




Provincial Guide

Community Based Services Waste Disposal

Waste Management Provincial

Operations Support

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1.0 Community Based Services Waste Disposal

1.1 Objectives

Waste disposal within a residential setting will differ from a healthcare setting due to which wastes a municipality will accept into their landfill stream as well as the reduced volume of such waste. Alberta Health Services (AHS) **Community Based Services (CBS)** guideline provides information to CBS staff on handling and disposing of different waste streams generated while providing care within residential and community settings.

1.2 Guideline

CBS provides health care services to various clients through public health clinics, community immunization programs, home care settings, etc. The nature of these services generates various waste streams requiring proper separation and disposal.

The CBS Waste Disposal Guideline provides detailed information concerning the management of waste in the community setting. The guideline focuses on waste disposal in two specific CBS areas: in a residential home care setting and in a public health community setting. CBS staff and clients shall be responsible for developing a waste management plan that is in accordance with current guidelines, legislation, and best practices as outlined in this guide.

1.3 Applicability

Compliance with this document is required by all AHS employees, members of the medical and midwifery staffs, students, volunteers and other persons acting on behalf of AHS (including contracted services providers as necessary).

2.0 Waste Segregation

AHS CBS shall ensure waste generated within the client's home is disposed of safely and appropriately. Generally, waste generated within the client's home and/or community health care setting is no more hazardous than general household waste and should be disposed of accordingly. CBS waste categories for the purpose of proper segregation are as follows:

2.1 General Waste

General waste, also known as refuse or garbage, is a common waste stream. It's not considered practical or necessary to treat all items having contact with a body fluid as biomedical waste. Items contaminated with blood or body fluids that are double bagged before being sent to the landfill pose no threat to public health when generated in the home care environment.

2.2 Biomedical Waste

Biomedical Waste whether generated within a health care facility setting or being removed from a clients home require special precautions and handling due to the waste being infectious, a sharp, **cytotoxic**, or especially sensitive due to the nature of the waste. However biomedical waste generated within a home care setting does not apply to this definition and

is therefore acceptable to be disposed of in the general waste. (Reference: Alberta Waste Control Regulations)

Note: Waste generated within a home care setting does not apply to this definition and is therefore acceptable to be disposed of in the general waste. (Reference: Alberta Waste Control Regulations)

2.3 Sharps

Sharps include needles, scalpels, scissors, and other items that can cut or puncture the skin. These may be contaminated with blood and body fluids and are considered biomedical. Uncontaminated sharps include broken glass, empty vials, etc.

2.4 Medication Waste

Medication waste includes any medication or medicinal chemical that is unusable; including products that may be outdated or potentially contaminated, stored improperly, or partially used (e.g., heparin vial and/or heparin syringe with residual heparin, used IV medication bags and/or tubing containing residual medication). Medication waste is biomedical waste requiring incineration.

Hazardous medications are those medications that can pose a health risk from exposure in the workplace due to the medication's inherent toxicity. There are three categories of hazardous medications: Known hazard medications, potential hazard medications and reproductive hazard medications. According to the National Institute for Occupational Safety and Health (NIOSH), hazardous medications exhibit one or more of the following characteristics:

- Carcinogenicity – capable of causing or promoting the development of cancer or a lesion which could be the starting point of a cancer
- Teratogenicity or other developmental toxicity – capable of causing congenital malformations due to an action on the embryo
- Genotoxicity – capable of damaging genetic material (DNA) to cause mutations
- Reproductive toxicity – capable of affecting fertility (i.e. miscarriages, late fetal death, infertility)
- Organ toxicity at low doses – capable of causing serious organ or other toxic effects at a low dose (i.e. liver damage, local necrosis of exposed tissue)
- Structure and toxicity profiles of medication that mimic existing medication determined hazardous by the above criteria

For further information regarding “Hazardous Medication Waste and Hazardous Waste Handling” please refer to

<https://www.albertahealthservices.ca/assets/info/hp/pharm/if-hp-pharm-hazardous-medications-ppe-guide.pdf>

2.5 Dialysis Waste

Alberta Kidney Care North (AKC-North) and Alberta Kidney Care South (AKC-South) are two AHS Hemodialysis and Peritoneal Dialysis programs that also provide service within the community.

