

***In* CONTROL**

The Dental Infection Control/Safety Supplement to Dental Items of Significance
NUMBER 22

September 2003

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InCONTROL

The Dental Infection Control/Safety Supplement to Dental Items of Significance

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It has been a challenging, but rewarding first year at DIS. I hope my efforts have helped you. If you have any ideas or would like to contribute to this publication, please do not hesitate to contact me.

This *InControl* offers another opportunity for federal dental service personnel to earn one hour of infection control continuing education. To answer some of the questions you may have about the CE program, please visit our Frequently Asked Questions (FAQ) page.

As always I am available to answer your individual calls, e-mails, or letters. My contact information is:

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USAF Dental Investigation Service
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DENTAL INFECTION CONTROL AND SAFETY COURSE

The next co-sponsored Organization for Safety and Asepsis Procedures (OSAP)/Federal Services Dental Infection Control course is scheduled for Tuesday, 27 January–Friday, 30 January 2004 in Atlanta, Ga. We will be covering a broad range of topics and have guest speakers from the Centers for Disease Control and Prevention, dental schools, and the Federal Services again this year. As in previous years, OSAP will handle all registration issues. There will be a limited number of USAF command sponsored quotas that will be handled by your respective Command Dental Surgeon. The course is not scheduled to end until 1615 on Friday, 30 January 2004; travel arrangements should be made accordingly. The course schedule and registration information can be found by visiting www.osap.org.

January 2004						
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25	26	27	28	29	30	31

2003 USAF DENTAL INFECTION CONTROL SURVEY



The USAF Dental Investigation Service is gathering information on dental infection control practices in USAF dental clinics. A survey questionnaire was sent to every USAF dental clinic in August. If you did not receive a survey, please let us know. The questionnaire will provide information on current dental infection control practices at USAF dental clinics, and assist DIS with updating, educating, and disseminating new product ideas and practices. Any questions can be directed to me at: DSN 792-7676, Commercial (847) 688-

7676, or email: jennifer.harte@ndri.med.navy.mil.

Please return the surveys no later than **30 September 2003** via FAX or mail to:

Lt Col Jennifer A. Harte
USAF Dental Investigation Service
Detachment 1, USAFSAM
310C B Street, Building 1H
Great Lakes, IL 60088-5259
DSN FAX 792-7667 or Commercial FAX (847) 688-7667

Thank you in advance for your participation in this survey.

FROM THE LITERATURE



Reviews of the following infection control articles can be found in *DIS* # 69.

A laboratory-based study to assess the performance of surgical gloves.
Korniewicz DM, El-Masri MM, Broyles JM, Martin CD, O'Connell KP. *AORN J* 2003;77:772-779.

Bacterial contamination of computer keyboards in a teaching hospital. Schultz M, Gill J, Zubairi S, Huber R, Gordin F. *Infect Control Hosp Epidemiol* 2003;24:302-303.

Centers for Disease Control and Prevention. Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). *MMWR* 2003;52 (No. RR-10):1-44.

Environmental surface cleanliness and the potential for contamination during handwashing. Griffith CJ, Makik R, Looker N, Michaels B. *Am J Infect Control* 2003;31:93-96.

Hand antisepsis: evaluation of a sprayer system for alcohol distribution. Barrau K, Rovey C, Drancourt M, Brouqui P. *Infect Control Hosp Epidemiol* 2003;24:180-183.

Infection control: Its evolution to the current standard precautions. Molinari JA. *J Am Dent Assoc* 2003;134:569-574.

Infection control practices in dental radiology. Bartoloni JA, Charlton DG, Flint DJ. *Gen Dent* 2003;51:264-271.

Microbiological evaluation of a range of disinfectant products to control mixed-species biofilm contamination in a laboratory model of a dental unit water system. Walker JT, Bradshaw DJ, Fulford MR, Marsh PD. *Appl Environ Microbiol* 2003;69:3327-3332.

Monomer permeability of disposable dental gloves. Nakamura M, Oshima H, Hashimoto Y. *J Prosthet Dent* 2003;90: 81-85.

Needlestick injuries among medical students. Patterson JM, Novak CB, Mackinnon SE, Ellis RA. *Am J Infect Control* 2003;31:226-230.

