

**Environmental issues**

**Greener ORs: Keys to making the business case**

**P**eriodic staff and managers face a variety of pressures: improving processes, enhancing patient outcomes, documenting savings, meeting regulations, and more, all in a time of tighter budgets.



With so much to balance, it can be difficult to consider (much less sell to upper management) the idea of greening the operating room. That's especially true because of perceptions that green programs and products cost more. But there is evidence that environmental best practices in the OR can reduce costs, protect staff safety, and even enhance patient and staff health.

**Bottom-line benefits**

The key to introducing a successful program to green the operating rooms lies in presenting a business case to decision makers that allays concerns about costs and staff time and emphasizes the upsides of cutting OR waste.

Many hospitals have demonstrated bottom-line benefits that come from greening the OR:

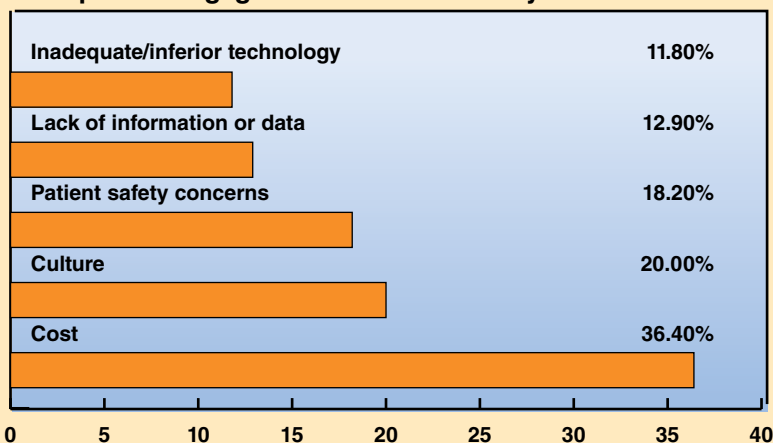
- MetroWest Medical Center in Framingham, Massachusetts, saved an estimated \$29,843 and reduced its waste stream by 5,606 lbs of disposable blue wrap in 2010 by transitioning 66% of its surgical instrumentation to reusable rigid sterilization containers.
- Bon Secours Good Samaritan Hospital, a 377-bed facility in Suffern, New York, installed a fluid management system in the OR, avoiding the creation of 261,999 lbs of waste and saving \$86,460 in 2010.
- Hospital Corporation of America (HCA) and its 163 member hospitals saved \$17.6 million in 2010 by reprocessing single-use medical devices and avoided placing 298 tons of waste into landfills.

**Selling the benefits**

The first step to succeeding in any green initiative is building—and selling—a compelling business case. Your focus should be first on cost savings because a survey of hospitals by Practice Greenhealth found that cost was the biggest perceived obstacle to implementing green initiatives in operating rooms (graph).

The second key element to your business case should emphasize the nonfinancial and less tangible benefits. These could be increased visibility in your community, the opportunity to demonstrate sustainable leadership to other hospitals or the business

**Overall, what are the biggest challenges to implementing 'green' interventions in your ORs?**



*A survey by Practice Greenhealth of OR staff showed that cost was the biggest perceived barrier to greening the OR. Source: Practice Greenhealth.*

**Practice Greenhealth**

A nonprofit membership organization, Practice Greenhealth offers members tools, resources, forums, technical assistance, and networking opportunities to assist the health care design, construction, and operations sectors in creating safe and healthy environments. Members include health care facilities, businesses, and friends.



Left to right: Batal Abdelouahe, Lynn Thelen, RN, and Rafael Andrade, MD, highlight items recycled by the OR at the University of Minnesota, Fairview Health Services. Courtesy Practice Greenhealth.

community, increased worker and patient safety, or improved staff satisfaction.

Many health care companies have gained exposure from their green efforts, helping them stand out in ways that assist their business.

Think about how your effort to green the OR might augment your hospital's marketing initiatives. You might check with your hospital's marketing and communications department for its ideas about how to use the Greening the OR Initiative to increase your facility's visibility among patients, the public, the industry, and staff.

### Enhancing health

Keep in mind ways in which a greener OR could enhance the health of patients and clinicians. Examples are:

- LED lights, which produce less heat than their halogen counterparts, with less drying of the surgical wound and more thermal comfort for the staff and surgeons
- PVC- and formaldehyde-free finish materials, such as wall coatings, which reduce exposure to toxic chemicals
- greener cleaning products, which can improve air quality, reduce exposure to harmful chemicals, avoid the need for hazardous waste disposal, and generate less pollution during their manufacture.

