

## Bon Secours St. Francis Health System

# Recycling, waste reductions efforts yield rapid success

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Bon Secours St. Francis, a Greenville, SC-based two-hospital health system, embarked on a small recycling program two years ago. And recently, these and other waste reduction efforts culminated in national recognition by a leading environmental healthcare organization.

What began as a small group project in a 2009 corporate leadership retreat blossomed into an exemplary greening program, and helped lay the foundation for a model of sustainability for the other 18 hospitals in the corporate Bon Secours Health System scattered down the eastern seaboard.

### EARNs PRESTIGIOUS ENVIRONMENTAL AWARD

In April 2011, Bon Secours St. Francis was the only one in the country to earn the elite 2011 Environmental Leadership Circle Award from Practice Greenhealth – a national membership organization for healthcare facilities committed to environmentally responsible operations. The prestigious award honors facilities that exemplify environmental excellence and are setting the highest standards for environmental practices in health care. Honorees must meet stringent criteria, including mercury-free purchasing, recycling at least 25 percent of their total waste stream, implementing recycling and pollution prevention programs and launching innovative employee and community programs to foster local sustainability.

Bon Secours St. Francis Health System includes hospitals in downtown and the east side of Greenville.

### SUCCESS SUMMARY

For Bon Secours St. Francis Health System, it is a testament to how quickly a sustainability program can succeed with a realistic plan, enthusiastic champions and a very engaged and educated workforce. Within two years, the two-hospital health system cut its recycling rate by nearly 30%, saved millions of gallons of water through upgrading or eliminating unused equipment, nearly eliminated Styrofoam use in its dietary department, drastically cut red bag waste volume through educating staff, and prevented several tons of needless waste through a reusable sharps container program and a single-use device processing program.

### HOW IT ALL GOT STARTED

Several Bon Secours hospitals, including those in the Greenville, SC, system, had been tackling individual “green” projects in the latter half of the decade, but it wasn’t until 2007 when the corporate Marriottsville, MD-based Bon Secours Health System (19 hospitals in seven states) set its sights on a full-scale environmental sustainability program.

The impetus came during a corporate retreat called Ministry Leadership Formation, which is designed to empower competent and confident leaders through community building and relationship development, said Karen Schwartz, FACHE, vice president, support services for Bon Secours St. Francis.

### SNAPSHOT OF SUCCESS – 2008-2010

#### Recycling

- Total recycling improved by 28%
- Number of recycled items increased from 4 to 25 in first year
- Upcycling, or repurposing batteries and pallets saved more than \$15,000 in 2010
- Recycled 600 pounds of “trim waste” from hospitals’ foodservices department through compost program

#### Waste reduction

- Regulated medical waste as percentage of total waste now 5.5 percent of total waste, down from 8 percent in 2009, reducing red bag disposal costs to fraction of former 25 cents-per-pound rate
- “Say No To Styro” campaign eliminated nearly all Styrofoam containers in dietary departments, reduced foam/plastic usage by 2000 cups, 3,000 plates and 1,000 each of knives, forks and spoons
- Reusable sharps container program eliminated 3.96 tons of plastic waste, saved \$10,000 per year in disposal costs
- Single-use device processing on downtown campus eliminated 2.3 tons of waste, saved \$134,000 in first year
- Community expired drug reclamation project saved 780 pounds from general waste stream

“To ‘graduate’ from the Ministry Leadership program, we have to do a project, so a team from our local system and the one in Virginia teamed up and decided our project would answer one question – what would it be like if we embarked on a road toward sustainability?” Schwartz said. “At the same time, our corporate office was feeling like this was the right thing to do, and that we needed to have more of a stewardship position as part of our ministry side because we need to set a good example in healthcare and the communities we serve. And so, together, our leadership retreat team came up with a vision and a mission.”

### ESTABLISHING A VISION AND MISSION

On a corporate level, at the beginning of 2010, the Bon Secours Health System Green Team worked to develop within the health system a culture of sustainability and awareness of the far reaching impact of decisions and actions on our world. The Bon Secours Ecological Stewardship Plan is implementing system-wide efforts focused around waste stream management and energy management. The goal is to assess and reduce the health system’s “carbon footprint” through efficient recycling and waste stream management, reducing the use of toxic chemicals, reducing energy use, and moving toward the use of sustainable products and resources. Local systems are customizing projects to their specific situations.

