

Control of Bloodborne Pathogens Hazards – Know the Laws of Your Province



Cuts, lacerations, punctures and similar percutaneous injuries can be especially dangerous when the instrument that causes them is contaminated with blood and other bodily fluids or tissue that can cause hepatitis, HIV, COVID and other significant and even life-threatening diseases. Exposure to so called bloodborne pathogens (BBPs) is great amongst healthcare workers who handle needles, scalpels, and other “sharps” used to provide medical care. However, it’s also a concern at medical research facilities, labs, laundering and cleaning services, law enforcement offices, and any site in which staff provides first aid to ill or injured workers.

Employers at sites where BBP hazards exist are legally required to take measures to protect their workers against exposure. For hospitals and health facilities, the main law that applies are the licensing requirements contained in a federal law called the *Human Pathogens and Toxins Acts*. However, most provinces and territories also incorporate special protections against BBPs for health workers into their OHS laws. While there’s a lot of overlap, BBP protection requirements also vary by province. Here’s a look at the requirements of each jurisdiction so you can stay compliant no matter where in Canada you operate. Go to the OHS Insider website for a complete [BBPs Exposure Policy](#).

OHS REQUIREMENTS FOR MANAGING BLOODBORNE PATHOGENS HAZARDS

FEDERAL

COHS Regulations don't specifically address needles, contaminated sharps, or medical waste.

ALBERTA

General: Employer must follow hierarchy of controls to control a worker's exposure to blood borne pathogens or other biohazardous material and ensure exposure is kept as low as reasonably practicable (*OHS Code*, Secs. 525.1 + 529).

Medical Sharps: Employer must: 1. Provide and ensure that any medical sharp is a safety engineered medical sharp EXCEPT if: (a) use of the required safety engineered medical sharp is not clinically appropriate in the particular circumstances, or (b) the required safety engineered sharp is not available in commercial markets; 2. Develop and implement safe work procedures for the required use and disposal of medical sharps; 3. Ensure that a worker required to use and dispose of a medical sharp is trained in the safe work procedures including: (a) the hazards associated with the use and disposal of medical sharps, (b) the proper use and limitations of safety engineered medical sharps, (c) procedures to eliminate accidental contact with medical sharps, and (d) any other relevant information (*OHS Code*, Sec. 525.2).

Sharps Containers: Employer must: 1. Provide sharps containers and ensure they're located as close as reasonably practicable to where sharps are used; and 2. Ensure that a sharps container has a clearly defined fill line and is sturdy enough to resist puncture under normal conditions of use and handling (*OHS Code*, Sec. 526).

Recapping Needles: A person must not recap waste needles (*OHS Code*, Sec. 527).

Policies & Procedures: Employer must: 1. Establish policies and procedures for storing, handling, using, and disposing of biohazardous materials; 2. Establish policies and procedures for the post-exposure management of workers exposed to biohazardous material; and 3. Ensure that workers are informed of the health hazards associated with exposure to biohazardous material (*OHS Code*, Secs. 528 + 530).

BRITISH COLUMBIA

Key Definition: Biological agent designated as a hazardous substance means: (a) a liquid or solid material contaminated with a prion, virus, bacterium, fungus, or other biological agent classified by the Public Health Agency (PHA) of Canada as a Risk Group 2, 3, or 4 human pathogen that causes an adverse health effect; or (b) a biological toxin that causes an adverse health effect (*OHS Regs*, Sec. 5.1.1).

General: If a worker is or may be exposed to a biological agent designated as a hazardous substance which could cause an adverse health effect, employer must ensure that: (a) the identity of the biological agent, its possible effects on health and safety, and any precautions required are clearly indicated by labels, SDSs, or other similar means, (b) the above information is clearly communicated to the worker, (c) written procedures are prepared and implemented to eliminate or minimize risk of exposure and address emergency and cleanup procedures in the event of a spill or release, and (d) the supervisor and worker are trained in and follow the measures required for the safe handling, use, storage, and disposal of the biological agent, including emergency and spill cleanup procedures (*OHS Regs*, Sec. 5.2).