Transmission of HIV and hepatitis C virus from a nursing home patient to a health care worker. Beltrami EM, Kozak A, Williams IT, Saekhou AM, Kalish ML, Nainan OV, Stramer SL, Fucci MH, Frederickson D, Cardo DM. Am J Infect Control 2003;31:168–175.

EVALUATING SAFETY DEVICES



Typical Safety Anesthetic Syringe

Many safer versions of sharp devices used in hospital settings have become available, and their impact on reducing injuries has been studied. 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. 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., blunt suture needles, safety scalpels, IV safety catheters). In 2001, OSHA revised their Bloodborne Pathogen Standard. The revisions clarify the need for development of 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.



Typical Safety Scalpel

In response to the revised standard, the Department of Defense issued a policy (HA 0000013) 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 Clinical Product Teams for needlestick safety devices should include information on any cost increases associated with this policy in their quarterly product standardization report to the TRICARE Management Activity."

The dental infection control officer (or an appointed alternate) should be representing the dental service on the MTF infection control committee/function where issues about safety devices are commonly discussed. 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 devices decisions for the facility with Medical Logistics. The dental service should also be actively involved in this process.

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 will have to coordinate their 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.

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/infection_control/forms.htm

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
- 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
- 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/
- Needlestick-Prevention Device Selection Guide (Sponsored by ECRI, an independent nonprofit health services research agency). www.ecri.org/

Selected References:

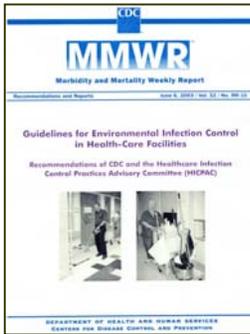
CDC. NIOSH Bloodborne Infectious Diseases HIV/AIDS, Hepatitis B Virus, and Hepatitis C Virus Web site: www.cdc.gov/niosh/topics/bbp/. Accessed September 2003.

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 <http://www.osha.gov/SLTC/dentistry/index.html>. Accessed September 2003.

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 <http://www.osha.gov/SLTC/dentistry/index.html>. Accessed September 2003.

CDC PUBLISHES UPDATED ENVIRONMENTAL INFECTION CONTROL GUIDELINES

The health-care facility environment is rarely implicated in disease transmission, except among patients who are immunocompromised. Nonetheless, inadvertent exposures to environmental pathogens (e.g., *Aspergillus* spp. and *Legionella* spp.) or airborne pathogens (e.g., *Mycobacterium tuberculosis* and varicella-zoster virus) can result in adverse patient outcomes and cause illness among health-care workers. Environmental infection-control strategies and engineering controls can effectively prevent these infections. The incidence of health-care-associated infections and pseudo-outbreaks can be minimized by 1) appropriate use of cleaners



and disinfectants; 2) appropriate maintenance of medical equipment; 3) adherence to water-quality standards for hemodialysis, and to ventilation standards for specialized-care environments (e.g., airborne infection isolation rooms, protective environments, or operating rooms); and 4) prompt management of water intrusion into the facility. Routine environmental sampling is not usually advised, except for water quality determinations in hemodialysis settings and other situations where sampling is directed by epidemiologic principles, and results can be applied directly to infection-control decisions. This report, which contains the complete list of recommendations with pertinent references, is Part II

of *Guidelines for Environmental Infection Control in Health-Care Facilities*. The full four-part guidelines will be available on CDC's Division of Healthcare Quality Promotion (DHQP) Web site at: www.cdc.gov/ncidod/hip/Guide/guide.htm.

Reference:

Centers for Disease Control and Prevention. Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). *MMWR* 2003;52 (No. RR-10):1–44. Available at: www.cdc.gov/ncidod/hip/Guide/guide.htm. Accessed September 2003.

FDA PROPOSES AMENDMENTS TO REGULATION OF MEDICAL GLOVE TESTING



The Food and Drug Administration (FDA) regulates the medical glove industry, which includes gloves marketed as sterile surgeon's and sterile or nonsterile patient examination gloves. General-purpose utility gloves are also used in dental health-care settings but are not regulated by FDA because they are not promoted for medical use. More rigorous standards are applied to surgeons' than to examination gloves. Presently, the FDA examines gloves for visual defects and water leaks. The FDA has identified acceptable quality levels (AQLs) for glove manufacturers. In March

2003 the FDA proposed an amendment of its regulation on medical glove testing by implementing stricter acceptable quality levels.

