

# Naval Hospital Bremerton Diverts Biomedical Waste from Its Waste Stream

## Operating Room's Initiative Reduces Landfill Biohazard Waste, Proves Cost-Efficient

**WHEN IS A** ton not a ton? When approximately 2,000 pounds of biomedical waste gets diverted from a landfill due to efforts of personnel at Naval Hospital Bremerton (NHB).

April 22, 2013 marked one year of success for Naval Hospital Bremerton's Main Operating Room (OR) sustainable practice of recycling and reprocessing single-use instruments.

fiberoptic instrument, passed through a small incision in the abdominal wall, which examines the abdominal cavity or performs minor surgery.) Much is disposable and not reusable. But the instrumentation once used is recyclable. Plastic parts can be grinded and/or melted down; metal components of copper and steel can be separated, recovered and reused.

The Main OR used to throw away three, 30-gallon bags of garbage per total joint surgery case. Now they recycle three, 30-gallon bags of plastic and have just one 15-gallon bag to throw away.

"It's a significant reduction in the waste sent to a landfill. It's really an incremental amount of waste product, and we're staying on top of the

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The OR's environmental initiative has not only reduced landfill biohazard waste, but also proved cost-efficient by saving \$2,300 from enacting biomedical waste disposal processes, as well as enhanced their recycling efforts by receiving brand new sterile items from instruments turned in.

A prime example of the OR's sustainability plan concerns medical supplies involved in laparoscopic usage during a procedure. (Note: A laparoscopic procedure involves the use of a flexible

"Due to our case load, we might use a dozen specific devices a day and each is recycled instead of sending them to a landfill," said Kevin Stevenson, Main OR Nurse and prime coordinator of the OR efforts along with Cmdr. Fran Slonski, Quality Management Department Head, and previous Main OR Department Head. Stevenson and Slonski received the inaugural NHB Sustainability Award certificate last year on behalf of the OR for this endeavor.

process because it's easy to take for granted. We even recycle the instrument wrappings to use again," Stevenson said.

"This program is becoming more main-stream because of its obvious benefits. It is also supporting our environmental sustainability. Environmental management is focused on waste diversion, reduction, and minimization," said Ramon Calantas, NHB Facilities Management environmental technician.

“We have a lot of great nurses, both military and civilian, working on this project,” said Slonski.

“This is a result of staff members such as Cmdr. Slonski and Kevin Stevenson providing insight on how we can minimize our impact of the environment. It’s process improvement at its best,” Calantas said.

has staff members diligently placing single-use devices into Sharps Containers (a container used to place medical needles and other sharp medical instruments after use) for biomedical waste. Single-use devices include bipolar cutting forceps, laparoscopic dissectors, graspers, scissors, suture passers, ultrasonic scalpels, and any sharp-pointed surgical instruments.

and without needles are also disposed in the Sharps Containers.

