



Section VII _____ More About Regulated Medical Waste

Reducing the amount of red bags generated is the first step in any hospital waste management program. Why is that? The reason is very simple: money. In most states, red bag waste haulage is at least five times more expensive than regular clear-bagged waste. The cost savings can generate the interest to focus on other programs to reduce the volume and toxicity of the waste.

So, let's get to work to try to make it as clear as possible, how you can take steps to reduce the amount of red bagged or regulated medical waste (RMW) at your facility. Large or small, urban or rural, operating room or outpatient clinic, every area can reduce costs through better understanding of exactly what has to go into the red bag.

Lastly, **don't consider treatment options until you reduce the generation of RMW.** Many facilities look into treatment options before red bags have been tackled. After segregation implementation, it may not make sense for your facility to treat on-site, and if it does, your throughput necessities will be greatly reduced. Reduce first and then consider treatment options. (See [Appendix O How to Choose Treatment Technologies](#))



Definitions

Before starting your RMW reduction, your facility should create or review your existing definition. Make sure that your definition aligns itself with your state's definition [link](#). Consider these following definitions adopted from the American Hospital Association (AHA), the Association of Operating Room Nurses (AORN), and state definitions:

Cultures & Stocks

Cultures and stocks of infectious agents and associated biologicals including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the

production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer inoculate and mix cultures.

Pathological Waste

Human pathological wastes including: tissues, organs, and body fluids and parts that are removed during surgery, autopsy, or other medical procedures. Only those body fluids obtained during surgery and autopsy to be used for diagnostic purposes are considered regulated. These fluids would be limited to: blood; cerebrospinal, synovial, pleural, peritoneal, and pericardial fluids; and semen and vaginal secretions.

Human Blood & Blood Products

Discarded waste human blood and blood products (e.g., any product derived from human blood, including blood plasma, platelets, red or white blood corpuscles, licensed products, and other derived materials containing free-flowing blood and blood components).

Sharps

Discarded sharps that have been used in animal or human patient care or treatment or in medical research, or industrial laboratories including: hypodermic needles; Pasteur pipettes; scalpel blades; blood vials; needles with attached tubing; and culture dishes (regardless of the presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents such as used slides and cover slips.

Animal Waste

Contaminated animal carcasses, body parts, bedding and medical waste from animals that were infected with or which have been exposed to infectious agents capable of causing disease in humans.

Waste from Patients with Highly Virulent Diseases

Waste and discarded materials contaminated with blood, excretion, or secretions from humans who are isolated to protect others from certain highly virulent organisms, or isolated animals known to be infected with highly virulent diseases. Highly virulent diseases such as Lassa Fever, Marbury and Small Pox are derived from Class 4 Etiologic Agents as defined by the Centers for Disease Control.

Unused Sharps

The following unused, discarded sharps: hypodermic needles; suture needles; and scalpel blades.

Trace Chemotherapy Waste³²

Trace chemotherapy waste that is contaminated through contact with or has previously contained chemotherapeutic agents including, but not limited to: gloves; disposable gowns, towels, and intravenous (IV) solution bags and attached tubing which are empty

OSHA recommends that trace chemotherapy waste be segregated and managed separately as **hazardous chemical waste** (see Chemical Minimization chapter). Let's not forget that most regulated medical waste is treated by autoclave which does little to render cytotoxic wastes less hazardous.

Chemotherapy containers, such as vials, syringes and transfusion bags must be "empty" as per state and federal hazardous chemical waste definitions.

It's important to remember that regulated medical waste has required special guidance for disinfection and disposal due to its potential to harm healthcare employees and waste handlers.

³²This waste may be regulated as hazardous chemical waste in some states. Check with your state regulations to be sure.

Education

Education is the key to RMW reduction. Ensure that your institution has a formal policy on regulated medical waste segregation. [Appendix K](#) has sample Regulated Medical Waste policies.

Train staff on your facility's RMW policies and proper segregation. It is important that staff know the hospital policy and have a good understanding of it. Because, as the RMW reduction initiative progresses and RMW containers are relocated, many areas will insist they need their red bags. Until staff review what they generate and understand the rules, they won't realize that the number of RMW containers can be reduced in their area or they may need none at all. For tips on who and how to train, see the Education section, p35 of this guide.

