Providing a safe environment for dental care in an era of infectious diseases

This issue and the October issue of The Journal of the American Dental Association contain reports by the Centers for Disease Control and Prevention (CDC) of documented transmissions of hepatitis B virus (HBV) and hepatitis C virus (HCV) associated with dental health care settings. These transmissions resulted in state health department investigations and patient notifications that led to substantial social, emotional and economic costs.

The authors of the October article reported a cluster of acute HBV transmissions associated with a temporary dental clinic. The five people who became infected as a result of that program highlight the risks of hepatitis transmission associated with breaches in infection control protocols and inadequate policies regarding, practices in, training for and coordination of infection control programs. Radcliffe and colleagues concluded, “Temporary dental clinics can and do provide needed dental care to many patients. However, because of the types of settings and volume of patients treated, consistently maintaining recommended infection control practices in these clinics can be challenging.” The commitment on the part of organizers, providers and volunteers to establish and maintain an effective infection prevention and control program at each of these clinics is critical. The second article, featured in this issue of JADA (starting on page 1340), was prompted by the first documented transmission of HCV in a dental practice.

These two reports provide insight into collaborations between state health departments and the CDC in investigating potential health care–associated infections. They also stimulate questions regarding the nature of infection control breaches that may occur in dentistry and what can be done to prevent them. An overriding question is this: what do we not know regarding the outcomes of breaches not identified or investigated?

These case reports bring attention to the lack of existing surveillance systems capable of predictably helping identify sporadic transmissions, primarily because of the long incubation periods and typically asymptomatic course of these infections, and the difficulties in retrospective investigations of potential health care–associated infections. In the decades since dental health care personnel began using universal precautions (now called “Standard Precautions”), including the use of personal protective equipment and the safe handling of sharps, there has been only one...
documented outbreak—which is defined as more than one transmission—of HBV and none of HCV in a dental setting in the United States. In comparison, 35 outbreaks of HBV and HCV were reported to CDC in the period from 2008 through 2012 in other health care settings.4

There is an overriding public trust in and expectation of safe oral health care, including the prevention of transmission of infectious diseases. To ensure this trust, it must be communicated that the transmission of HBV or HCV associated with dental health care settings is considered a rare event. The 2003 CDC guidelines for infection control in dental health care settings are regarded as a minimum standard of infection prevention and control for dental professionals and dental health care practice settings. Compliance with the CDC guidelines and other relevant federal, state and local regulations is considered to be an ethical and, in some situations, a legal responsibility of all oral health care providers and all settings in which oral health care is provided. Actual compliance with CDC guidelines and other regulations can be affected by many factors, including the provider’s knowledge, experience and commitment; comprehensive policies and procedures understandable to those who must carry them out; and effective systems of implementation and oversight.

External oversight of dental care providers’ compliance with CDC guidelines and other regulations is limited, unless the dental practice setting is in a community health center, an educational institution or a hospital. Although many state dental licensing boards accept CDC guidelines as the standard of practice, their involvement in monitoring compliance is primarily complaint driven. Consequently, infection prevention and control that are compliant with CDC guidelines in the dental health care setting are largely voluntary.

There are a variety of stakeholders in the delivery of oral health care who can play key roles in enhancing compliance with infection prevention and control. These include regulators, educators, professional organizations and individual providers. Collaboration among and coordination of these public, professional and private stakeholders can enhance compliance with infection prevention and control guidelines, standards and regulations for the benefit of the consumers and providers of oral health care. Collaboration can facilitate appropriate and timely response to infection control breaches and support proactive prevention of breaches through compliance enhancement efforts. Professional organizations play a critical role in promoting infection prevention, control and safety as a professional responsibility. They also disseminate credible information, guidelines and best practices. The Organization for Safety, Asepsis and Prevention (OSAP) (www.osap.org) and the American Dental Association (ADA) (www.ada.org) are two organizations that promote safe dental care and provide valuable infection prevention and safety resources for dentistry.

The report of the West Virginia transmissions raises a broader question regarding the oral health care delivery system. The temporary portable clinic was set up to address the unmet dental care needs of a large segment of the population. The need for these large temporary clinics highlights the access-to-care crisis affecting large numbers of people, many of whom have serious unmet oral health care needs. Volunteerism, while well intentioned, is not a system of care, and it does not provide a dental or health care home for those with serious dental neglect. It also raises the question of whether no care is better than unsafe care. For numerous reasons, the private practice model of care has been unable to address the oral health care needs of this growing population, which is left to either rely on the public delivery system or else receive no care at all. The dental public health infrastructure, intended to provide these safety net clinical services, often does not have the capacity or resources to meet the needs of the population. Dental public health systems responsible for developing, maintaining and evaluating community-based efforts to improve oral health too often cannot fulfill these responsibilities because of decreasing budgets, shortages in skilled public health professionals and increasing populations with serious unmet oral health care needs.

Several recent reports in the general media and in scientific and professional journals (Innes5 and Tarpley6 are examples) have documented instances of infection control breaches in dental care settings, resulting in state health department investigations and patient notifications about possible infection. These breaches are the result of failures in compliance with accepted infection control practices and policies. Even though all breaches do not result in health care–associated infections, they are unacceptable, particularly when we have the knowledge and ability to prevent them. Both of these reports in JADA highlight steps that we must take to stop the
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guest editorial

needless suffering, costs and harm to the patients we serve, as well as the damage to our professional credibility. There are additional actions we could undertake as well. We could require mandatory continuing education for all dental health care professionals in infection control as mandated by state licensing boards and expanded inspection of dental facilities. We could put aside some of our internal professional differences and thereby perhaps create more effective solutions to increasing access to safe and equitable care for those with the greatest need. And we could redouble our efforts to enhance the dental public health infrastructure at the federal, state and local levels. These efforts include developing new and enhancing existing effective community-based prevention programs; expanding federally qualified health centers and other safety-net programs to provide dental homes to the currently underserved; providing greater support for school-based and school-linked prevention programs, as well as programs for elderly people and those with disabilities; and establishing better oral health surveillance programs. These goals will not be easy to achieve, but doing so is possible. We in dentistry have a responsibility to those we serve to provide the highest level of care and to ensure the care is provided safely.

Ms. Eklund is the director of the division of Oral Health, Centers for Disease Control and Prevention, Atlanta; however, he was not involved in any of the investigations cited in this editorial, and the views expressed are not those of the CDC.


LETTERS

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WHITE-SPOT LESIONS

In their September JADA article, “Minimally Invasive Resin Infiltration of Arrested White-Spot Lesions: A Randomized Clinical Trial (Senestraro SV, Crowe JJ, Wang M, et al. JADA 2013;144(9):997-1005), Dr. Seth V. Senestraro and colleagues demonstrated some excellent results of bonding clear resin material into white decalcified lesions to improve the appearance of the teeth.

This “microrestorative” method was reported both in 1987 and 1995 and was termed “smooth surface sealant” treatment. The only difference is that phosphoric acid was used for the etching, rather than hydrochloric acid. That prior work should have been discovered and disclosed in the reference list. In addition, if the investigators had wished to improve the appearance of the tooth in Figure 4, they should have taken an aluminum oxide abrasive disk to the incisal edge to smooth off the chipped enamel.

Another problem in the article is the statement, “Although microabrasion can remove WSLs [white-spot lesions], the technique has the potential to remove large amounts of enamel.” Any enamel removal technique has that potential if done improperly. Enamel microabrasion, when done