

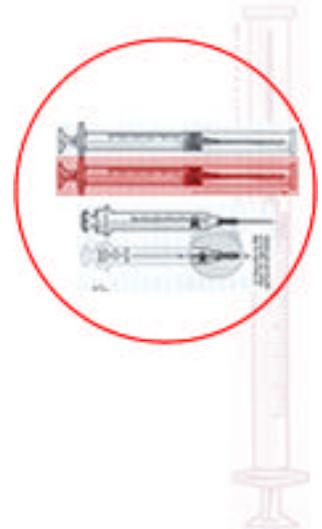
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities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

How did our Home Health Agency identify priorities when implementing the process for selecting and evaluating safer medical devices?

A comprehensive needs assessment was completed to establish a plan. The assessment included the following elements:

1. Review of literature by the Sharps Injury Prevention Team

Purpose: To provide the Sharps Injury Prevention Team with information regarding the Federal and State legislation and evidence-based practice in needlestick prevention and management within the home health field.

Method: The Team was encouraged to review the literature prior to meeting. Our education specialist facilitated the discussion surrounding this literature review. Both the education specialist and supply manager performed a search focusing on current literature and research demonstrating the epidemiology of needlestick injuries, strategies for needlestick prevention and legislation.

Findings:

The literature that was most helpful included:

- State and Federal Legislation
- OSHA web site for Needlestick Prevention (<http://www.osha-slc.gov/SLOTC/needlestick/index.html>)
- JCAHO Sentinel Event Alert, Issue 22, August 22, 2001 (<http://www.jcaho.org/>)
- NAPPSI - National Alliance for the Primary Prevention of Sharps Injuries (<http://www.nappsi.org/>). This site has listed examples of actual safety devices with the manufacturer information.
- American Nurses association- Safe Needles Save Lives (<http://www.nursingworld.org/needlestick/nshome.htm>)
- How to Protect Yourself from Needlestick Injuries (<http://www.cdc.gov/niosh/2000-135.htmml>)

- Home Healthcare Nurse, vol. 19, no.6, June 2001; special edition dedicated to needlestick prevention and management.
(<http://www.nursingcenter.com>)

2. Review of the Agency's sharp injury or needlestick event data

Purpose: To determine the Agency's trends in sharp or needlestick injuries and the relationship between the events and devices used.

Method: Our Agency's Director of Human Resource's reviewed the Agency's needlestick events from the past two years and reported the information to the Sharps Injury Prevention Team. The Team discussed the events and drew conclusions on cause and effect based on the provider's description of the event.

Findings: It was determined there was no pattern or trend that related to a medical device. The data yielded a low incidence of < 2 needlestick exposures per 12-month period. The incidents had no commonality, and in each case no connection with the devices used.

3. Infusion manager interview

Purpose: To provide feedback on the type of devices the Infusion Team utilized and the methods for education.

Method: Meeting conducted with the Sharps Injury Prevention Team and Infusion Manager.

Findings: Needless systems have been in use at our agency for over 10 years, however the equipment is selected by the patient's insurance and delivered to the patient's home prior to the nurse's arrival. This is particularly important information as it posed a barrier in field staff involvement with the selection of the equipment. The Infusion Manager was able to provide a comprehensive list of devices used in home infusion as well

as resources for purchasing new or updated devices and indicated periodic training sessions were conducted as devices were changed.

4. Interview of the Infusion Team

Purpose: 1. To determine the Infusion Team RNs' level of satisfaction with infusion products and venipuncture equipment currently used at the Agency.

2. To determine the Infusion Team RNs' level of expertise with safer medical devices.

Method: The Infusion Team was collectively interviewed during a routine team meeting and a brief written survey was completed and tallied. The Human Resource files for the infusion team members were examined for turnover rate, compensation, and individual experience.

Findings: Our Infusion Team consists of 15 Registered Nurses who are the only providers at the Agency offering infusion services to adults and pediatric clients. The experience of the infusion staff is extensive, the turnover rate low and pay rate higher than that of the medical surgical staff. These providers are familiar and comfortable with using multiple devices as their proficiency with the products is an expectation of the specialty position. The team was unanimously satisfied with the infusion products, but desired safer biohazard containers as well as safer venipuncture equipment. The Infusion Team members were willing to participate in the selection and evaluation of safer medical devices. See survey, *"Is It Safe?"* The survey was kept simple and brief due to time constraints of the staff.

5. Interview of Clinical Managers, Team Leaders and Field Staff; Current Product Satisfaction and Utilization

Purpose: 1. To determine the estimated quantity of devices needed.

2. To determine the field staff's level of satisfaction with current injectable and venipuncture devices.

Method: The Sharps Injury and Prevention Team representatives discussed the information needed with the Clinical Management and Clinical Team Leaders (field staff supervisors) during a management meeting. The Clinical Managers provided the number of venipunctures performed per month in the agency using data obtain from provider profile report sheets. The team leaders were able to submit internal data regarding the average number of venipuncture attempts per case to obtain an adequate blood sample.

The Team Leaders planned and conducted random *satisfaction surveys* by interviewing 20 providers in the field. The interview required two questions: "Are you satisfied with the current medical devices that we use for injectables and venipuncture, including the biohazard container? (yes/no)" and, "I f we were to change the devices to a safer product, what device would you see as a priority?"

Lastly, the ordering records were reviewed to determine the quantity of venipuncture and injectable equipment ordered over the past year.