Home Hemodialysis Supplies

At the end of a patient's home hemodialysis treatment (e.g. patient no longer a suitable candidate or death), families are instructed to dispose of unused supplies in the manner listed

in Appendix B. In rare circumstances, AKC renal technicians may bring back a patient's unused supplies and dispose of them according to proper waste disposal or to be used for demonstration purposes only (refer to AKC process).

Home Peritoneal Dialysis Supplies

At the end of a patient's home peritoneal dialysis treatment (e.g. patient no longer a suitable candidate or death), families are instructed to dispose of unused supplies in the manner listed in Appendix B.

In rare circumstances, the PD unit will accept from patients a limited quantity of unused supplies for demonstration purposes only (refer to AKC process).

3.0 Waste Containers and Transportation

The information below identifies waste type, container colour, and labeling requirements for the disposal of different waste streams.

3.1 Waste Containers

Waste is disposed into different container types depending on the type of waste being disposed.

- General waste container (household garbage container)
- Sharps container (red or yellow)
- Biomedical container (red or yellow)
- Cytotoxic container

Containers used for the disposal of segregated wastes are colour coded to distinguish waste type and appropriate disposal method. Red colour coding of a container indicates that the waste inside is to be incinerated. Yellow container colour coding of a container indicates that the waste inside is to be autoclaved. In addition to colour coding of containers, proper waste disposal procedures can be indicated through coloured labels with corresponding waste symbols as shown on the following page.

Coloured labels with corresponding waste symbols



Biomedical (Incinerate)



Biomedical (Autoclave)



Cytotoxic

NOTE: Due to the requirements indicated by the colours of the containers, red and yellow colour coded waste containers are never to be left in a client's residence when providing patient home care. These must be properly disposed in a health care facility.

If the patient provided red or yellow sharps container does not contain a cytotoxic label, and cytotoxic medication waste is placed in that container for disposal, the home care worker may need to apply a cytotoxic label to that container for awareness. The Labels obtained through two processes:

Product Image	Oracle Item #	Unit of Measure	Supplier and Item #
	187195	Roll of 500	Pharmasystems Inc. PCT-1
	Non-Catalog Request	Roll of 100	G-M Pearson 70013

3.2 Transportation

There are special regulations that must be followed when transporting some of the containers listed above. The regulatory requirements for CBS workers transporting sharps containers, specimens and/or small oxygen cylinders in their vehicles are as follows:

Oxygen Cylinders: Transportation of Dangerous Goods Regulation 1.15 150 kg Gross Mass Exemption (1)d,(1)i:

- CBS workers transporting a small oxygen cylinder in their vehicles are exempt from transportation of dangerous goods documentation, placarding, and training certification.
- CBS workers transporting a small oxygen cylinder in their vehicles are required to ensure the cylinder is **secured** to prevent movement while transporting.

Sharps: Transportation of Dangerous Goods Regulation 1.42 (1), (2)a:

- CBS workers transporting sharps containers in their vehicles are exempt from transportation of dangerous goods documentation, placarding, and training certification.
- CBS workers transporting sharps containers in their vehicles are required to ensure the sharps container is labeled “*Exempt Human Specimen.*”
- A Type 1C means of containment is required. A Type 1C means of containment as identified by Transport Canada can be a sharps container.

Bilirubin: Transportation of Dangerous Goods Regulation 1.42 (1), (2)a

- CBS workers transporting bilirubin samples in their vehicles are exempt from transportation of dangerous goods documentation, placarding, and training certification provided the samples are considered “Non-Infectious”.
- CBS workers transporting bilirubin samples in their vehicles are required to ensure the sample container is labeled “*Exempt Human Specimen.*”
- A Type 1C means of containment is required. A Type 1C means of containment as identified by Transport Canada can be a sharps container.

4.0 Waste Disposal Procedures

Waste disposal within a residential setting will differ from a healthcare setting due to which wastes a municipality will accept into their landfill stream as well as the reduced volume of such waste. The home care waste process is determined by whether the client disposes of the waste into the residential collection system or if the community service worker removes the waste to a standardized location (e.g. community health clinic).

