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.

Phase 2 Report
Identifying Priorities

This nursing care center is a 500-bed JCAHO accredited long-term care facility that provides 24-hour care to psycho-behavioral and medically/physically handicapped residents with intermediate and skilled nursing care needs. Provision of care is accomplished by 600 employees in the following departments: Medical, Nursing (including Infection Control), Quality Improvement, Respiratory Therapy, Activity Therapy, Occupational Therapy, Pharmacy, Chaplaincy, Physical Therapy, Nutritional, Environmental, Education, Speech & Hearing, Social Work, Health Information, Supply, Volunteer, Physical Plant and Employee Health.

IDENTIFYING PRIORITIES

The goal in Phase 2 was to determine medical devices that will have the greatest impact on preventing occupational exposure. In order to determine what would have the greatest impact on prevention, we first had to identify what devices caused the most injuries.

Team members requested definitions for: 1) a sharp, and 2) a sharps injury. The team decided on the following definitions. A sharp is a syringe, lancet, suture needle, stylet (IV), butterfly needle, razor, pre-filled syringe, scissors, tweezer with teeth, glass specimen tube, cutting shears, nail clippers and scalpel. A sharps injury is any injury caused by listed devices and is contaminated by blood or other potentially infectious material (OPIM).

Infection Control Practitioners provided team members with a list of sharps injury patterns that occurred from 2000 to the present. We included data for several years because the injury rate was consistently low and we felt we needed enough data to determine if a causal pattern existed. Below is the chart presented to team members:

TYPES OF SHARPS INJURIES

Injury	Device Used	Situation	Add'l Information
Laceration	Suture Needle	Injury occurred after suturing complete.	
Needlestick	Needle in sharps container	After venipuncture, attempted to place top on sharps container lid, when needle pricked finger	
Needlestick	Butterfly needle	While pulling needle out of vein, needle went into thumb	
Needlestick	Needle attached to inside of vacutainer holder	During venipuncture, changing blood specimen tubes	

Injury	Device Used	Situation	Add'l Information
Needlestick	Clean needle	Stuck with clean needle over bloody glove during venipuncture.	
Laceration	Razor	Shaving resident	
Needlestick	Monoject Insulin syringe	While pulling shield over needle, turned away to listen to a resident who was talking loudly, and the finger was pricked.	Provider did not know how to activate the second step to make syringe safe.

Infection Control Practitioners also presented the "Facility Sharps Chart" to the team. (See an example of this chart at the end of this report.) This chart is a listing of all the sharps used in the facility and usually contains the Product/Brand, whether a safety device is present, if the activation of a safety device is active or passive, how that safety feature is activated, and comments on when the product was evaluated and if it was removed from the facility and replaced with a safer product.

NIOSH Alert: Preventing Needlestick Injuries in Healthcare Settings workbook was provided to each team member to facilitate understanding of current scientific information about needlestick injury risk and the transmission of bloodborne pathogens to healthcare workers. While the document focuses on needlestick injuries to prevent sharps-related injuries and associated bloodborne infections, our team also considered razors and scalpels as a potential risk.

A speaker trained by American Nurses Association in needlestick injury prevention and device selection came to one of our team meetings to discuss real life scenarios that included injuries and the impact of disease transmission on healthcare workers' lives.

TEAM PRIORITY: Sharps Disposal

Once the team evaluated injury patterns, the Facility Sharps Chart and the NIOSH workbook, they determined that we needed to assess the disposal process. The team developed a monitor to assess correct lid placement, safety device activation, tube holder attached to butterfly in disposal container and fill line compliance by examining each disposal on each unit; they collected the information and presented their findings at the next team meeting. Team consensus was unanimous to screen sharps disposal containers.

LESSONS LEARNED

Throughout Phase I and Phase II, we attempted to locate definitions for "sharp" and "sharps injuries". Unable to locate a definition for either term after multiple searches through documents and agencies, our team decided to modify definitions that encompassed needlestick-only injuries. The team included razor and scalpel injuries in the definition. Sometimes definition modifications are necessary to meet a facility's needs.

The speaker's presentation elicited a response such as "This could really happen to one of us" reinforcing what we had presented and brought a level of seriousness to the team that was previously lacking. We recommend that others explore options or resources that would provide this type of training. Our speaker was encouraged by the ANA to conduct training for a specified number of participants per year and the ANA provided all of the resources (handouts, videos, exercises, etc.) without cost.

STAFF HOURS AND OTHER COST ISSUES

Cost issues are broken down into two areas: materials and staff hours. Materials used for this step included computer, paper, Types of Injuries Chart, Facility Sharps Chart, the NIOSH booklet, Sharps Disposal Container Monitor, and the (free) resources obtained from the ANA by the instructor to conduct her training.

Again, we would recommend obtaining secretarial support at the beginning the process if possible. Staff hours in the formation of the team are reflected in the following chart:

Type of Staff	Hours Spent on Phase II
Team Coordinators	16
Management	12
Administrative	8
Device Users	17
Total	53

Infection Control
Facility Sharps Information Sample Form

Product/Brand	Safety Apparatus Present ?	Activation		If Active, how is safety feature engaged?	Comments
		Active	Passive		
Blood Collection					
Lancets					
IV Therapy					
Scalpels					
Razors					