

Podcast: Waste management

Welcome to the Difäm Health community. My name is XXX and here with me is XXX. Today we'll delve into another important aspect of Infection Prevention and Control (IPC): healthcare waste management in resource-limited settings. It is an important issue with many different aspects. Very often, healthcare waste management is not considered important and is therefore overlooked, which can result in an inappropriate disposal of dangerous and hazardous waste. This can lead to serious health risks for both patients and healthcare workers as well as environmental problems.

This is true, but let's start at the beginning. Let us define what we mean by healthcare waste. Healthcare waste refers to every waste generated by healthcare facilities such as hospitals, clinics, and laboratories. It includes general waste, infectious waste, and hazardous waste such as chemicals and sharps. The problem is, that very often, these kinds of waste are not separated accordingly but mixed together, which makes them dangerous and difficult to dispose of properly. This can lead to a number of health risks, including the spread of infectious diseases through contaminated waste, exposure to hazardous chemicals and injuries from improperly disposed sharps. In addition, it is an environmental disaster if this waste is just dumped anywhere. Substances from medications can contaminate the soil or leak into drinking water and cause poisoning.

Ugh, that sounds like quite a big issue and nobody would want this to happen. I see that there are a lot of things that you can do wrong concerning medical waste. However, how do we do it right then?

The WHO has issued a number of recommendations and papers on health care waste management but it always starts with me and the waste I have in my hands: what kind of waste is it and where do I put it? It all starts with waste separation. Healthcare facilities should have a waste separating system from the point where the waste is generated. Waste should be separated into different categories, such as infectious waste, sharps, and general waste. One can of course introduce further separation criteria like recyclables for example, but infectious, sharps and general is the absolute minimum of separation criteria. Waste separation helps reduce the risk of cross-contamination and makes it easier to manage and dispose of waste safely.

You are talking about three categories. Infectious waste, sharps and general waste. For sharps, I have a pretty clear picture, but maybe you can also give some examples of infectious waste and general waste.

Okay, about infectious waste, also known as biomedical or clinical waste. It refers to any waste generated in healthcare facilities that has the potential to transmit infectious agents to humans. This type of waste includes items that are contaminated with blood or other bodily fluids, as well as items that have been in contact with patients who have infectious diseases. Examples of infectious waste include for example surgical gloves, gowns and masks, used swabs or bloody bandages, used catheters, IV-lines, lab specimens and human tissues or organs.

Infectious waste poses a significant risk to public health if not managed properly. It can transmit a wide range of infectious diseases, including HIV, hepatitis B and C, and tuberculosis. Therefore, it is essential that infectious waste is separated, collected, transported, treated, and disposed of in a safe and appropriate manner to prevent the spread of infection.

In healthcare facilities, infectious waste is typically separated from other types of waste and placed in designated containers that are labelled and color-coded to distinguish them from non-infectious waste. These containers are designed to be leak-proof and puncture-resistant to prevent accidental exposure to infectious agents. Once collected, infectious waste is typically treated using methods such as incineration, autoclaving, or chemical disinfection, before being disposed of in a manner that is safe and compliant with local regulations.

Okay, everything that is potentially contaminated goes to infectious waste. What about the other stuff?

Sharps you already mentioned. To sharps apply the same rules as to infectious waste, because most sharps have come in touch with the patient like syringes or needles, lancets and blades. But there are also sharps that are non-infectious like used or broken vials, broken medicine bottles. All these things should go into a special sharps container. These containers should be available at all places where sharps are in use, so that they can be disposed of immediately and have not to be carried around or managed by third persons. Sharps are a special threat as they always carry the possibility of bringing pathogens accidentally directly into our bloodstream through injuries.

Healthcare workers who handle sharp waste and infectious waste should be provided with appropriate personal protective equipment (PPE) like heavy duty gloves to avoid accidental needle prick injuries and sturdy aprons and boots in the event of spilling or leakage. They also should be trained in safe handling and storage practices.

I see, medical waste is really a much more dangerous thing than normal household waste, where I just recycle whatever I can and go outside and dump the rest in my bin...

Yes, it is, but with general medical waste we come to the less dangerous section. General healthcare waste refers to any waste generated in healthcare facilities that is not considered infectious or hazardous. This type of waste includes items such as paper and cardboard, food and kitchen waste, plastics, and other non-infectious materials. General healthcare waste may also include waste generated from administrative and support functions in healthcare facilities, such as office waste, packaging materials, and cleaning supplies.

While general healthcare waste is not considered hazardous, it still needs to be managed properly to ensure that it is disposed of in a safe and environmentally responsible manner. Once collected, general healthcare waste is typically treated using methods such as landfilling or incineration, depending on the type and quantity of waste. However, there is an increasing interest in sustainable waste management practices, such as recycling or composting, to reduce the environmental impact of healthcare waste.

Okay, we have infectious waste, sharps and general waste all nicely separated and put into different bins. What next?

As I already said concerning sharps: The waste has to be removed from the patients' rooms, the theatres, the offices, the wards... and the person who does it should wear proper personal protective equipment and be trained in safety measures and safe handling of different kinds of waste. In addition, there should be protocols in place how to handle for example major spillings or needles prick injuries.

Facilities and administrations should make sure that all the equipment needed including waste containers, sharps containers, and autoclaves for sterilization of infectious waste and incinerators are available and regularly maintained to ensure that they are not damaged and function properly.

Okay, that was quite a lot. I sense a new interesting topic coming up: incineration. However, maybe we'll save this for our next podcast, so that everything we learned today about waste categories, infectious waste, sharps, general waste and how to separate them can settle a little.

I am glad we had this talk today. Cooperation of clinicians, nurses and all the staff working in a hospital not only with patients but also in administration or in other functions is important to tackle the waste issue properly.

Next week we'll have another talk about what to do with the waste in all the bins and how to get rid of it. I hope that you will tune in again.

However, until then – stay safe and stay blessed!