The following sections outline the waste disposal procedure for the following:

- Home care in a residential setting
- Public health in a community setting

Each subsection describes the waste streams that are encountered in the different settings along with how they are to be properly disposed. Quick reference charts for waste disposal procedures for home care (residential setting) and public health (community setting) described below can be found in Appendix A.

4.1 (Home Care) Community Based Services

The following procedures should be followed when disposing of wastes in a residential setting.

General Waste

The following are examples of general waste materials generated within residential settings:

- soiled dressings;
- lavage tubes;
- disposable gloves;
- catheters;
- empty specimen containers;
- incontinence products, diapers;
- syringes without needles;
- empty medication containers or vials;
- dialysis wastes such as tubing, filters, towels, and disposable sheets;
- IV bags and tubing, empty and without patient information;
- Ostomy supplies
- Personal protective equipment (PPE)

When changing dressings, wrap and double bag before placing them in the regular garbage. Bodily fluids should be disposed of through the sanitary sewer by pouring or emptying them into the toilet, placing the lid down before flushing the toilet and flush twice (e.g. PleurX drainage). If the client and/or family are unable to dispose of bodily fluids, CBS staff should ensure the material is disposed of appropriately and would follow proper PPE procedures.

Biomedical Waste

CBS worker(s) shall work with and educate clients on the proper method and packaging of biomedical waste. Waste items contaminated with blood or body fluids should be placed with absorbent material (e.g. paper towel, continence products, dressings, etc.) for disposal in a residential setting where it is accepted at the landfill. Waste generated from residential premises may be set out for collection only if the waste is double-bagged, securely tied and does not contain medical sharps or medications.

Sharps

In a residential setting, clients should be encouraged to dispose of sharps, such as used needles and lancets, in a safe manner that reduces the risk of puncture to clients or staff. Such objects pose a potential hazard to family members, friends, neighbors, and sanitation workers. These objects must not be disposed of in the sewer system.

To properly dispose of sharps waste, use a puncture resistant container for disposal. Please consult with your local pharmacy for appropriate container types. When the container becomes $\frac{3}{4}$ full, secure the lid and dispose of the container in the acceptable method(s) according to zone as shown in the table below:

Zone	Disposal Location
North	Local community pharmacy
Central	Local community pharmacy
South	Local community pharmacy
Edmonton	Local community pharmacy or local Eco Station
Calgary	Local community pharmacy or landfill*

** A person may set medical sharps out for collection if the medical sharps are contained in a puncture-resistant, non-breakable container with a tight-fitting lid as per City of Calgary.*

Medication Waste

Disposing of medication in a general waste container or flushing them down the toilet is unsafe and can harm the environment. Residents can return unused, partially used or

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expired medications to their local pharmacy for safe disposal. Pharmacies that accept waste medication display the ENVIRx label (as shown).

When returning unused medication to a local pharmacy residents need to ensure:

- Liquids and powders are in their original packaging.
- Capsules or tablets from vials or blister packaging is removed and place in a sealed plastic bag (e.g. Ziploc bag). Empty blister packs can be placed into the general waste.
- Any identifying labels or information are removed for privacy.
- Place medication waste into a sealable container. Please consult your local pharmacy for appropriate container types.



Alberta Pharmacists Association
<https://www.rxa.ca/for-the-public/medication-disposal.aspx>

4.2 (Public Health) Community Based Services

The following is the procedure that should be followed if residents are disposing of their own waste items:

General Waste

The following are examples of general waste materials generated within community-based settings:

- soiled dressings;
- lavage tubes;
- disposable gloves;
- catheters;
- empty specimen containers;
- incontinence products, diapers;
- syringes without needles;
- empty medication containers, vials or vaccine vials;
- IV bags and tubing, empty and without patient information;
- Ostomy supplies
- Personal protective equipment (PPE)

When changing dressings, wrap and double bag them before placing in the regular garbage. Bodily fluids should be disposed of through the sanitary sewer by pouring or emptying them into the toilet, placing the lid down before flushing the toilet and flush twice (e.g. PleurX drainage). If the client and/or family are unable to dispose of bodily fluids, CBS staff should ensure the material is disposed of appropriately and would follow proper PPE procedures.