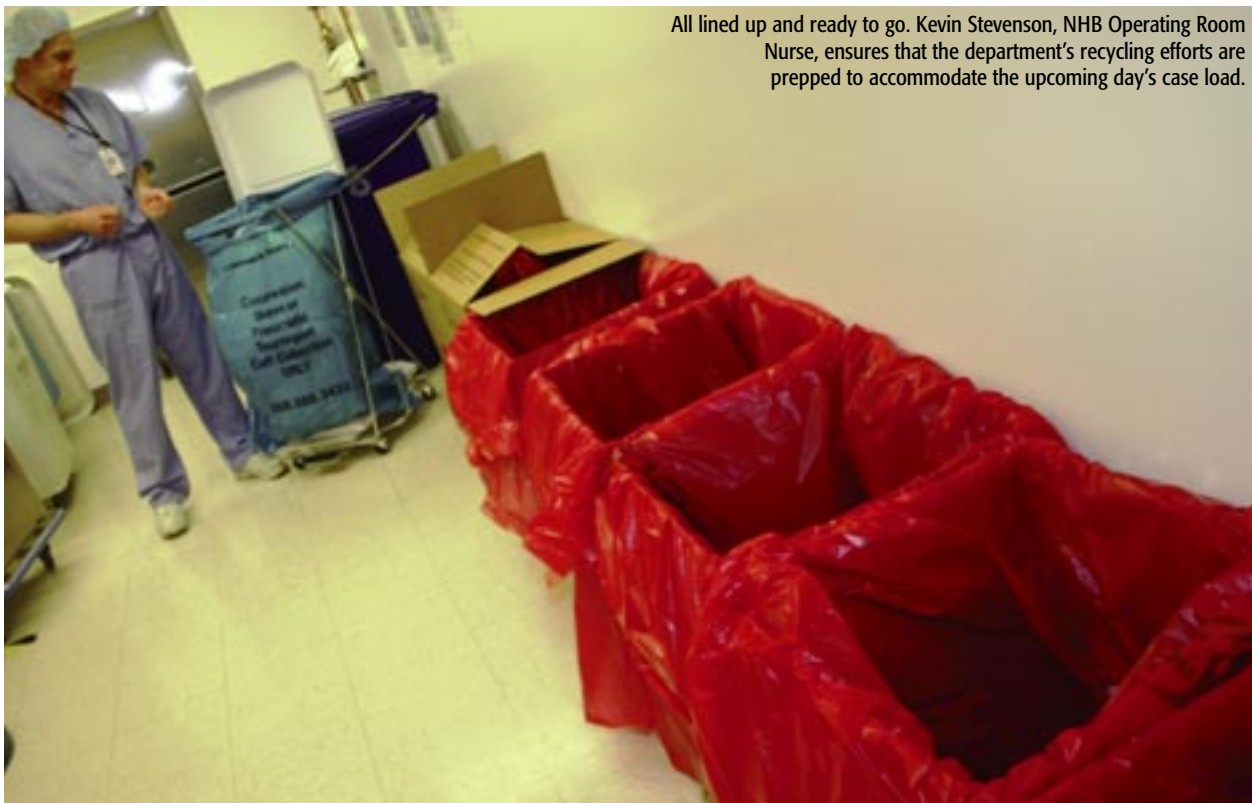
According to Robert Mitchell, NHB Environmental Manager and Sustainability Program Manager, sustainability is to the ability to meet present needs without compromising the ability of future generations to meet their own needs.

The OR has reduced the amount of biomedical waste disposed, reduced the cost of disposing of medical waste, and saved money by buying back at half the price of a brand new device.

Calantas added that the OR recycling/reprocessing efforts are a prime example of keeping the command more environmentally sustainable. A prime example of the OR reprocessing single-use instruments

The primarily red-white colored Sharps Containers in the OR are also used to dispose of all sharps instruments such as needles, blades, scalpels, razors, pins, clips, staples, and puncture-creating items. Empty syringes with

“Stevenson has been the driving force of the Main OR team. He has helped to coordinate overall environmental awareness that has reduced the amount of solid waste leaving the Main OR, increased



All lined up and ready to go. Kevin Stevenson, NHB Operating Room Nurse, ensures that the department’s recycling efforts are prepped to accommodate the upcoming day’s case load.



“A place for everything and everything in its place” is the daily norm of NHB’s OR when it comes to recycling products from regular waste to biohazard waste to pharmaceutical waste.

recycling outflow and advocated product substitution as a sound economic practice,” said Mitchell.

“We work closely with our Environmental Department and brought in a contractor, Stryker Sustainability Solutions, to coordinate and accommodate the ambitious

sustainability plans we implemented. Without them, this would not have happened. We wouldn’t be handling paper, plastic and any medical devices as properly as we do now,” said Stevenson.

Stevenson notes that prior to partnering with Stryker, the OR devices were just disposed of into large Sharps Containers. Now, Stryker can sell devices back to NHB with up to 50 percent of cost reduction after each device is broken down to bare components, cleaned, sharpened, reassembled, packaged, and sterilized. The OR has reduced the amount of biomedical waste disposed, reduced the cost of disposing of medical waste, and saved money by buying back at half the price of a brand new device.

