GoodRx Health

Cleaning Up Healthcare: How to Reduce Environmental Waste

Written by [Alex Evans, PharmD, MBA](#) | Reviewed by [Lindsey Mcilvena, MD, MPH](#)

Published on September 9, 2022

Key takeaways:

- Every year, U.S. healthcare generates millions of tons of waste, including infectious, sharps, chemical, and radioactive waste.

- By reducing waste, healthcare organizations can save money, improve employee engagement, and stand out in the community.

- Both non-clinical and clinical departments can play a role in reducing waste.

Healthcare carries an enormous environmental footprint. It contributes significantly to climate change and water use.

In this series, we'll explore the connection between healthcare and the environment. We'll look at healthcare's environmental impact, how healthcare facilities can reduce their waste, and which organizations are paving the way in sustainability.

Healthcare waste by the numbers

Practice Greenhealth reports that U.S. hospitals generate more than 5 million tons of waste per year. Numbers on healthcare clinics, long-term care facilities, pharmacies, and other types of healthcare services are harder to come by.

According to the World Health Organization, about 85% of all healthcare waste is general waste. This could be everything from plastic wrappers on healthcare equipment to food scraps to landscape waste. The rest (15%) is made up of specialty waste, like infectious and pathological waste, sharps waste, pharmaceutical and chemical waste, and radioactive waste.

Why should organizations reduce their waste?

Cost-savings are a clear reason to generate less waste. While it pays to reduce all waste, disposing of specialty waste is particularly expensive. In fact, according to Healthcare without Harm, specialty waste can make up as low as 8% of a hospital's waste volume but over 40% of its waste management budget.

It also requires a significant amount of staff time to manage all that waste. Hospitals have to order and stock the specialty waste bins for sharps and chemotherapy, and empty the trash on every floor and in every unit and clinic.

In addition to it being one of the most obvious categories for cost-savings, reducing waste can also motivate and engage employees. Many of them will feel proud to work for a responsible organization. It can also help the organization stand out in the community as a leader in sustainability.

Millennials, who now make up the largest portion of the nation's workforce, place a high priority on working for companies with a good reputation. A PricewaterhouseCoopers (PWC) report noted that millennials want to work with purpose. They want to contribute meaningfully to the world, and they want to be proud of who they work for. They are drawn to companies with a strong environmental and sustainability record, both as a consumer and as an employee.

How can each department contribute to reducing waste?

When working to reduce waste, it can be helpful to think in terms of clinical and non-clinical departments. That's because clinical departments will likely be the sole producer of specialty waste. They will have needs and solutions very different from non-clinical departments.

Clinical departments

For clinical departments, proper segregation is one of the first places to look in reducing waste. Practice Greenhealth reports that regulated medical waste (RMW) should make up less than 10% of a hospital's total waste. So if it's higher than that, it's very likely the red bags are being overused. On average, it costs 5 to 10 times more to dispose of RMW than regular, municipal waste.

Another easy way for clinical departments to reduce their waste is to transition to reusable products. Here again, Practice Greenhealth has a guide to reusable products. In addition to this, there are companies producing reusable alternatives for numerous types of medical supplies typically thought of as disposable, like sharps containers, gowns, and even N95 respirators.

Non-clinical departments

Non-clinical departments like food services and landscaping can also play a major role in reducing waste generation. For example, food waste is an enormous problem globally: It is estimated that one-third of all food produced is wasted.

A recent systematic review provides a toolbox for food service managers to use when addressing waste. Strategies include looking at staff engagement, food waste measurement, purchasing, inventory, menu planning, portion sizes, awareness campaigns, and donations.

Landscapers can consider using vegetation native to their area, which uses less water. They can also consider the types of fertilizers, soil, and other gardening supplies they are purchasing. This practice is known as sustainable landscaping, and the state of California has an excellent guide for landscape managers to become more familiar with the practice.

Finally, the impacts of administrative and clerical departments can go far beyond things like reduced paper or toner use. The European Environment Agency has a guide that can be applied to offices anywhere in the world. Ideas include setting up a central storage area for office supplies so they can be reused, avoiding disposable cups and bags, shutting off computers and printers, and turning off lights when they are not needed.

Case study: The 'Gloves Are Off' campaign

A great example of both reducing waste and improving care comes from the Great Ormond Street Hospital in the U.K. They ran a "Gloves Are Off" campaign to reduce unnecessary use of non-sterile gloves.

