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1. PURPOSE:

To ensure the segregation, packaging, collection, movement, storage, and on-site treatment of waste materials within the Winnipeg Regional Health Authority and its affiliated agencies is carried out safely and in accordance with the Canadian Standards Association.

2. DEFINITIONS

2.1 Biomedical/Biohazardous Waste (non-anatomic):

Contaminated, infectious waste requiring special handling and disposal due to potential risk of disease transmission including:

2.1.1 Liquid blood and blood products.

2.1.2 Items saturated with blood (e.g., dressings).
NOTE: the mere presence of blood/body fluid on an article does not make it biomedical waste and as such may be disposed of as general waste. An article must be saturated with blood/body fluid and capable of releasing the fluid during handling in order to require biomedical waste disposal.

2.1.3 Body fluids visibly contaminated with blood.

2.1.4 Body fluids removed as a result of treatment, surgery or autopsy. These include sputum, and drainage fluids; also referred to as liquid biomedical waste. This includes expressed breast milk.
NOTE: this category **does not include** urine, feces or emesis. Also not included are soiled dressings, sponges, surgery drapes; IV, dialysis and lavage bags and tubing; diapers, disposable pads, feminine hygiene products, catheters, and casts; specimen containers, syringes without needles, empty medication containers; disposable gloves, lab coats, aprons, laboratory slides with non-infectious fixed tissue, non-infectious paraffin blocks.

2.1.5 Human and animal cultures or specimens (excluding urine, feces, vomit, tears).

2.1.6 Vaccines for human use (live, attenuated, and recombinant; and Disposable laboratory material that has come into contact with human blood or body fluid waste, including:

- Human fluid, blood, and blood products
- Items saturated with blood

Body fluids contaminated with blood; and body fluids removed for diagnosis during surgery, treatment or autopsy.

2.2 General Waste:

Includes waste that:

2.2.1 Has not been included in other waste categories; and

2.2.2 Does not pose a disease-related risk or threat to people or the environment. The general waste category includes:

- Office waste
- Kitchen waste
- Waste generated in service to patients/clients that does not meet the definition of biomedical waste, and
- All other similar wastes.

2.2.3 Examples of general waste include: soiled dressings, sponges, surgery drapes, lavage tubes, IV bags and tubing, incontinence products, including diapers, disposable pads, soiled feminine hygiene products, disposable gloves, catheters, specimen containers, casts, syringes without needles, medication containers, saliva, urine, vomit and tears.

2.3 Human anatomic components

A classification of biomedical waste that includes human tissues, organs, and body parts. This category does not include teeth, hair, or nails which are considered general waste.
NOTE: When the return of tissues, organs, or body parts is requested by a patient or a third party, see WRHA Policy 110.220.070 Pathology Specimens – Acute Care Setting (Management of) and the Diagnostic Services of Manitoba Pathology Specimen Release policy

2.4 Animal anatomic waste

A classification of biomedical waste that includes carcasses, tissues, organs, and body parts.

2.5 Contaminated sharps

Any item which has sharp point(s) or cutting edge(s) capable to cause injury that can penetrate, puncture, pierce or cut the skin when handled, and includes two categories. See WRHA Policy 20.20.020 Sharps, Safe Handling, Use and Disposal (including Safety-Engineered Needle (SEN) Exemption):
NOTE: empty drug vials and ampoules are not considered contaminated sharps.

2.6 Pharmaceutical Waste

All medications, including controlled substances, that are partially used, not intact, have become outdated or contaminated, have been stored improperly, or are no longer required. Oral doses of medications that have been removed from the packaging, dropped, portion remaining, refused or damaged are considered pharmaceutical waste.

2.7 Controlled Substances:

A substance included in Schedule 1,11,111,1v or V of the Controlled Drugs and Substances Act (S.C. 1996, c.19)
http://laws-lois.justice.gc.ca/eng/acts/C-38.8/
E.g. narcotics, benzodiazepines, and other controlled drugs.
Cytotoxic Waste

2.8 Medication Waste

Containers, needles, syringes, gloves, pads, empty IV sets and any other disposable supplies or equipment used in the preparation, administration and/or disposal of a Cytotoxic Hazardous Medication.

2.9 Human Waste

Patients' blood and body fluids/excreta including specimens; items used in Patient care (e.g. incontinence products, dressings, urinary catheters and bags); and clothing and linen contaminated with the Patient's blood and body fluids/excreta for 48 hours following completion of the Cytotoxic Hazardous Medication.

3. PREAMBLE:

Waste handling is the shared responsibility of the source department, Housekeeping/ Environmental Cleaning Services, Facility Management, Pharmacy, & Materiel Management.