Exposure Control Plan: If a worker has or may have "occupational exposure," i.e., reasonably anticipated contact

with a biological agent designated as a hazardous substance, employer must develop and implement an exposure control plan that incorporates: (a) a statement of purpose and responsibilities; (b) a risk assessment by a qualified person to determine potential for occupational exposure by any route of transmission; (c) a list of all work activities for which there's a potential for occupational exposure; (d) engineering controls and administrative controls to eliminate or minimize the potential for occupational exposure; (e) standard or routine infection control precautions and transmission-based precautions for all work activities identified as having a potential for occupational exposure, including (i) housekeeping practices designed to keep the workplace clean and free from spills, splashes, or other accidental contamination, (ii) work procedures to ensure that contaminated laundry is isolated, bagged, and handled as little as possible, and (iii) work procedures to ensure that laboratory or other samples containing a biological agent designated as a hazardous substance in section 5.1.1 are handled in accordance with the Laboratory Biosafety Guidelines 3rd edition, 2004, issued by the PHA of Canada; (f) a description of PPE to eliminate or minimize occupational exposure; (g) a program to inform workers about the contents of the exposure control plan and to provide them with adequate education, training, and supervision to work safely with, and in proximity to, a biological agent designated as a hazardous substance in section 5.1.1; (h) a record of all training and education provided to workers in the program described in paragraph (f); (i) a record of all workers who have been exposed, while performing work activities, to a biological agent designated as a hazardous substance in section 5.1.1; and (j) hygiene facilities and decontamination procedures, if required; and (k) health monitoring, if required; and 2. Plan must be reviewed at least annually and updated as necessary by the employer, in consultation with the JHSC or safety rep (*OHS Regs*, Secs. 5.54 + 6.34).

Engineering Controls: 1. A needleless device or safety-engineered hollow bore needle must be used for the following procedures performed to care for or treat a person: (a) withdrawal of body fluids; (b) accessing a vein or artery; (c) administration of medications or fluids; (d) any other procedure involving the potential for an exposure to accidental parenteral contact for which a needleless system or safety-engineered hollow bore needle system is available; 2. Any medical sharp used to care for or treat a person must be a safety-engineered medical sharp EXCEPT if (a) use of the required device, needle, or sharp is not clinically appropriate in the particular circumstances, or (b) the required device, needle, or sharp is not available in commercial markets; 3. If more than one type of safety-engineered hollow bore needle or safety-engineered medical sharp is available in commercial markets, the needle or sharp that provides the highest level of protection from accidental parenteral contact must be used, as determined by the employer based on information provided by manufacturers, independent testing agencies, objective product evaluation, or other reliable sources; and 4. Safe work procedures and practices relating to the use of safety-engineered hollow bore needles and safety-engineered medical sharps must be developed and implemented before use of these devices (*OHS Regs*, Sec. 6.36).

Labels & Identification: 1. A container holding a known or suspected biological agent designated as a hazardous substance in section 5.1.1 must be clearly identified by the biohazard symbol as described in the *Hazardous Products Regulations (Canada)* or by other means that indicate the presence of a biological agent; and 2. A laboratory sample of a known or suspected biological agent designated as a hazardous substance in section 5.1.1 must be transported only in accordance with the federal *Transportation of Dangerous Goods Act, 1992 (Canada)* (*OHS Regs*, Sec. 6.37).

Vaccination: 1. Employer must offer vaccination against

hepatitis B virus to all workers at risk of occupational exposure to that virus; and 2. If the Communicable Disease Control Immunization Program Manual issued by the BC Centre for Disease Control, as amended from time to time, lists a vaccine that protects against infection by a biological agent that is designated as a hazardous substance in section 5.1.1, the employer must offer the vaccination to all workers who are at risk of occupational exposure to that biological agent; and 3. Vaccinations must be provided without cost to workers (*OHS Regs*, Sec. 6.39).

Medical Evaluation: 1. Employer must advise worker who may have been exposed to the human immunodeficiency virus (HIV), hepatitis B virus or any other biological agent designated as a hazardous substance in section 5.1.1 to seek immediate medical evaluation (*OHS Regs*, Sec. 6.40); and 2. Employer must pay for medical exam of worker if ordered by a Director of Medical Services (*OHS Act*, Sec. 29).

MANITOBA

Hazard Assessment: Employer must, in consultation with the JHSC, safety rep, or workers themselves: 1. Assess all information practicably available to it regarding a chemical or biological substance present in the workplace to determine if the substance creates or may create a risk to the safety or health of a worker in the workplace; and 2. Do a reassessment if: (a) there's a change in workplace conditions, or in the health or physical condition of a worker known to the employer; or (b) new information about the substance becomes available to the employer (*WSH Regs*, Sec. 36.2).

