



PRACTICE MANAGEMENT NOTES

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Evaluation and Implementation of Safety Devices in Dental Practice

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Introduction:

Instrumentation and devices used in the practice of dentistry are designed to efficiently cut and puncture skin, muscle, bone, tooth structure and a variety of structures/substances. These same instruments and devices, while intended to perform specific clinical procedures, can and do cause injury to dental healthcare workers (DHCWs) resulting in their exposure to the blood and/or body fluid of the patient (exposure incident).¹ As defined by OSHA, an exposure incident occurs whenever, during the performance of an employee's duties, an instrument/device contaminated with blood/saliva/other potentially infectious material (OPIM) causes a percutaneous injury (needlestick or cut with a sharp object) or contacts mucous membrane (eye, nose, mouth, other) or nonintact skin.^{1,4} The inherent risk of sustaining an exposure increases when instruments/devices are used carelessly or improperly. The Centers for Disease Control and Prevention (CDC) estimates that 385,000 needlesticks and other sharps-related injuries are sustained by hospital-based healthcare personnel every year and an average of 1,000 sharps injuries occur each day.³ Data for exposures in outpatient facilities, including dental facilities, is incomplete and many exposure incidents are suspected to go unreported.^{3,4} However, a significant number of parenteral exposures, splashes and other contact with mucous membranes or non-intact skin frequently occur in outpatient medical and dental settings.^{2,4} While more than 20 pathogens associated with occupational transmission in healthcare settings have been documented, the bloodborne pathogens (HBV, HCV, and HIV) are the most commonly transmitted and are the greatest concern in dental outpatient settings.⁴ Although occupational HIV, HBV and HCV seroconversion is relatively rare, especially in dentistry, the risk of acquiring a bloodborne infection

after an exposure is definable and very real.⁴ Costs, including appropriate post-exposure counseling, testing and prophylaxis, are estimated to range from \$500 to \$3,000 depending on the treatment provided per occurrence.³ Each exposure incident carries with it significant emotional anguish from worrying about the possible consequences of seroconversion. The OSHA Bloodborne Pathogens Standard specifically dictates the exact procedures that an employer must follow when an employee sustains an occupational exposure.¹ The American Dental Association, CDC and all related agencies recommend that dental practitioners comply with the OSHA regulations regarding bloodborne pathogens.^{1,5} Non-compliance could result in a higher risk of bloodborne disease transmission and increased anxiety for the exposed individual — and significant fines for the employer. Effective post-exposure management must be an essential part of every dental office's infection control and safety protocol.^{1,5}

Prevent The Exposure Incident

Prevention is paramount. Avoiding exposure to blood/OPIM and compliance with immunization recommendations remain primary strategies for reducing occupationally acquired infection.^{3,4} While most exposures in dentistry are preventable when proper preventive controls are implemented, accidents and occupational exposures can and do occur. Needlesticks and other hollow bore exposures are the most significant risk for transmission of bloodborne diseases due to the significantly increased volume of infected blood/OPIM contained within the lumen.^{3,4,6} In 1991, OSHA issued the Bloodborne Pathogens Standard to protect workers from this threat.¹ However, the markedly increased potential for disease transmission from hollow-bore needles/devices has resulted in greater attention to removing sharps

hazards through the development and use of engineering controls that mechanically reduce the chance of a hazard or injury occurring and are frequently technology-based, incorporating safer designs of instruments and devices. By the end of 2001, many states had mandated some form of safe sharps legislation.^{6,7} In 2001, OSHA revised the 1991 Bloodborne Pathogens Standard to include legislation from the Needlestick Safety and Prevention Act.⁶ The revised standard, effective March 6, 1992, clarifies the need for employers to:

1. select safer needles and devices
2. involve employees in identifying and choosing these devices
3. maintain a log of injuries from contaminated sharps.^{3,6}

While this OSHA update does not specifically require safer sharps be used in every clinical scenario it does state that employers should consider “safer” needles and other “safer” sharps and devices as they become available.^{3,6}

Each office should conduct an annual review of the sharps in use and their possible replacement with “safer” versions that are clinically acceptable. A log documenting this yearly review should include:

1. the date of the review;
2. the personnel in attendance;
3. products reviewed;
4. a brief explanation of the evaluation process; and
5. which, if any “safer” devices will be selected.^{3,6,7}

Cost may not be used as a justification for non-selection of safer sharps.^{3,6,7}

Non-managerial employees with occupational exposure including dental hygienists, assistants and any other staff member such as nurses and nursing assistants should be actively involved in identifying and choosing such devices.^{3,6,7} Many “safer” versions of sharp devices such as self-sheathing needles, scalpels with retractable blades, etc., have become available and should be considered. The selected devices must be acceptable for clinical care and provide optimal protection against injuries. The annual review of selecting sharps injury prevention devices gives offices a systematic way to determine and document which of those devices will best meet the needs of that practice.^{3,6,7} Additionally, each employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the log shall be recorded and

maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1. the type and brand of device involved in the incident,
2. the department or work area where the exposure.³ incident occurred, an explanation of how the incident occurred.^{3,6,7}

Product Evaluation:

A product evaluation should be conducted as a pilot test to determine how well a device performs in each office’s clinical setting. The CDC Division of Healthcare Quality Promotion publishes an invaluable resource to help with this evaluation.³ The *Workbook for Designing, Implementing and Evaluating a Sharps Injury Prevention Program*, is available for download at <http://www.cdc.gov/sharpsafety/workbook.html>.³ This workbook outlines an 11-step approach for selecting a product and has a number of examples of how to evaluate safer sharps. The Sample Device Evaluation Form (Figure 3) may help facilitate this effort⁸.