The FDA is proposing to amend the sampling plans, test method, and AQLs for medical gloves contained in its medical-device regulations. The objective of the proposed regulation is to improve the barrier quality of medical gloves on the U.S. market. The updated regulation would accomplish this by reducing the acceptable level of defects observed during FDA testing of medical gloves. The FDA is proposing to lower the AQL for surgeons' gloves from 2.5 to 1.5 and to lower the AQL for patient examination gloves from 4.0 to 2.5. By reducing the AQLs for medical gloves, the FDA would also harmonize the level with consensus standards developed by the International Organization for Standardization (ISO) and the American Society for Testing Materials (ASTM).

INFLUENZA: PREVENTION AND CONTROL

Introduction

Influenza, commonly referred to as the flu, typically occurs during the winter months and has been responsible for an average of approximately 114,000 hospitalizations and 36,000

deaths/year in the United States. Influenza viruses cause disease among all age groups. Rates of infection are highest among children, but rates of serious illness and death are highest among persons aged >65 years and persons of any age who have medical conditions that place them at increased risk for complications from influenza.



Influenza A and B are the two types of influenza viruses that cause epidemic human disease. Influenza A viruses are further categorized into subtypes on the basis of two surface antigens: hemagglutinin (H) and neuraminidase (N). Influenza B viruses are not categorized into subtypes. A person's immunity to the surface antigens, including hemagglutinin, reduces the likelihood of infection and severity of disease if infection occurs. Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual incorporation of ≥ 1 new strains in each year's influenza vaccine.

Clinical Signs and Symptoms of Influenza

Influenza is a respiratory illness. Influenza viruses are spread from person to person primarily through the coughing and sneezing of infected persons. The incubation period for influenza is 1–4 days, with an average of 2 days. Adults typically are infectious from the day before symptoms begin through approximately 5 days after illness onset. Children can be infectious for >10 days, and young children can shed virus for <6 days before their illness onset. Severely immunocompromised persons can shed virus for weeks or months.

"FLU" SYMPTOMS

- Fever
- Headache
- Fatigue
- Dry cough
- Sore throat
- Runny/stuffy nose
- Muscle aches

Among certain persons, influenza can exacerbate underlying medical conditions (e.g., pulmonary or cardiac disease), lead to secondary bacterial pneumonia or primary influenza viral pneumonia, or occur as part of a coinfection with other viral or bacterial pathogens.

Options for Controlling Influenza



The single best way to prevent the flu is for individuals, especially persons at high risk for serious complication from the flu, to get a flu shot each fall before seasonal increases in influenza virus. Vaccination of health-care workers and other persons in close contact with persons at increased risk for severe influenza illness can also reduce transmission of influenza and subsequent influenza-related complications. Vaccination is associated with reductions in influenza-related respiratory illness and physician visits among all age groups,

hospitalization and death among persons at high risk, otitis media among children, and work absenteeism among adults.

The vaccine is made from highly purified, egg-grown viruses that have been made noninfectious (i.e., inactivated or killed). Because the vaccine viruses are initially grown in embryonated hens' eggs, the vaccine might contain limited amounts of residual egg protein.

Inactivated influenza vaccine distributed in the United States might also contain thimerosal, a mercury-containing compound, as the preservative. Thimerosal has been used as a

preservative in vaccines since the 1930s. Although no evidence of harm caused by low levels of thimerosal in vaccines has been reported, in 1999, the U.S. Public Health Service and other organizations recommended that efforts be made to reduce the thimerosal content in vaccines to decrease total mercury exposure, chiefly among infants and pregnant woman. Since mid-2001, routinely administered, noninfluenza childhood vaccines for the U.S. market have been manufactured either without or with only trace amounts of thimerosal to provide a substantial reduction in the total mercury exposure from vaccines for children.



Although the optimal time to vaccinate against influenza is October and November, vaccination in December and later continues to be strongly recommended. The 2003–2004 trivalent inactivated vaccine virus strains are A/Moscow/10/99 (H3N2)-like, A/New Caledonia/20/99 (H1N1)-like, and B/Hong Kong/330/2001-like antigens (for the A/Moscow/10/99 [H3N2]-like antigen, manufacturers will use the antigenically equivalent A/Panama/2007/99 [H3N2] virus, and for the B/Hong Kong/330/2001-like antigen, manufacturers will use either B/Hong Kong/330/2001 or the antigenically equivalent B/Hong Kong/1434/2002).

