

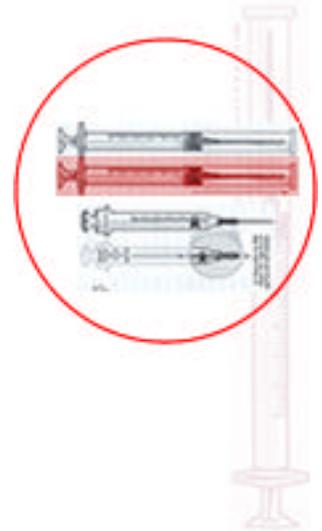
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities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

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This agency is the largest Community Mental Health/Retardation Center in the United States. The agency provides an array of services for eligible residents of this County in the form of mental health/mental retardation services, early childhood intervention services, crises stabilization, psychiatric emergency services, forensic psychiatry, residential programs, psychiatric rehabilitation services and community outreach. Services for adults, adolescents and children are provided in outpatient clinics, inpatient/residential programs and group homes and in natural environments within the community. Approximately 30,000 consumers are served annually within the various programs and services of this agency.

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- The Sharps Injury Prevention Team (SIPT) task in this phase of the study was to purchase, use, and monitor the selected medical devices that we evaluated during our pilot test. The devices we chose in phase 2 of this study were:
  - Phlebotomy needles especially safer butterfly blood collection sets;
  - Vacutainer holders; and
  - Safety syringes.

In order to complete our tasks the following steps were taken:

Our Agency has a contract with a specific medical supply company from whom the safer medical devices for injection and phlebotomy are ordered. We have the option of ordering directly from the manufacturers with a Purchasing Order number (PO#). The agency purchasing department staff assists us by obtaining the PO # and placing the orders. A part of the phlebotomy supplies are received from our contract labs and we order a back up supply either through the medical supply company or direct from the manufacturers. In the event that a device is not readily available, we have the ability to special order. We have had no difficulty getting sufficient quantities. A master SIPT approved safer medical supply requisition form was developed and provided to all units. Nurses will be directed to only order devices identified.

One of the problems we encountered was that one of our chosen phlebotomy devices will not be available until October 2004. Therefore, we will use the safety device provided by our contract lab until we are able to obtain the device. We will be reevaluating the devices in October 2004, as there is another phlebotomy device we want to try that will be available at that time. The other safer medical devices evaluated and chosen are currently being used in all units. This has been verified by onsite inspection both by the Project Coordinator and the primary SIPT members. We have not had any difficulties getting nursing staff to implement and use the safer medical devices.

Nursing staff provided verbal and written communication to SIPT Site leaders and Project Coordinator about their satisfaction/dissatisfaction with the safety devices. The Project Coordinator and SIPT Site Leaders performed direct observation of use of the safer medical devices and monitored the adequacy of supplies.

We had a month long trial on five of our units and a two-week trial on a sixth unit. This unit was a 24-hour Forensic facility and had to wait for approval from the county sheriffs department to participate in the trial. The four remaining units have been using the newer safety devices approved by the SIPT team since November 2003.

We had a total of 65 safety sharps evaluation tools returned representing 171 uses of injection devices and 82 evaluation tools of vacuum tube blood collection sets, representing 277 uses. We were disappointed in the low responses from the Nursing Supervisors in completing the Supervisors Survey Form, which was due to several supervisors being out on vacation. The above forms completed and returned provided adequate data for us to determine the level of satisfaction among nursing staff.

The need for Needlestick Injury Prevention training for all nursing staff was identified early in the study. Mandatory nursing training with demonstration and participant return demonstration occurs at New Employee Orientation and yearly with all nursing staff. Consumer/participant satisfaction was determined through a written consumer survey. The SIPT members reported that the 529 consumers, who completed the written satisfaction surveys, were interested in the fact that safer medical devices were available for use. The number of surveys completed provided us with enough data to determine the level of consumer satisfaction. The consumers were intrigued by how the devices worked and their focus was on their own comfort/discomfort. With the retractable devices for injection the consumers complained of the noise (pop) as the needle retracted. A few instances of hematomas have occurred after injections with the retractable devices. The majority of consumers preferred the nonretractable syringes. Most consumers identified that the nurse was knowledgeable and capable while providing their service.