Controls: If the above assessment determines that a chemical or biological substance creates or may create a safety or health risk to a worker in the workplace, the employer must: 1. Develop, implement, train workers in, and ensure they follow safe work procedures for the use, production, storage,

handling, and disposal of (*WSH Regs*, Sec. 36.3); and 2. Immediately implement control measures in the workplace to eliminate any risk resulting from non-airborne exposure to the substance (*WSH Regs*, Sec. 36.4).

Needlestick Injuries: 1. If hollow-bore or intravenous needles are used in a medical workplace, employer must ensure: (a) so far as is reasonably practicable, that workers use only safety-engineered needles; and (b) that safe work procedures and practices relating to the use of those safety-engineered needles are implemented in the workplace; 2. If it's not reasonably practicable to use safety-engineered needles in a medical workplace, employer must ensure that safe work procedures and practices for use of hollow-bore or intravenous needles are implemented; 3. Employer in a medical workplace must develop procedures for when a worker suffers a needlestick injury, including instructions for the injured worker; and 4. Employer must investigate and prepare a report on every needlestick injury to a worker in a medical workplace (*WSH Act*, Sec. 45.1).

NEW BRUNSWICK

Sharps: Employer must ensure that: (a) Safe means of handling needles, knives, scissors, scalpels, broken glass, and other sharp materials are used, (b) Recapping of needles before disposal is not permitted unless the recapping device is specifically designed for single-handed use, or is otherwise safe for use, and (c) Biohazard sharp puncture-resistant containers are used for the disposal of needles, knives, scissors, scalpels, broken glass, and other sharp materials to prevent cuts or punctures (*OHS General Reg*, Sec. 342.92).

Medical Evaluation: WorkSafeNB can order employer to pay for a doctor examination to determine whether a worker exposed to BBPs has suffered an occupational injury (*OHS Act*, Sec. 46).

NEWFOUNDLAND

Medical Evaluation: 1. A medical practitioner hired by WorkplaceNL may arrange, with a worker's consent, to have the worker medically examined by another medical practitioner to determine: (a) the extent of an injury suffered by a worker in the course of the worker's occupation; or (b) whether a worker is suffering from a disease related to the worker's occupation; and 2. If practicable, the exam must be carried out during the worker's normal working hours and the employer may not make deductions of wages, salary, or other benefits for the time lost by the worker in going to, attending, or returning from the medical examination (*OHS Act*, Secs. 58 + 59).

OHS Regulations don't specifically address needles, contaminated sharps, or medical waste.

NOVA SCOTIA

Safety-Engineered Needles: 1. "Safety-engineered needle" means any of the following that is commercially available and approved as a medical device by Health Canada: (i) a shielded needle device, (ii) a retractable needle system, (iii) a needleless device, or (iv) a needle reduced device (*Safer Needles In Healthcare Workplaces Act*, Sec. 2(e)); and 2. Employer must ensure that employees use only safety-engineered needles when hollow-bore or intravenous needles are used in a healthcare workplace EXCEPT if: (a) the employee is using a needle other than in the direct care and treatment of a person; (b) the employer in consultation with the JHSC or safety rep, if any, can demonstrate that a safety-engineered needle: (i) poses more risk of harm than another needle to a patient, client, resident, or employee, or (ii) may impair the effectiveness of the treatment of a patient, client, or resident; (c) there's a public-health emergency under the *Health Protection Act* or state of emergency under the *Emergency Measures Act*; or (d) a national program, including a

blood-collection program and vaccination program requiring Health Canada approval to use a safety-engineered needle hasn't yet received such approval, until such time as approval is obtained (*Safer Needles In Healthcare Workplaces Act*, Sec. 4).

Compliance Plans: Employer must, in consultation with the JHSC or safety rep, develop and implement a compliance plan (*Act*, Sec. 5).

Training: Employer must: 1. Ensure that any employees who are required to use a safety-engineered needle, or may come into accidental parenteral contact with a safety-engineered needle, receive and participate in such instruction and training; and 2. Review the training and instruction provided to employees and the employees' familiarity with the instruction and training, in consultation with the JHSC or safety rep, at least once a year (*Act*, Sec. 6).

