DENTAL ECONOMICS®

Give yourself a hand: Hand hygiene considerations for dental professionals

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I REMEMBER WORKING as a chairside dental assistant in 1985 and not wearing patient exam gloves. At the time, wearing gloves was not required by the Occupational Safety and Health Administration (OSHA). Appropriately, we referred to it as "wet-finger dentistry." In this article, we will look back at how things have progressed in the area of hand hygiene over the past 30 years.

Today, the thought of working chairside without gloves may seem grotesque. However, in looking back, the bright side was that we were conscientious about decontaminating our hands and applying moisturizers. We believed that healthy skin provided a strong barrier against infectious microorganisms. This fact is often understated in this era of gloved dentistry.

In 1991, OSHA published the Bloodborne Pathogens standard.[1] We became very aware of blood-borne pathogens, including the human immunodeficiency and hepatitis B viruses, and how to protect ourselves from transmission. We were introduced to new requirements for personal protective equipment, or PPE, including gloves. I remember the transition to working with gloves was tough; now we would never chance working without them.

In 2003, the Centers for Disease Control and Prevention (CDC) published the "Guidelines for Infection Control in Dental Health-Care Settings," wherein dental professionals were advised to "perform hand hygiene with either a nonantimicrobial or antimicrobial soap and water when hands are visibly dirty or contaminated with blood or other potentially infectious material."[1] Additionally, the CDC recommended that clinical personnel keep their fingernails short and smooth to avoid compromising the gloves. Artificial nails were not recommended. Wearing rings was also not recommended if it made putting on the gloves difficult or compromised the integrity of the gloves. These principles still hold true today.

When it comes to hand hygiene, rings and other types of jewelry deserve a closer look. In a 2010 paper entitled "Effect of Finger Rings on Microbial Cross-Contamination During Dental Clinical Procedures," Swapna Nadikuda discussed the evidence in favor of ring removal due to cross-contamination between patients and health-care workers in dental settings.[2] Rings, she found, held bacteria under the band, beneath the stones, and between the crevices. She discussed how this could lead to cross-contamination between the health-care worker and the patient when gloves leaked, and pointed out that gloves were more likely to perforate.

A different study quantified hand-to-face contact rate.[3] The study revealed that people touched their faces approximately 250 times a day.[3] The study magnifies the importance of keeping yourself and your patients protected with proper hand hygiene.

In 2003, the CDC recommended the use of alcohol-based hand rubs: "For routine dental examinations and nonsurgical procedures, handwashing and hand antisepsis is achieved by using either plain or antimicrobial soap and water. If the hands are not visibly soiled, an alcohol-based hand rub is adequate."[1] This allowed us to speed up the hand hygiene process, which was particularly beneficial in high-volume practices.

Even more recently, in 2016, the CDC published its Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Dental Care. The key recommendations for hand hygiene reinforced the 2003 guidelines:

"1. Perform hand hygiene—
   a. When hands are visibly soiled
   b. After barehanded touching of instruments, equipment, materials, and other objects likely to be contaminated by blood, saliva, or respiratory secretions
   c. Before and after treating a patient
   d. Before putting on gloves and again immediately after removing gloves
2. Use soap and water when hands are visibly soiled (e.g., with blood, body fluids); otherwise, an alcohol-based hand rub may be used."[4]

In assessing *adherence* to guidelines, one thing that my consulting practice sees on a regular basis is the lack of proper hand hygiene techniques between patients. To solve this problem, alcohol-based hand rubs may be in-

corporated into the protocol to save time and comply with hand hygiene standards.

Another area of deficiency we note is the failure to comply with hand hygiene recommendations for surgical procedures. The CDC indicates that for "surgical procedures, perform a surgical hand scrub before putting on sterile surgeon's gloves."[4] Surgical procedures are defined by the CDC as involving the incision, excision, or reflection of tissue that exposes the normally sterile areas of the oral cavity.[4] Examples include biopsies, periodontal surgery, implant surgery, and surgical extractions of teeth (e.g., removal of an erupted or nonerupted tooth requiring elevation of mucoperiosteal flap, removal of bone or a section of tooth, and suturing).

According to a study published in 2016 in the *American Journal of Infection Control*, hand hygiene is skipped 37% of the time by staff members in outpatient care facilities.[5] This study affirms the need to not only have policies and procedures, but the necessity to assess behavior compliance through observational audits.

Take a close look at your hands. Are your hands dry and cracked? Are your nails trimmed? Do you have nicks and scratches? Are your cuticles intact? Unfortunately, some hand hygiene techniques can lend themselves to dry, cracked skin. If the skin is broken down, the natural barrier to infectious microorganisms is compromised. To remedy this, explore the many product lines that are dedicated to all components of good hand hygiene. This includes companies that produce medical-grade hand moisturizers and soaps designed for frequent use while maintaining the skin's natural moisture balance. Hand sanitizers that contain emollients to help increase skin moisture are also helpful.

Talk with your staff and review the CDC's recommendations together. Provide your team with hand-hygiene products that are designed to be used in dental offices. Then, give yourself a hand knowing that you are setting your team up to practice proper hand hygiene. This will help ensure a healthy, productive work life, as well as safety for your patients. DE

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