The Winnipeg Regional Health Authority (WRHA) will manage its biomedical waste in as close accordance as possible with the Canadian Council of Ministers of the Environment (CCME) Guidelines for the Management of Biomedical Waste in Canada, and engage in dialogue with the waste management vendor for the WRHA.

All waste shall be handled in a manner to ensure that it is segregated at the point of generation, contained in packaging that holds the contents to the point of disposal, and disposed of in a manner that is both practical and efficient, yet minimizes any hazard. It is important to minimize the handling of waste so fewer people will be exposed to it.

Appropriate personal protective equipment shall be used when handling and disposing of waste products in keeping with Routine Practices.
Staff are to minimize the amount of biomedical waste generated, ensuring all waste streams are properly identified and segregated.

An important component of waste management is following the 3 R's – reduce, reuse, and recycle. The first approach is to avoid creating or to reduce waste. Overstocking should also be considered as part of the process to waste management. Next, items should be reused wherever possible, provided this does not conflict with Infection Prevention and Control requirements. Finally, waste should be recycled where possible. Facilities and programs are encouraged to establish a recycling program.

3.1 Creutzfeldt-Jakob Disease (CJD)

3.1.1 The prions that cause CJD and other transmissible spongiform encephalopathies (TSEs) exhibit an unusual resistance to conventional chemical and physical decontamination methods. Because the CJD agent is not readily inactivated by means of conventional disinfection and sterilization procedures and because of the invariably fatal outcome of CJD, the procedures for disinfection and sterilization of the CJD prion require stringent practice.

3.1.2 For a surgical instrument to act as a vehicle of prion transmission, it must come into contact with infective tissue (e.g., brain) during surgery of the infected patient, it must retain the infectivity of any adhered matter after being decontaminated and sterilized, and it must have contact with the receptive tissue in the recipient. Iatrogenic transmission of CJD has occurred following the use of contaminated cadaver-derived human pituitary hormone, dura mater and corneal grafts, EEG depth electrodes, and neurosurgical instruments.

3.1.3 The 3 parameters integrated into disinfection and sterilization processing for prion-contaminated medical instruments are the patient's risk of having a prion disease; the comparative infectivity of different body tissues; and the intended use of the medical device.

3.1.3.1 High-risk patients:
Patients considered to be at high risk of transmitting CJD are those diagnosed, prospectively or retrospectively, with:

CJD

Either confirmed, probable, or possible CJD, familial CJD, German-Straussler-Scheinker disease (GSS), or fatal familial insomnia (FFI)) depending on pathological, laboratory, and clinical evidence and following Surveillance Definitions for Classic CJD (Appendix A).

Suspected CJD

Undiagnosed, rapidly progressive dementia and CJD not ruled out.

Asymptomatic Carrier of Genetic TSE

Person without signs or symptoms of TSE, but meets one or more of the following:

- Confirmed by genetic testing to carry a genetic mutation causative of TSE.
- At least one first-degree relative confirmed by genetic testing to carry such a mutation, with or without pathologic TSE confirmation.

- Two or more first-degree relatives diagnosed with either confirmed or probable TSE, with or without confirmation by genetic testing.
- To minimize the risk of transmitting CJD, elective procedures in high-risk patients (involving high-risk or low-risk tissues) should be well justified and carefully planned in advance and occur in location where appropriate decontamination can take place.

3.1.4 Infectivity of Tissues:
Tissues at high risk of carrying prions include those of the brain, spinal cord, pituitary gland, and posterior eye (including the retina or optic nerve). All other tissues are considered to have low or no risk.

3.1.5 Medical Device Use:
Critical devices are any that enter sterile tissue or the vascular system (e.g., surgical instruments). Semi-critical devices are those that contact non-intact skin or mucous membranes (e.g., gastrointestinal endoscopes).

4. PROCEDURE:

4.1 Biomedical Waste – Non-Anatomic, Non-Cytotoxic

4.1.1 A biohazard symbol shall be visible on all waste disposed of as such.
Biomedical Waste shall be placed in appropriate bags, boxes, and/or leak-proof containers and stored in a designated area until transported out of the facility for disposal. Containers shall be capable of withstanding the weight of the waste without tearing, cracking, or breaking; and sealed with packing tape. Double-bagging is only necessary when the first bag becomes stretched or damaged, or when waste has spilled on the exterior.

Items that are contaminated, but not dripping, with blood or body fluids and are contained in an impervious plastic bag before being sent to landfill pose no threat to the public health and are therefore, not considered as biomedical waste.