ONTARIO

Safety-Engineered Needles: 1. "Safety-engineered needle" means either: (a) a hollow-bore needle that, (i) is designed to eliminate or minimize the risk of a skin puncture injury to the worker, and (ii) is licensed as a medical device by Health Canada, or (b) a needleless device that, (i) replaces a hollow-bore needle, and (ii) is licensed as a medical device by Health Canada; 2. Employer must provide a worker doing work requiring the use of a hollow-bore needle with a safety-engineered needle that's appropriate for the work EXCEPT if: (a) the employer is unable, despite making efforts that are reasonable in the circumstances, to obtain a safety-engineered needle that's appropriate for the work; (b) the workplace is in a part of Ontario in which, i. a declaration of emergency made under the *Emergency Management and Civil Protection Act* is in effect, or ii. a situation exists that constitutes or may constitute a serious risk to public health; (c) the

employer's supplies of safety-engineered needles appropriate for the work have been exhausted; or (d) the risk of harm from postponing the work until a safety-engineered needle appropriate for the work becomes available is greater than the risk of harm from using a hollow-bore needle that is not a safety-engineered needle; 3. A worker must use the safety-engineered needle provided. EXCEPTION: workers may use a hollow-bore needle that's not a safety-engineered needle if they believe on reasonable grounds that, in the particular circumstances, the use of a safety-engineered needle would pose a greater risk of harm to themselves or another person; and 4. Employer must develop, establish and provide training to help workers use a non-safety-engineered hollow bore needle in accordance with subsection 3. above (*OHS Needle Safety Reg.*).

Housekeeping & Waste in Healthcare Workplaces: 1. Needles, knives, scissors, scalpels, broken glass, or other sharp objects that are capable of cutting or penetrating the skin or any part of a worker's body must be placed in puncture-resistant containers when they're discarded as waste materials; and 2. Used needles that are being discarded as waste material must be discarded, immediately after use and without being bent or recapped, into a puncture-resistant container; EXCEPTION: If it's impracticable to discard used needles in accordance with subsection (2): (a) the employer must provide a device or equipment selected by the employer in consultation with the JHSC or safety rep that protects workers from being accidentally punctured while recapping used needles; and (b) the needles must be recapped using the device or equipment described in clause (a) by workers who have received instruction and training in the use of that device or equipment (*OHS Health Care and Residential Facilities Reg.*)

Medical Examination: If the worker agrees, a worker who's been exposed to a BBP or other hazardous biological agent must undergo medical examinations and clinical tests, at the

employer's expense, to determine if the worker has an occupational illness because of exposure and whether the worker is fit, fit with limitations, or unfit to continue working in exposure to the agent, provided that either: (a) the worker or the worker's physician notifies the employer in writing that they have reason to believe that the worker's health has been affected by exposure to the agent and the worker or the worker's physician has notified the employer in writing; or (b) the employer notifies the worker in writing that it has reason to believe that the worker's health is likely to be affected by the exposure (*OHS Control of Exposure to Biological or Chemical Agents*, Sec. 8(1)).

PRINCE EDWARD ISLAND

Medical Examination: OHS Director may arrange, with worker's consent, to have the worker medically examined by a medical practitioner to determine if the worker is suffering from an occupational disease to be carried out, if practicable, during the worker's normal working hours of the worker with the employer paying the costs; Employer may not make deductions from wages or other benefits for the time lost by the worker in going to, attending, or returning from a medical examination (*OHS Act*, Sec. 33).

OHS Regulations don't specifically address needles, contaminated sharps, or medical waste.

QUÉBEC

OHS Regulations don't specifically address needles, contaminated sharps, or medical waste.