When the vaccine and circulating viruses are antigenically similar, influenza vaccine prevents influenza illness in approximately 70%–90% of healthy adults aged <65 years. Vaccination of healthy adults also has resulted in decreased work absenteeism and decreased use of health-care resources, including use of antibiotics, when the vaccine and circulating viruses are well-matched.

Antiviral drugs used for chemoprophylaxis or treatment of influenza are a key adjunct to vaccine. Effectiveness depends on application early in the course of the disease. When started within the first two days of symptoms, they can reduce the duration of flu by about one day. However, antiviral medications are not a substitute for vaccination. Four licensed influenza antiviral agents are available in the United States: amantadine, rimantadine, zanamivir, and oseltamivir.

Who Should Get a Flu Shot (Influenza Vaccine)

Groups considered at increased risk for serious complications from the flu:	Persons who can give the flu to people who are at high risk:
<ul style="list-style-type: none"> - persons aged \geq 50 years; - residents of nursing home and other long-term care facilities that house persons of any age who have long-term illnesses; - adults and children \geq 6 months of age who have chronic heart or lung conditions, including asthma; - adults and children \geq 6 months of age who need regular medical care or had to be in a hospital because of metabolic diseases (e.g., diabetes), chronic kidney disease, or weakened immune system (including immune system problems caused by medicine or by infection with HIV/AIDS); - children and teenagers (aged 6 months to 18 years) who are on long-term aspirin therapy and therefore could develop Reye Syndrome after the flu; and -women who will be more than 3 months pregnant during the flu season. 	<ul style="list-style-type: none"> - health-care personnel and other employees in hospitals and clinics, including emergency response workers; -employees of nursing homes and long-term care facilities who have contact with patients or residents; - employees of assisted living and other residences for people in high-risk groups; - people who provide home care to those in high-risk groups; and - household members (including children) of people in high-risk groups.

Who SHOULD NOT Get a Flu Shot (Influenza Vaccine)

The following groups should not get a flu shot before consulting their physician:

- persons who have a severe allergy to hens' eggs;
- persons who have had a severe reaction to flu shot in the past;
- persons who previously developed Guillain-Barre syndrome in the 6 weeks after getting a flu shot.

Side Effects and Adverse Reactions

Inactivated influenza vaccine contains noninfectious killed viruses and cannot cause influenza. In placebo-controlled studies among adults, the most frequent side effect of vaccination is soreness at the vaccination site (affecting 10%–64% of patients) that lasts <2 days. These local reactions typically are mild and rarely interfere with the person's ability to conduct usual daily activities.

Fever, malaise, myalgia, and other systemic symptoms can occur after vaccination and most often affect persons who have had no prior exposure to the influenza virus antigens in the vaccine (e.g., young children). These reactions begin 6–12 hours after vaccination and can persist for 1–2 days.

Selected References and Additional Resources:

Centers for Disease Control and Prevention. National Center for Infectious Diseases: *Influenza*: <http://www.cdc.gov/ncidod/diseases/flu/overview.htm>. Accessed September 2003.

Centers for Disease Control and Prevention. National Immunization Program: *Influenza*: <http://www.cdc.gov/nip/Flu/default.htm>. Accessed September 2003.

Centers for Disease Control and Prevention. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2003;52(No. RR-8): 1–44.



INFECTION CONTROL Q & A

Hepatitis B Vaccine

Question: Should I be tested for antibodies to hepatitis B after I complete the hepatitis B vaccine? Are boosters for the hepatitis B vaccine indicated?

Answer: Dental health-care personnel who perform tasks involving contact with blood, blood-contaminated body fluids, other body fluids, or sharps should receive the hepatitis B vaccination. Vaccination should be completed before any contact with blood; it will protect both dental personnel and patients from hepatitis B virus infection.

Dental health-care personnel should be tested for antibody to hepatitis B surface antigen (anti-HBs) one to two months after completing the 3-dose vaccine. Knowledge of antibody response aids in determining appropriate post-exposure prophylaxis or need for revaccination. Persons who do not respond adequately to the vaccine should complete a second 3-dose series or be evaluated to determine if they are hepatitis B surface antigen



positive. Revaccinated persons should be retested after completing the second vaccine series. Individuals who do not respond to an initial 3-dose vaccine series have a 30–50% chance of responding to a second 3-dose series. If a protective antibody response (>10mIU/ml) develops after vaccination, vaccinated persons are considered completely protected against clinical illness.