- Wear personal protective equipment according to point of care risk assessment when packaging and transporting waste.

4.1.2 Biohazardous waste materials must be sealed and labeled in accordance with the established regulations.

4.1.3 Use facility approved containers and empty plastic bags for biohazardous waste disposal marked with a Biohazard symbol.

4.1.4 Place Biomedical Waste within a sturdy, YELLOW plastic biohazard bag and tie shut. Place bag within a specialized, single-use cardboard container marked with the biomedical waste symbol.

4.1.5 Place liquid Biomedical Waste in sealed single-use containers before placing inside the specialized cardboard container marked with the biomedical Waste symbol and lined with a YELLOW sturdy, plastic bag.

4.1.6 Where containment in a sealed, single-use container is inappropriate, such liquids may be disposed of in sanitary sewers, before disposal of the collection device. Examples of appropriate liquid waste disposal into sanitary sewers include, but are not limited to human bile, draining urine collection devices, drains [e.g., Jackson-Pratt], and hemovacs.

4.1.7 Dispose of the collection device, once emptied, as biomedical waste only if it is capable of releasing blood/body fluid during handling. Otherwise it can be placed in regular waste.

4.1.8 A contingency plan shall be in place as required for storage of Biomedical Waste in the event of excess production, or other disruptions to disposal.

4.1.9 Drain liquid Biomedical Waste from reusable glass containers into the hopper or other waste management system.

4.1.9.1 Place in soiled utility room for pick up for reprocessing once emptied.

4.1.10 Minimize manual handling of waste.

4.1.11 Ensure outside of specialized single-use cardboard containers are completely dry and secure. Biomedical Waste will not be removed by Supply and Distribution Services if containers are not dry and damage-free.

4.1.12 Contact Supply and Distribution Services for additional/extra waste pick-up when excess biomedical waste is present in the unit/area.

4.2 Supply and Distribution Services (or designate)

4.2.1 Store all Biomedical Waste in a secure, lockable storage area dedicated to the accumulation of waste for disposal.

4.2.2 Store Biomedical Waste other than sharps at 4°C or lower if stored for more than 4 days.

4.2.3 Clearly mark Biomedical Waste storage facilities with a biomedical waste symbol.

4.2.4 Decontaminate all storage and waste refrigerated/freezer areas according to a pre-determined schedule. A record of these scheduled cleaning tasks shall be maintained.

4.2.5 Use carts which prevent spillage and leakage and are designed to permit effective cleaning and disinfecting for the carriage of Biomedical Waste.

4.2.6 Supply & Distribution (or designate) thoroughly cleans and inspects the carts regularly and before maintenance, in accordance with established procedures.

4.2.7 Remove Biomedical Waste on a scheduled basis, and as required, from the designated storage areas to be transported from the facility for disposal or incineration.

4.2.8 Store all Biomedical Waste in a secure, lockable storage area dedicated to the accumulation of waste for disposal. Access to the storage space should be limited to authorized personnel.

4.2.8.1 When each filled container is placed in the appropriate storage facility, a bar-coded label sticker provided by the contracted waste disposal company is affixed to the outer surface of each container by **dd/mo/year**.

4.2.8.2 The stored containers are removed from the storage facility by the contracted waste disposal company.

4.2.9 Develop a site contingency plan for storage and transport of Biomedical Waste including roles and responsibilities for units/areas.

4.2.10 Disposal of biohazardous waste will be done according to a regular schedule and as required by an approved carrier per established WRHA Logistic Services contract. The carrier will comply with the Federal Transportation of Dangerous Goods Regulations. Dangerous good that are medical or clinical waste must be classified.

4.3 Biomedical Waste – Human Anatomic, Animal Anatomic

4.3.1 Human anatomic components and animal anatomic waste shall be bagged separately, stored in the designated refrigerated or freezer storage areas until transported out of the facility for incineration.

4.3.2 Human anatomic components shall be treated with respect and shall be collected and moved to its final designated storage area by the most direct route possible, avoiding client care areas.

4.3.3 A contingency plan shall be in place in each area/unit as required for storage of anatomic components/waste in the event of excess production, inoperative refrigeration equipment, or other disruptions to disposal.

4.3.4 Place human anatomic components or animal anatomic waste in a sturdy red coloured plastic bag, double bagged and/or placed inside a specialized cardboard container.

4.3.5 Use a cardboard container, colour coded red, or labeled with the anatomic waste symbol. The cardboard container should be rigid and puncture-resistant. Avoid intermixing of human components and animal waste.

4.3.6 Wear protective clothing/equipment as deemed necessary when packaging human anatomic components and animal anatomic waste. Minimize manual handling of human anatomic components and animal anatomic waste.