### Steps in building a case

Key steps in building and selling a business case for greening the OR are:

#### 1. Gather baseline data

Documenting your OR's current performance will help identify opportunities and weaknesses and will provide a basis for projecting and measuring actual savings. For example, when Inova Fairfax Hospital, a 900-bed Level 1 trauma center and community hospital in Falls Church, Virginia, set out to green its operating room, one of its first steps was to conduct a detailed audit of regulated medical waste (RMW).

### Ten most commonly reprocessed surgical single-use devices

The lower cost of reprocessing of medical devices in the OR should be a piece of a successful business case.

- Ultrasonic scalpels
- Hand-activated sealer/dividers (Ligasure Impact)
- Trocars
- Scissors
- Graspers
- Suture passers
- Laparoscopic dissectors
- Orthopedic devices
- Arthroscopic devices
- Pneumatic tourniquet cuffs

Source: Stryker Sustainability Solutions.

During the audit, staff analyzed the contents of RMW bags in the OR and found they were full of packaging material and other nonregulated items. They also discovered that the OR produced an average of over 900 lbs of RMW daily—far more than the target of 15% RMW as a percentage of overall waste.

This baseline data enabled them to calculate the cost savings that could be achieved if they met the target and helped them successfully to make the case for investments in staff training in waste minimization and segregation practices. The result was an 18.6% reduction of RMW over a 6-month period, saving the hospital more than \$15,000 and promising greater savings in the long term.

## **2. Emphasize safety**

Beyond maintaining safety standards, many green initiatives have the potential to enhance safety. Identifying initiatives that boost both safety and environmental performance at the same time is an important selling point for facilities with limited capital budgets.

As North Suburban Medical Center, a 157-bed hospital in Thornton, Colorado, evaluated potential green enhancements for its facility, it identified that OR staff were experiencing problems with the suction canisters used for fluid management, leading to concerns about safety for both staff and patients.

Among concerns: Canisters were only available in limited sizes and would occasionally fill up, requiring the staff to empty them during a procedure, risking exposure to potentially infectious fluid waste. In addition, the wall suction had poor suction strength, anesthesiologists were not able to measure fluid loss accurately, and the staff were exposed to toxic chemicals when adding solidifiers to used canisters. Emptying the canisters also posed a splash risk.

By investing in the Stryker Neptune Fluid Management System for the hospital's 6 ORs, the facility was able to address safety concerns while significantly reducing waste.

## **3. Cultivate champions**

The process of building a business case provides an early opportunity to build support for green initiatives. Engaging key staff and executives in identifying needs and opportunities helps cultivate champions who can help advocate for necessary investments down the road.

The green OR initiative at Inova Fairfax Hospital started with the vision of one physician, Ravi Gupta, MD. His first step to building the business case for what became a systemwide transformation was engaging the hospital's CEO and executive staff in an assessment of the avoidable costs of current practices. By engaging the hospital's leadership, he helped build early buy-in that led to the creation of a position dedicated to sustainability, the launch of "green teams," and a systemwide environmental committee.

## **4. Identify best practices**

Facilities around the country are introducing green initiatives in partnership with their employees, municipalities, nonprofit organizations, and suppliers. By learning about what has worked for other facilities (and what technologies, products and processes are available), OR managers can replicate successes and avoid repeating others' mistakes.

## **5. Enlist support**

Building a business case can be daunting, but you don't have to do it alone. Practice Greenhealth's Greening the Operating Room Initiative provides resources

**Have a question  
on the OR  
revenue cycle?**

*Keith Siddel will respond to questions in the column. Send your questions to [editor@ormanager.com](mailto:editor@ormanager.com)*

*You can also reach Siddel at [ksiddel@hrmlc.com](mailto:ksiddel@hrmlc.com).*

to help you connect with peers and identify successful tools that will work for your facility. There is no cost to participate. Through detailed case studies, webinars, and other interactive opportunities, Greening the Operating Room provides a learning community that makes it easier to strategize for success. You can learn more at [www.GreeningTheOR.org](http://www.GreeningTheOR.org) ❖

—*Laura Wenger, RN*  
*Executive Director*  
*Practice Greenhealth*  
*Reston, Virginia*

*Practice Greenhealth is a nonprofit membership organization that fosters environmental stewardship and best practices. More information and tools are at <http://practicegreenhealth.org>*

### **References**

- Conrardy J, Hillanbrand M, Myers S. Reducing medical waste. *AORN J.* 2010;91:711-721.
- Moduga M. Reduce, reuse, recycle: Reprocessing medical devices. [www.hospitalmanagement.net](http://www.hospitalmanagement.net). March 31, 2010.