Documents such as posters and signage should be modified to be as specific to each area as possible. Samples of educational signage such as:

- ▶ Where did the red bag go?
- ▶ What goes in a red bag anyway?
- ▶ Laboratory Waste Management

are included in [Appendix L](#). But, be sure to modify these according to the regulations and policies of your individual facility and state.

 **Commonly Asked Questions**

Listed below are some frequently asked regulated medical waste segregation questions. Because details can, and do, vary from state-to-state, please be sure to verify the answers with regulatory agency governing waste segregation in your state.

Question: Are sanitary pads considered Regulated Medical Waste (RMW)?

Answer: No. Sanitary pads are exempt from the definition of RMW. You do not need red bags in bathrooms. Maternity ward staff should be trained to put saturated waste into a central red-lined can, but maternity rooms do not need a red bag.

Question: What about blood on a gauze from a blood-drawing area?

Answer: A bit of blood on a gauze is not RMW. RMW includes blood-soaked, blood-caked material, not blood-tainted. Do not put a red bag in blood-drawing areas.

Question: What about isolation waste?

Answer: Isolation waste used to be red bagged in its entirety, but science has caught up to regulations in this area. The only type of isolation waste that must be red bagged in its entirety is waste from patients with a highly communicable disease as defined by the Centers for Disease Control and Prevention (CDC), Atlanta. These are diseases such as Lassa Fever, Marburg and Small Pox. These disease are very rarely seen in the United States. Hepatitis, TB and AIDS are not included in the CDC list. Isolation room waste should be segregated as any other patient room waste.

Question: Aren't our housekeepers put at risk with feces from a Hepatitis patient in the regular waste stream?

Answer: Red bags are red in color – they do not make waste safer for the housekeeper. Housekeeping staff must be trained to handle all waste as if it is potentially infectious. This includes regular garbage and even recyclables. Housekeepers must hold all waste away from their bodies, never push down on any type of waste and visually inspect waste as it is collected in the event of contamination.

Question: What about suction canisters?

Answer: Empty suction canisters can go in the regular waste.

Question: What if I have a blood-soaked dressing in a patient room, but I have to throw it away in the soiled utility room. Should I carry dripping waste down the hallway?

Answer: The user can take a waste bag into the patient room and then transport this bag to the soiled utility room and discard the entire bag into the red bag. You should not walk down the hallway with dripping waste.

Items that are frequently disposed of incorrectly include non-bloody Foley bags, empty suction canisters, and isolation waste cans – all of which can go into *solid* waste containers. Make sure employees understand the difference between *blood-soaked* and *blood-tainted*.



Reusable Products Which Can Reduce Regulated Medical Waste Volume

- ▶ Underpads
- ▶ Ambu Bags
- ▶ Ventilator Circuits
- ▶ Drapes
- ▶ Diapers
- ▶ Surgical Gowns
- ▶ Bibs
- ▶ Bedpans
- ▶ Urinals
- ▶ Isolation Gowns
- ▶ Sterilization Wrappers
- ▶ Hard Plumbed Suction Systems
- ▶ Reusable sharps containers



Tools

Waste Receptacles

Make sure that each regulated medical waste container is appropriately labeled as per your policy and/or state regulations. The label should be made of a durable material that will not fade with cleaning. Having signage above or nearby will assist employees with proper segregation.

RMW receptacles should be stainless steel, step-on cans. These cans are durable and covered to help prevent overuse. Step-on cans are usually available in 8 gallon, 12 gallon and 24 gallon sizes. For each given area, the smallest can possible should be used for RMW. Purchase a few of each to show to staff to determine which size is best for each area. Plastic step-on cans are available for dialysis areas where rusting of cans often occurs. Plastic cans may be used throughout, but they are less durable and may require approval under fire code. Data from the waste assessment will assist you with sizes needed in each department. Solid Waste receptacles must be large enough to handle the increase in volume as a result of improved segregation.

Each red bag can location MUST have a larger, solid waste or recycling receptacles directly next to the red can. This is very important. The solid waste receptacles may be covered, but often an open-topped container is easier for staff use.

The results of the waste assessment will assist with the location and size of the RMW containers.



