

# Disposing of Vaccines in Michigan

Some unused, nonviable or expired vaccines may be returned to the vaccine manufacturer for credit under their vaccine return policy. Ensure follow up with the appropriate vaccine manufacturer. If the vaccine is Vaccines for Children (VFC) vaccine, contact your Local Health Department (LHD). If the vaccine is private vaccine, be sure to contact the manufacturer.

Proper disposal of vaccines to protect our environment is everyone's responsibility. If vaccine cannot be returned to the vaccine manufacturer, then proper disposal guidelines need to be followed. There may be times when disposal of vaccine vials and pre-filled syringes will need to occur even when the vial or syringe is not empty<sup>1</sup>.

To dispose of these materials appropriately, you need to know if they are any of the following:

- Nonhazardous/noninfectious waste
- Medical/biohazardous waste
- Hazardous waste
- Both (medical/biohazardous and hazardous waste)

## **Nonhazardous/Noninfectious (normal trash)**

An empty vial that contained preservative-free vaccine is non-infectious and not considered medical waste.

Nonhazardous and noninfectious waste is waste that can be disposed of in the normal trash. It is also called solid waste or industrial solid waste.

## **Medical/Biohazard Waste (Infectious Waste)**

Infectious waste has the potential to transmit disease to humans. Medical/biohazard waste disposal is not the same as hazardous waste disposal.

Medical/biohazard waste is any waste that contains infectious material or potentially infectious substances, such as blood, and should be disposed of in a medical waste bin, bag or sharps container. Needles, blades, glass pipettes, and other wastes that can cause injury during handling should be disposed of as medical/biohazard waste. Syringes with a sharp (a needle) are considered medical/biohazard waste and need to be disposed of in a sharps container. Live attenuated vaccines are considered medical waste and should be disposed of in a medical waste bin, bag or sharps container. Vaccines that contain mercury (such as thimerosal<sup>2</sup>) or cresol-based preservatives (most commonly found in multi-dose vials and some pre-filled syringes) are considered medical waste and should be disposed of in a medical waste bin, bag or sharps container. This includes all multi-dose vials of vaccine and the Novartis Fluvirin<sup>®</sup> prefilled syringes.

## **Hazardous Waste**

Hazardous waste is waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. There are no vaccines that fall into the category of hazardous waste.

## Disposal of Vials, Syringes, Applicators and Sprayers

Waste Items	Type of Waste	Where to Dispose
<ul style="list-style-type: none"> <li>• Empty inactivated vaccine vials</li> <li>• Empty inactivated vaccine syringes <u>without</u> needles</li> </ul>	Nonhazardous/Noninfectious waste	<ul style="list-style-type: none"> <li>• Normal trash</li> <li>• May be placed in a sharps container and disposed of as medical/biohazard waste</li> </ul>
<ul style="list-style-type: none"> <li>• Preservative-free vaccines (most commonly single-use vials and some pre-filled syringes without needles)</li> </ul>	Nonhazardous/Noninfectious waste	<ul style="list-style-type: none"> <li>• Normal trash</li> <li>• May be placed in a sharps container and disposed of as medical/biohazard waste</li> </ul>
<ul style="list-style-type: none"> <li>• Empty syringes with needles</li> </ul>	Medical/Biohazard waste	<ul style="list-style-type: none"> <li>• Sharps container</li> </ul>
<ul style="list-style-type: none"> <li>• Live vaccines:               <ul style="list-style-type: none"> <li>○ LAIV (live attenuated influenza vaccine) in nasal sprayer</li> <li>○ Oral vaccine applicator</li> <li>○ Live vaccine in vials</li> </ul> </li> </ul>	Medical/Biohazard waste	<ul style="list-style-type: none"> <li>• Medical waste bag or bin</li> <li>• Sharps container (needle attached to syringe must be disposed in sharps container)</li> </ul>
<ul style="list-style-type: none"> <li>• Vaccines containing mercury or cresol-based preservative               <ul style="list-style-type: none"> <li>○ Multi-dose vials containing vaccine</li> <li>○ Pre-filled syringes (i.e., Novartis Fluvirin<sup>®</sup>)</li> </ul> </li> </ul>	Medical/Biohazard waste	<ul style="list-style-type: none"> <li>• Medical waste bag or bin</li> <li>• Sharps container (needle attached to syringe must be disposed in sharps container)</li> </ul>
<ul style="list-style-type: none"> <li>• There are no vaccines that are considered hazardous waste</li> </ul>	Hazardous waste	<ul style="list-style-type: none"> <li>• Hazardous waste container or sharps container</li> <li>• Must be clearly marked as “Hazardous/Universal Waste-pharmaceuticals”</li> <li>• Company must have license to dispose of hazardous waste</li> </ul>

<sup>1</sup>A vial is considered empty when there is 3% or less of the original vaccine remaining and all vaccine that can be removed by normal means (syringe) has been removed. Single- or multi-dose vials that have been fully administered may still contain extra vaccine, just because there is not enough vaccine left for a dose does not mean the vial is empty and it needs to be disposed of properly.

<sup>2</sup>Vaccines labeled as "preservative-free" may contain trace amounts of thimerosal that were used during manufacturing but later removed, leaving only a trace amount (about 1/100th of the amount found in vaccines that use thimerosal as a preservative). Vaccines with trace amounts of thimerosal need to be disposed of as Medical/Biohazard waste.