4.3.7 For transportation of anatomic materials, use carts which prevent spillage and leakage and are designed to permit effective cleaning and disinfecting for the carriage of Biomedical Waste.

4.3.8 Supply & Distribution thoroughly cleans and inspects the carts regularly and before maintenance, in accordance with established procedures.

4.3.9 Store human anatomic components and animal anatomic waste at 4°C or lower unless contained in 10% neutral buffered formalin.

4.3.10 Store refrigerated anatomic components and waste for a maximum of one week. Store frozen anatomic components and waste until proper pickup is arranged.

Supply and Distribution Services, on a regularly scheduled basis:

4.3.11 Removes the anatomic components and waste from the designated storage areas to be transported from the facility for incineration.

4.3.12 Decontaminates the waste storage areas and the anatomic refrigerated and freezer storage areas in accordance with established procedures.

4.4 Pharmaceutical Waste:

4.4.1 All Pharmaceutical waste should be disposed of in an approved reusable pharmaceutical waste container. All Patient care areas must use containers with lockable lids so that access to wasted medication is limited. (Pharmacies are the only permitted exception).

4.4.1.1 It is recommended that these containers be stored in secure and convenient locations and each medication room have a container.

4.4.2 All Patient Identifiers should be removed from the medication disposed of into the pharmaceutical waste container. If it cannot be removed, it may be obscured with a black marker. When removed, patient identifier information shall be disposed of in the confidential waste.

4.4.3 Disposal of medications should occur in the following manner:

4.4.3.1 Oral Solids: Dispose of tablets, capsules including Non-cytotoxic hazardous medication directly into the pharmaceutical waste container.

4.4.3.2 Liquids: Empty remaining liquid into the pharmaceutical waste container and dispose of the empty bottle in the General Waste.

4.4.3.3 Vials and ampoules: Dispose of vials and ampoules into the pharmaceutical waste container.

4.4.3.4 Patches: Fold patches in half and dispose of into the pharmaceutical waste container.

4.4.3.5 Eye/ear drops: Discard directly into the pharmaceutical waste container.

4.4.3.6 Aerosols and compressed gas medication containers such as metered-dose inhalers shall be disposed of in clearly marked containers for this specific purpose.

4.4.3.6.1 Separate the metal canister from the plastic inhaler. The plastic inhaler can disposed of in general waste.

4.4.3.6.2 Dispose of metal canister as per site process, e.g., special labelled container in medication room/area.

4.4.3.7 Controlled Substances: shall be rendered, unusable and un-recoverable before disposal. Disposal shall be witnessed and co-signed by an RN, RPN, LPN or Pharmacist.

4.4.3.7.1 With a witness present, render Controlled Substances unusable in the following manner:

- Remove all remaining pharmaceutical waste in partially used ampoules, syringes, vials or bags and expel into the pharmaceutical waste container. The empty ampoules, vials, syringes can be discarded into the pharmaceutical waste container.
- Crush partial or whole tablets and o pen capsules and dispose into the pharmaceutical waste container.

Document the disposal of the Controlled Substance and have witness co-sign disposal as per site process i.e., in Automated Dispensing Cabinet (Pyxis ES) or on Narcotic Control Record.

4.5 Confidential Waste

See Winnipeg Regional Health Authority Disposal of Confidential Material, Including Personal Health Information.

4.5.1 Staff in departments, divisions, services and programs shall process confidential material as follows:

- pre-sort by placing in designated containers
- package securely for pick up and/or storage until incineration or shredding
- clearly identify and label as 'Confidential Waste';
- containers shall not be loaded to the point where the container will rip or tear, or be unmanageable due to weight (maximum weight limit is 50lbs);
- direct questions regarding confidential material segregation and/or identification to the Privacy Officer.

4.6 Sharps Waste

See Winnipeg Regional Health Authority Policy 20.20.020 Sharps, Safe Handling, Use and Disposal (including Safety-Engineered Needle (SEN) Exemption).

4.6.1 Safe Handling, Use and Disposal of Sharps

4.6.1.1 Activate the safety engineered needles (SEN) mechanism before disposing the needle in an Approved Sharps Container.

4.6.1.2 Do not recap or otherwise manipulate needles by any technique that involves directing the point of the sharp toward any part of the user's body.

4.6.1.3 Completely drop syringe and Sharps in the designated labeled container immediately after use by the user or as dictated by area specific procedures (e.g. operating room).