SASKATCHEWAN

Safety Controls for Waste: 1. "Waste" means any biomedical or

pharmaceutical material or substance that may be hazardous to a worker's health or safety and that requires special handling precautions, decontamination procedures, or disposal, including: (a) human anatomical waste; (b) animal anatomical waste; (c) microbiological laboratory waste; (d) blood and body fluid waste; and (e) used or contaminated needles, syringes, blades, clinical glass, and other clinical items that are capable of causing a cut or puncture (*OHS Regs*, Sec. 31-1); 2. If exposure to waste is likely to endanger a worker's health or safety of a worker, employer must develop and implement a process to ensure that the waste: (a) is segregated at the place where the waste is located or produced; (b) is contained in a secure, clearly labelled package or container that holds the contents safely until it's cleaned, decontaminated, or disposed of; and (c) is cleaned, decontaminated, or disposed of in a manner that will not endanger the health or safety of any worker; 3. Employer must ensure that: (a) a worker or self-employed person who generates, collects, transports, cleans, decontaminates, or disposes of waste or launders contaminated laundry is trained in and follows safe work practices and procedures, and is provided with and uses PPE appropriate to the risks; and (b) If reasonably practicable, any equipment contaminated with waste is inspected and decontaminated before it's repaired or shipped for repair (*OHS Regs*, Secs. 31-6 + 31-7); 4. Employer must provide and ensure that workers and self-employed persons use readily accessible containers for waste needles, syringes, blades, clinical glass, and any other clinical items that are capable of causing a cut or puncture and that those containers: (a) have a fill line; (b) are clearly identified as containing hazardous waste; and (c) are sturdy enough to resist puncture under normal conditions of use and handling until the containers are disposed of; and 5. Employer must ensure that workers don't manually clip, bend, break, or recap waste needles (*OHS Regs*, Sec. 31-8).

Exposure Control Plan required.

Safety-Engineered Needles: 1. "Needles with engineered sharps injury protections" means hollow bore needles or devices with hollow bore needles that: (a) are commercially available; (b) are approved as medical devices by Health Canada; (c) have a built-in safety feature or mechanism that eliminates or minimizes the risk of a percutaneous injury; and (d) are used for purposes that include: (i) withdrawing bodily fluids; (ii) accessing a vein or artery; and (iii) administering medications or other fluids; 2. "Needleless system" means a commercially available device approved as a medical device by Health Canada that replaces a hollow bore needle for use in: (a) the collection of bodily fluids; (b) the withdrawal of bodily fluids after initial venous or arterial access is established; (c) the administration of medication or fluids; or (d) any other procedure in which it's reasonably anticipated that a worker could incur a percutaneous injury with a contaminated hollow bore needle; 3. For tasks and procedures in which it's reasonably anticipated that a worker or self-employed person may incur a percutaneous injury from a contaminated hollow bore needle, the employer or contractor must: (a) identify, evaluate, and select needles with engineered sharps injury protections or needleless systems, in consultation with representatives of those workers or self-employed persons who will use the selected device; and (b) ensure that the needles with engineered sharps injury protections and needleless systems selected under clause (a) are used; EXCEPTIONS: Subsection (3) doesn't apply: (a) if the employer or contractor can demonstrate that needles with engineered sharps injury protections or needleless systems pose an additional risk to the patient, worker, or self-employed person; (b) to any needles or needle devices that are obtained during a public health emergency for use in that emergency; (c) to needles or needle devices for use in a public health emergency that are stockpiled for use in a public health emergency and were present in Saskatchewan on Dec. 31, 2020 (*OHS Regs*, Sec. 31-9).

Injury Log: 1. Employer or contractor must maintain an injury log for all exposures involving a percutaneous injury with a sharp that may be contaminated; and 2. Injury log entries must: (a) protect the confidentiality of the exposed worker or self-employed person; and (b) contain at least the following information: (i) the type and brand of the device involved in the exposure incident; (ii) the department or work area in which the exposure occurred; (iii) an explanation of how the exposure occurred (*OHS Regs*, Sec. 31-10).

Medical Exams: If a worker has been exposed to blood or potentially infectious bodily fluids at a place of employment, employer must, with the worker's consent, during the worker's normal working hours, arrange for immediate medical evaluation and intervention by a qualified person in an approved manner and for confidential post-exposure counselling (*OHS Regs*, Sec. 6-22(9)).