### DESIGNING A THREE-YEAR PLAN

To lead Bon Secours Health System’s corporate program, an umbrella Environmental Stewardship Organization was established, led by Bon Secours Health Ministries’ board of directors and composed of the corporate and individual system green teams. Key “green” strategies also then identified. “A representative from each of Bon Secours’ local markets met and came up with a strategic plan, and then our corporate green team leader was responsible for coming back to help setting up a local system green team,” Schwartz said. “We decided out of the gate to partner with key organizations so we would have the resources available to each local system to help guide them. The first part of our strategy was to develop a framework for setting up the initiative in each local market, look at what resources we’d need to be successful, and what we wanted to measure.”

### RECYCLING INITIATIVES

#### **Achievements overview**

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#### **Five-fold increase in types of recycled items**

Schwartz said she knew she’d need quick and visible successes at St. Francis Health System’s two hospitals in order to generate excitement and buy-in from staff. She achieved that with recycling and red bag waste reduction programs. “We started our recycling effort with easy stuff like cans and paper and we ended up taking the number of things we recycle from four-to-five items to 24 items,” she said.

### CORPORATE VISION

#### *Guiding Principles*

The mission, values and operating principles of Bon Secours Health System shape this initiative to enable a consistent ethic of functioning. The program focus will be on assessment and reduction of the system’s “carbon footprint” through efficient recycling and waste stream management, reduction of use of toxic chemicals, reduction of energy use, and movement toward the use of sustainable products and resources, and to develop within the Bon Secours Health System a culture of sustainability and awareness of the far reaching impact of decisions and actions. The connection between the health of individuals, community and environment will underlie decisions and program planning.

*Also see*

[Corporate presentation at CleanMed 2010](#)  
[Bon Secours’ most recent annual report](#)

### “GREEN” STRATEGIES

- **Seek partnerships that leverage expertise, support, recognition, potential funding sources**  
*Government, environmental, state hospital associations, national/regional sustainability organizations*
- **Develop strategic business relationships**  
*Environmentally preferred purchasing vendors, programs (Premier Health Alliance), direct service providers (waste, energy, water, food)*

“These items grew into a higher number by suggestions coming from the staff,” said Bill Clough, administrative director, Guest Services. “At first the Environmental Services (EVS) staff who had the role of transporting the items from small collections areas on the floors to larger collections areas located outside realized the process was easier than they thought. The recycle numbers were shared and this encouraged staff to start asking ‘What else can we recycle?’ Clough added that the enthusiasm carried over to individual departments. “When clinical staff saw the EVS staff picking up recyclables, it started clinical staff to start thinking “I wonder what we can recycle?’ This has led to much more items and quantities being captured.”



Bon Secours St. Francis employee at one of hundreds of recycling locations on campus

Clough said he is now frequently approached by staff about whether or not an item can be recycled, and gleans other queries from CEO Mark Nantz’ intranet blog, “Ask Mark.”

“This is where having a multi-disciplinary team can make a difference,” added Schwartz. The St. Francis “Green Team” meets for about 90 minutes each month to discuss progress and identify new opportunities. “This approach has allowed us to be open to new ideas and see perspectives from ground level, from every level of care and administration,” she said. “It keeps things dynamic and helps to keep reinforcing our core sustainability messages.”

Schwartz said the recycling program became so successful so quickly that staff began looking at “upcycling,” in which products such as batteries and pallets were sold to community residents and business instead of being discarded. Upcycling efforts alone saved more than \$15,000 in 2010. “The upcycling success got people excited about our whole recycling efforts,” Schwartz said. “It became almost like a game but more like a challenge that was fun.” Schwartz said Practice Greenhealth tools also showed staff the value of tracking and trending progress in each “green” initiative. “Let’s face it. What gets tracked and trended gets attention,” she added. “It helped us begin to set up a valuable set of metrics we could report and share information about. It got a lot of people’s attention and it gave our whole initiative steam.”

#### 24 ITEMS RECYCLED AT ST. FRANCIS

- Aluminum (mostly cans)
- Tin (mostly cans)
- Plastics (numbers 1,2,3,5 and7)
- Paper
- Wood pallets
- Used medical equipment
- Scrap metal
- Linen (stained , ripped or torn)
- Batteries
- Light bulbs
- Reprocessed medical instruments
- Used fryer oil
- Food scraps compost
- Electronic waste
- Cardboard
- Donated food
- Toner cartridges
- Eyeglasses (to the local Lions Club)
- Shoes (to the local “Souls for Soles” charity)
- Glass
- Used office furniture
- Xylene
- Cell phones (to the “Cell phones for soldiers” charity)
- Waste oil

#### **Recycling food waste pays off**

Recycling efforts also paid off in the dietary department, where discarded food and trim waste were added to the downtown hospital’s “worm farm” to be composted and later sold as “worm tea” at \$3 a bottle to staff and community residents. More than 600 pounds of trim waste alone was composted in 2010, and the profits from worm tea were added back into the hospital’s Community Garden operations, making the garden self-sustaining.

