1. List the specific intermediate or activity goals from the sharps injury goals

**Intermediate Goal 4.6:** Advocate for the establishment, annual update, and implementation of a comprehensive exposure control plan that complies with the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard or relevant state standard, and Centers for Disease Control and Prevention (CDC) guidelines as appropriate, in all healthcare settings.

**Activity/Output Goal 4.6.4:** Develop materials, tools and examples to assist workplaces to develop and implement comprehensive exposure control plans.

2. Briefly describe the proposed research or activity:

The Centers for Disease Control and Prevention estimate that healthcare workers sustain nearly 600,000 percutaneous injuries annually involving contaminated sharps. In response to both the continued concern over such exposures and the technological developments which can increase employee protection, Congress passed the Needlestick Safety and Prevention Act directing OSHA to revise the bloodborne pathogens (BBP) standard to establish requirements that employers identify and make use of effective and safer medical devices. That revision was published on Jan. 18, 2001, and became effective April 18, 2001. ¹

The revision to OSHA’s bloodborne pathogens standard added new requirements for employers, including additions to the exposure control plan and maintenance of a sharps injury log.

OSHA has determined that compliance with these standards significantly reduces the risk that workers will contract a bloodborne disease in the course of their work. ² However, bloodborne pathogens programs, policies, and standards for health care workers are based primarily on hospital data.

Approximately one-half of the 11 million health care workers in the United States are employed in non-hospital-based settings, such as physician offices, home healthcare agencies, correctional facilities, or dental offices and clinics. Little information is known about the risk management practices in these non-hospital


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settings. 3 A small study conducted by the National Institute for Occupational Safety and Health (NIOSH) 4 found that although seven of the eight correctional health care facilities visited had written exposure control plans, only two were reviewed and updated annually as required by the OSHA BBP Standard. One reason postulated for non-compliance was that hospital-based standards, policies, and programs may not be appropriate to non-hospital settings. It is important to identify effective methods for using exposure control plans in non-hospital settings and to verify whether the specificity and relevance of bloodborne pathogen training and educational materials for non-hospital facilities can positively impact compliance in dental settings.

The purposes of this proposal are to insure that bloodborne pathogens exposure control plans are effectively implemented in private dental offices and dental clinics, an important segment of the non-hospital based healthcare system; and to understand how effective implementation strategies may be applied to other healthcare settings. The proposed work will draw on research-to-practice principles and will be assisted by a strong network of dental professional groups, trade associations, and government agencies. Specific objectives are to:

1) inventory existing exposure control plans in dental healthcare settings.
2) determine if the exposure control plan or other resource is actively used to prevent occupational exposures.
3) determine available resources and barriers to use such as relevant educational materials, knowledge, costs, availability, etc.
4) develop strategies to overcome key barriers to compliance.
5) report lessons learned applicable to the entire health sector.

3. Potential Partners for working group

- Occupational Safety and Health Administration (OSHA)
- Organization for Safety & Asepsis Procedures (OSAP)
- Centers for Disease Control and Prevention (CDC)
- American Dental Association (ADA)
- American Dental Educators Association (ADEA)
- American Dental Hygienists Association (ADHA)

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- American Dental Assistants Association (ADAA)
- Association of State and Territorial Dental Directors (ASTDD)
- National Dental Association (NDA)
- Hispanic Dental Association (HDA)
- American Association of Women Dentists (AAWD)

4. Needed resources amounting to $25,000/year would be directed to:

- Convene working group
- Inventory existing materials
- Survey partners to identify and rank key resources and barriers
- Develop and pilot test strategies to overcome the key barriers
- Report lessons learned to partners and other healthcare sectors

5. Other data sources that would support or contribute to the project:

- BBP Standard compliance data from OSHA
- Information from CDC’s National Health Survey Network (NHSN) and NaSH.
- One of the proposed partners, the American Dental Educators Association, have junior faculty members who are interested in assessment projects as potential publications required for tenure track.
- A sample of some of the studies characterizing percutaneous injuries in dental settings includes:

  Jennifer L. Cleveland, Laurie K. Barker, Eve J. Cuny, Adelisa L. Panlilio, and the National Surveillance System for Health Care Workers (NaSH) Group  
  Preventing percutaneous injuries among dental health care personnel  

  JL Cleveland, SA Lockwood, BF Gooch, MH Mendelson, ME Chamberland, DV Valauri, SL Roistacher, JM Solomon, and DW Marianos  
  Percutaneous injuries in dentistry: an observational study  

  C Siew, SE Gruninger, CL Miaw, and EA Neidle  
  Percutaneous injuries in practicing dentists. A prospective study using a 20-day diary  

  J Harte, R Davis, T Plamondon and B Richardson
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The influence of dental unit design on percutaneous injury

BF Gooch, DM Cardo, R Marcus, PS McKibben, JL Cleveland, PU Srivastava, DH Culver, and DM Bell
Percutaneous exposures to HIV-infected blood. Among dental workers enrolled in the CDC Needlestick Study

F Ramos-Gomez, J Ellison, D Greenspan, W Bird, S Lowe, and JL Gerberding
Accidental exposures to blood and body fluids among health care workers in dental teaching clinics: a prospective study

6. Information on other research and activities- completed, in progress or pending that are closely related:

- Exposure control plans: http://www.ada.org/prof/resources/topics/osha/intro.asp

- Safety device screening and evaluation forms: http://www.cdc.gov/oralhealth/infectioncontrol/forms.htm

- Sharps injuries in surgical versus nonsurgical settings:


- Sharps injuries and blood exposures and the effectiveness of engineered safety devices in home health care: