Sharps injury prevention programs are intended to reduce the risks associated with the use of needles and other sharps. The goal of such programs should be to provide protection to everyone in the facility — from the sharps users, such as nurses and physicians, to those who may come in contact with the sharp after use, such as housekeeping personnel, visitors, or waste handlers. These programs typically include the following elements:

- the introduction of engineering controls — such as sharps-disposal containers, needleless intravenous (IV) line connectors, and protective syringes — with device-selection decisions based on input from frontline healthcare workers and data obtained during regular reviews of the protective-device marketplace (Each device category should be reviewed at least once a year);
- the establishment of simple, efficient injury-reporting and post-exposure-treatment practices;
- the establishment of safe work practices, including methods for the safe disposal of sharps;
- education and training; and
- continuous monitoring of injuries and exposures and routine analysis of incident data to determine program effectiveness.

Effective programs are often developed by a sharps injury prevention committee or other safety committee, which includes representatives from several areas in the facility, including administration — such as the risk manager — materials management, appropriate clinical areas — nursing, clinical laboratory, pharmacy — and housekeeping. Also, staff members such as the infection control officer, industrial hygienist, employee health officer, and medical director should be involved. Additional personnel from operating room, emergency department, nuclear medicine, and home care will likely be needed to address specific concerns. Finally, the perspectives of nonmanagerial, direct patient care providers should be considered during program development. In the United States, for example, the Occupational Safety and Health Administration (OSHA) requires that frontline healthcare workers participate in the identification, evaluation, and selection of effective work practices and engineering controls.

To develop a comprehensive sharps injury prevention program — which, for U.S. healthcare facilities, can be developed as part of the written exposure control plan required by OSHA in its bloodborne pathogens standard — facilities will need to do the following:

1. **Assess injuries and current practices**
   Collecting and reviewing information about past sharps injuries and present work practices is an essential step when designing or assessing a sharps injury prevention program. Examining the facility’s history of needlesticks and other sharps injuries can help the sharps injury prevention committee identify where and when (e.g., during which procedures or applications) such injuries occur in the hospital. Similarly, assessing current work practices will help the committee identify procedures that may increase the risk of injuries. If the facility is not already using a comprehensive reporting system, the committee may need to interview employees or staff to perform an adequate analysis.

2. **Define specific objectives**
   The data collected about injuries and current practices will help the committee define or refine the objectives of its program and prioritize its efforts. Ideally, a healthcare facility would be able to implement all protective measures simultaneously, thereby drastically reducing the risk of sharps injuries the moment the program is enacted. The reality, however, is that different aspects of a facility’s sharps injury prevention program will be implemented over a period of time. Consequently, facilities should focus first on the applications that pose the greatest risk of sharps injuries from contaminated needles and other objects. Other applications should then be addressed in descending order of risk.

3. **Establish an action plan**
   After examining injury reports and establishing ob-
jectives, the committee will need to define an action plan. Within the action plan, each injury category identified should include a strategy for remediation or comment as to action. For each injury category, the committee will need to research the protective alternatives available. For many categories, an engineering control should be available. When selecting engineering controls, healthcare facilities will need to identify the alternatives to consider, determine which of those alternatives will be most effective in the intended environment of use, and analyze costs for the models under consideration.

4. Implement the program

After a program has been developed and protective devices have been selected, the committee will need to develop a plan for implementing the changes. The plan should specify who is responsible for implementing different aspects of the program, when specific milestones should be completed, and what results the facility expects to achieve. The facility should recognize that careful implementation can be difficult and time-consuming.

5. Periodically assess the program’s effectiveness

This step is crucial in assuring the continued success of any sharps injury prevention program. Further guidance on how to assess the effectiveness of a facility’s program is included here.

Effective sharps injury prevention programs do not develop overnight. They result from thoughtful planning and ongoing review, analysis, and revision. Thus, it is important that such programs incorporate procedures for regular review and that they be routinely updated as circumstances change. In the United States, OSHA requires that healthcare facilities review their programs at least annually and that they document assessments of program effectiveness — such as periodic reviews of sharps injury rates — and consideration of newly available protective technologies, like assessments of whether new protective devices would better address sharps injuries and user needs.

Nonprofit health services research agency ECRI recommends that healthcare facilities review sharps injuries on at least a monthly basis after implementing any new program or changing an existing one (e.g., when changing to a new model of protective device). The findings from these reviews should be compared to the previous sharps injury data to determine whether injuries have decreased. If they have not, the facility will need to investigate why and make corrective changes as required. If injuries have decreased, the facility should try to assess whether the reduction can be attributed to the introduction of a protective device or whether other factors might be involved. This will help verify the effectiveness of the particular protective devices in use.

Facilities should also continue to collect sharps injury data and review the data at least annually (as OSHA requires) to verify the continued effectiveness of the program. Some helpful tools for reporting and tracking needlesticks and other exposure incidents are available through the EPINet program, developed by Dr. Janine Jagger and her colleagues at the International Health Care Worker Safety Center at the University of Virginia. For example, the EPINet “Uniform Needlestick and Sharp-Object Injury Report” can be used to ensure standardized reporting of sharps injuries. This form and other EPINet tools can be accessed through the EPINet Web site at www.healthsystem.virginia.edu/epinet. An alternate program for collecting information about occupational exposures is the National Surveillance System for Health Care Workers, developed by the Centers for Disease Control and Prevention. For more information about this voluntary program, see www.cdc.gov/ncidod/hip/SURVEILL/ rash.htm.

In addition, facilities should monitor employee compliance (e.g., by comparing the number of procedures with the number of products used) and investigate any problems that are identified. Facilities should also continue training efforts — providing training for new employees as needed, along with refresher training for current employees and temporary staff. Training should include proper use and disposal of devices as well as protocols for reporting device failures and exposure incidents. Finally, facilities should continue to encourage users to faithfully report all sharps injuries as well as all near injuries and device failures.

Documentation of program review and the development of new or modified action plans confirm the facility’s commitment to reducing bloodborne pathogen exposures and providing a safer work environment.

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**Sharps Safety and Needlestick Prevention Guide**

To help healthcare facilities make informed sharps safety and needlestick prevention device-selection decisions — with the goal of ensuring healthcare worker and patient safety — ECRI presents its comparative evaluations and ratings of 91 currently available protective devices in the second edition of its *Sharps Safety and Needlestick Prevention Guide*. ECRI’s evaluations are designed to determine whether — and to what degree — a product can protect healthcare workers from injury without compromising the patient’s safety or comfort. The findings for each product are based on ECRI’s own laboratory testing, its discussions with device users, and its analyses of the clinical literature and the input received from experts in the field of sharps safety and needlestick prevention. In addition, ECRI provides guidance for ensuring the safe use of these devices once selection decisions have been made.

“A big Lab Week Salute to those who draw the blood! Designate one day of Lab Week as ‘Phlebotomist Appreciation Day.’”

—Dennis J. Ernst, MT(ASCP),
MLO editorial advisory board