



POLICY AND PROCEDURE	
SUBJECT/TITLE:	Use of Needleshark NS-950
APPLICABILITY:	Nursing Department / Laboratory
CONTACT PERSON & DIVISION:	Diane Thompson, MSN, RN
ORIGINAL DATE ADOPTED:	01/31/2019
LATEST EFFECTIVE DATE:	01/31/2019
REVIEW FREQUENCY:	Every three (3) years and as needed
BOARD APPROVAL DATE:	N/A
REFERENCE NUMBER:	200-019

A. PURPOSE

The intent of this document is to detail the policy and procedure for using the Needleshark NS-950 in the various clinics at Canton City Public Health (CCPH). A needlestick or a cut from a contaminated sharp can result in an employee being infected with human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), and other bloodborne pathogens. Careful handling of contaminated sharps is the responsibility of each employee; however, CCPH has implemented measures to help eliminate this risk by utilizing single-use, safety engineered needles and the Needleshark NS-950.

B. POLICY

To ensure the safety of all clinicians, all employees who use sharps are required to dispose of them in approved containers. It is common practice at CCPH to immediately place used needles and other sharps in a sharps disposal container to reduce the risk of needle sticks, cuts or punctures from loose sharps. CCPH utilizes single-use, safety engineered needles to help prevent this.

The following guidelines are used and followed by all employees at CCPH:

- All sharps should be disposed of via the red/yellow sharps container provided by CCPH.
- Sharps should never be disposed of in the regular trash.
- The safety devices on needles and other sharps should be activated immediately after use.
- Never carry an uncapped needle around with you or place it in your pocket.
- Used needles should not be recapped (unless they have a safety cap), bent, cut, removed from the syringe or tube holder, or otherwise manipulated.
- **Do not** pick up broken glass or other sharp objects with hands, use mechanical means such as a brush and dustpan, tongs, etc., or attempt to recap a needle that is not yours.
- **Do not** recycle or reuse needles or syringes.
- **Do not** flush used needles or syringes down the toilet.
- **Do not** use glass containers to dispose of the needles or syringes.



C. BACKGROUND

Ohio Environmental Protection Agency (EPA) regulates the generation and treatment of infectious waste. Ohio's infectious waste regulations contain approved treatment methods. Most commonly, autoclave and incineration technologies are used to treat infectious waste prior to disposal. Additional approved treatment methods include chemical treatment utilizing a sodium hypochlorite solution (bleach) for stocks and cultures; applied heat encapsulation for sharps; and chemical treatment utilizing peracetic acid and grinding.

According to Ohio EPA, CCPH is classified as a small quantity generator (less than 50lbs of infectious waste per month). Ohio law allows a small generator of infectious waste to dispose of these wastes (with the exception of untreated cultures) in the regular trash. Biohazard bags and wastes visibly contaminated with blood are also allowed into the trash from a small generator.

OSHA's Bloodborne Pathogens Standard, 29 CFR 1910.1030, has provisions for the protection of employees during the containment, storage, and transport of regulated waste other than contaminated sharps [29 CFR 1910.1030(d)(4)(iii)(B)]. The bloodborne pathogens standard defines regulated waste as liquid or semi-liquid blood or other potentially infectious material (OPIM); contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM [29 CFR 1910.1030(b)].

In general, regulated wastes, other than contaminated sharps, must be placed in containers which are: *(i) Closable; (ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping; (iii) Labeled or color-coded in accordance with paragraphs (g)(1)(i); (iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping* [29 CFR 1910.1030(d)(4)(iii)(B)(1)(i)-(iv)].

Small generator facilities are required to maintain a monthly generation log of the amount of infectious waste generated each calendar month. The monthly generation rate log must show the weight of all the infectious waste generated during each calendar month. If the infectious waste is sent to a licensed infectious waste treatment facility, the generator may use the shipping papers that include the weight of all the infectious waste that is generated during that calendar month.

The Needleshark is a volume reduction medical device and method for processing waste materials. The device significantly eliminates the obvious risks of current sharps containers, effortlessly shredding needles and syringes at the point of origin.

The Needleshark operation starts by dropping the needle/syringe into the shredding chamber. The hands-free appliance automatically shreds needle/syringe into unrecognizable micro-sized particles, which is then disposed of and secured into the sharps container. As the needle/syringe is shredded, the patented HEPA filter removes potential airborne aerosols, contaminants, stale and impure air during this process, keeping the container fresh and odorless. The hazardous material is locked safely and securely inside the machine. When the shredded needles/syringes fill the container, an indicator light signals a full container. Simply remove the container from the Needleshark and dispose of or recycle according to State law.

This shredding process renders the contents of the sharps container as noninfectious, and therefore can be marked as treated waste and black bagged for disposal.



D. GLOSSARY OF TERMS

Black bagged – dispose of in normal trash.

