);
- Be leak-proof;
- Be labelled as containing sharps;
- Be labelled with a biohazard symbol; and
- Remain upright if used in kit bags.

APPENDIX C

SUMMARY OF TREATMENT & DISPOSAL OPTIONS FOR BIOMEDICAL WASTE

Below is a summary of treatment and disposal options for biomedical waste produced within AHS facilities; however, this is a high level guideline only. Regulatory requirements for each area shall need to be consulted to determine appropriate treatment and disposal methods.

Biomedical Waste Type	**Treatment and Disposal Options**			
	Steam Autoclaving	Chemical Decontamination	Disposal Once Treated	Incineration
Animal Anatomic*	No	No	N/A	Yes
Creutzfeldt-Jacob Disease (“CJD”)	No	No	N/A	Yes
Hazardous Medication	No	No	N/A	Yes
Human Anatomic	No	No	N/A	Yes
Human Blood and Body Fluids	Yes	Yes	Sanitary Sewer or Landfill*	Yes
Non-Anatomic Waste	Yes	Yes*	Sanitary Sewer or Landfill*	Yes
Medication/ Pharmaceutical Waste	No	No	N/A	Yes

*If compliant with regulatory requirements.