Biomedical Waste

Biomedical waste must be segregated from other streams at the point of origin. If biomedical waste materials are inadvertently mixed with other waste streams (with the exception of hazardous waste), the entire contents shall be treated and disposed of as biomedical waste. Appropriate segregation of waste materials is important to maintain safety, efficiency and cost control. (refer to *Biomedical Waste #ESM-01-01*).

Sharps

Sharps wastes should be properly contained in a puncture-resistant container that is colour-coded yellow, with a biomedical waste symbol and secured with a tightly fitted lid. Approved containers can be ordered through AHS central stores. Generators of sharps wastes shall dispose of sharps wastes at an approved collection facility.

Where the collection facilities are not readily available (e.g. school immunization clinic, etc.) the sharps container(s) may be transported to a public health facility or arrangements may be made with the contracted waste vendor for collection.

Medication Waste

Medication products whether expired or no longer required should be placed in a red biomedical waste container prior to disposal by the contracted vendor.

Definitions

The following definitions shall be used by community-based services staff taken in part from the Canadian Standards Association (CSA) *Handling of Health Care Waste Materials* Z317.10-15

Biomedical Waste

The Alberta Waste Control Regulations defines biomedical waste as waste that is generated by;

- human health care facilities,
- medical research and teaching establishments,
- clinical testing or research laboratories, and
- facilities involved in the production or testing of vaccines, and contains or may contain pathogenic agents that may cause disease in humans exposed to the waste.

Note: Waste generated within a home care setting does not apply to this definition and is therefore acceptable to be disposed of in the general waste.

Community Based Services include Allied Health, Addictions and Mental Health Public Health Clinic and School Immunization program, Home care, Living (residential) environment

Contaminated Sharps means materials that can puncture, penetrate, or cut the skin and have come in contact with a body fluid or micro-organisms. Examples include needles;

- lancets;
- laboratory glass that is broken or easily broken; or
- scalpel blades; and

Note: *Unused drug vials and ampoules are not contaminated sharps.*

Controlled drug means a drug or preparation that contains a substance specified in Part G of the *Food and Drug Regulations*.

colour-coding means the application of colour to a container in order to identify the category of waste for which it is to be used.

Cytotoxic means the property of a substance or drug which has a toxic effect on a living cell and/or which interferes with or prevents cell function. This term is used to describe pharmaceuticals used for the treatment of cancer and, in some cases, for the treatment of other conditions (e.g., psoriasis, arthritis).

Disposal means the removal of waste, treated or residue from residential and/or community health facility to a final location. Disposal may involve placement in a landfill or discharge to a sanitary sewer.

General waste means material that does not pose a disease-related risk or threat to people or the environment when managed in accordance with appropriate practices and applicable regulations.

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

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Medication means any substance or mixture of substances manufactured, sold or represented for use in the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state, or its symptoms, in human beings, and restoring, correcting or modifying organic functions in human beings.

PleurX System includes a drainage catheter and drainage bottles that collect fluid.

Pressurized container waste is waste from any container that is under pressure.

Note: *Pressurized container waste includes aerosol cans, compressed gases.*

Segregation means the separation of wastes at the point of generation according to the waste category.

Sharps are items used in medical care diagnosis or research that can be contaminated with biohazardous or cytotoxic agents and that are capable of causing punctures, cuts, or tears the skin or mucous membranes.

Note: *Sharps include hypodermic, IV (intravenous) needles, syringes with needles, staples.*

Appendix A

*Community Based Services (**Home Care**) Waste Disposal Procedure Quick Reference Table*

*Community Based Services (**Public Health**) Waste Disposal Procedure Quick Reference Table*

Community Based Services (Home Care) Waste Disposal Procedure Quick Reference Table