4.6.1.4 Locate Sharps container nearby user to permit safe and convenient disposal of Sharps.

4.6.1.5 Store Sharps in a safe place, pertinent to the workplace setting.

4.6.1.6 Do not transfer Sharps from one container to another or overfill.

4.6.1.7 Inform clients who administer their own injections at home or use blood glucose testing devices that they are responsible for their own safe disposal practice, including:
Participation in a Sharps Disposal Program with either pharmacies, or Access Centers, or:

Placement of Sharps in an alternate container, that is:

1. Puncture proof such as a plastic bleach container or plastic liquid laundry container (NOT to be made of glass, cardboard or thin plastic).
2. Leak proof.
3. Designed to allow Sharps to be placed in the container and have a sealable lid when not in use.
4. Clearly labeled "SHARPS".
5. If the client is unable to participate in a pharmacy disposal program, the designated Sharps container shall be closed securely sealed, taped and discarded into the client's garbage.

4.6.1.8 Designate a secure, appropriate Sharps storage area in all WRHA facilities and funded facilities.

4.6.1.9 Handle broken glass thermometers that contain mercury in accordance with site/program-specific procedures as well as the Provincial Workplace Hazardous Material Information System (WHMIS) and Chemical and Biological Substances Regulation Part 36. The WHMIS regulation requires that the hazardous waste or container in which the hazardous waste is packaged, be labeled appropriately and a Material Safety Data Sheet be made available to healthcare worker (HCW) handling and disposing this waste.

4.7 Creutzfeldt-Jakob disease (CJD) Waste

All solid waste exposed to high or low infectivity tissues from a high risk patient or high infectivity tissues and CSF from an at risk patient should be sealed in a leak proof, puncture-resistant container, labelled 'biohazardous', and incinerated. Employees should use personal protective equipment and engineering controls (e.g., splash guards) to prevent exposure from splashing and aerosols during the emptying of waste containers. Liquids used for cleaning can be flushed down the drain.

See the WRHA CJD Protocol to determine risk level of tissues and patients. Consult Infection Prevention and Control and Waste Management for management and pick-up of instruments.
See the WRHA CJD Protocol for risk-stratification to determine whether patient is considered a potential CJD transmitter, infectiousness of tissue, and so forth.

4.8 Chemical Waste

See Winnipeg Regional Health Authority Section 6: Emergency Codes and Specific Scenarios. See Code Brown site specific policies if applicable.

4.9 Cytotoxic Waste

See Winnipeg Regional Health Authority Policy Safe Handling of Hazardous Medications (Cytotoxic and Non-Cytotoxic) Policy # 110.160.010

4.10 Ebola Virus Disease (EVD) Waste

See Infection Prevention & Control Management of Ebola Virus Disease (EVD) in EVD – Designated In-Patient Areas Operational Directive.
or
Infection Prevention & Control Management of Ebola Virus Disease (EVD) in NON EVD – Designated In-Patient Areas Operational Directive.

5. ROLES AND RESPONSIBILITES:

All departmental managers are responsible for ensuring their employees are knowledgeable about, and properly trained in, waste segregation and safe handling procedures.

6. REFERENCES:

6.1 Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices-In All Health Care Settings, 3rd edition. (2013, May). Provincial Infectious Diseases Advisory Committee (PIDAC). Accessed November 7, 2018.

6.2 Classic Creutzfeldt-Jakob Disease in Canada. Quick Reference Guide. (2007). Public Health Agency of Canada Accessed November 7, 2018.

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6.4 Guideline for Disinfection and Sterilization of Prion-Contaminated Medical Instruments. (2010). The Society for Healthcare Epidemiology of America. Volume 31 (2). Accessed November 7, 2018.

6.5 Hand Washing, Cleaning, Disinfection, and Sterilization. (1998). Health Canada. Accessed November 7, 2018.

6.6 Handling of Health Care Waste Materials. (2015, October). Canadian Standards Association CSA Standard Z317.10-15. Accessed November 7, 2018.

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6.8 Heymann, David L. Prion Diseases. In: Control of Communicable Diseases Manual 20th ed. (2014). American Public Health Association, Washington, 2014; 484-490. Accessed November 7, 2018.

6.9 Pathology Specimens (Management of) – Acute Care Setting Policy 110.220.070. (2012, February). Winnipeg Regional Health Authority. Accessed November 7, 2018.

6.10 Recommended Biosafety Practices for Handling Prions and Prion-Infected Tissues. (2007). Michigan State University. Accessed November 7, 2018.

6.11 Sharps, Safe Handling, Use and Disposal (including Safety-Engineered Needle (SEN) Exemption) Policy 20.20.020. (2009, April). Winnipeg Regional Health Authority. Accessed November 7, 2018.

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