#### **WASTE REDUCTION EFFORTS**

##### **Achievements overview**

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**Red bag, hazardous, general waste reduction**

For Schwartz and Clough, educating staff about the cost of disposing red bag waste was one of the easiest tasks they faced. “One of the first things we did was a walkabout in both hospitals and we quickly identified where we had the red bag containers,” she said. “We looked at where we needed red bags relative to how we take care of our patients. We also discovered general solid waste in the red bags because employees hadn’t fully been educated about what their purpose was.” Schwartz’s Green Team also performed a waste stream analysis and produced a poster to educate nurses. The poster shows staff how to properly dispose of the following kinds of waste (with examples): aluminum cans, batteries, plastic, shredded paper, chemotherapy waste, clear bag (non-hazardous) waste), linen, red bag items, sharps and "black box," or hazardous chemical waste.

“We put those posters in dirty utility rooms on each patient care floor so it became a constant reminder for them about where to put what,” she said. “This helped us streamline. We educated them on the costs of disposing red bag waste and it became easy for them to embrace the concept of how reducing costs incrementally like this truly makes a difference.”

**Reducing foam and plastics**

The next waste reduction project involved a little more homework but had a high impact: reducing the amount of Styrofoam the hospitals’ used in the cafeteria and patient foodservice. The Green Team launched a “Say no to Styro” campaign, which revealed a shocking dependence on Styrofoam cups and dinnerware. “The ‘Say no to Styro’ campaign got our whole foodservice department thinking about a lot of things,” said Schwartz, noting that both hospitals have signed Healthcare Without Harm’s “Healthy Food Pledge,” which requires a commitment “to treat food and its production and distribution as preventive medicine that protects the health of patients, staff, and communities,” according to the group.

As a result, the hospitals eliminated nearly all Styrofoam containers in dietary departments and switched to reusable cups, glasses and plates. All employees were given a reusable mug whose use entitled them to free coffee and tea in the cafeteria. Styrofoam clamshells were replaced by clamshells made from sugar cane. All in all, the campaign led to a total reduction of foam and plastic usage by 2,000 cups, 3,000 plates and 1,000 each of knives, forks and spoons.










**Switch to reusable sharps containers saves \$10,000**

The next waste reduction project explored the impact plastic disposable sharps containers were having on the hospitals’ waste stream, and the environment. All units were replaced with reusable sharps containers, which are taken away by a vendor that sanitizes the units for re-use. The result: 3.96 tons of plastic waste prevented and \$10,000 per year savings in waste disposal costs.

**Single-use device reprocessing saves \$134,000**

Schwartz and her team also zeroed in on the wasted dollars from discarding certain medical devices and instruments labeled as “single use,” after realizing that many such devices can safely and effectively be reprocessed for use again. After implementing a single-use reprocessing program for such devices as pulse

