

Case Study: Less Waste Challenge, Regulated Medical Waste (RMW) Reduction**Summary**

Since 2009, St. Mary's Regional Medical Center has reduced their regulated medical waste (RMW) from 10 to seven percent of total waste, saving an estimated \$2,000 per year in waste disposal fees.

The operating room and endoscopy personnel identified opportunities for improvement.

This win-win opportunity was accomplished through education, improved segregation and regular audits.

St. Mary's Regional Medical Center Lewiston, Maine

A Covenant Health Hospital

The Problem

Regulated medical waste removal fees are five to ten times more expensive than solid waste removal. The RMW waste stream at St. Mary's Regional Medical Center (SMRMC) was audited and found to contain numerous items that did not meet the definition of RMW. Additionally, fluid regulated medical waste was adding significant weight to RMW, and required plastic suction canisters and a chemical solidifier to meet required standards. The audit included a review of waste receptacle types and locations throughout the site, and created an opportunity to reduce costs and waste generation. Working as a team, a baseline was established and a goal was set to reduce RMW generation to the HHI goal of less than 10 percent of total hospital waste.

The Strategy Selected

After meeting and consulting with appropriate department leaders, the team opted for an educational campaign on regulated medical waste management practices with staff from the endoscopy and operating room (OR) departments, the latter which can generate as much as 60 percent of hospital RMW¹. The team worked to incorporate the education, including disposal costs (both financial and environmental) with the simultaneous roll out a new "zero-sort" recycling stream, a welcome change, in terms of time, effort and space for staff who had been source separating recyclable materials at/near the point of care for the past several years.

Implementation Process

The team toured the OR and endoscopy departments with the directors and some interested staff members to understand current practice, which helped inform the educational content of the waste management program. Two 30-gallon RMW containers were found in every room—an indication of over use, and a challenge due to both the size and location of containers in rooms with limited space.

After meeting with infection control to review the facility definition of RMW, the team conducted inservices with departmental staff. Providing personnel with waste facts helped raise awareness around proper waste segregation and was successful in motivating and engaging staff in opportunities to reduce both waste and costs.

First Row: Denise Timberlake MSN,RN,CNOR, Michele Grass RN, Iwona Cwik CST, Loretta Hinkley CNA
Second Row: Paul Blais, Sue Kane CST, Sue Laliberte CST, Melissa Foley CST, Elizabeth Usher RN, Mike Desrosiers



With buy-in from the staff, the team reduced the size of RMW receptacles in OR and endoscopy rooms to one three-gallon container, and added and a 30-gallon, clear receptacle for municipal solid waste. A simultaneous single-stream recycling program added a 30-gallon, blue recycling bin in each operating and procedural room. Standardizing the size and placement of receptacles combined with signage and ongoing education, segregation practices were improved and performance was measured and reported throughout the organization. Later, a closed fluid management system was implemented, which further reduced the volume of regulated medical waste.

The team was present on the units during the pilot and subsequent roll outs of the waste segregation program, and remained available to answer and respond to any questions. In addition to tracking their data, the team assesses the effectiveness of the program through the eyes of the EVS staff, who continue to monitor the waste streams for appropriate segregation, and provide feedback to the staff and department directors. Also, the team continues the practice of weekly rounds on the units to assess performance and compliance with hospital policy.

About St. Mary's Regional Medical Center

St. Mary's Regional Medical Center (Lewiston, ME), is a 233-bed acute care and behavioral health facility serving Androscoggin County area and beyond. They enrolled in HHI in 2013 taking on the Engaged Leadership, Leaner Energy and Less Waste Challenges. The facility also maintains a membership with Practice Greenhealth, and has been recognized with four Partner for Change awards since 2009.

Benefits

- Financial benefits: \$2,000 annual savings.
- Staff engagement.
- Environmental benefit: reduced RMW 30% from 93,246 lbs. in 2001 to 65,564 lbs. in 2012.
- Reduced the purchase and use of suction canisters and chemical solidifying agents, a potential chemical hazard to workers and the environment².
- Led to implementation of further RMW reduction strategies including single-use device reprocessing, diverting pharmaceuticals out of RMW, incorporating closed fluid management technologies in building design and new construction, and removing red bags from patient exam rooms in the adjacent medical office building.

Challenges and Lessons Learned

The anesthesia carts used to have red bags attached to them, but the trash generated did not meet the criteria of RMW. The OR director met with the anesthesiologists to clarify the hospital's policy, and the red bags were removed. In retrospect, including the anesthesia department in the education and roll out would have contributed to a more seamless transition. Additionally, the team recommends involving the facility's waste hauler early in the process, providing the same education regarding the management of hospital waste and clarification of acceptable material for recycling. Lastly, SMRMC now uses four compactors (two for MSW, two for recycling) which further reduce their waste disposal costs. The team credits their membership with Practice Greenhealth in identifying additional strategies outside of the waste stream, and they continue to build on their success.

References

1. Practice Greenhealth. Implementation Module. Regulated Medical Waste Segregation and Minimization in the OR. Available at: https://practicegreenhealth.org/sites/default/files/upload-files/gorimpmod-rmwsegintheor_r5_web.pdf. Accessed 1/11/15.
2. National Institute of Occupational Safety and Health, Centers for Disease Control and Prevention. Glutaraldehyde – Occupational Hazards in Hospitals. NIOSH Publication No. 2001-115. Available at: <http://www.cdc.gov/niosh/docs/2001-115/#2>. Accessed 1/9/15.

