

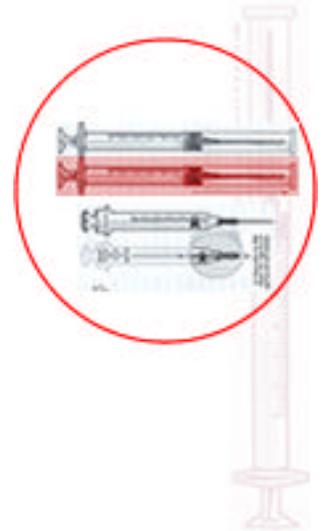
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities 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 5: Implement and Monitor the New Device

Our full service home health agency services the inner city, suburban and rural areas. Our organization is made up of 390 employees, 69% providing direct patient care. We carry an average daily census of 2800 patients and provide comprehensive home health and hospice services for adult, maternal and pediatric clients.

Devices selected and why:

As indicated in our Phase 2 and 3 reports, the Sharps Injury Prevention Team identified **venipuncture (blood drawing)** and **injection devices** as high priority for the agency based on:

1. Current literature and research demonstrating the epidemiology of needlestick injuries in home care, strategies for needlestick prevention and legislation
2. The agency's trends in sharp or needlestick injuries and the relationship between the events and devices used

When selecting the actual device brand, we followed specific criteria (see Phase 2). The selection of the brand was based on the NIOSH criteria for desirable characteristics as well as the availability of the device and costs of the equipment.

Were we able to obtain sufficient quantities of the new device for implementation?

As a part of the screening phase, we selected a product that not only met our quality standards for new devices, but was also readily available for distribution. We did not experience problems obtaining a sufficient quantity for our providers in the field. Ample devices were distributed in team meetings as well as made available through the supply department.

How did we determine the device was being used in the field after implementation?

Once all of the field staff received formal device training and the new devices were distributed, an announcement was made via broadcast voice mail indicating old devices in trunk supplies must be returned to the supply department and policy was announced indicating the safer medical devices must be used. We also provide routine home visit supervision that allows us to determine if the proper safer device was being used.

PROBLEM:

Approximately two months later, a team leader observed a field staff nurse using an old device. After investigation, the field nurse reported she did not feel comfortable with the safer butterfly device because “the needle slipped on occasion and was cumbersome.” This particular device required the nurse to hold the butterfly wings together during insertion into the patient, or the device would not operate correctly. The information was reported to the facilitator and a survey (Attachment A) was distributed to determine the level of **satisfaction of the field staff.**

The findings were surprising as 50% of the field staff were not satisfied with the new safer butterfly device.

RESOLUTION:

A committee meeting was called to determine if a re-training was in order, or if another butterfly device that had been introduced to the committee that month would be screened and tested (using the steps outlined in Phase 4). The committee decided to test a second device and compare that device to the one previously chosen.

After testing and comparing the devices, the result was to use the second device. This safer device did not require holding the butterfly wings together, and the needle never slipped during insertion into the patient. The field staff was retrained in small groups and *all* of the safer medical devices were reviewed. A demonstration back to the trainer was done using artificial arms and both the trainer and trainee signed a statement of competency.

Monitoring

Device usage:

The supply department conducted inventory to determine the current usage of the products. Several follow up broadcast messages were sent to the field staff as a reminder to remove old devices from their trunk supply. One month after converting to the new butterfly device, the product inventory demands as compared to the baseline demands in the supply department were indicating the field staff was indeed using the device.

Satisfaction:

Random telephone surveys were completed to determine **patient satisfaction** (see attachment B.) This simple survey was able to capture the level of patient satisfaction that we needed. It was easy to obtain a sufficient quantity of surveys by using a list of patients, the type of device used and the dates of bloodwork from the field supervisors. In question number 1, we were trying to determine if the device had any impact on the patient's perception of pain during the procedure. In question 4, we were attempting to determine if the patient perceived the device as impacting the safety of the patient in some way.

