



**EVALUATING SAFETY DEVICES IN USAF DENTAL CLINICS  
WITH THE REGIONAL TRI-SERVICE PRODUCT STANDARDIZATION BOARD**

**KEY TERMS**

**Engineering controls:** controls that isolate or remove the bloodborne pathogens hazard from the workplace. Examples include sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems.

**Work practice controls:** controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

**Sharps with Engineered Sharps Injury Protection:** a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

In 2001, OSHA revised their Bloodborne Pathogen Standard. The revisions clarify the need for developing a program to prevent sharps injuries that includes a process to identify, evaluate, and select



engineering and work practice controls (e.g., evaluating safer dental devices). Under the revised OSHA Bloodborne Pathogen Standard, employees directly responsible for patient care

(e.g., dentists, hygienists, and dental assistants) should actively participate in this program. Safety devices should be evaluated based on the nature of existing exposures and type of work performed. The revised OSHA requirements make clear that employers must implement the safer medical devices that are appropriate, commercially available, and effective. No one medical device is appropriate in all circumstances of use. For purposes of this standard, an "appropriate" safer medical device includes only devices whose use, based on reasonable judgment in individual cases, will not jeopardize patient or employee safety or be medically contraindicated. Many safer versions of sharp devices used in hospital settings have become available, and their impact on reducing injuries has been studied. The impact of safer medical devices in other health-care settings suggests that devices with engineered safety features could reduce percutaneous injuries in dental settings as well (e.g., safety scalpels, IV safety catheters). This means that USAF dental clinics should be integrating safety scalpels and IV safety catheter devices into their practice if they haven't done so already. Web sites containing lists of available safety devices can be found at the end of this article. Aspirating anesthetic syringes that incorporate safety features have been developed for dental use, but the low injury rates in dentistry limit assessment of their effect on reducing injuries among dental health-care personnel. Despite this, dental clinics should still be periodically evaluating these syringes as part of their infection control/safety programs.



**Typical Safety Scalpel**



**Typical Safety Anesthetic Syringe**

**In response to the revised OSHA standard, the Department of Defense issued a policy (HA 000013) on 4 June 2001 that states: "Effective immediately, it is Department of Defense policy that Medical and Dental Treatment Facilities will comply with newly revised OSHA 29 CFR part 1910 and all applicable state regulations with respect to needlestick safety. All decisions concerning safety devices will be coordinated with the Regional Tri-Service Product Standardization Boards."**

The regions for the Tri-Service Product Standardization Board are based upon TRICARE Regions. Medical Logistics is the usual point of contact for Regional Tri-Service Product Standardization Board

issues within the medical treatment facility (MTF). The MTF infection control officer should be coordinating new safety device decisions for the facility with Medical Logistics. **The dental service needs to be actively involved in this process.** Issues about safety devices and this evaluation process are commonly discussed at the MTF infection control committee/function meetings and since the dental infection control officer (or an appointed alternate) attends these meetings, this should be easy to accomplish.

The USAF Dental Investigation Service will periodically evaluate safety devices and/or provide information on devices, as they become available. However, each individual dental clinic must coordinate the evaluation of safety devices with their respective Regional Tri-Service Product Standardization Board to be in compliance with the OSHA and DOD policy **before purchasing and using** any new safety devices.

Additional changes that all Air Force Medical Service (AFMS) Medical/Dental Treatment Facilities must comply with include the following:

1. The **exposure control plan** should be reviewed and updated at least **annually** (and whenever necessary) to reflect new or modified tasks and procedures that affect occupational exposure. Updating should also reflect new or revised employee positions that may have occupational exposure. The review and update of your plan should also reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens, and **annually** document the consideration and implementation of appropriate commercially-available, effective safer medical devices designed to eliminate or minimize occupational exposure.



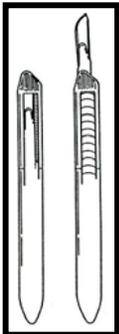
**Suggested Change to the Exposure Control Plan**

**New Engineering Controls Evaluation Record**

*In this clinic, the following engineering controls have been evaluated and/or implemented for appropriate usage in a dental setting:*

Engineering Control	Date Evaluated	Evaluated By	Results of Evaluation (implemented or not appropriate)

2. The **exposure control plan** should solicit input about effective engineering and work practice controls from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps. Specifically, their opinions should be sought when identifying, evaluating, and selecting these controls. Please note that the input received from the employees should also be documented in the Exposure Control Plan.