Monitoring, Reporting and Maintenance

Are all important to regulated medical waste reduction. Tips for these activities are on pages 36-38



Treatment Technologies

Once regulated medical waste is being reduced and properly segregated, it is time for your facility to consider appropriate treatment technologies for *the waste*. Appendix O, Medical Waste Treatment Technologies –

Evaluating Non-Incineration Alternatives reviews the various technologies and their considerations.

It is advisable to involve the professionals in your facility who have responsibility for Safety and Infection Control as well as Maintenance, Facility Engineering, and Purchasing in the technology evaluation process. This team approach will ensure that the final selection is one that will effectively meet the waste processing needs of your facility.



Sharps Management

Reusable Containers

What if every time we filled up a garbage can, we capped it, threw it into the incinerator and then bought another one? Sounds silly, but this is what we frequently do with sharps containers! In many states, vendors offer sharps services using a reusable sharps container. Converting to a reusable system has numerous benefits including:

- ▶ Reduction in needlesticks associated with handling of sharps by multiple staff members
- ▶ Reduction in needlesticks associated with using an overfilled container
- ▶ Reduction in waste due to switching from a disposable to reusable container
- ▶ Reduction in cost (in most cases)
- ▶ Improved environmental impact due to the reduction of incinerated/autoclaved waste
- ▶ Increase in space on-site due to elimination of purchase and storage of containers
- ▶ Reduction in overfilled containers and an increase in employee satisfaction and visitor safety since reusable systems charge by the service instead of by the container eliminating the incentive to fill the container to the “rim” to get the most out of it

When analyzing your current sharps management program, consider the following operational elements:

- ▶ Who changes the sharps containers?
- ▶ What is the exchange schedule and how are the containers monitored for fullness?
- ▶ Who is responsible for closing the containers?
- ▶ What is the procedure for closing them when they are overfilled?
- ▶ Where are the containers staged prior to removal to the waste area?
- ▶ Who packages the sharps for treatment/hauling?
- ▶ How many containers are purchased and what is the cost?
- ▶ What are the hauling fees? (Sometimes this can only be a rough estimate. If you pay by the pound for RMW, you can weigh an average sampling of sharps containers and calculate the weight based on purchasing records. Make sure you get a sampling of each container-size in use. If you pay by the container, you can track the number of containers in a month and annualize that number. An outside vendor can assist you with these calculations.)
- ▶ Review the documented needle-sticks through the Safety Committee or Infection Control records. How many are typically associated with: overfilled containers? Closing the container? Transporting the container? Packing the container for hauling?

Whatever method you select to manage sharps in your facility, be sure to have a well-defined, written policy that clarifies all aspects of sharps handling, use and disposal (*refer to the sample policy in Appendix K*).

Regulated Medical Waste in Specific Departments

The following is a brief discussion of some of the more challenging departments with regard to waste management and segregation.

Operating Room (OR)

The operating room (OR) generates more waste than any other location in the facility. It is often avoided because it seems daunting, but it is one of the first departments that should be on the list for implementation of the Waste Reduction Program.

The waste reduction team certainly needs support from each department manager, but nowhere is this more true than in the OR. The OR nurses can provide a great deal of insight into opportunities for waste reduction – especially since it is they who actually discard the majority of waste generated in the department. Because the OR can be a difficult area to monitor, it is crucial that the staff be committed to implementation of an effective waste minimization program.

The following is a list of guidelines for waste minimization in the OR:

- ▶ Plan carefully for each case. Ensure that all products used are necessary
 - ▶ Scrub sinks do not need red bags
 - ▶ Preparatory waste should be clear bagged
 - ▶ Clear bags should be located by the anesthesia carts and segregation should occur during the case
 - ▶ Kick buckets can be used for red bags and the remaining cans may be clear bagged – alternatively, if required, one additional can may be red bagged
 - ▶ Staff can inspect each other after the procedure to segregate drapes and gowns
 - ▶ Unused products can be segregated for reprocessing or donation
 - ▶ Holding areas and recovery (post anesthesia) areas are often over red bagged – red bagged containers should be centrally located. There is no need to place one at each bedside.
- ▶ **Reducing Suction Canisters**
- Replace suction canisters with a system that drains directly to the sanitary sewer. Elimination of the

canisters can significantly reduce waste volume and associated hauling fees (a typical knee surgery case can use as many as 10 canisters).

- Install engineering controls (such as clear sink shields) that make it safer to empty the containers before they are discarded.

Labor and Delivery

The volume of blood associated with the Labor and Delivery unit makes it necessary to have a large number of red bags available – and they need to be large. A tremendous amount of non-regulated medical waste is also generated making waste segregation even more important in this area.

Because of the type of patient care activity in the unit, staff frequently just do not have the time to focus on sorting the trash before it hits the can! However, with commitment and close monitoring, staff can accomplish significant cost reductions through waste segregation efforts.

Inpatient Care

Typical patient care areas do not require a red bag inside the patient room. Once located in the room, it is virtually impossible to prevent patients and visitors from discarding general waste in the red bagged cans. This practice significantly increases the volume and cost associated with disposal of RMW. In the absence of very unusual circumstances, a much more effective approach is to locate the red bagged containers in a central area such as the Soiled Utility Room.

Outpatient Care

Outpatient areas typically do not require red bags in most of the rooms. Although it is usually advisable to locate red bagged containers in procedure and treatment rooms, they should otherwise be limited to a central, non-public location such as the Soiled Utility Room. Even speculums from gynecological exams do not have to be red bagged unless they are blood-soaked.

Critical Care

Depending on the set up of the critical care area, red bagged containers can either be centrally located throughout the unit or at the bedside along with a clear bagged container. Each facility must carefully evaluate the various critical care units since the needs can vary significantly. Although Cardiac Surgical Intensive Care Units (ICUs) and Surgical ICUs generate more blood than the Medical ICUs and the Neonatal ICUs, all of these areas have the potential for significant amounts of bloody waste.

Laboratories

Laboratories can be a real challenge – they're often small, crowded and operate 24 hours a day, 7 days a week. Training information for the Waste Reduction Program should be carefully targeted for each specific type of lab and the type of waste it generates.

Often, an effective approach is for the Waste Manager and the Lab Director to tour the various labs and identify the specific location where each type of waste should be discarded as well as the type of container required. Microbiological waste such as cultures and stocks of infectious agents must be autoclaved prior to disposal.

In the case where all of the lab waste is autoclaved prior to disposal, there may be no need for red bagged or biohazard containers at all. Some states require red bagging of specimen bags with the biohazard symbol clearly visible on the bag. If this is the case in your state, you will need to place biohazard bags throughout the specimen receiving areas. Unfortunately, this will significantly increase your volume of RMW.

Many facilities use two types of sharps containers to facilitate a safe collection of liquid blood mixed with sharps such as with blood culture bottles. Staff must be trained on all shifts and continuous monitoring is crucial for a successful waste minimization project in this area.

See [Appendix L.3](#) for sample chart of Laboratory Waste Management

is essential if waste minimization is to be achieved in this area.

Emergency Room (ER)

The Emergency Room waste can vary dramatically depending on the patient population, the day of the week, and even the time of year! Departmental management should identify blood-generating areas and clear bagged receptacles should be large enough to hold the high volume of packaging and patient-related waste that is generated in this area. Triage areas need both red and clear bagged receptacles.

Although there is typically not a lot of blood in the ER, when it is generated it is usually significant. It is important that receptacles be located in areas convenient to staff who are often in a hurry and quite properly more occupied with saving lives than sorting the trash. However, if there are an adequate number of receptacles in the right places, staff will usually develop the habit of effectively segregating the waste.

Cardiac Catharization Lab

Red bagged kick buckets can be used for RMW and segregation can occur during the procedure. Holding and Recovery (Post Anesthesia Care) should have clear cans by the bedsides with a centrally located red bagged can(s). There is considerable opportunity for waste reduction here. Again case planning (see Operating Room and reusables , along with training and monitoring can bring success.

Dialysis

Dialysis is also a challenge. Typically overcrowded with patients and supplies, it is a busy area. Often, it is located off-site from the main medical center facility. Dialysis generates a tremendous amount of waste. To the greatest extent possible employ reusables that will reduce waste. Waste and recycling receptacles for this area may need to be quite large, clearly labeled and set on wheels. Management support and continuous training