

## **Publication**

## Hand hygiene in the intensive care unit

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Healthcare-associated infections affect 1.4 million patients at any time worldwide, as estimated by the World Health Organization. In intensive care units, the burden of healthcare-associated infections is greatly increased, causing additional morbidity and mortality. Multidrug-resistant pathogens are commonly involved in such infections and render effective treatment challenging. Proper hand hygiene is the single most important, simplest, and least expensive means of preventing healthcare-associated infections. In addition, it is equally important to stop transmission of multidrug-resistant pathogens. According to the Centers for Disease Control and Prevention and World Health Organization guidelines on hand hygiene in health care, alcohol-based handrub should be used as the preferred means for routine hand antisepsis. Alcohols have excellent in vitro activity against Gram-positive and Gram-negative bacteria, including multidrug-resistant pathogens, such as methicillin-resistant Staphylococcus aureus and vancomycin-resistant enterococci, Mycobacterium tuberculosis, a variety of fungi, and most viruses. Some pathogens, however, such as Clostridium difficile, Bacillus anthracis, and noroviruses, may require special hand hygiene measures. Failure to provide user friendliness of hand hygiene equipment and shortage of staff are predictors for noncompliance, especially in the intensive care unit setting. Therefore, practical approaches to promote hand hygiene in the intensive care unit include provision of a minimal number of handrub dispensers per bed, monitoring of compliance, and choice of the most attractive product. Lack of knowledge of guidelines for hand hygiene, lack of recognition of hand hygiene opportunities during patient care, and lack of awareness of the risk of cross-transmission of pathogens are barriers to good hand hygiene practices. Multidisciplinary programs to promote increased use of alcoholic handrub lead to an increased compliance of healthcare workers with the recommended hand hygiene practices and a reduced prevalence of nosocomial infections.

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