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## Addition of a sixth step in hand hygiene protocol: Moisturization



*To the Editor:* The COVID-2019 cases caused by severe acute SARS-CoV-2 are steadily increasing, and the pandemic has forced significant lifestyle modifications including social distancing, cough etiquettes, and, most important of all, emphasis on hand hygiene practices. Health care workers and the public adhere to the widely propagated hand hygiene protocol in their attempt to break the chain of COVID-19 transmission. Regular hand washing with soap and water for 20 seconds and hand sanitization with alcohol-based hand rubs has now become the new normal. The Centers for Disease Control and Prevention (CDC) recommends a 5-step sequence of hand washing with soap: wet with water, lather, scrub, rinse, and dry. This essential and highly beneficial adherence to prevention recommendations is not without drawbacks. The same is evident from the sudden surge in dermatology consultations by health care workers and the general public all over the world for hand eczema (HE).<sup>1,2</sup> Alcohol-based hand rubs have a lower irritant potential, yet increase the skin dryness and predispose to irritant contact dermatitis. Reported risk factors predisposing to HE in health care workers include high frequency of hand washing or sanitization, prolonged wearing of gloves and personal protective equipment, and infrequent application of moisturizers.<sup>2,3</sup> Development of HE results in absenteeism from work and impairs adherence to hand hygiene protocol. Most dermatology associations have laid down recommendations for prevention of HE. These include using warm instead of hot water to wash hands, gently pat drying rather than rubbing, and liberal application of moisturizers after each hand wash or sanitization. Adequate use of moisturizers is a single practical measure that substantially reduces the chances of HE development. Moisturizers replace the depleted skin lipids and improve the barrier function. Fragrance- and dye-free hand creams or lotions containing mineral oil or petrolatum appear most suitable. Further, alcohol-based hand rubs with added humectant (glycerol) should be favored in the health care setting when moisturization after every hand wash/sanitization is impractical. A randomized controlled trial evaluating the effect of regular application of hand creams by health care workers reported higher improvement in their HE severity scores compared with the control group.<sup>4</sup> Recent studies have also reported an inverse correlation of

moisturizer application with HE development.<sup>1,2</sup> However, there is lack of awareness regarding this essential step. Posters and leaflets designed by the World Health Organization depicting sequence of hand wash and hand rub fail to mention moisturization as the concluding step.<sup>5</sup> Another barrier in implementing this protective measure is nonavailability of moisturizers in the work place. Alcohol-based hand sanitizers are currently omnipresent; however, hand creams and lotions are mostly not available. Therefore, this knowledge gap must be bridged with appropriate mass education and repeat reminders. There is an essential need to modify the hand hygiene posters with inclusion of moisturizer application as an additional step. The problem of nonavailability of moisturizers can be easily tackled with twin dispenser bottles containing both hand sanitizer and moisturizer.

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