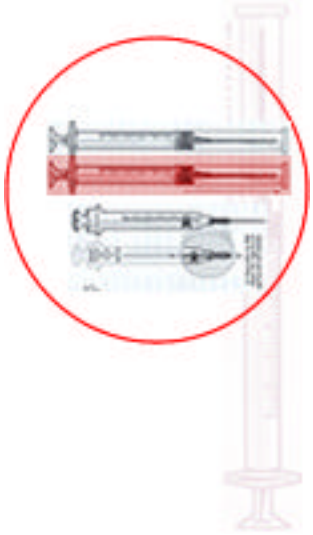
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities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



DISCLAIMER: Provision of this report by NIOSH does not constitute endorsement of the views expressed or recommendation for the use of any commercial product, commodity or service mentioned. The opinions and conclusions expressed are those of the authors and not necessarily those of NIOSH. More reports on Safer Medical Device Implementation in Health Care Settings can be found at http://www.cdc.gov/niosh/topics/bbp/safer/

Phase 2 - Identify Priorities

Our hospital is a not for profit corporation. We have served the community for over ninety years. We offer a full range of general acute care, drug rehabilitation and specialized health services. We are licensed for 170 beds; we have an admission rate of approximately 6,000 patients per year. Our in-patient dialysis unit provides treatment to 4-6 patients daily. Our facility performs approximately 5,000 surgical procedures yearly. We also deliver services via 5 off site clinics. We provide additional services to the community through our comprehensive detoxification unit, chemical dependency unit, and HIV (Wellness Center).

In order to identify priorities, the sharps injury prevention team decided to examine the following criteria in order to provide guidance on selection, implementation and evaluation of safety devices.

1. Assess data related to needlestick injuries in our institution for the past two years.

- Department where injury occurred
- Type of employee: Physicians, Nurses, Phlebotomy, Nurse Aid, Dialysis Tech, Respiratory, Environmental, Dietary, Ancillary personnel
- Type of device used: IV Catheter, Winged needle, Syringe, Scalpels, Suture needles, Phlebotomy devices
- Circumstances at time the incident occurred : over filled containers, sharps container placement (proximity for rapid disposal) , lighting, overtime employee, distractions, patient involvement (non-compliance or combative)
- Type of sharps container: Non-visible containers (dark red) clear containers, ease of placing sharp into container, closure and disposal technique
- Patterns: Departments where similar incidents re-occurred during the stated time period. Employees with repeated incidents of needlestick occurrences. Equipment failures (assessment of equipment that was most often involved in needlestick incidents.)

- Department specific Information:
  Emergency Room (special challenges due to rapid pace of care given)
  Wellness- HIV Clinic (dynamic nature of infectious disease)
  Detox and Chemical Dependency unit (High risk patient population),
  Dialysis (cannula insertion and removal technique)

2. The next step involved assessing data obtained from Employee Injury reports. We needed additional information in order to assess the entire incident, as well as the type of devices that were involved.

- Employee identifying information (Name, Job Category, Department)
  (Scrambled medical record number to maintain employee confidentiality)

- Date and time injury occurred, Date reported (May not be the same as date of occurrence)

- Location where injury occurred, Person injury was reported to

- Nature of injury, specific part of body affected

- Task employee was performing when injury occurred

- Was there an unsafe act by a person that caused or contributed to the injury?

- Did anyone witness the injury? (Name of persons)

- List actions to be taken to prevent re-occurrence

- Does employee feel that this injury could have been avoided?

- List policies/procedures of non-compliance

- List actions to prevent this type of incident from re-occurring

We divided the group into two teams in order to take a closer look at needlestick statistics for the last two years. One group looked at needlestick incidents that had occurred in the nursing and laboratory departments. The other group focused on incidents that occurred in the surgery department, and included all other areas of the hospital. Our goal was to greatly reduce or entirely eliminate needlesticks incidents at our facility. We realized that this process would be a difficult task to complete, however our average number of occurrences were relatively low. We felt that with proper staff education, no more than one or two injuries per year would be a reasonable goal.

Our initial assessment gave us the tools that we needed to begin the difficult task of assessing where sharp exposures most often took place. After we completed gathering the information, we assessed exposures based on the type of employee and the type of device that was involved. We also assessed the number of times that each incident occurred.

During 2001 and 2002 we collected the following information related to needlestick incidents:

Exposure Profile (2001-2002)

Nursing (RN), Laboratory, Surgery, Environmental, Non-Employee

Type of Device Involved

Conventional Sharp's which include (*syringes and Insulin syringes)*
Angiocatheters
Vacutainer
Suture Needle
Sharps Container
(*Listed in order from the most incidents to the least number*)

We were surprised to discover that we had no documented needlestick occurrences in the dialysis unit, and also none in the respiratory department.

Lessons learned: Our total number of employees is approximately 520. Even though our data revealed only a small number of needlestick injuries for the past two years, we realized that even one needlestick is one too many. Every incident is devastating to the person who incurred the injury. We became acutely aware that our team had a great responsibility to our co-workers. It became important that we remained focused on the task to prevent percutaeous injuries that could transmit HIV and other bloodborne pathogens.

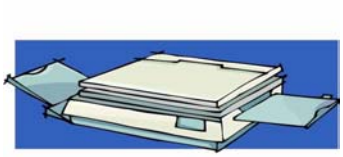
We did not share the names of employees that had been previously injured; we used a scrambled, medical record number method. As we investigated each injury, we became aware that one of our employees had sustained an injury from an HIV positive patient. This fact increased our dedication to develop risk reduction strategies, and also to strengthen our staff educational structure.

Recommendations:

1. Do your homework: Questions related to designs, self sheathing needles, retractable devices, blunting devices, and needle-less connectors will be asked by staff members. The team should be prepared to provide guidance, and give information on new safer, alternative methods.

2. Sub-Committees: When we found that the attendance at meetings was becoming a problem, we divided the team into smaller sub-committees. We felt that by organizing the team into small groups, rather than one large group, everyone would realize that their presence was needed.

3. Goals: Clear cut goals and time lines are important. When the actual evaluation phase begins, time can be your friend or your enemy. Prior preparation and careful planning will prove to be a most valuable asset.



Team Meetings (Approx. 5)
Materials: Copying Handouts
Time: Researching Employee Needlestick Data
Total 40 Hours