

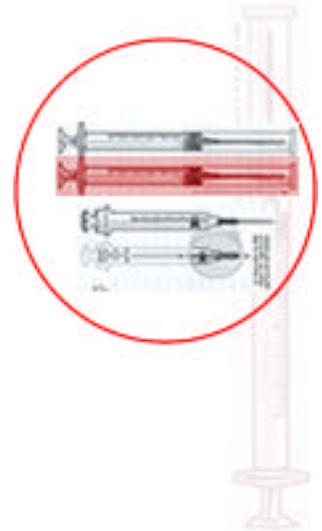
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities are required to use safer medical devices.



SAFER MEDICAL DEVICE IMPLEMENTATION IN HEALTH CARE FACILITIES

SHARING LESSONS LEARNED

NIOSH has asked a small number of health care facilities to share their experiences on how they implemented safer medical devices in their settings. These facilities have agreed to describe how each step was accomplished, and also to discuss the barriers they encountered and how they were resolved, and most importantly, lessons learned.



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Phase 3: Identify and Screen Safer Medical Devices

For the past seventy-five years, our faith-based health-care facility has played a critical role in contributing to the quality of life of the 600,000 culturally diversified residents in our community. We are dedicated to carrying out our mission of contributing to healthy communities and promoting quality healthcare to all with compassion. This is accomplished through a full spectrum of diagnostic, therapeutic, preventative, and rehabilitation services, which include Neighborhood Affiliate Physician Offices, Parish Nursing Program and a Health Connection Medical Call Center.

After deciding which type of safer medical device to introduce, each health care facility must identify specific brands and product names of safer medical devices to consider for evaluation and possible implementation. This is a two-step process: 1) identifying the manufacturers and their products and 2) physically examining the safer medical devices to ensure their appropriateness for specific clinical settings. No device would be used on a patient before it has been screened by the health care facility to ensure it meets clinical needs.

1. Describe the process your sharps injury prevention team used in identifying safer medical devices (step 1)

Data obtained from the risk assessment conducted by the committee identified the blood culture collection process as the highest risk area for injuries to employees and in particular, the use of safety butterfly collection sets. The safety butterfly set is unique in that it has two needles, one at the anterior end for entry into the vein, and the other at the posterior end for penetration into the collection container.

At the time of the evaluation, our facility was already utilizing a safety butterfly needle that was equipped with a single-hand activated safety feature at the anterior end, but none at the posterior end. Injuries were occurring both during blood collection and when disposing of the used collection set from the posterior needle.

When assessing the blood culture collection process it became evident that samples for routine blood work are frequently collected from the same phlebotomy site after the blood cultures have been obtained. This required the safety device selected to be capable of accommodating both the larger blood culture bottle and the smaller routine blood collection vials.

2. Describe where the sharps injury prevention team obtained information about available devices and what this information included.

A search for a device to meet these needs was conducted by visiting vendor websites, catalogs, conversations with current vendors, and review of ads and articles in professional journals. Vendor representatives proved to be an excellent

source for identifying products. The blood culture representative identified products on the market that would accommodate the specific size and shape of collection bottle currently in use.

Input from committee members regarding products that they had used at previous places of employment also provided options for device evaluation.

3. List and explain the factors or criteria used in step 1 in deciding which safer medical devices should be screened for possible pilot testing.

Certain requirements needed to be considered in identifying a safety device for evaluation since it had to be incorporated into an existing process. Factors of concern included compatibility with:

- current safety butterfly collection set
- blood culture collection bottles
- vacutainer blood collection vials

Above all, the product had to provide protection to prevent injury from the posterior needle during the collection process and disposal.

4. List and explain the factors or criteria used in step 2 in deciding which safer medical devices to use in a device evaluation

Committee members physically examined each device for difficulty of use, integrity of construction, and ease of integration into the existing blood collection process.

Also considered were the risks to employees and patients during the evaluation process, the level of difficulty in training staff to effectively use the device, and employee or patient risk for injury.

The availability of the product was also a key factor. A hospital-wide change would require a steady supply of the device during training and implementation periods. If a device was too new on the market there was a risk of it being backordered leaving the hospital without a safe alternative system.

Was the product available through the purchasing group contracted by the hospital?

All of these factors contributed to the final selection of the device to be trialed.

5. What lessons were learned in general during the process of identifying (step 1) and screening (step2) safer medical devices? Describe the difficulties encountered and how problems were resolved.

Identifying suitable devices was quite limited at the time. Only two vendors were producing a safety device that met the criteria. Once the product was selected for trial it was discovered that the size of the device could not be accommodated by the existing sharps containers for disposal. Ironically, the manufacturer of the sharps container was the same as that of the device. The trial process was delayed until the disposal problem was corrected. The manufacturer modified the device so that it would fit safely into the sharps container opening.

6. What would you do differently if you were to begin this process again?

The biggest obstacle in this process was initiating the trial process due to the inability to safely disposing of the item. The disposal requirements of any new device under evaluation must be addressed as one of the criteria during the initial evaluation steps.

7. What advice would you offer a similar facility that is just starting this process?

When searching for a product that must address a particular function, discuss the specific needs with your current vendors. Representatives can be a source for referrals to manufactures. They can also relay the need for modifications to improve the effective use of their products.

8. Please provide any other information you wish to share about the process used or problems encountered in identifying and screening safety devices.

New technology and products continue to be developed for the safe use and handling of sharp and their disposal. Shortly after our newly identified blood culture collection sets were implemented the blood culture bottles were slightly redesigned during the manufacturer' s conversion from glass to plastic. As a result, the new safety device did not fit securely around the bottle septum allowing movement of the needle when engaged.

The manufacturer of the device was contacted and a redesigned device was obtained.

Materials

Materials distributed at the meeting included a) previous meeting minutes for approval, b) an agenda of items to be discussed - both old and new business, c) copies of Employee Health Service sharps injury statistics, d) inventory listing of current sharps supplies stocked in Central Service, and e) information on new products for review.

Staff Hours

Type of Staff	Hours Spent on Phase 3
Management	36
Administrative	6
Front-line	30
Total	72

Other, non-labor items

Item
1) Tablet for recording minutes
2) Copy Paper
3) Professional Organization Publications (Nursing, Infection Control, Laboratory, Purchasing)
4) Internet Access for product search
5) Sample products for evaluation by committee members