“Re-processing is really all about changing habits. It is keeping people from falling back into former ways of handling waste product. Kevin is a champion of the cause because he has shared his awareness and discipline with those with whom he works. As former military, we know that service members tend to pick up on new instructions quickly and follow through.

## The Basics About Naval Hospital Bremerton

NHB IS A community-based acute care and obstetrical hospital, offering expert primary care, emergency care and a broad range of medical and surgical specialties, with 40 inpatient beds (with expansion capacity to 72). The hospital is conveniently located between Naval Base Kitsap (NBK) Bremerton and Puget Sound Naval Shipyard and NBK Bangor. NHB is parent command for three Naval Branch Health Clinics and the Puget Sound Family Medicine Residency Program. The three clinics are located at Puget Sound Naval Shipyard, NBK Bangor and Naval Station Everett.

NHB has a three-fold primary mission to support warfighters, past and present, and their families:

- Providing exceptional care anytime, anywhere.
- Shaping military medicine through training, research, and graduate medical education
- Preparing forces for deployment.

NHB and its clinic’s staff consist of approximately 1,400 dedicated military, civilian, contract and American Red Cross volunteer personnel.

For more information about NHB, visit [www.med.navy.mil/sites/nhbrem](http://www.med.navy.mil/sites/nhbrem).



The efforts here at NHB are really great,” stated Jayson Ayers, Stryker Sustainability Solutions representative.

“We are seeing a nearly 40 percent reduction in supply costs related to the purchasing of the reprocessed items. The first item we started buying as a reprocessed unit is saving us \$240 per box of five from purchasing them brand new. Creative business practices such as these will allow us to make better use of the government funding, reduce our environmental footprint, and prove our dedication to being responsible stewards for the government,” explained Lt. Cmdr. Richard B. Lawrence, Main OR Department Head. “Even with the custom set-up packs used in surgeries, the provider has been accommodating to the OR needs and concerns to achieve additional reductions in our waste stream,” he continued. Additionally, items such as sterile trays for equipment (to be placed on) are also being recycled to help meet environmental concerns.

“We are always interested in evaluating our partnerships with current and prospective vendors who can help our department and the Command reduce our environmental impact. All of these efforts are a huge team approach from the department, the vendors, and the other parties in the Command who help us along the way from Materials Management to the Environmental team. Without their support and dedication, we would have never been able to accomplish this goal,” Lawrence said.

Along with the Sharps Containers, NHB has a variety of color-coded medical waste disposal devices located at specific departments, clinics and offices throughout the command, such as:

- Clear bags for regular waste (trash/wrappers, dressings, diapers, gloves, empty drainage bags, disposable patient items and sanitary napkins)
- The black box for Pharmaceutical Waste including residual medication, intravenous (IV) bags and tubing with residual added medications (no blood)
- Vials, tablets, capsules, powders, liquids, creams/lotions, eye drops, suppositories, inhalers, unused nicotine gum or patches, nitroglycerine tablets
- Residual medications expelled from medication-filled syringes
- Partially used/residual prescription or over-the-counter medications



Just an arm's length away. Sharps Containers in the OR are used to dispose of all sharps instruments such as needles, blades, scalpels, razors, pins, clips, staples, puncture-creating items. Empty syringes with and without needles are also disposed of in the Sharps Containers.

The Biohazardous Waste red bags are used for:

- Blood and all potentially infectious material
- Bloody tubing, hemo/pleurovac chest drainage systems
- Soaked/dripping bloody dressing/intact glass or plastic bottles containing bloody fluids
- All disposable items soaked or dripping with blood or other potentially infectious material
- Maternity absorbent pads from obstetrical patients

The Trace Chemo Waste in yellow boxes are reserved for all supplies used to make and administer chemo medication, such as tubing, empty bags/bottles/vials, syringes, gloves, pads, masks, gowns and wipes. Pathological Waste such as human tissue and organs, placentas and similar tissues from surgery, delivery or autopsy procedures is disposed of in gray tubs. The color-coded medical waste disposal containers also have specific handling instructions that include maximum weight allowances. [↕](#)

*Photos by Douglas Stutz.*

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