Waste Stream	Examples	Disposal	
General Waste	<ul style="list-style-type: none"> • Procedure trays • Gloves • Masks • Hemodialysis tubing and filter (including clotted hemodialysis systems) • 	<ul style="list-style-type: none"> • Dressings • Suction and urinary catheters • Diapers (incontinence and/other) • Peritoneal tubing and bag (PD effluent from bag to be emptied down toilet or tub drain prior to disposing bag into garbage) • Empty vaccine vials 	<p>Double bag and securely tie general waste before setting out for municipal waste collection in all zones. Do not include sharps or medication waste.</p>
Sharps Waste	<ul style="list-style-type: none"> • Syringes • Lancets • Needles • Scalpel blades 	<ul style="list-style-type: none"> • Suture needles • Insulin pen needles • IV spikes and needles 	<p>Place sharps waste into a puncture-resistant container and bring to a local pharmacy for proper disposal. Please consult your local pharmacy for appropriate container types.</p>
Medication Waste	<ul style="list-style-type: none"> • Pills • Inhalers • Jars • Tubes • Syringes with residual medication (e.g., heparin syringe with residual used for hemodialysis) 	<ul style="list-style-type: none"> • Vaccines • Vials that are not empty • Ampoules • Any medication containers with liquid residue 	<p>Place medication waste into a sealable container and bring to your local pharmacy or identified drop off location for disposal. Please consult with your local pharmacy for appropriate container types.</p>
Known Hazard Medication/Cytotoxic Waste	<ul style="list-style-type: none"> • Empty vials, ampules, IV bags, syringes, needles, tubing, hemodialysis tubing/ filter, etc., contaminated with known hazard medications, chemotherapy substances, or other cytotoxic medications. 	<ul style="list-style-type: none"> • Items that have been contaminated with blood and body fluids, including human waste from patients receiving known hazard/cytotoxic medications (during the precautionary period). 	<p>Double bag and securely tie before setting out for municipal waste collection in all zones. Do not include sharps or non-hazardous medications. If during precautionary period and being transported from the patient's home by the health care provider, place waste into a red cytotoxic waste container prior to relocating to a predetermined drop off location for disposal (e.g. community health facility). If the waste is being transported by the patient and/or their family they are responsible for disposal as per patient education (e.g. returning containers to the dispensing pharmacy (sharps) or cancer center (waste bag) that accepts this type of waste).</p>

Community Based Services (Public Health) Waste Disposal Procedure Table

Waste Stream	Examples	Examples	Disposal
General Waste	<ul style="list-style-type: none"> • Procedure Trays • Gloves • Masks • Dressings 	<ul style="list-style-type: none"> • Suction and urinary catheters • Diapers (incontinence and/other) • Empty vaccine vials • Procedure trays • Gloves • Masks 	Double bag and securely tie general waste before setting out for municipal waste collection in all zones. Do not include sharps or medication waste.
Biomedical Waste	<ul style="list-style-type: none"> • Items grossly contaminated with blood or body fluid. • Liquid or semi-liquid blood, blood products and human body fluids excluding urine and feces (unless grossly contaminated with blood). • Live or attenuated vaccines. 	<ul style="list-style-type: none"> • Tubing, bags contaminated with blood. • Clamped chest drainage sets. • Human specimens excluding urine or feces. • Any container that has come in contact with a human specimen. 	Place biomedical waste into a yellow sharps container or yellow biomedical waste container for disposal. This waste must be in a sealed container.
Sharps Waste	<ul style="list-style-type: none"> • Syringes • Lancets • Needles • Scalpel blades 	<ul style="list-style-type: none"> • Suture needles • Insulin pen needles • IV spikes and needles 	Place sharps waste into a yellow sharps container or biomedical waste container for disposal.
Medication Waste	<ul style="list-style-type: none"> • Pills • Inhalers • Jars • Tubes 	<ul style="list-style-type: none"> • Vaccines • Vials that are not empty • Ampoules • Any medication containers with liquid residue. 	Place medication waste into a red biomedical waste container for disposal.
Known Hazard Medication/Cytotoxic Waste	<ul style="list-style-type: none"> • Empty vials, ampules, IV bags, syringes, needles, tubing etc., contaminated with known hazard medications, chemotherapy substances, or other cytotoxic medications. 	<ul style="list-style-type: none"> • Items that have been contaminated with blood and body fluids, including human waste from patients receiving known hazard/cytotoxic medications (during the precautionary period). 	If outside of the precautionary period it can be disposed as general waste. If during precautionary period, place waste into a red cytotoxic waste container for disposal.

Appendix B

Home Therapies (Hemodialysis and Peritoneal Dialysis) Supply List: AKC-North and AKC-South

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The following instructions apply to disposal procedures for **UNUSED** supplies only. Please refer to Appendix A for instructions on disposal procedures for USED supplies.