The Centers for Disease Control and Prevention does not currently recommend booster doses of hepatitis B vaccine and periodic serologic testing to monitor antibody concentrations after completing the vaccine series. As additional information becomes available, the possible need for booster doses will be evaluated.

References:

CDC. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination. *MMWR* 1991;40(No.RR-13).

CDC. Immunization of health-care workers: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). *MMWR* 1997;46(No. RR-18).

CDC. Recommended Infection-Control Practices for Dentistry, 1993. *MMWR* 1993;41(RR-8):1–12.

CDC. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for postexposure prophylaxis. *MMWR* 2001;50(No.RR-11): 1–52.

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.



Infection Control Notebook

Question: What documents should be kept in the dental clinic infection control notebook?

Answer: The following items should be maintained in the dental infection control notebook.

- ✓ Letters of appointment for the dental infection control officer (ICO) and dental noncommissioned officer (NCO);
- ✓ AFI 44-108, Medical Infection Control Program;
- ✓ Most current edition of the USAF Dental Infection Control Guidelines;
- ✓ Dental infection control operating instructions and exposure control plan;
- ✓ 29 CFR Part 1910.1030 Subpart Z (Amended)—OSHA Occupational Exposure to Bloodborne Pathogens; Final Rule or successor;
- ✓ Installation and/or medical treatment facility (MTF) regulations on infection control (e.g., occupational exposure to bloodborne pathogens, management of regulated medical waste);
- ✓ References, including current Centers for Disease Control and Prevention (CDC) and American Dental Association (ADA) infection control recommendations for dentistry;

- ✓ Policy letters and dental infection control consultant's updates (e.g., *InControl* newsletters);
- ✓ Monthly or quarterly reports to the MTF Infection Control Function/Committee;
- ✓ Infection Control related memos or correspondence (e.g., clinical/support flight meeting minutes, policy changes within the clinic, MTF infection control function/committee meeting minutes);
- ✓ Initial and periodic training records, including the lesson plan or a copy of the presentation with a sign-in sheet or post-test attached¹;
- ✓ Results from inspections, dental unit waterline monitoring, and refrigerator temperature monitoring
- ✓ Health-care-associated infection program documentation (i.e., clinic acquired/nosocomial infections); and
- ✓ Sterilization monitoring records (i.e., spore test and other sterilizer monitoring results)²

It's not required that all of these items be maintained in a single notebook. The ICO could maintain some items (e.g., health-care-associated infection program, training documentation) and the NCO of infection control the others (e.g., inspection results, sterilization monitoring results).

¹ Maintain training records for three years IAW current OSHA and MTF guidelines.

² Maintain sterilizer documentation for a period dictated by local statutes and MTF policy or 2 years, whichever is longer.

Sterile Surgical Irrigation

Question: What devices are available to deliver sterile irrigating solutions during surgical procedures?

Answer: The practice of using sterile solutions (e.g., sterile saline or sterile water) for coolants/irrigants during surgical procedures is not a new policy. The Centers for Disease Control and Prevention's *Recommended Infection Control Practices for Dentistry, 1993* recommended the use of sterile saline or water as a coolant/irrigant when surgical procedures involved the cutting of bone, as did the 1999 U.S. Air Force Clinical Practice Guidelines and the USAF Year 2000 USAF Dental Infection Control Guidelines. Recently, the 2003 USAF Clinical Practice Guidelines state that sterile irrigating solutions will be used for procedures that involve the intentional penetration, incision, excision or ablation of intact, non-sulcular oral mucosa and expose normally uncontaminated bone or soft tissue (i.e., surgical procedures).



