Hand Hygiene

General Overview

Hand hygiene is considered the single most important aspect of infection control, yet adherence to hand hygiene protocols and compliance are known to be variable. Hand hygiene in the dental office setting should be conducted before donning gloves, when changing out gloves during care, when removing gloves after a single episode of patient care, and after ungloved skin contact with patients or potentially contaminated inanimate objects. The overall objective of hand hygiene is to remove microorganisms from the skin. The transient flora contained in the superficial layers of the skin are transmitted to dental healthcare workers during direct contact with patients or a contaminated inanimate object, and from healthcare workers to patients. The resident flora is present in the deeper layers of the skin, and therefore more difficult to remove. The manner in which hand hygiene must be performed is different for routine, nonsurgical care, and surgical care.

Hand Hygiene for Routine Nonsurgical Procedures

For routine nonsurgical procedures, an antimicrobial or plain soap and water can be used. After handwashing, hands should be dried thoroughly using single-use disposable paper towels. Alternatively, if hands are not visibly soiled, an alcohol-based hand sanitizer (hand rub) can be used. These are available as foams, gels, and rinses; they are most effective at 60% to 95% levels of concentration. Provided sufficient product is used, alcohol-based sanitizers are more effective in reducing microbial loads than soap and water. The overall goal is the removal of transient flora, which is more commonly associated with healthcare-acquired infections than resident flora. Hand hygiene with soap and water or an alcohol-based hand sanitizer should be performed for at least 15 seconds.

Hand Hygiene for Surgical Procedures

For surgical procedures, the objective is to remove transient flora as well as to decrease the count of resident flora in the deeper skin layers while surgical procedures are in progress, to reduce the risk of transmission should the integrity of gloves become compromised. If only handwashing is being performed, then an antimicrobial soap with persistent activity and water must be used for from 2 to 6 minutes depending on the product being used. If plain (non-antimicrobial) soap is used, hands must be dried and then treated with an alcohol-based hand sanitizer with persistent activity. Using a product with persistent activity is required to minimize the presence of microorganisms under gloves during patient care. Examples of antiseptics providing for persistent activity in soaps and handrubs include chlorhexidine, quaternary ammonium compounds, and triclosan.

Product Selection

Considerations in selecting hand hygiene products include ease of use, efficacy, and comfort. Using dispensers that are closed off reduces the risk of contamination, and using dispensers with premeasured amounts of product ensures that an appropriate amount is used. To avoid contamination, dispensers should not be topped off. In addition, using automated no-touch product dispensers and no-touch towel dispensers for single-use disposable paper towels, also removes potential opportunities for cross-contamination.

Discomfort associated with hand hygiene may lead to noncompliance. Using soap or alcohol-based handrubs that contain emollients replaces lost moisture, reducing skin dryness and irritation as well as improving comfort, and therefore increasing the likelihood of compliance with hand hygiene. Alcohol-based handrubs are less irritating to skin than soaps. In addition, using a foam hand hygiene prod-

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uct reduces the amount of soap or other chemicals that skin is exposed to, thereby potentially reducing irritation. The use of medical-grade emollient-containing hand lotions/hand creams also helps to maintain an equilibrium and skin health. Oil- and petroleum-containing products must be avoided as these ingredients degrade latex gloves. It is important to ensure that products selected for hand hygiene and hand creams/lotions are compatible with the types of medical and surgical gloves being used. Care must also be taken to select products that are pleasant to use, do not result in allergic skin reactions in users, and have only mild scents to avoid breathing-related problems and allergies.

Selecting and using products appropriately aids hand hygiene, while rigorously complying with hand hygiene requirements is a singularly important aspect of infection control in all healthcare settings.

References

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