Infectious agent – a type of microorganism, pathogen, virus, or proteinaceous infectious particle that can cause or significantly contribute to disease in or death of human beings.

Infectious wastes – any wastes or combination of wastes that include cultures and sticks of infectious agents and associated biologicals, human blood and blood products, and substances that were or are likely to have been exposed to or contaminated with or are likely to transmit an infectious agent or zoonotic agent.

Ohio EPA (Environmental Protection Agency) – regulates the generation and treatment of infectious waste as authorized by Chapter 3734 of the Ohio Revised Code.

Sharps – needles, with or without syringes, including insulin pen needles, lancets or blades, and broken medication ampules or vials.

Sharps red container – used for cytotoxic medications/sharps. These containers are incinerated on disposal or placed in infectious waste management disposal.

Sharps yellow container – used for sharps. Used with the Needleshark NS-950 where contents are shredded and disinfected before disposal. These are black bagged and discarded in the regular trash.

E. PROCEDURES & STANDARD OPERATING GUIDELINES

At CCPH, all sharps are discarded in the Needleshark NS-950 except for the following:

1. Safety-Lok blood collection butterfly device
2. HIV test kits
3. Plastic collection tubes
4. Other sharps that may have rubber connections

The following are the steps for using the Needleshark NS-950:

1. Turn the Needleshark on. It can be left on throughout the clinic.
2. Immediately after using the syringe/needle, place it in the shredding chamber. **Please note:** No more than 6-7 syringes/needles can be placed in the chamber at one time [the only clinic this may be appropriate for is the needle exchange program (SWAP)].
3. Press the silver button or wave hand over the black motion detector to generate the automatic shredding.
4. At the end of the clinic or when the clinician no longer has use for the Needleshark, close the shredding chamber cover and turn the Needleshark off.

Problem solving

On occasion, the shredder can get jammed when the syringes/needles become lodged perpendicular to the teeth of the machine thus causing a jam. Turn the device off and attempt to readjust the syringe/needle parallel



to the teeth with a device such as tweezers, forceps, pliers or the like (do not use your hand to manipulate the syringe/needle). Once parallel, turn the machine on and attempt to shred the needle. If you continue to have a problem and are unable to dislodge, notify a supervisor and do not use the machine.

If the machine makes unusual sounds or is not functioning correctly, notify a supervisor.

On occasion, the inside compartment that houses the yellow sharps container can have some spillage of the shredded contents. When this happens, remove the sharps container and vacuum out the pieces in the bottom of the compartment. The hand held vacuum is stored in the stat lab.

Removal of Full Container

The Needleshark NS-950 has a sensor that alerts you when the container is full (2 red lights on the top of the machine). To remove a full container:

1. Turn the machine off and unlock the front compartment that holds the container.
2. Use gloves to handle a partial or full container.
3. Shake the container to make sure it is at capacity (sometimes the particles accumulate on top of each other causing the machine to incorrectly identify that it is full – if not full, put it back in the Needleshark and continue using.
4. If the container is full, remove it and replace it with a new container.
5. Close and lock the front access panel.
6. Secure the lid on the full container.
7. All full containers must be documented individually and then discarded in the trash.

Documenting and Discarding Treated Waste

1. A treated waste label is completed by the individual that removes the full container. (These labels are located on the countertop in the stat lab). The following information must be documented with a permanent sharpie on the treated waste label:
 - a. Date: date container is discarded
 - b. Entity: "CCPH"
 - c. Method: "Shredding"
 - d. UDI: all digits following + on the bottom of the container (usually 9 digits)
 - i. Notify a supervisor if the UDI label is missing from the bottom of the container.
2. Place the treated waste label on the container over the biohazard symbol.
3. Transport the closed container to the laboratory – if more than a few containers, transport on a cart.
4. Laboratory staff will complete the Medical Waste Log by documenting the following fields:
 - a. Employee
 - b. Date
 - c. The form is prefilled with the manufacturer's part of the UDI number. Laboratory staff add the remaining digits of the UDI number.
 - d. Weight in lbs



- Once disposal is documented, containers are black bagged and removed by the cleaning staff with the normal trash.

F. CITATIONS & REFERENCES

Ohio Revised Code 3745-27 Solid Waste and Infectious Waste Regulations

Ohio Revised Code 3745-27-30 Standards for generators of infectious wastes

Safe Medical Technology, www.safemedtech.com

G. CONTRIBUTORS

The following staff contributed to the authorship of this document:

- Diane Thompson, MSN, RN

H. APPENDICIES & ATTACHMENTS

200-019-01-A Medical Waste Log

I. REFERENCE FORMS

N/A.

J. REVISION & REVIEW HISTORY

Revision Date	Review Date	Author	Notes

K. APPROVAL

This document has been approved in accordance with the “800-001-P Standards for Writing and Approving PPSOGFs” procedure as of the effective date listed above.