

IMPROVING ENVIRONMENTAL AND COST PERFORMANCE IN WASTE AND RECYCLING MARKETS



Laura Brannen

The movement to green healthcare is well underway and it's a good thing—good for the environment and, thankfully, also good for the bottom line. Responding to expectations from staff, patients and the community, hospitals are busy instituting green teams, creating recycling programs, building or renovating to “green building” standards, putting energy and water reduction programs in place—all to reduce their institution's environmental footprint. Waste minimization initiatives are bellwether programs and a cornerstone of any sustainability program.

According to one hospital administrator, “We are not waste managers, and it's not our job to get into the waste business. We provide patient care.” Clearly hospital leaders are caught in the middle between meeting the high demands of their core mission, while also meeting the demands of being good stewards of community resources. The responsibility to the community is not a minor one. Hospitals generate considerable amounts of waste. On average providing inpatient care generates 10 to 40 pounds per patient per day. The good news for hospital leaders is that “green initiatives” do not equate to increased operational costs. More sophisticated management of post-consumed resources has a positive effect on operational costs.

“Green initiatives” involving waste stream management are both complex and dynamic. While it's not necessary to become an expert in the multi-faceted markets of waste and recycling, it makes a lot of sense to at least understand the basics of external operations of waste management and recycling, and the market conditions that may impact costs, revenue potential, and internal operational decisions. Environmental program managers who are more informed about these dynamics are able to make better decisions, build strong and more sustainable waste management and minimization programs for their organizations.

Understanding Your Waste Stream

Hospitals generate tons of waste in almost every type of waste category imaginable. To complicate matters, waste management also tends to be decentralized both inside hospitals and out. The waste

industry calls this “dock-in” and “dock-out.” A good place to start is with an understanding of the waste management logistics of dock-in inside your facility because you can't manage something if you don't know what you've got. Make a list of what are the general main categories of waste? Where is that waste typically generated, and what department(s) are accountable for managing that waste stream, including oversight, contracts and invoicing operations?

Understanding dock-out logistics includes making a list of all your waste and service providers, including the waste being collected, the type and size of collection containers, the destination of the waste, the type of treatment or processing, and all the different cost dynamics. Use solid waste (or trash) as an example. Is the waste going to a municipal waste landfill or an incinerator? Is it collected in the right sized container at your dock? Is it hauled away when it's full? Keep in mind that hauling partial loads may result in cost inefficiencies. Also, you want to make sure that you're collecting the right materials in the right container. For example, putting pallets or furniture in your solid waste compactor will take up too much volume, but more importantly, by watching the back door, you'll find opportunities to minimize that waste. Pallets can be taken back by your suppliers and furniture can perhaps be donated. Visiting your waste or recycling disposal facility can identify opportunities to make changes that maximize cost, operational and environmental efficiencies.

Know Your Markets

Trash is considered a tossed resource, it doesn't have any value as a commodity in a landfill. Recyclables on the other hand, are a commodity that have value that is tied to the commodity markets. The cost of recycling is dependent on several factors, which include: equipment, labor, processing, and transportation. The value of recyclables are dependent on the worth of recycled versus virgin feedstock, and to an even more complex set of global economic indicators, such as universal material availability and emerging global markets. China and India are buying recycled material commodities and have recently made a great

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impact on this value dynamic. You can close the loop by purchasing goods made from recycled content to support markets for our recycled materials. Energy costs impact both the cost and value of recycled materials. Recycled materials often have reduced energy consumption requirements compared to “virgin” materials. Goods made from recycled plastics require 80 percent less energy to produce than using virgin plastic. Eight percent of global oil production is used for plastics and with the price of oil, the value of recycled plastic resin has tripled in the last five years. Likewise, it takes 64 percent less energy to produce paper using recycled fiber so it makes sense that the value of all paper commodities has also risen along with energy prices. It takes 95 percent less energy to make aluminum and 75 percent less to make iron and steel.

While many of your recyclable materials have value in the marketplace, don't expect to get rich selling your recyclables, but do create reasonable revenue goals. A sound expectation is to group your recycling and waste minimization program financials together and try to create programs that will at least meet or beat the cost of landfilling. Some materials have less value, some more. Some are more costly to process or transport, but the objective is to know enough about the relative market value to help you make operational decisions. Decisions including what to collect, how best to collect and manage it, will be more informed by having these kinds of conversations with your waste and recycling providers and your colleagues in other healthcare facilities. There's a lot of experience out there to tap into so you don't have to start from scratch.

Designing Your Recycling Programs

How materials are collected and transported to the recycler will also impact the cost and value. Materials that are separated are typically more valuable than those that are mixed together. However, many facilities find it much easier to have fewer containers and commingle materials even if it reduces the value of the material. It's all still recycled—better for the environment—and typically more cost-effective than landfilling the same material.

Questions you should ask are: Is the material compacted, baled or loose? Is it loose in small or large quantities? Not only do these considerations impact the value of the material but also the transportation costs. Loose materials

in smaller volumes have lower value in the marketplace compared to large volumes of baled material. Loose materials also have a higher transportation cost per pound than compacted or baled materials. Ask your hauler or recycler if there are more efficient ways to collect your waste or recycling that will maximize the value of your recyclables.

One of the major challenges facing hospitals is the number of waste haulers and service providers who each manage a piece of the total waste pie and who may come to the dock for just one commodity. It's been up to the customer to be informed enough to ask the right questions because it's not in the supplier's best interest to potentially reduce the size of their slice.

Ask your solid waste hauler whether your containers are leaving your dock full and if you have any opportunities to maximize your loads. Ask your paper shredding company if your paper is being recycled and whether you're generating enough paper to possibly generate revenue. Ask every service provider what you can do to drive costs out of your waste and take actions to improve your environmental performance. Insist on suppliers who will partner with you to improve both dock-in and dock-out operations, and who will help you catch up in building best-in-class waste minimization, recycling and sustainability programs.

Learn More

Being informed is the best way to shift the conversation from “pick up my trash” to “what can we do to be more efficient with my trash.” Once you begin talking in those terms, you'll improve your facility's waste management and reduction programs, and ultimately reduce your costs. There are some great resources out there that can help you get smart about your waste. Nonprofit organizations such as Practice Greenhealth and the American Society for Healthcare Environmental Services (ASHES) along with publications such as *Waste News* and *Resource Recycling*, and others can help educate you on best practices. Plus, your haulers are also a great resource.

Remember, the waste generated as a result of patient care carries with it substantial costs, along with occupational and environmental risks. That, coupled with your facility's desire to be greener creates the immediate demand for better, more efficient integrated waste management. 🌿