

## Pre-Filled Saline Syringe: A Small Change with Big Results

**Environmental and Human Health Impact:** Elimination of the consumption and disposal of 27,352 pounds of plastic annually.

**Business Impact:** \$196,227 in product and medical waste cost reduction.

### Challenge

The Medical Procurement department established the Strategic Supplier Development program (SSD) to cultivate mutually beneficial relationships with key suppliers. All suppliers who participate in the SSD program are required to lead environmental initiatives which will support KP's EPP goals.

Becton Dickinson (BD) came to the program with a proposal to switch a larger version of a product to a smaller one. The BD "Posi Flush" pre-filled saline syringe is used to push saline into IV lines in order to clear them. We use over five million 10ml syringe annually. BD highlighted to the group that a smaller 3ml syringe is all that's needed to accomplish the task. By simply migrating to a smaller syringe, we found that we could not only save money but also avoid thousands of pounds of plastic, medical waste from reaching landfills.

### Aim/Goal

- Reduce cost and waste by converting 75 percent of the five million 10ml saline syringe, in use today, to the 3ml syringe.
- Reduce landfill waste.
- Reduce medical waste disposal costs.

### Team

Pat Schow, Manager, Strategic Supplier Development  
Product Support and Supply Chain Managers

### Actions Taken

- ✓ Established supplier expectations for environmental goals and reviewed project proposals.
- ✓ Identified current volumes: 5.4 million 10ml pre-filled saline syringes annually, equaling 135,000 pounds of plastic waste.
- ✓ Assess conversion opportunity around KP regions. Supplier provided utilization data and appropriate mix recommendations (of 10ml vs 3ml syringe) by facility.
- ✓ Presented conversion idea to the National Sharps Safety Committee and Regional Nursing Leadership to obtain nursing endorsement for change.

- ✓ Supplier drafted education material which was used to describe the value of using the 3ml saline syringe to the nursing staff and gain endorsement by nursing leadership.
- ✓ The speaking points were directed at nursing to reassure them that a change in product would not mean a change in practice.
- ✓ Utilized expertise of facility-based Product Support and Supply Chain teams to drive the effort locally.
- ✓ BD worked directly with facilities on education and training.
- ✓ Actual conversion was targeted to be phased over several months as facilities accepted the concept. We worked with our distributors, BD, and our supply chain to ensure adequate supply during the migration period.

### Results

The program was initiated in May 2010 with an annual benefit of:

- 27,350 pounds of landfill plastic waste reduced
- \$5,470 medical waste disposal cost reduced
- \$180,757 product cost eliminated



### Lessons Learned

- ✓ While not truly a change in clinical practice and industry regulations only require 2.7ml of saline to flush IV lines, nursing has traditionally used a 10ml syringe. It was important that the SSD program collaborate with local nursing, supply chain, and BD to ensure the rationale and logistics of the change were understood and agreed to.
- ✓ Support from nursing and leadership was helpful and used to communicate and reinforce the acceptability of the change.

### Next Steps

- ✓ Working this initiative within the SSD program has inspired similar ideas which are being explored, such as changes in packaging materials and a waste stream mapping project.