Item	Waste Disposal Stream	Comment
Syringes <ul style="list-style-type: none"> empty with sodium citrate normal saline filled insulin with needle 3 cc syringe with needle 	General General General Sharps container Sharps container	
Needles – blunt; fistula	Sharps container	
Empty Blood tubes <ul style="list-style-type: none"> red gold mauve blue 	General General General General	
Vacutainer holder with needles	Sharps container	
Citric Acid 20%	Empty in drain, discard empty bag into general waste	
Sharps container (2 gallon)	Filled container is taken to nearest pharmacy	
Specimen zip lock bag	General	
Blood lines	General	
Dialyzer	General	
Mask	General	
Gloves	General	
Tape (paper, plastic, silk)	General	
Outlet port clamps (plastic)	General	
Gauze, mepore dressing, tegaderm dressing	General	
Normal saline – 1 litre bags	Empty in drain, discard empty bag into general waste	
Sodium Bicarbonate cartridges	General	
Hand sanitizer <ul style="list-style-type: none"> microsan quick care waterless 	General General	
Sodium carbonate cartridges		
Citric acid cartridges		
Constant cleanse spray	General	
Isage lotion (no rinse)	General	
Chorohexidine swabs	General	
Alcohol swabs	General	
Povidone-iodine prep pads	General	
Tego connectors	General	

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Mini disconnect caps	General	
Cotton tipped applicators	General	
Band-Aids	General	
Blue absorbent pads	General	
Transducer filters	General	
Hemaperoxy disinfectant (liquid)	Give to the renal technician when they come to remove the dialysis machine, return to home dialysis unit or take to nearest Eco Station	
Hemastix	General	
Test strips (Renalcheck)	General	
Chlorine strips	General	
Calcium powder	General	
Magnesium powder	General	
Sodium phosphate enema (solution)	Empty in drain, discard in General	
Hemodialysis Acid solution: Potassium, calcium, magnesium, sodium, chlorine, acetic acid, glucose	Empty into toilet, discard container in general waste	
Peritoneal Dialysis solution Glucose, calcium chloride, magnesium chloride, sodium chloride, sodium bicarb	Empty into toilet, discard bag into general	
Luer lock cassette	General	
Amia cassette	General	
Prong manifold set	General	
Cycler drainage set	General	
Manifold for drainage set	General	
Drain line extension	General	
Opticaps (with betadine)	General	
Empty sterile bag	General	
Effluent sample bag	General	
Virocidin (empty container)	General	

References

Alberta Provincial Continuing Care. Medication Assistance Program (MAP) Manual. Home and Supportive Living. August 26, 2014. Section 8: Medication Management System (pg.33).
<https://www.albertahealthservices.ca/assets/info/seniors/if-sen-map-program-in-alberta.pdf>

Alberta Pharmacists Association
<https://www.rxa.ca/for-the-public/medication-disposal.aspx>

Alberta Waste Control Regulations
http://www.qp.alberta.ca/documents/Regs/1996_192.pdf

City of Calgary Waste Bylaw 20M2001
<https://www.calgary.ca/CA/city-clerks/Documents/Legislative-services/Bylaws/20M2001-WasteAndRecycling.pdf?noredirect=1>

City of Edmonton Waste Bylaw 17555
<https://www.edmonton.ca/documents/Bylaws/C17555.pdf>

Cytotoxic Drug Manual. Administration and Handling Guidelines.
<http://insite.albertahealthservices.ca/PharmacyServices/tms-phm-ez-cytotoxic-manual.pdf>).

Guide for Management of Biomedical Waste generated in Physicians' Offices
https://www.albertadoctors.org/leaders-partners/clinical-resources/biomedical-waste/MemSerClinResGuideforManofBiomedical_waste_poster.pdf

Handling of Health Care Waste Materials CSA Z317.10-15. Accessed May 2018

Hazardous Medication Personal Protective Equipment (PPE) Guide
<http://insite.albertahealthservices.ca/assets/pmmc/tms-pmmc-hazardous-medication-ppe-guide-frontline-non-clinical.pdf>

National Institute for Occupational Safety and Health (NIOSH) 2016,