Important information to obtain before performing product evaluation includes:

1. Frequency of use and purchase volume of the conventional devices;
2. Most commonly used sizes;
3. Purpose(s) for which the device is used;
4. Other products the device is used with that might pose compatibility concerns;
5. Unique clinical needs that should be considered; and
6. Clinical expectations for device performance.^{3,6}

Conclusions:

1. Exposure incidents place dental healthcare personnel at risk for HBV, HCV and/or HIV infection,
2. The Needlestick Safety and Prevention Act , effective March 6, 1992, revised the Bloodborne Pathogens Standard of 1991 and clarifies the need for employers to:
 - a. select safer needles and devices
 - b. involve employees in identifying and choosing these devices
 - c. maintain a log of injuries from contaminated sharps.

References:

1. U.S. Department of Labor, Occupational Safety and Health Administration. 29 CFR Part 1910.1030. Occupational exposure to bloodborne pathogens; needlesticks and other sharps injuries; final rule. Federal Register 2001;66:5317—25. As amended from and includes 29 CFR Part 1910.1030. Occupational exposure to bloodborne pathogens; final rule. Federal Register 1991;56:64174—82. Available at <http://www.osha.gov/SLTC/dentistry/index.html>
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7. U.S. Department of Labor, Occupational Safety & Health Administration Bloodborne Pathogens and Needlestick Prevention, <http://www.osha.gov/SLTC/bloodbornepathogens/index.html>
8. Centers for Disease Control and Prevention (CDC). Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program, February 12, 2004, Appendix 13 <http://www.cdc.gov/sharpsafety/pdf/AppendixA-13.doc>.

This is number 96 in a series of articles on practice management and marketing for oral and maxillofacial surgeons developed under the auspices of the Committee on Practice Management & Professional and Allied Staff and AAOMS staff. Complete sets of previously published *Practice Management Notes* are available online at aaoms.org.

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originally presented on May 17, 2006

Crystal Reeves, CPC, CMPE

This virtual seminar provides **step-by-step** guidance to **develop an organization** and **build a staff** that functions *smoothly and efficiently*. The practical tools and techniques discussed will prepare the participant to take a fresh look at *staffing, hiring, training and assessment*. Participants will be better prepared to *identify problems* and *develop solutions* within their OMS Offices. **Code: AOM – 11595**

Electronic Transactions in the OMS Office: They're Easier Than You Think

originally presented on March 15, 2006

Alan H. Feldman

One of the first steps towards e-health, electronic transactions have grown beyond just claim submissions. This seminar will explore the many ways to utilize technology that will enable OMSs and their staff to make better use of their time and improve the overall efficiency of the office. Electronic Data Interchange (EDI), Electronic Funds Transfer (EFT), costs of implementing electronic transactions, Electronic Attachments, and HIPAA's National Provider Identifier (NPI) required by May 23, 2007 are discussed. **Code: AOM – 11530**

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originally presented on November 9, 2005

Sandra E.D. McGraw, JD, MBA

This seminar will provide an overview of **what it means to make your associate your partner**, and the **obligations that you have to each other**. Valuing the hard assets, accounts receivable, good will and structuring the buy-in and pay-out, alternatives and options that should be considered will be discussed. Concrete examples are used, as they pertain to OMS practices. **Code: AOM – 10850**

Rebirth of the Referral Network

originally presented on July 13, 2005

Scott McDonald

This program will teach OMSs and their staff how to prioritize referral sources, identify new referrals, and patch up lost relationships. *Especially useful for new associates, newly re-located practices and others hoping to grow their practices quickly*. Build your practice through internal marketing outside the office, create a referral network plan with staff, and employ specific dialogues to persuade potential referrals. **Code: AOM – 10671**

Use of Formal Pay Scales in the OMS Practice

originally presented on May 18, 2005

John S. Bauer, MBA and Robert G. Haney

Learn how to Hold and Mold the Right Staff! This virtual seminar will help to assure a well-operated office with a friendly environment, low-turnover rate and higher employee satisfaction. Attract and keep your greatest asset — your employees, allow the practice to be accountable for a budget; create realistic employee pay expectations, and decrease the cost of bad hiring decisions. **Code: AOM – 10582**

HIPAA Security Compliance Part-II

originally presented on February 23, 2005

John C. Parmigiani, MS, BES

This seminar will indicate what OMSs need to do in order to be compliant with the administrative, physical and technical safeguards of HIPAA Security Regulations. Security policies, procedures and documentation requirements as well as specific implementation issues practical to the OMS office are highlighted. **Code: AOM – 10246**

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