One of our problems identified was that we had no standardized safer supply order form and Lead Nurses were ordering safety devices that were not approved/evaluated by the SIPT. To correct this situation, the SIPT developed a standardized order form for ordering approved safer medical devices.

In addition to the problem identified above, we found a challenge unique to our setting in that we had multiple trial and implementation sites spread across a large county. Therefore, the Project Coordinator was not directly accessible to a site for on-unit management of a problem. In some instances in order to provide direct oversight the Project Coordinator had to travel in excess of ten miles to observe and make recommendations for problem resolution.

We evaluated the effectiveness of the devices through the consumer satisfaction surveys, user evaluations and supervisor evaluations on the safer devices chosen for our study. Since February 2004, we have not had any needlestick injuries, which ties directly to the use of the safer medical devices and increased Needlestick Prevention Awareness and training in our facilities.

The lessons we learned about implementing safer medical devices in our facilities were:

- Information and training supports an environment conducive for change.
- Nurses developed increased skill and knowledge in the use of safer medical devices.
- A standardized ordering form prevents the ordering and use of non-SIPT authorized devices.
- At least monthly on-site follow-up visits are needed to monitor use and ordering of devices.
- There is a direct correlation between the use of safer medical devices and the decrease in needlestick injuries.
- For best evaluation, and monitoring one device should be implemented at a time.
- Implementation should not occur during peak vacation times (due to possible low supervisors' response to evaluations).

If we started this process again, we would:

- Involve nursing frontline management earlier in the process in order to have them aware of trial/implementation dates and schedule, have knowledge of appropriate safer devices, and increase participation in survey activities.
- Train the Site Leaders so that they are well versed in the evaluation, trial, and implementation process and methodology for better on-site problem resolution.
- Develop better controls for monitoring and ordering of safer medical devices.
- Develop guidelines for implementation/trial of safer medical devices earlier in the process so that information is disseminated in a timely manner.
- Implement trials with attention to peak vacation times for staff.

The advice we would offer a similar facility beginning this process would be to:

- Establish a multi disciplinary team for evaluation and monitoring of safer medical devices (SIPT).
- Develop a SIPT approved list of safer medical devices that can be used in your facility.
- Develop a system for ongoing monitoring of safer medical devices used on the units.
- Evaluate and review skill levels and knowledge of needlestick injury prevention among licensed nursing staff.
- Provide on going education on needlestick injury prevention and safer medical devices for nursing staff at New Employee Orientation, annually, and as incidents occur.
- Schedule and implement evaluation/trials during non-peak vacation times.
- Implement evaluation and use of one safer medical device at a time per unit.

## Staff Hours

Type of Staff	Hours Spent on Phase 5
Ancillary	15 Hours
Administrative	60 Hours
Front-line	30 Hours
Total	105 Hours

### Other, non-labor items:

Item
1. Copies for meetings/trainings
2. Safer medical devices
3. Transportation to units
4. Food at trainings



USER SURVEY TOOL

Date	Your Unit
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**List the Safer Medical Devices you are using on your unit.**

Phlebotomy Device _____
Injection Device _____

**Please answer the following questions by placing an X in either the yes or no box.**

On your Unit:

1. Was extensive training needed for operation of these devices?  
YES  NO
2. The design of these devices suggests proper use?  
YES  NO
3. Are the devices easy to open and store?  
YES  NO
4. Do the safer medical devices increase the time it takes for you to complete the procedure (s)?  
YES  NO
5. Was there an increase in needlesticks injuries while using these devices?  
YES  NO
6. Do you like these devices?  
YES  NO

If you answered no to # 6 please describe what you do not like about the device(s).

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Are there additional comments you would like to make about this device (s)?

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