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The Case for Closed Containers Over Blue Wrap

See how this medical center went green, improved efficiencies and saved thousands of dollars.

Daniel Cook, Executive Editor

Blue wrap. You know the stuff. It's likely piling up in your facility right now, just like it did in the MetroWest Medical Center, where leadership began placing instruments in closed containers for transport and sterilization to help stem the tide. What began as a cost-saving and green conversion at the Natick, Mass.-based facility evolved into improved reprocessing efficiencies and better instrument care. Let's explore how closed containers can help save the environment while also saving you time and money.

Saving money, improving efficiency

The conversion to closed containers at MetroWest began as a collaboration between the medical center's green team leaders and its sterile processing manager. Surgical technologist Sara Lourie, SP, resource coordinator for surgical services and chair of the greening the OR committee, and Amy Collins, MD, emergency department physician and chair of the green team at MetroWest, helped lead the charge.

MetroWest invested \$75,000 in 2010 for 211 containers, which accommodate about 66% of the medical center's instrument sets. Representatives from MetroWest say blue wrap can account for 19% of the total waste generated in the OR and is often thrown out with regulated medical waste, which is 6 to 10 times more expensive to dispose of than white bag waste. (While it's possible to recycle blue wrap, finding a company offering the service can be a challenge.) In 2010, the medical center saved close to \$30,000 in avoided blue wrap purchasing costs and diverted about 5,600 lbs. of blue wrap from the center's waste stream as a result of transitioning to reusable rigid containers. That added up to a 40% payback on the containers in the first year alone; the medical center anticipates savings of \$84,000 and \$233,000 at 5 and 10 years, respectively, following the initial investment.

Dr. Collins and Ms. Lourie requested \$60,000 in capital last year to purchase additional hard cases. By 2013, they hope to place all of the medical center's instrument sets into reusable containers.

Before MetroWest switched to closed containers, the sterile processing staff would send trays of wrapped instruments to the ORs, where surgical teams would unwrap the instruments and compile needed sets. After surgery, a hodgepodge of dirtied instruments would arrive in sterile processing, where techs spent countless minutes pulling them apart and reorganizing them into complete sets before sterilization. Now, instruments leave central sterile in organized and clearly labeled closed containers. The OR teams remove complete

instrument sets from the containers before surgery and return used instruments to central sterile in the same containers. Sterile processing techs unpack the instruments for cleaning and repackage them in the containers for sterilization. The time-consuming process of lining up the instruments to ensure a set is intact before it's sterilized has been eliminated, saving precious minutes during the reprocessing cycle.

Unevenly wrapped instrument sets can make stacking a challenge. Noting what's contained in blue wrap on the white tape holding the wrap together also presents difficulties. Staff must search for needed instruments, removing and replacing stacked wraps to read handwritten labels that aren't in standardized locations. That shifting of wrapped items is inefficient at best, and often results in inadvertent tearing of the blue wrap, which requires rewrapping and resterilization — and results in more time wasted. When blue wrap ripping became increasingly common at MetroWest, the medical center switched to a more costly, fused, double wrap.

The rigid containers, on the other hand, are labeled clearly. Instead of guessing what's in wrapped packages or trying to decipher handwritten labels, staff can easily see which instrument set is inside a container, even when the containers are stacked. Instead of looking through a collection of blue wraps of various shapes and sizes to compile needed instrument sets, staff members now quickly scan labeled containers for the ones that contain the complete sets they need.

Leftover Blue Wrap? Consider Making Patient Tote Bags

MetroWest Medical Center in Natick, Mass., began using closed containers to transport instruments between the OR and central sterile with aims of reducing its use of blue wrap. The conversion eliminated most, but not all, of the wrap from circulation. Leadership at the medical center wanted to recycle the leftover material, but had difficulty finding a company that would take it off their hands.

So when Earth Day rolled around, Amy Collins, MD, decided to run a contest that called for staff to come up with creative ways to repurpose the boxes of wrap they had laying around at the time. She was inundated with more than 60 entries. "People made dresses, sandals, hats, purses you name it," says the emergency department physician and chair of the green team at MetroWest.

The contest attracted a good deal of media coverage, which drew the attention of BolderPath (bolderpath.com), a Boulder, Colo.-based producer of sustainable products. MetroWest worked with the company to produce patient tote bags out of recycled blue wrap. The bags were popular, but the partnership with BolderPath proved to be unprofitable in the long run.

MetroWest is still saving a majority of its leftover wrap, says Dr. Collins, and is "actively look for other creative ways to use it."

— *Daniel Cook*

Better instrument care

"The key to making a closed container conversion successful is working with the manufacturer's vendor to decide what size containers and which designs would best suit your needs," says Ms. Lourie. For example, the containers MetroWest purchased come in 5 sizes, with 5 options for inlay bins and trays that help organize and protect instruments. Ms. Lourie and the vendor rep meticulously went through each instrument set they were interested in putting in the closed containers to ensure they purchased the correct number of the correct-sized containers and inserts.

All of MetroWest's standard, hospital-owned sets have been converted to rigid containers. Currently, instruments brought in by vendors for complex procedures such as some ortho cases can't be put into rigid containers per the manufacturers' sterilization guidelines. "Although," says Ms. Lourie, "there seems to be pressure mounting on major instrument companies to send loaner sets to facilities in containers that can be sterilized."

Fewer wrapped instruments leads to fewer missing pieces and more complete instrument sets. "Wrapped items sometimes get thrown away," says Ms. Lourie. Placing instruments back in rigid containers after use in the OR helps keep sets intact and avoids the possibility of small items being accidentally swept up in leftover blue wrap by efficiency-minded nurses and techs focused on fast room turnovers. "Even small sets comprised of 6 instruments go into a closed container," says Ms. Lourie. "It's been a huge improvement."

Inlays and trays inserted into the closed containers allow for the safe stacking of instruments and keep delicate items from banging against heavier pieces, which improves instrument longevity. MetroWest also attached bar codes to its containers to track instrument usage. "Instruments due for inspection are flagged as they go through the sterilization process," says Ms. Lourie. "Performing regular preventative maintenance saves a bundle on instrument repair costs."

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