NORTHWEST TERRITORIES & NUNAVUT

Safety Controls for Waste: 1. "Waste" means biomedical or pharmaceutical material or substances that: (a) are hazardous to a worker's health or safety, and (b) require special handling precautions, decontamination procedures or disposal, such as: (i) human anatomical waste; (ii) animal anatomical waste; (iii) microbiological laboratory waste; (iv) blood and body fluid waste; and (v) used or contaminated needles, syringes, blades, clinical glass, and other clinical items that are capable of causing a cut or puncture (*OHS Regs*, Sec. 463); 2. If exposure to waste is likely to endanger a worker's health or safety of a worker, employer must develop and implement a process to ensure that the waste is: (a) segregated at the place where the waste is located or produced; (b) contained in a secure, clearly labelled package or container that holds the contents safely until it's cleaned, decontaminated, or disposed of; and (c) cleaned, decontaminated, or disposed of in a manner that will not

endanger the health or safety of any worker; 3. Employer must ensure that a worker who generates, collects, transports, cleans, decontaminates, or disposes of waste or launders contaminated laundry: (a) is trained in and follows safe work practices and procedures, and (b) is provided with and uses PPE appropriate to the risks; and 4. If reasonably practicable, employer must ensure that any equipment contaminated with waste is inspected and decontaminated before it's repaired or shipped for repair (*OHS Regs*, Secs. 467 + 468); 5. Employer must provide and ensure that workers use readily accessible containers for waste needles, syringes, blades, clinical glass, and any other clinical items that are capable of causing a cut or puncture and ensure that those containers: (a) have a fill line; (b) are clearly identified as containing hazardous waste; and (c) are sturdy enough to resist puncture under normal conditions of use and handling until the containers are disposed of; and 6. Employer must ensure that workers don't manually clip, bend, break, or recap waste needles (*OHS Regs*, Sec. 469).

Safety-Engineered Needles: 1. "Needles with engineered sharps injury protections" means hollow bore needles or devices with hollow bore needles that: (a) are commercially available; (b) are approved as medical devices by Health Canada; (c) have a built-in safety feature or mechanism that eliminates or minimizes the risk of a percutaneous injury; and (d) are used for purposes that include: (i) withdrawing bodily fluids; (ii) accessing a vein or artery; and (iii) administering medications or other fluids; 2. "Needleless system" means a commercially available device approved as a medical device by Health Canada and that replaces a hollow bore needle for use in: (a) the collection of bodily fluids; (b) the withdrawal of bodily fluids after initial venous or arterial access is established; (c) the administration of medication or fluids; or (d) any other procedure in which it's reasonably anticipated that a worker could suffer a percutaneous injury with a contaminated hollow bore needle; 3. For tasks and

procedures in which it's reasonably anticipated that a worker could suffer a percutaneous injury from a contaminated hollow bore needle, the employer must: (a) identify, evaluate, and select needles with engineered sharps injury protections or needleless systems, in consultation with the JHSC or safety rep representing the workers to be protected; and (b) ensure that the needles with engineered sharps injury protections and needleless systems selected under clause (a) are used; EXCEPTIONS: Subsection (3) doesn't apply: (a) if the employer can demonstrate that needles with engineered sharps injury protections or needleless systems pose an additional risk to a worker; (b) to biological or antibiotic products in injection-ready needle devices that are present in Northwest Territories or Nunavut; (c) to needles or needle devices that are obtained before or during a public health emergency; or (d) if a needle with engineered sharps injury protections or a needleless system requires Health Canada's approval for use in a national program, including blood collection and vaccination programs, until the day on which Health Canada approves a needle with engineered sharps injury protections or a needleless system for use in a national program (*OHS Regs*, Sec. 471).

Exposure Control Plan required.

Injury Log: 1. Employer must maintain an injury log for exposures involving a percutaneous injury with a sharp; and 2. Injury log entries must: (a) protect the confidentiality of the exposed worker; and (b) contain at least the following information: (i) the type and brand of the device involved in the exposure incident; (ii) the department or work area in which the exposure occurred; and (iii) an explanation of how the exposure occurred (*OHS Regs*, Sec. 472).

Medical Exam: If a worker is exposed to blood or potentially infectious bodily fluids at a work site, an employer must, if the worker consents, arrange for an immediate medical evaluation and intervention, during the worker's normal working hours, by a qualified individual in an approved manner

and for confidential post-exposure counselling (*OHS Regs*, Sec. 88(8)).

YUKON

Medical Exam: Yukon WCSHB may require a worker to be medically examined to determine if the worker is suffering from an injury with the employer to pay for the exam, count exam time as work time and, if reasonably practicable, ensure the exam is performed during normal hours of work (*WSC Act*, Sec. 63).

WSC Regulations don't specifically address needles, contaminated sharps, or medical waste.