

## **SOLUTION AT A GLANCE: MONTEFIORE MEDICAL CENTER: WASTE MANAGEMENT PROGRAM REDUCES OVERALL WASTE & COST**

### **SECTOR**

Commercial

### **BARRIER**

Engaging employees, occupants, and customers, Motivating my organization

### **TOOL TYPE**

Outreach Materials

### **BUILDING TYPE**

Healthcare

### **TECHNOLOGY**

Waste Reduction/Efficiency

### **OVERVIEW**

Montefiore has developed a comprehensive, single-stream recycling program to minimize waste generation within the healthcare system. As part of DOE's **Waste Reduction Pilot**, Montefiore is working to increase the waste diversion rate and lower the amount of regulated medical waste from its properties. Montefiore focused on using audits and other creative solutions to reduce waste in operating rooms and through implementing source reduction methods.

#### **Operating Room Waste Audits**

Waste diversion is the process of diverting waste from landfills through recycling, composting, reuse or donation, or other means. For the waste audit, the Montefiore sustainability team calculated the average weight of each bag of waste in each operating room (OR), with different colored bags for each waste stream (red for regulated medical waste, and clear for non-hazardous landfill waste). The audit was designed to give the team a better understanding of both the amount of waste and the contents coming out of the ORs. This included items that ended up in the hazardous "red bag" stream, even if the item was deemed safe for disposal in a municipal landfill. Montefiore is using this data to inform decisions on both landfill diversion and regulated medical

waste reduction. “Red bag” waste is much more expensive to dispose of and has a higher environmental impact since it is required to be incinerated. The sustainability team has already seen an 11% reduction in “red bag” tonnage in one year by removing extraneous hazardous waste bins and right-sizing them to encourage proper usage of municipal landfill bins when appropriate.

## Source Reduction Methods

The sustainability department also made a change to instrument deliveries to reduce waste at the source, requesting delivery in the instrument case instead of additional cardboard boxes. Creative solutions have also been utilized in the operating room, where medical staff review procedure kits to see what is necessary in the OR for the procedure and only setting out those tools. This prevents unneeded instruments from being opened in the OR and thrown away regardless of if they were used or not.

For Montefiore, medical equipment and supplies are distributed to their various campuses from a centralized warehouse, allowing for more control and management of the recycling program from one location. Montefiore’s recycling program captures paper, cardboard, plastic, aluminum, and glass throughout the health system.

In one year, several partnerships with third-party providers allowed Montefiore to recycle:

- 100% of paper containing sensitive health information.
- Thousands of pounds of electronic waste at all Montefiore hospitals and Albert Einstein College of Medicine.
- Nearly 6 tons of single-use devices through a process called single-use device (SUD) reprocessing.
- Nearly 4 tons of batteries.
- Ink and toner cartridges.

Montefiore uses other methods of source reduction to reduce the quantity and toxicity of chemicals used within medical campuses. This includes analyzing the use of new equipment, ensuring that they use concentrated chemicals most effectively, and purchasing more environmentally friendly goods that have been certified by an accredited organization. Montefiore continually trains Environmental Services workers on the proper use and disposal of chemicals or hazardous products to reduce hazards (including a toxic indoor environment and waste) associated with the overuse of such chemicals and products.

## Tracking Progress

For Montefiore, a deeper dive into the data showed how the most common method of tracking, waste *diversion*, could misrepresent positive efforts towards overall waste *reduction/avoidance*. The waste diversion method is simple and is most accurate when total waste stays largely constant and the percentage of each stream (compost, recycling, landfill, etc.) shows progress. Since Montefiore’s efforts largely revolve around waste reduction and avoidance, diversion rate was deemed an inaccurate figure for tracking progress (see Figure 1 for an example).

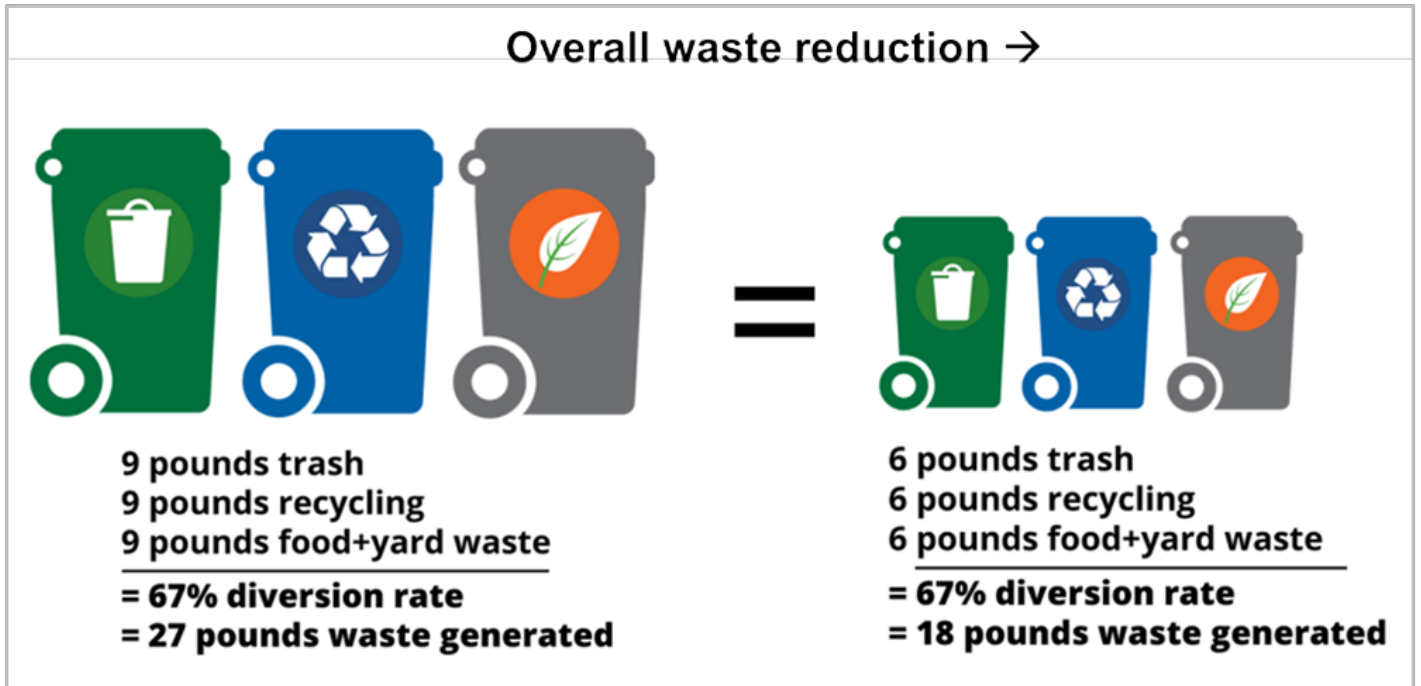


Figure 1: Adapted from the City of Kirkland, WA

The waste diversion method did not accurately capture Montefiore's progress since their total waste generated decreased with the addition of source reduction/waste avoidance efforts. Montefiore is helping to shed light and prompt more discussions about how waste reduction and diversion are tracked across the industry to paint an accurate picture of progress.

