Brook Swallow, a member of Dr. Bradley Willcox's dental team at AccuCare Dental Center.

DENTAL INFECTION PREVENTION:
GOVERNMENT UPDATES AND FAQS

Infection Prevention Corner
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LEARNING OBJECTIVES:

After reading this article, the reader should be able to:

- describe the reasoning behind OSHA's adaptation of the Globally Harmonized System;
- compare and contrast OSHA and Arizona State Board of Dental Examiners (BODEX) training and education requirements;
- identify resources available regarding hepatitis B immunizations and testing for immunity.

WHAT'S NEW?

UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

BLOODBORNE PATHOGENS

There has not been an update in OSHA law regarding bloodborne pathogen exposure since 2001. I am not aware of any proposed changes at this point.

NEW HAZARD COMMUNICATION LAW

OSHA requires that safety data sheets (SDSs), formerly called material safety data sheets (MSDSs), be kept readily available for all chemicals in use by employees at your facility. In addition, the labels on the chemical containers must list warnings and other pertinent information. On Monday, March 26, 2012, OSHA published a final rule updating OSHA's Hazard Communication Standard.[i] This new rule or standard requires changes to the SDSs and the labeling of these chemicals. The requirements are designed to follow the worldwide Globally Harmonized System (GHS).[ii] This system was initiated to guide chemical manufacturers in the assessment of the hazards of a chemical then labeling it with a signal word, pictogram, hazard statement, and precautionary statement. If carried out worldwide, it would traverse language barriers and would provide increased safety to human health and the environment. The Safety Data Sheets will have a new consistent format that has been lacking in the past. OSHA expects reduction of chemical-related workplace injuries and illnesses from these changes.

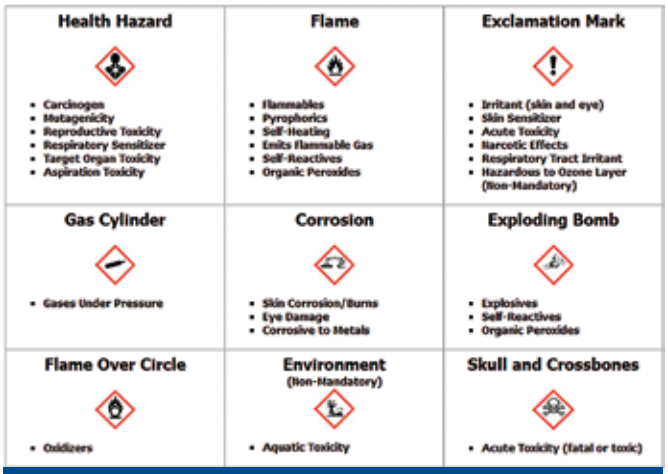
OSHA says "The Hazard Communication Standard in 1983 gave the workers the 'right to know,' but the new Globally Harmonized System gives workers the 'right to understand.'" We have until December 1, 2013 for employee training and the entire transition is not required to be completed until the year 2016. I will provide additional information on this as we learn more about employer responsibility. It appears

that the manufacturers and importers are responsible for the bulk of the transition and the employers will have to provide training to their employees in interpreting the symbols and wording. The old sticker system that left the employer trying to decide what was flammable, corrosive etc. was virtually unmanageable unless the employer was a chemist. Overall, I feel that this is an improvement that will make hazard warnings and SDSs easier to understand. The 29 CFR 1910.1200 Hazard Communication Standard will remain the same except for these new changes.

The table below summarizes the phase-in dates required under the revised Hazard Communication Standard (HCS)

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

www.osha.gov/dsg/hazcom/hazcom-faq.html



www.osha.gov/Publications/HazComm_QuickCard_Pictogram.html

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

NEW GUIDELINES EXPECTED

The CDC guidelines for Infection Control in Dental health-Care Settings first published in 1986 were updated in 1993 and 2003.[iii] My sources from the CDC tell me to expect a new update to be published in 2013. I will address the changes at that time.

FAQS

Most dentists indicate to me that they feel that they are following CDC guidelines and OSHA law to the best of their ability. For the most part, I agree but there are always questions that I get regarding both areas. I would like to share with you some of the questions that I have received over the years and my answers to them.

OSHA vs. ARIZONA STATE BOARD OF DENTAL EXAMINERS (BODEX) REQUIREMENTS:

Are the OSHA requirements for staff training the same as BODEX requirements for continuing education for infection control?

No, the requirements are different for each government agency. OSHA law mandates that each dental facility have its own customized OSHA plans for bloodborne pathogens, hazard communication and others for employee protection. Training for all employees who will have occupational exposure must be provided at time of hire, yearly and more often if the plans change. There is not a specific period of time required for the training but there is a compulsory content.