Lesson Learned: We should have obtained the number of needlesticks the nurse performed on the patient in order to obtain the sample. This information would have eliminated the question of a difficult stick as a variable in the patient's perception of the quality of the device.

Management satisfaction was determined through individual interviews (Attachment C). We measured the satisfaction of the overall impression of safety, cost and quality of the device.

Lesson Learned: The survey could have been more detailed to include the satisfaction of the accessibility of sufficient quantities within the agency, as well as the ordering process. The ordering process was not assessed until well into the monitoring phase.

Evaluation of Effectiveness

The committee meets every 6 months to review the rate of needlestick or device incidents. The committee has plans to randomly survey the nurses' satisfaction using Attachment A. These results will be reviewed at the bi-annual meeting. A decision will be made on the value of this information and if it will become an expectation of the meeting.

Lessons Learned: The committee understands the importance of continued evaluation of the devices we have chosen. During the orientation of new employees, feedback is solicited informally. This is something we recently added. The new employee is trained on the safer medical devices during the first two weeks of orientation, and their evaluation of the device is important. There is an opportunity for the new employee to request another device to be considered. Often the new orientee has a preference of a particular brand and may introduce a new (preferable) product to the agency.

Time Incurred

The time it took for the Agency to Evaluate one safer medical device is included below.

Type of Staff	Hours
Management	8
Administrative Assistant	6
Clinicians	8
Administration	.5
Total	22.5 hours

Other, non-labor items:

Item
Computer system for survey development
Xeroxing, paper
Safer Medical Devices
Artificial arms
Space for meetings

IS IT SAFER?

Please analyze the indicated medical device by answering the following questions on the scale from 1-3:

1= definitely disagree; 2= somewhat agree; 3= absolutely agree

1. The device is needleless. 1 2 3
2. The safety feature is an integral part of the device. 1 2 3
3. The device works passively (i.e., it requires no activation by the user).
1 2 3
4. User can easily tell whether the safety feature is activated.
1 2 3
5. If user activation is necessary, the safety feature can be engaged with a single-handed technique and allows the provider's hands to remain behind the exposed sharp.
1 2 3
6. Safety feature cannot be deactivated and remains protective through disposal.
1 2 3
7. Device performs reliably. 1 2 3
8. Device is easy to use and practical. 1 2 3
9. Device is safe and effective for patient care. 1 2 3
10. I am (overall) satisfied with this device. 1 2 3

Comments:

Attachment B

Safer Medical Device

**Telephone Survey
Patient Satisfaction**

Date of bloodwork: _____

Device used: _____

-Script: We recently purchased safer blood drawing equipment and we want to find out what patients think about it. We hope the bloodwork equipment will decrease the chance of our nurse getting stuck by a needle. You had your blood drawn this week, and I wonder if you mind answering 3 survey questions for us.

Yes __, No __, Call Back Later __.

11. How would you rate the discomfort of this blood draw as compared to previous blood work you have experienced? Less Pain: __, More Pain: __, No Difference: __.

12. Did the device seem easy and practical to use? Yes: __, No: __, Not Sure: __.

13. In your opinion, was the device safer for the nurse? Yes: __, No: __, Not Sure: __.

14. In your opinion, did the device provide safety for the you, the patient?
Yes: __, No: __, Not Sure: __.

Comments:

Scores:

Answers "Yes", or "Less Pain" = 2

Answers "No", or "More Pain" = 0

Answers "No Difference" or "Not Sure" = 1

Total Score: _____

Attachment C

**Safer Medical Device Survey
Management Satisfaction**

15. Do you think the _____device provides safety for the nurse? Yes: __, No: ____,
Neutral: ____.

16. Are you satisfied with the cost of the device? Yes: __, No: ____, Neutral: ____.

17. Are you satisfied with the quality of the device? Yes: ____, No: ____, Not Sure: ____.

Comments:

Scores:

Answers "Yes" = 2

Answers "No" = 0

Answers "Neutral", "Not Sure" = 1

Total Score: _____