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HAND HYGIENE TIMES

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Winter is Coming: Are You Skin Health Savvy?

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Regardless of the season, healthcare workers (HCW) are susceptible to dry skin and irritant contact dermatitis by nature due to the high frequency of hand hygiene. But, winter can be a particularly taxing time especially when there is failure to adapt to hand hygiene best practices. Low relative humidity and colder temperatures lead to a decrease in skin barrier function and increased susceptibility to mechanical stress.¹ Because hand washing with soap and water feels soothing, HCW may revert to it as a primary means of hand hygiene, but in doing so dissolve oils and lipids naturally present in the skin and further disrupt the natural skin barrier. Consequently, when alcohol-based hand rub (ABHR) is applied to already-damaged skin, an immediate stinging sensation is experienced due to channels of exposure to nerves and tissues in the deeper layers of the skin. As a result, HCW may limit or avoid use of ABHR, unknowingly exacerbating the problem and setting themselves up for progressive skin damage.

Fall is an optimal time to reinforce good hand hygiene behavior and skin care. Reminding HCW that ABHR should be the primary vehicle for hand hygiene, except when hands are visibly soiled, is key to maintaining skin health. In addition, moisturizers are a critical, but often overlooked aspect of a hand hygiene program. The Centers for Disease Control and Prevention (CDC) recommends "Provid[ing] HCWs with hand lotions or creams to minimize the occurrence of irritant contact dermatitis associated with hand antisepsis or handwashing."² This IA recommendation is strongly recommended for implementation and strongly supported by well-designed experimental, clinical, or epidemiologic studies. Further, the Joint Commission requires healthcare facilities to implement a [hand hygiene] program that follows categories IA, IB, and IC recommendations by the CDC or World Health Organization.³

The guidelines around cleaning hands are clear, but vague for lotion use. Selecting appropriate moisturizing agents can be confusing and needs to be carefully considered in the clinical environment. The goal of moisturization is to

create a protective layer on the skin surface, reduce water loss from skin, and protect it during the next cleanser or water exposure. The term "moisturizer" is very broad to include lotions, creams, and ointments. Ointments are comprised of 80% oil and 20% water and are designed to form an occlusive barrier to seal moisture into the skin. The downside of the high oil content is that they are greasy, messy, and not practical during clinical care; however, they can be beneficial when left in contact with the skin for an extended period, such as during sleep. Creams are 50% oil and 50% water, and therefore feel somewhat greasy. Lotions are like creams but are less thick due to their higher water content. Lotions are readily absorbed and evaporate more quickly, making them the ideal choice for the clinical environment. Especially in winter months, HCW may need different combinations of moisturizers for optimal skin care; for example, a lotion during the work shift and the addition of a cream or ointment at night. There is also no guidance around frequency of application and it may depend on various factors. In one study, subjects used a cream immediately after each wash which resulted in decreased skin dryness and roughness over a two-week period.⁴ Lotion application after every soap and water wash is likely not feasible in a clinical setting, but lotions should be used as frequently as possible for optimum benefit. Bottom line: the more, the better.

Lastly, there is confusion around the appropriateness of moisturizers containing petrolatum as it relates to glove compatibility. Petrolatum-based oils are known to deteriorate certain glove materials like natural rubber latex. Other materials like nitrile are not affected by petrolatum oils. The quality of the petrolatum and the amount present in the moisturizer can affect compatibility. The safest course of action is for product selection committees to choose healthcare-grade lotions and to solicit glove compatibility data from lotion manufacturers, thereby ensuring that there are no potential deleterious effects on glove integrity or on the efficacy of antiseptic agents used in the facility.²

¹ Engebretsen KA, Johansen JD, Linneberg A, Thyssen JP. The effect of environmental humidity and temperature on skin barrier function and dermatitis. *J Eur Acad Dermatol Venereol.* 2016;30:223-249.

² Centers for Disease Control and Prevention. Guideline for hand hygiene in health-care settings: recommendations of the healthcare infection control practices advisory committee and the HICPAC/SHEA/APIC/IDSA hand hygiene task force. *MMWR* 2002;51:RR-16.

³ The Joint Commission. National patient safety goals effective January 2018. The Joint Commission web site. https://www.jointcommission.org/assets/1/6/NPSG_Chapter_HAP_Jan2018.pdf. Accessed October 20, 2018.

⁴ Kampf G & Ennen J. Regular use of a hand cream can attenuate skin dryness and roughness caused by frequent hand washing. *BMC Dermatol.* 2006;6:1.

PRODUCT FEATURE

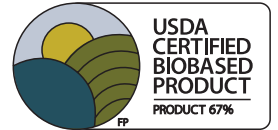
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