BODEX requires that Arizona dental professionals receive "Recognized continuing dental education in infectious diseases and infectious disease control" for each three year period of licensure. Dentists must have at least six credit hours, hygienists at least four credit hours and denturists at least two credit hours.[iv] This means you can take more credits in infection control but must take the minimum just cited. BODEX also requires that Arizona dental facilities follow both OSHA law and CDC guidelines.

Can the Arizona Dental Association OSHA Workshops count towards my continuing education requirements for BODEX?

Yes, the "OSHA Manual Workshop", sponsored by the AzDA, course content includes OSHA law; elements of an employee health program; blood-borne pathogens; how to handle an exposure incident; sterilization; disinfection; environmental infection control; and the new CDC dental guidelines. It does not take the place of OSHA training for dental health care workers (DHCWs) for their own workplace. It is a "train-the-trainer" workshop with a turnkey CD and individual employers must form their own plans from the workshop information to train their employees. I recommend that the dentist, the hygienist attend along with the office manager if he/she is responsible for the OSHA plans. I also recommend that the back office assistant who handles the SDSs attend. It is a four-hour course. You also can access continuing education in infectious diseases and infectious disease control, by going to the AzDA web site at http://www.azda.org/CE/Infection_Prevention/.

HEPATITIS B (HBV):

I know that I must offer hepatitis B vaccinations to employees. Who needs the shots, and what if a new employee already has had part of the series somewhere else but did not complete it?

The hepatitis B vaccination series must be made available at no cost after training and within 10 days of initial assignment to employees identified as being exposed to bloodborne pathogens while at work. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series and antibody testing reveals that the employee is immune, or 2) medical evaluation shows that vaccination is contraindicated.

If the employee presents with a history of an incomplete series of vaccinations but no record of immunity, you may want to test for antibodies. Many times the employee converts to positive immunity after the first shot and the remaining two shots act as boosters so further vaccination is not necessary. Other sources recommend continuing the series then testing for immunity. Follow the advice of your occupational medical provider.

Why is it necessary to test at-risk employees for hepatitis B antibodies and when should it be done?

One of the original tenents of the OSHA Bloodborne Pathogen law mandated that in addition to the law, any new recommendations from the United States Public Health Service (USPHS) regarding occupational exposure to bloodborne pathogens should be followed. When the vaccine series was first introduced in the 1980s, testing for immunity was not routinely done. Through research it is now known that approximately 10% of the vaccine recipients do not convert to immunity status after the initial series and of that 10%, only half will respond to the second series. As a result, the USPHS recommends antibody testing to determine that the vaccination series has provided immunity to hepatitis B. If an employee does not convert after the second series, they are to be considered nonimmune to hepatitis B and treated accordingly when dealing with a bloodborne exposure. Note: It is more cost effective knowing immunity than testing and providing costly Hepatitis B Immune Globulin (HBIG) following a bloodborne exposure.

The time to test is one to two months after the end of the series and must be offered free to the employee. A few years ago infection prevention experts were saying that a responder can be protected for life and before that, boosters were recommended. Now the CDC is saying a healthy responder is protected for at least 20 years.[v] The recommendations of the CDC Advisory Committee on Immunization Practices (ACIP)[vi] are updated frequently so it is always best to be advised by an occupational medical provider who is experienced in the testing, vaccination and assessment of healthcare employees.

What is the name of the test to check for antibodies for hepatitis B and what is the approximate cost?

The lab test is called Hep B Surface Antibody (anti-HBs). It usually runs about $55. A full panel can be costly and is not necessary to determine immunity.

HEALTHCARE IMMUNIZATIONS:

The only shots I have to pay for my employees are the hepatitis B vaccine series; right?

No, all Dental Health Care Personnel (DHCP) are considered to be at substantial risk for acquiring several vaccine-preventable diseases.

- **Flu**: DHCWs should be immune to influenza and need a vaccination every year.
- **Measles, mumps, rubella, (MMR)**: Most employees have already been vaccinated against these diseases as part of their childhood immunization programs. If not immune to MMR, your employee should be vaccinated.
- **Tetanus/diphtheria/pertussis**: A booster is required every 10 years. Available now is a combined tetanus/diphtheria/pertussis vaccine all in one dose called Tdap. It is now recommended to provide a single dose of Tdap for adults to replace the next booster dose of tetanus and diphtheria toxoids vaccine (Td). This serves as protection to prevent the spread of pertussis from adults to children, especially those too young to be immunized.
- **Varicella (chickenpox)**: Having DHCP immunized to Varicella will prevent lost workdays as the nonimmune must be excluded from work during their period of possible infectiousness.

All DHCP should be vaccinated or have documented immunity to these diseases, preferably before they are placed at risk for exposure. Employers should require employees to document their immunization records so they can be evaluated for risk of disease transmission. All of the above vaccine-preventable diseases can cause serious complications, even death. These vaccinations protect your patients, your employees and serve as a risk-management strategy for your facility.

> As always, I recommend that you have in place an agreement with an occupational medical provider who is experienced in the testing, vaccination and assessment of health-care employees.

Kay, I recently attended an OSHA course here in Arizona given by a California dentist who was telling us that we have to monitor our glutaraldehyde levels and have a certain thread count for our lab coats. I have attended your AzDA course and you did not say anything about this stuff. Why?

I get this type of question a lot and it stems from speakers and companies from out of state that may not realize that we have our own state-run OSHA or what the requirements are. Approximately half of the states have their own OSHA agencies and half just follow the federal law. Some states, such as California (CalOSHA), have stricter laws than our federal government mandates. Our state OSHA, the Industrial Commission of Arizona, follows Federal law with few exceptions. It is best to know what your speaker is prepared to offer so you do not receive the wrong information.

Is there a problem with me having a fish tank in my operatory?

What about a waterfall in my waiting room? I am seeing more water fixtures in dental facilities designed to add ambiance and to ease anxious patients awaiting dental treatment. What should be addressed is placement and maintenance of these devices. I do not recommend placement of a fish tank in an operatory. It will contain bacteria from fish excrement and may generate droplets that could contaminate contact surfaces. The waiting room would be a good placement but ensure that the tank is property cleaned and the fish well cared for. A dirty tank and dead fish may signal to patients that the dental care that you provide may be suspect. As to waterfalls, I have seen some in waiting rooms that were glass-enclosed, providing both privacy and a sound barrier to the back office. Again proper maintenance is essential with chlorination preventing biofilm buildup.

▶ Continued On Pg 53

▶ INFECTION CONTROL/CARL: Continued from Pg 47

I know the front desk people don't really work in the back; however, they walk down the hall all day. If we are walking around with sharps and dirty instruments, is it okay for them to be wearing open-toed shoes and sandals?

I am not aware of any research regarding injuries to dental employees either in the front office or clinical areas wearing this type of footwear, but I will share my thoughts. Your disposable sharps should be placed in sharps containers as close as possible to the point of use; I prefer placement on the operatory walls. Your reusable sharps should be contained as you move from the operatory to the sterilization area; I recommend cassettes to achieve this purpose. Prevention is the key word in this situation and remember, patients also wear sandals and open-toed shoes and are not expected to follow office dress codes for foot wear.

My bosses were wondering about whether we can use the "blank" system for sharps disposal. You know the one where you put the sharps in the container and then when it is full, you add something so you can put it in with the regular trash?

This form of sharps disposal involves a chemical activation process that encapsulates the sharps and according to the manufacturer, renders the sharps unusable. If you chose to use this product, you must contact your waste-management provider to determine that the landfill that used to dispose of this product will accept it. It may not. The most common means of rendering sharps noninfectious is steam sterilization by a facility with the proper equipment to achieve this purpose. Your office sterilizer would not be acceptable.

Do we have to test our employees for TB? How often?

Since 2005, CDC Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings have expanded to included dental facilities. Unless you are working in a homeless shelter, nursing home, correctional facility or other areas of Tuberculosis (TB) high risk, your employees are considered at low risk to Tuberculosis (TB) transmission. In the TB guidelines, low risk is defined as a patient population containing less than three TB patients/year.[vii] Baseline testing should be done with a two-step Mantoux Tuberculin Skin Test or a single blood test, blood assay for *M. tuberculosis* (BAMT). You only need to test again if and when there is an exposure.

At our clinic, we use the disposable tips that are already loaded with composite. Most of time there is material left over. The assistants wipe the tips off and use them again for other patients. Should we be doing this?

In the medical field, it is considered unethical to use something on a patient that was used for another patient when it is marked as a single unit dose. It is also a legal issue if the material is labeled for single use. Reusing composite does not put the patient at risk as much as reusing a cardiac catheter, but the principle remains the same. We filled our own syringes that could be sterilized, using the disposable plastic tips and rubber stoppers and did not reuse any material. The prefilled capsules must cut down on the labor intensity and the stress factor for the assistant. Have you considered asking the manufacturer to provide smaller units? I have found that dental equipment and supply companies are open to change from feedback from their customers. In the meantime, the tips should be used only for one patient.

My hygienist has "pink eye." When can she come back to work?

Pinkeye, or conjunctivitis, is an inflammation of the conjunctiva usually caused by bacteria or viruses and can be highly contagious. In the past, it was common to treat with antibiotic ointment and the healthcare employee could return to work in 24 hours. As viral infections have become more common, the guideline has changed to "until discharge ceases." This information is from a guide that can be found in the current CDC Guidelines after the references. It is called TABLE 1. Suggested work restrictions for health-care personnel infected with or exposed to major infectious disease in health-care settings, in the absence of state and local regulations. This is a two-page guide that has information as to whether an employee can work or not when infected with a communicable disease. I consider it a quick and valuable resource for the dentist and or/office manager.

KAY'S TWO CENTS:

As always, I have tried to give you pertinent information and practical advice. I appreciate all your feedback and your kind words. And no, I do not plan to retire just yet. There are new CDC dental guidelines coming and then there is that new HazCom standard… *(Note: CEU Quiz next page)*

REFERENCES:

For a complete listing of references cited in this article, refer to page 73.

Kay Carl is board certified in infection control and epidemiology. She has over 35 yrs experience in infection control and has worked in collaboration with AzDA since 1991 to provide CE in OSHA, infectious diseases and infection control. She is a prolific contributing author and editor for various industry print and electronic media.

1. An interesting fact about OSHA is:
___ a. Approximately half of the states have their own OSHA agencies.
___ b. California OSHA has the same exact OSHA regulations as Arizona OSHA.
___ c. OSHA requires you to follow CDC guidelines.
___ d. OSHA law protects only patients.

2. The new Hazard Communication Law published March 26, 2012 requires:
___ a. adaptation of the new Globally Harmonized System (GHS).
___ b. completion of the transition to the GHS by 2016.
___ c. employee training.
___ d. all of the above.

3. What is the name of the test to check for immunity to hepatitis B?
___ a. Hepatitis B surface antigen (HBsAg).
___ b. Hepatitis B e antigen (HbeAg).
___ c. Hepatitis B surface antibody (anti-HBs).
___ d. IgM antibody to Hepatitis B core antigen (IgM anti-HBc).

4. Taking an entire staff to an OSHA workshop will count as OSHA training.
___ a. True
___ b. False

5. OSHA's adaptation of the Globally Harmonized System will require::
___ a. employee training to understand the new labeling.
___ b. employers putting stickers on all chemicals to warn of hazards.
___ c. manufacturers and importers to follow a standard format for chemical labels and SDSs.
___ d. a and c only.

6. New CDC guidelines for dentistry are expected:
___ a. This year
___ b. 2013
___ c. 2014
___ d. 2015

7. What with the confusion of the updating and changing recommendations for hepatitis B vaccination and testing for immunity, the best guidance for the dental employer should come from:
___ a. the employee's personal physician.
___ b. the employer's personal physician.
___ c. an occupational medical provider who is experienced in the testing, vaccination and assessment of healthcare employees.
___ d. any licensed physician.

8. How many hours of recognized continuing dental education in infectious diseases and infectious disease control are required for BODEX license renewal in a three-year period?
___ a. at least six credit hours for dentists.
___ b. at least four credit hours for hygienists.
___ c. limited to 6 hours for dentists.
___ d. a and b only.

9. Why is it necessary to test at-risk employees for hepatitis B antibodies?
___ a. Only 90% of recipients of the vaccination series convert with the initial series.
___ b. 5% of recipients of the second vaccine series do not convert to immunity.
___ c. In order to treat an employee effectively following a bloodborne exposure, the immunity status should be known.
___ d. all of the above.

10. How many hours of OSHA training is required each year?
___ a. There is no time requirement, just content.
___ b. at least six hours for dentists
___ c. at least four hours for hygienists
___ d. at least two hours for assistants

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All major credit cards accepted With online completion, you receive CE certificate electronically

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ARTICLE REFERENCES (44-47, 53-54):

[i] 29 CFR 1910.1200 Hazard Communication Standard. Available from http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099. Accessed May 3, 2012

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[iii] Centers for Disease Control and Prevention Guidelines for Infection Control in Dental health-Care Settings---2003. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm. Accessed May 3, 2012.

[iv] Article 12. Continuing Dental Education And Renewal Requirements Arizona Administrative Code Title 4. Professions and Occupations; Chapter 11. State Board Of Dental Examiners available from: http://www.azsos.gov/public_services/Title_04/4-11.htm#Article_12 Accessed May 3, 2012.

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[viii] Guidelines for Infection Control in Dental Health-Care Settings — 2003. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm. Accessed May 3, 2012.