As they argue, healthcare providers often believe they are protecting the patient by wearing non-sterile gloves. In fact, the gloves are designed to protect *the provider*, not the patient. For that reason, they should only be worn when the provider could be exposed to infectious material.

The hospital is part of the U.K.'s National Health Service, which uses 1.4 billion gloves per year. The hospital began an ambitious campaign to educate staff. It also encouraged them to consider how they could reduce unnecessary use of other types of personal protective equipment.

One year later, they had saved 21 tons of plastic and also improved both the caregiver and patient experience. Staff reported less skin irritation. But there was another benefit: The father of a child patient told them that the child's anxiety about receiving healthcare had been triggered by the gloves. The campaign helped his son's anxiety.

Case study: Inova Fairfax Hospital

Inova Fairfax Medical Center, a 900-bed community hospital located in Falls Church, Virginia, completely transformed their health system about 15 years ago. In doing so, they reduced their regulated medical waste by 1 million pounds and saved over $200,000 in one year alone. They are proof of the positive environmental and economic impacts of reducing waste in the healthcare setting.

The first step was recognition of the problem. Dr. Ravi Gupta, a physician at the hospital, was concerned about the amount of waste the facility was generating as well as the environmental and human health consequences. After voicing his concerns to hospital leadership, they came together to change the culture across the entire system of hospitals. They formed an environmental committee and brought in a consultant dedicated to helping the organization reach its goals.

When they first began, there was no recycling program. Many recyclable items ended up in solid waste or even in the regulated medical waste. Much of their work began in the operating room, primarily because it was more manageable than starting with a system-wide effort. A large portion of any healthcare organization's waste also comes from the operating room.

Within 6 months, they had reduced regulated medical waste by 19%, mostly by improving the proper segregation of waste. In addition to reducing the amount of non-infectious waste being put in the regulated medical waste bin, the OR staff also started collecting unused supplies to donate to charity.

Case study: London Health Sciences Centre

[London Health Sciences Centre](#), located in London, Ontario, Canada began work towards greening their 40-bed ICU in 2013. It can serve as a model for other facilities aiming to reduce waste from critical care.

They targeted the unnecessary disposal of supplies from the bedside after the patient was discharged from the ICU. After forming a working group consisting of ICU nurses, infection control staff, a quality and safety team member, and others, the team began by reviewing evidence and creating infection control guidelines for those supplies. Afterwards, they conducted an audit and found over $2,300 of discarded, unused items over a 2-week period.

The group then began an education campaign. They provided descriptions, photographs, and posters, and put information in the hospital newsletter on the hospital's current practices. The quality improvement project began with two hospital beds, to allow for staff to provide feedback, and then expanded gradually.

The organization reported significant cost savings, improved teamwork between staff, and fewer unopened supplies being discarded. Through their experiences, the team at London Health Sciences Centre has learned the importance of including front-line staff in the quality improvement process and communicating effectively through a variety of methods, like email, posters, and one-on-one conversations.

The bottom line

Healthcare generates a wide variety of waste, including both regular, non-hazardous waste and numerous types of specialty waste. Healthcare organizations can greatly benefit by reducing the amount of waste they generate, and engage both clinical and non-clinical departments to make a maximum impact.

Was this page helpful? 👍 👎

Prices & Discounts ⌄

Tools & Info ⌄

Health ⌄

Support ⌄

Company ⌄

Download the GoodRx app now

[Download on the App Store] [GET IT ON Google Play]

Don't miss out on savings!

| Enter your email address | Subscribe |

By providing your email address, you agree to receive emails containing coupons, refill reminders and promotional messages from GoodRx. You can unsubscribe at any time.

GoodRx

Copyright ©2011-2023 GoodRx, Inc.

[Facebook] [Instagram] [Twitter]

Cookie Preferences   Privacy Policy   Privacy Center   Your Privacy Choices   Disclaimer
Terms of Use

This information is for informational purposes only and is not meant to be a substitute for professional medical advice, diagnosis or treatment. GoodRx is not offering advice, recommending or endorsing any specific prescription drug, pharmacy or other information on the site. GoodRx provides no warranty for any information. Please seek medical advice before starting, changing or terminating any medical treatment.

GoodRx works to make its website accessible to all, including those with disabilities. If you are having difficulty accessing this website, please call or email us at (855) 268-2822 or ada@goodrx.com so that we can provide you with the services you require through alternative means.

GoodRx is not sponsored by or affiliated with any of the third-party brands identified. Trademarks, brands, logos, and copyrights are the property of their respective owners.