# The Waste Stream

<p><b>ALUMINUM CANS</b> PLACE EMPTY CANS IN THE LABELED CONTAINER</p>  <p>CONTAINERS WILL BE PICKED UP EVERY THURSDAY Call ext. 1546 if pick-up is needed immediately</p> <p>The aluminum can is the most valuable container to recycle and has the highest consumer recycling rate in the U.S.</p> <p>Place empty cans in the labeled container.</p>	<p><b>BATTERIES</b> PLACE USED BATTERIES IN THE LABELED BUCKET</p>  <p>CONTAINERS WILL BE PICKED UP EVERY THURSDAY Call ext. 1546 if pick-up is needed immediately</p> <p>Batteries are considered hazardous because of the metals and/or other toxic or corrosive materials within. Batteries are potentially a valuable source of recyclable metal.</p> <p>Place all used batteries in the battery bucket.</p>	<p><b>PLASTIC</b> PLASTIC ITEMS ARE TO BE PLACED IN THE LABELED CONTAINER</p>  <p>CONTAINERS WILL BE PICKED UP EVERY THURSDAY Call ext. 1546 if pick-up is needed immediately</p> <p>Plastics are classified from #1 to #7. Please recycle plastics labeled: 1, 2, and 3. #1 Examples: Disposable soft drink and water bottles #2 Examples: Milk jugs, detergent bottles, shampoo bottles #5 Examples: Clearly plastic bottles, yogurt cups/lids</p>	<p><b>SHREDDED PAPER</b> PAPER ITEMS ONLY SHOULD BE PLACED IN THE LABELED CONTAINER</p>  <p>VENDOR PICKS UP PAPER ITEMS ON WEDNESDAY Call ext. 1546 if items are needed to the container</p> <p>Budget Credit Card Info Financial Documents Health Info Link Mail Operations Manual Outdated Policies Patient Info Documents Payroll Forms Personal Health Forms Social Security Info Strategic Plans</p>
<p><b>CHEMO</b> PLACE IN CONTAINER WITH SECURE LID</p>  <p>IF BOXED, SEAL ID AND LABELLED</p> <p>Waste that contains residual chemotherapy agents including chemotherapy agents including sharp volumes larger than residual needs to be packaged as hazardous.</p>	<p><b>CLEAR BAG - General Trash</b> ALL ITEMS MUST BE BAGGED AND PLACED IN CART</p>  <p>DISPOSED OF IN TRASH COMPACTOR</p> <p>Items not dripping or saturated with blood and/or body fluid</p> <p>Disposable Gowns Drapes Drawings Gowns Tees, urine, vomit, sputum with no presence of blood Foley Catheter &amp; Foley Catheter bags with no presence of blood IV Bags &amp; Tubing</p>	<p><b>RED BAG ITEMS</b> PLACE ITEMS INSIDE OF THE RED BAG IN THE CONTAINER</p>  <p>AUTOCLAVE WITH SANIPAK (OR BOXED FOR DISPOSAL)</p> <p>Draping Foley Catheter Hemovac Hemovac Blood &amp; Blood Product Bags Body Fluid are defined as Blood &amp; Blood components Contaminated, absorbent, perineal, vomit, &amp; vaginal secretion Clean drainage into Foley Catheter Bags with presence of blood IV Tubing (with blood) Segments - Piped Types</p>	<p><b>SHARPS</b> DISINFECT APPLIES THAT ARE COMPRESSED BY TANKS MUST BE PLACED IN THIS BOX</p>  <p>IF BOXED, SEAL ID AND LABELLED IF PLACED IN HAZ-WASTE AREA</p> <p>Blood vials/serum tubes Broken &amp; reusable glass contaminated with blood or body fluids Disposable instruments Lancets Needles Pencil &amp; Culture dishes Syringes with or without needles</p>
<p><b>BLACK BOX</b> HAZARDOUS CHEMICAL WASTE INCLUDING PHARMACEUTICALS FROM THE LIST BELOW</p>  <p>CONTAINER WILL BE RE-PLACED EVERY 6 MONTHS Call ext. 1546 if pick-up is needed immediately</p> <p><b>RCRA LISTING - Chemo</b></p> <p>Federal Hazardous Waste - P-List Warfarin, Nicotine, Arsenic Trioxide Federal Hazardous Waste - U-List Arsenic, Mercury (Methylmercury), Crotalaria (Dithionite)*, Cyclophosphamide*, Cyanide (Cyclophosphamide)*, Lindane, Miconazole*, Phosphen (Hexachlorocyclopentadiene), Selenium Sulfide, Zalcitabine (Zalcitabine)* Federal Hazardous Waste - D-List Cephazolin (Mercury Preservatives), Diclofenac (Mercury Traces), Flurbiprofen (Mercury Preservatives), Hexachlorocyclopentadiene, Lidocaine (Cocaine), Methylmercury (Chromium, Sodium Hexafluoroantimonate) (Mercury Preservatives), Norethindrone (Cocaine), Selenium, Silver Sulfide, Tetraglycyl (Mercury Preservatives), Thiamine (Silver) Federal Hazardous Waste - Ignitable Any ignitable semi-solid products including inhalers</p>		<p><b>LINEN</b> ALL ITEMS MUST BE BAGGED AND PLACED IN CART</p>  <p>PLACE IN CAGE AREA OF LOADING DOCK</p> <p>ALL LINEN (including heavily soiled) should be placed in a clear bag and closed.</p> <p>Linen that cannot be laundered will be removed from the linen supply by the vendor.</p> <p><b>IN THE EVENT OF AN EMERGENCY,</b> <u>move all items 36 inches away from any electrical panels.</u></p>	



oximeter sensors, trocars, forceps, scissors and staplers, the hospital prevented 2.336 tons of waste and notched savings of \$134,000 in the first year.