**Suggested Change to the Exposure Control Plan**

*Input has been solicited from non-managerial employees responsible for direct patient care in the identification, evaluation and selection of effective engineering and work practice controls, using the following process (e.g. meetings, questionnaire, pilot testing):*  
 \_\_\_\_\_ . The following non-managerial employees were involved in this process, by name and/or position: \_\_\_\_\_ .

3. Since engineering controls must be examined routinely and maintained or replaced as needed to ensure their effectiveness (e.g., inspecting sharps containers daily to make sure they are not overfilled), DIS recommends the following also be added to your Exposure Control Plan:

**Current Engineering Controls Maintenance Schedule**

*In this clinic, engineering controls are inspected and maintained or replaced as follows:*

Engineering Control	Inspection/Maintenance	Assigned To



4. Your facility should establish and maintain a **sharps injury log** for recording percutaneous injuries from contaminated sharps. The information in the sharps injury log should be recorded and maintained in a way that protects the confidentiality of the injured employee. At a minimum, the log should contain: the type and brand of device involved in the incident, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred.

**Resources to assist in selecting devices to evaluate and forms to use when evaluating a safety device can be found by visiting:**

**Screening and Device Evaluation Forms**



- Centers for Disease Control and Prevention: Sample Screening and Device Evaluation Forms [www.cdc.gov/OralHealth/infectioncontrol/forms.htm](http://www.cdc.gov/OralHealth/infectioncontrol/forms.htm)

- Training for Development of Innovative Control Technologies (TDICT) Project, University of California - San Francisco: Safety Feature Evaluation Forms - Design Criteria for Evaluation of Several Medical Devices <http://www.tdict.org/criteria.html>



**Lists of Available Safety Devices**

- List of Devices Designed to Prevent Percutaneous Injury and Exposures to Bloodborne Pathogens in the Health-Care Setting (Developed by the University of Virginia's International Health Care Worker Safety Center). [www.med.virginia.edu/medcntr/centers/epinet/products.html](http://www.med.virginia.edu/medcntr/centers/epinet/products.html)
- The California List of Needleless Systems and Needles With Engineered Sharps Injury Protection(Developed in accordance with California Labor Code section 144.7 by the California Department of Health Services (DHS) and the Division of Occupational Safety and Health (Cal/OSHA)). [www.dhs.ca.gov/ohb/SHARPS/disclaim.htm](http://www.dhs.ca.gov/ohb/SHARPS/disclaim.htm)
- The National Alliance for the Primary Prevention of Sharps Injuries (NAPPSI) is a group of health organizations, medical device manufacturers, health-care professionals, and others working cooperatively to reduce sharps injuries by reducing the number of sharps in the workplace. [www.nappsi.org/](http://www.nappsi.org/)  
Needlestick-Prevention Device Selection Guide (Sponsored by ECRI, an independent nonprofit health services research agency). [www.ecri.org/](http://www.ecri.org/)

**Selected References:**

CDC. NIOSH Bloodborne Infectious Diseases HIV/AIDS, Hepatitis B Virus, and Hepatitis C Virus Web site: [www.cdc.gov/niosh/topics/bbp/](http://www.cdc.gov/niosh/topics/bbp/). Accessed March 2004.

US Department of Labor Occupational Safety and Health Administration 29 CFR Part 1910.1030 Occupational Exposure to Bloodborne Pathogens, Needlestick and Other Sharps Injuries; Final Rule. Federal Register 2001; 66 (12); 5317-25. As amended from and includes Federal Register 1991 29 CFR Part 1910.1030 Occupational Exposure to Bloodborne Pathogens; Final Rule. 56(235);64174-82. Available at [www.osha.gov/SLTC/dentistry/index.html](http://www.osha.gov/SLTC/dentistry/index.html). Accessed March 2004.

US Department of Labor, Occupational Safety and Health Administration. Enforcement procedures for the Occupational Exposure to Bloodborne Pathogens CPL 2-2.69; November 27, 2001. Available at [www.osha.gov/SLTC/dentistry/index.html](http://www.osha.gov/SLTC/dentistry/index.html). Accessed March 2004.