Findings: The data collection was time consuming and obtained manually. The Team Leaders within the Agency are field supervisors and are therefore able to provide the most accurate information from a practical standpoint. At the Agency, 500 successful venipunctures are performed per month taking 1.25 attempts per patient. One surprising finding included the general satisfaction of providers with the current equipment with the exception of the biohazard container. The providers perceived the risk in the disposal of the butterfly needle, as they thread it into the biohazard container. The potential exposures to other needles in the container were the concern. The current biohazard container was not transparent and was tall with a screw top lid.

6. Availability, costs, and financial resources of safer products

Purpose: To determine the current operational costs and utilization of equipment as well as the available resources to help fund the equipment, including internal organizational resources.

Method: The Infusion Manager and Supply Manager listed examples of safety devices to be researched for commercial availability and the general costs. The National Alliance for the Primary Prevention of Sharps Injuries' web site (www.nappsi.org) was particularly helpful in identifying safety devices with manufacturer information. Supply product catalogs were helpful and were obtained by calling various medical supply companies and requesting the mailing. The source of the products as well as the costs associated with instituting safer devices were not the basis of our decision making with regard to priorities, however with the Agency's large volume and the very narrow budget in healthcare it proved to be an important consideration.

Our standard method for obtaining venipuncture equipment was solely dependent on what the Agency received from the lab vendors. We relied on routine shipments of vacutainers with needles, butterfly needles and glass blood collection tubes. A teleconference with our local lab company representatives was held to discuss the new law requirements and investigate the possibilities of the lab providing safer devices. It was concluded the labs would not provide updated devices.

Information brought back to the Sharps Injury Prevention Team included a cost benefit analysis of two safety devices. The objective was to obtain a reasonable rate based on budget constraints and fair market values. The Sharps Injury Prevention Team studied the safer butterfly devices and vacutainer needles. Using the Agency's product provider satisfaction/utilization data, the Sharps Injury Prevention Team reported to the Administration the estimated annual costs of purchasing new devices.

Findings:

Availability: The Sharps Injury Prevention Team found ample resources for obtaining the equipment in the future. The Agency was not limited in the selection of devices due to non-exclusive contracts with medical supply companies.

Costs: Due to the Sharps Injury Prevention Team's preparation in completing a cost analysis and presenting this information to the administration, we were able to produce a reasonable budget for safer medical devices.

Funding: The historical funding for venipuncture equipment could not continue, as the labs would not provide the safer devices. However, our Agency's Director of Human Resources was able to obtain a *lower premium for the Agency's workers compensation insurance package* by submitting copies of invoices showing the safer equipment device is being ordered.

7. Assessment of current agency policies and procedures

Purpose: To determine if the Agency's Policies and Procedures were current with evidenced based practice, state and federal regulations and our accrediting body.

Method: Our Quality Assurance representative reviewed all of the agency's policies that related to exposure.

Comments: Many of the Policies and Procedures were revised to reflect current standards of the law and accreditation.

Advice from Lessons Learned and Difficulties Encountered:

Be certain to have a multidisciplinary group of field staff participating on the Sharps Injury Prevention Team before beginning to identify priorities as their practical knowledge contribution was invaluable. One reason we did not include the field staff early on in this process was due to the shortage of nurses. In addition to the requirements of the Needlestick Safety and Prevention Act, our Agency was preparing for accreditation and anticipated surveys. The Administration's priorities did not include our efforts in the beginning of this phase. We soon discovered ways to overcome this roadblock. First, time constraints and shortages of home health field staff required the establishment of much of the groundwork ahead. For example, the literature review was accomplished by dispersing the articles and printed web site literature to the members of the Team in advance. The field staff could not attend all of the meetings, but their input was solicited by telephone from the facilitator and this information was brought back. It

is important to note how resourceful the Infusion Team members were for providing reliable information due to their experience with the equipment and contacts with national societies.

The Agency's administrative unanimity in supporting this effort was critical in the development of this phase. After the needs assessment was completed for the Agency, it was necessary to develop a reasonable budget presenting this information succinctly to those senior administrators that make budget decisions. Because these costs were new and additional to the current budget, it was imperative that the administration of the organization understand and agree with the utilization of the safer medical devices and support the staff developing this effort. One presentation approach that worked well was describing the risk management associated with sharps injuries, following up with legislative information and finally our cost benefit analysis, available resources and proposed budget.

The Sharps Injury Prevention Team also benefited from having meticulous facilitators responsible for the preparation of the meetings conducted during this phase. Due to the preparation time, very few members had questions regarding the laws and legislation, and many come with ideas for further identifying priorities. The planning facet of identifying priorities took much longer than expected. It proved to be well worth the undertaking, however. The later phases moved more efficiently due to the preparation in this phase.

Time Incurred

The time it took for the Agency to identify priorities is included below.

Type of Staff	Hours Spent on Phase 2
Management	58
Administrative Assistant	8
Front-line Administration	41
Administration	2
Total	109

Other, non-labor items:

Item
Computer system with Internet access for literature search
Subscription to infusion journals and newsletters
Xeroxing, paper
Overheads
Space for meetings

IS IT SAFE?

Please complete this survey using the following criteria:

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

1. All of the devices I work with in infusion (needless systems and access devices) are safe and I am satisfied with them.

1 2 3

2. I am satisfied with the biohazard container that we currently use. 1

2 3

3. I am satisfied with the safety of the venipuncture equipment our agency currently uses.

1 2 3