Minnesota Pollution Control Agency

Facts about Infectious Waste

Hazardous Waste Division Fact Sheet #4.21 September 1997

What is infectious waste?

Infectious waste is a small portion of the waste from hospitals, clinics, and other medical facilities — approximately 10 to 15 percent of the total waste stream. In 1989, the Minnesota Legislature passed the Infectious Waste Control Act, defining infectious waste as:

Laboratory waste

Includes waste cultures and stocks of agents that are infectious to humans, discarded contaminated items used to inoculate or transfer cultures and stocks of agents infectious to humans, and wastes from the production of biologicals and vaccines that are infectious to humans.

Blood

Includes waste human blood, blood products in containers, and solid waste items — such as gauze — that are dripping with human blood or blood products.

Research animal waste

Includes carcasses, body parts, and blood from animals exposed to agents that are infectious to humans.

Regulated human body fluids

Includes cerebrospinal, synovial, peritoneal, pleural, pericardial and anmiotic fluids in containers, as well as solid waste items dripping with such fluids.

Sharps

Includes discarded items that can cause inoculation of infectious agents through the skin — including needles, scalpel blades, pipettes, and discarded glass or rigid plastic vials containing infectious agents.

What does the Infectious Waste Control Act require?

The Infectious Waste Control Act was passed to ensure proper management of infectious waste. It required the Minnesota Pollution Control Agency (MPCA) to create an Infectious Waste Management Program. The MPCA's program is based on a management plan system, rather than a manifest tracking system, such as those used for hazardous waste and for the Federal Medical Waste Tracking Program.

The infectious waste management program requires all transporters and storage, treatment, and disposal facilities to submit management plans to the MPCA. The MPCA regulates infectious waste commercial transporters and storage, treatment, and disposal facilities. Medical facilities that incinerate on-site need to submit a plan to the MPCA.

Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194
(612) 296-6300, TDD (612) 282-5332, toll-free (800) 657-3864
Upon request, this material can be made available in alternative formats for people with disabilities.
Printed on recycled paper containing at least 20 percent fibers from paper recycled by consumers.

Under the regulatory program, the MPCA has developed rules for:

- Packaging and labeling of infectious waste;
- Handling and segregation of infectious waste;
- Infectious waste commercial transporter registration;
- Infection waste management plan requirements; and
- Standards for storage, transport, spill response, treatment and disposal of infectious waste.

The MPCA will review management plans for completeness and will approve them *only* if they meet all requirements of the statute and the rule. The MPCA will conduct on-site inspections prior to the plans being approved. The MPCA requires plans to be resubmitted every two years.

Why was the Infectious Waste Control Act needed?

Several factors contributed to the need for changing existing management practices for infectious waste:

- *Changes in the way garbage was managed.* In the past, garbage was taken directly to landfills where there was little, if any, human contact with the waste. Today, much of our garbage goes to processing plants, such as composting and refuse-derived-fuel facilities, where recyclable and non-processable materials are picked out by waste handlers. To protect these workers, a system is needed to keep infectious waste out of municipal solid waste.

- *Obsolete medical waste incinerators.* The MPCA estimates that 90 percent of the existing medical waste incinerators will not be able to meet the air emission limits in air quality rules currently being developed. In the future, instead of incinerating wastes on-site, health care facilities will be shipping wastes off-site.

- *The need for information aimed at influencing federal policy-makers.* Information and data on the amounts and types of infectious waste are needed to demonstrate to federal policy-makers that a nationwide system of tracking infectious waste is not needed. A two-year demonstration federal program has been implemented in New York, New Jersey, and Connecticut. Based on that program, the U.S. Environmental Protection Agency will evaluate the need for implementing the federal program on a nationwide basis. Minnesota policy-makers plan to use the information gained from state infectious waste management plans to demonstrate that Minnesota's system is a more cost-effective and reasonable approach to managing infectious waste.

- *Fear of contracting infectious diseases.* This fear has been heightened by the AIDS crisis, and magnified by incidences of improper disposal around the country. Although such incidents have been minor in Minnesota, problems have occurred at solid waste processing facilities. The response to items such as blood bags and needles appearing on facilities' tipping floors resulted in public pressure to re-examine existing regulations.

Who is at risk because of infectious waste?

Exposure to infectious agents through the handling of infectious waste is the reason the laws and management rules are needed. Those at greatest risk are people who have occupational contact with infectious waste, such as health-care workers, housekeeping and maintenance staff, and transportation and disposal workers. Even though these people are at the greatest risk, the chance of disease transmission is still very low with good safety practices in place.

The general public is at an extremely low risk of disease transmission from infectious waste. This is true mainly because the public is not routinely exposed to infectious waste. In fact, under the MPCA's Infectious Waste Management Program, the general public should never be exposed to infectious waste.

How would disease be transmitted from infectious waste?

Infectious diseases are transmitted by very specific routes which require the following conditions for transmission:

1. The infectious agent must be present and must come from an infected person. Bacteria and viruses are very fragile and cannot live long outside of the body, so the chance of infection decreases rapidly.

2. There must be sufficient numbers of the infectious agents present to allow for transmission of the disease. Some strains of viruses in an infected person have varying concentrations of infectious particles that are capable of transmitting disease. For example, the hepatitis virus has more concentrated amounts of infectious particles than the AIDS virus. This explains why the risk of acquiring hepatitis from an exposure to infectious waste is far greater than that of AIDS, along with the fact that the hepatitis virus is a much stronger virus, and can live longer outside of the body.

3. There must be an entry point into the body. This would include a break in the skin, such as a cut, abrasion, or puncture wound. For this reason, the MPCA has set specific requirements for handling sharps, a component of the infectious waste stream.

4. There must be a susceptible host. Since the most frequently transmitted infectious disease is hepatitis, more and more high-risk groups are being vaccinated against it, making them non-susceptible.

Risk of transmission is extremely low.

The risk of disease transmission from infectious waste is very low. All of the above factors must be present for disease transmission. If any of the above factors are missing, disease transmission will not occur.

Requiring proper packaging of infectious waste is the key component of the MPCA's Infectious Waste Management Program. Proper segregation and packaging will prevent workers and the general public from coming into direct contact with infectious waste.

More information?

For more information, contact the MPCA Infectious Waste Management Program at (612) 296-~~7227~~ 6300, or toll-free at (800) 657-3864. TTY users call (612) 282-5332.

Or you may contact the nearest regional office listed below:

- Duluth: (218) 723-4660
- Brained: (218) 828-2492
- Detroit Lakes: (218) 847-1519
- Marshall: (507) 537-7146
- Rochester: (507) 285-7343