Conventional dental units cannot reliably deliver sterile water even when equipped with independent water reservoirs because the water-bearing pathway cannot be reliably sterilized. Sterile water delivery devices should be used to deliver sterile water. Sterile water systems for surgery and for dental implants bypass the dental unit and employ sterile disposable or autoclavable tubing. In addition to sterile irrigating syringes used to deliver sterile solutions, oral surgery and implant handpieces as well as ultrasonic scalers that deliver sterile water or other sterile solutions using single-use disposable or sterilizable tubing are commercially available. Several examples include

- Implantmed by W & H distributed by A-dec corporation: www.a-dec.com.
- KaVo INTRAsurg 500 by KaVo America: <http://www.kavousa.com>.
- Osteopower 2i Modular Surgical Handpiece System by Osteomed Corp: www.osteomedcorp.com.
- Odontoson-M Ultrasonic Scaler by Odonto-Wave: www.Odonto-Wave.com.
- Various Ultrasonic Scalers providing sterile water delivery by Amadent (Satelec): www.amadent.com.
- AquaSept (individual autoclavable reservoir units bypassing dental unit waterlines to the handpiece) by Lares Research (Northland Ind.): www.laresdental.com.

References:

CDC. Recommended infection control practices for dentistry, 1993. *MMWR* 1993;41(No. RR-8):1–12.

Garner JS. CDC guideline for prevention of surgical wound infections, 1985. Supersedes guideline for prevention of surgical wound infections published in 1982 (Originally published in November 1985). Revised. *Infect Control* 1986;7:193–200.

Mills SE. The dental unit waterline controversy: defusing the myths, defining the solutions. *J Am Dent Assoc* 2000;131:1427–41.

USAF Clinical Practice Guidelines. Available at USAF Dental Service Home Page.

Year 2000 USAF Dental Infection Control Guidelines. Available at www.brooks.af.mil/dis. Accessed September 2003.

InControl Number 21—September 2003 Continuing Education

Federal dental service personnel can receive infection control continuing education by reading the September InControl and by completing this test. One hour of continuing education credit will be awarded for answering at least eight questions correctly. Please mail or fax the answer sheet **before 31 December 2003** to:

USAF Dental Investigation Service
Detachment 1, USAFSAM
310C B Street, Bldg 1H
Great Lakes, IL 60088
Fax Number: 792-7667 DSN or (847) 688-7667 Commercial.

To answer some of the questions you may have about the CE program, please visit our Frequently Asked Questions (FAQ) page.

1. The influenza vaccine should be made available for health-care personnel.

- a) **True**
- b) False

2. Uncomplicated influenza illness is characterized by the abrupt onset of

- a) respiratory signs and symptoms
- b) fever
- c) fatigue
- d) cough

e) all of the above

3. Antiviral drugs for influenza are a substitute for vaccination.

- a) True
- b) False**

4. The incubation period for influenza is

- a) 1–3 days
- b) 1–4 days**
- c) 1–3 weeks
- d) 1–4 weeks

5. The most frequent side effect of the flu vaccine is

- a) fever
- b) soreness at the vaccination site**
- c) headache
- d) cough

6. _____ regulates the medical glove industry, which includes gloves marketed as sterile surgeon's and sterile or nonsterile patient examination gloves.

- a) OSHA
- b) CDC
- c) FDA**
- d) EPA

7. More rigorous standards are applied to surgeons' than to examination gloves.

- a) True**
- b) False

8. According to the revised OSHA standard, who should evaluate safer dental devices?

- a) managerial personnel (e.g., receptionists)
- b) dental assistants
- c) dentists
- d) hygienists

e) b,c,d

f) all of the above

9. Sterile irrigating solutions and delivery devices should be used during all surgical procedures (e.g., oral surgery, periodontal surgery).

- a) True**
- b) False

10. Which of the following statements is false?

- a) Dental health-care personnel who perform tasks involving contact with blood, blood-contaminated body fluids, other body fluids, or sharps should receive the hepatitis B vaccination.
- b) Vaccination should be completed before any contact with blood.

c) The vaccine consists of 5 doses.

d) The Centers for Disease Control and Prevention does not currently recommend booster doses of hepatitis B vaccine.

**September 2003 InControl #22 Answer Sheet
(Valid 1 Sept–31 December 2003)**

Name: _____ Rank/Grade: _____

Duty Location: _____ DSN: _____

Your Mailing Address: _____

Provide your answers below:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

I affirm that these answers are the result of my work alone and that I have not received assistance from others.

(Signature)

(Date)

Please mail or fax **ONLY THIS SHEET** to DIS at:

USAF Dental Investigation Service

Detachment 1, USAFSAM

310C B Street, Bldg 1H

Great Lakes, IL 60088-5259

Fax number: DSN: 792-7667 or commercial (847) 688-7667