### ***Safe disposal of expired drugs***

Discarding expired pharmaceuticals in general trash or in septic systems has become a nationwide problem. In June 2011, St. Francis Hospital-Downtown co-sponsored and was a host site for Project Rx, a community-wide event to reclaim unwanted drugs to safeguard the public's drinking water. The project also entailed partnering with the local renewable wastewater utility, the Drug Enforcement Administration, Greenville Family Partnership (a local drug prevention initiative) and Upstate Forever, a regional environmental organization. More than 780 pounds of unwanted or expired drugs were collected and safely disposed of.

## **KEYS TO SUCCESS**

Schwartz points out that ensuring reliable data is a key factor of green business partnerships. And "great intentions" must be shepherded into real, sustainable long term programs.

Corporately, Bon Secours attributes its success to:

- Incorporating ecology into its mission and ministry;
- Connecting with and inspiring staff;
- An organization structure with clearly delineated accountability;
- Specific measures and targets;
- Making "green" activities a core part of current work, not a new and additional project; and
- Association with peers such as Practice GreenHealth and effective green business partners.

"One of the big things we've learned as a result of our sustainability initiative is first that old adage "failure to plan is plan to fail," said Schwartz. We started with a corporate strategic plan and broke it down into manageable projects at the individual system level. We didn't try to tackle everything at once. First, we put into place some processes around waste. And then we went on to the next thing. It also helps that our community is very proactive when it comes to keeping the 'green' in Greenville."

### ***Keeping staff motivated***

An educated and motivated staff is another key reason for St. Francis Health System's success, according to Schwartz. Once the system's Green Team found ways to communicate the 'whats' and the "whys" around green projects, the "hows" and "whens" almost took care of themselves. St. Francis uses every opportunity to reinforce its 'green' message, including using its employee intranet to explain ongoing initiatives.

Today, Schwartz and her team are surrounded by an energized workforce that treats sustainability are part of its job. And she attributes a lot of that

to the ministerial foundation of Bon Secours. "Before we started down this path, we vetted our plan by looking at other faith-based organizations," she said. "The fact that we were able to tie our plan to our parent's spiritual values clicked well with our employees. When you tie it to a values set, it becomes very personal."

But nothing illustrates the enthusiasm of St. Francis' staff better than a [special video](#) it produced and posted on its YouTube channel. The video, entitled "[Every Day is Earth Day](#)," quickly came to fruition in just a matter of days after staff learned of Schwartz's plans to travel to a national conference in Phoenix to present on the program. Two contract furniture movers not even official St. Francis employees who moonlighted as musicians and video producers immediately seized upon an idea to write lyrics and music to a rap song and build a video casted by hundreds of St. Francis employees, including guest services, facilities, housekeeping and nursing – even CEO Nantz. "We're all still humming that song," Schwartz mused. "It's infectious. When Practice Greenhealth called and told us



Scenes from the special "Every Day Is Earth Day" YouTube® video

they were inducting us into the Environmental Leadership Circle, the first thing they asked me is if I could get on stage and do a rap. I respectfully declined, of course.”

### ***Keeping it light, making it fun***

And St. Francis Health System’s Green Team never misses an opportunity to inject fun into hospital activities around environmental sustainability. And it involves branding and messaging. For example, an employee dressed as a futuristic robot called “Recyclops” often makes the rounds at various hospital departments to drive home the importance of recycling, accompanied by an employee who does all the talking. The purpose of the visits is to educate, as well as perform routine recycling audits. “Recyclops doesn’t talk, he just gives a thumbs-up or thumbs-down,” she said. “This is effective. People remember the behavior and begin to lay down that kind of mindset that recycling is important.”



“Recyclops” character used to promote recycling initiatives

St. Francis also hosts a week long Earth Week event on campus. During Earth Week, staff can eat eco-friendly, no-waste lunches, visit vendor booths to learn everything from green home building to how their unused cell phones can be recycled and transformed into free calling cards for military families, to educational booths to learn about buying organic food, energy conservation and local volunteer opportunities.

### **Closing thoughts**

It’s easy for anyone at Bon Secours Health System now to understand the practical reasons for its journey toward sustainability. “For many hospital nowadays, especially in the midst of the debates over healthcare reform, where you’re getting paid less for taking care of patients, anything you can do to operationally to improve your bottom line is wonderful,” she said.

But Schwartz just as easily waxes philosophical about the journey. “What we’re finding is greening an organization is not rocket science,” she said. “It’s a matter of always keeping your eyes and ears open for new opportunities. I’m a firm believer in Margaret Mead’s quote, ‘A small group of thoughtful people could change the world. Indeed, it’s the only thing that ever has.’”

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