GOJO

HAND HYGIENE TIMES

Your resource for the latest news in effective infection control program development and best practices.

Issue 10 Volume 2

Chlorhexidine Gluconate Use and Compatibility

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It's true that the effectiveness of handwashing is due, in large part, to mechanical friction followed by removal of microorganisms by rinsing hands under running water. Antimicrobial agents are added to handwashing products to decrease microbial counts to levels that are lower than those that can be achieved with plain (non-antimicrobial) soap. One such agent, chlorhexidine gluconate or CHG, was developed in England in the early 1950s and introduced into the United States in the 1970s.[1,2] Today CHG is found in many healthcare products with numerous uses and concentrations ranging from 0.12% to 4.0%.

CHG Efficacy

CHG has good activity against Gram-positive bacteria, (e.g., methicillin-resistant Staphylococcus aureus [MRSA] and vancomycin-resistant Enterococcus [VRE]) and somewhat less activity against fungi and Gram-negative bacteria, such as Pseudomonas aeruginosa.[1,2] The antimicrobial activity of CHG is not seriously reduced in the presence of body substances, including blood. CHG's immediate antimicrobial activity is slower than that of alcohol. And, like other antiseptics, CHG is not effective against spores.

One of the benefits of CHG is the persistent effect that comes with repeated use. CHG builds up in the upper layers of the skin and slows the re-growth of resident flora, the bacteria that live or reside under superficial skin cells. Persistent activity has clinical benefits, especially for surgical hand antisepsis, when it's important to keep the microbial load low under surgical gloves. In the past, CHG was one of a few ingredients used to achieve the persistent activity required for both water aided and waterless surgical hand antisepsis. More recently, new alcohol-based surgical scrub formulations without CHG have been shown to have the persistent and cumulative activity that meets the U.S. Federal Food and Drug Administration (FDA) requirements for surgical hand antisepsis.[3]

CHG containing products are also used to lower the microbial load and reduce infection risk through oral rinses for patients on ventilators and skin preps prior to surgical incisions and vascular catheter insertions.

Compatibility

It's important to note that due to the type of molecules contained in CHG, persistence can be reduced by some soaps, hand creams and cosmetics, including those used at home.[1,2] This potentially negates the cumulative effect of CHG. Be sure to ask manufacturers if their hand lotions, creams or other hand hygiene products are CHG compatible.

When using any CHG containing product, take care to avoid contact with the eyes. CHG can cause conjunctivitis and corneal damage. Ototoxicity, damage to the hearing and balance functions of the ear, prevents CHG from being used in surgery involving the middle or inner.[1,2] In addition, CHG solutions can be vulnerable to bacterial contamination as evidenced by the recall of a patient bathing cloth with CHG which become contaminated with a Gram-negative bacterium.[4]

Considerations when selecting any antimicrobial agent include: the potential for allergic contact dermatitis, the potential for microbial resistance, the impact on the environment, and any persistent effect on transient bacteria (pathogens that are picked up on the hands from the environment). These need further study.

When used as directed, CHG has a good safety record and true allergic reactions are uncommon. So, in situations where an antimicrobial agent is desired for handwashing, a CHG containing product should be considered along with other options.

1 http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf
2 http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf
3 Food and Drug Administration (1994) Tentative Final Monograph for Health-Care Antiseptic Drug Products [Docket No. 75N-183H]
4 http://www.fda.gov/Safety/Recalls/ArchiveRecalls/2008/ucm112463.htm

THAT'S a FACT!

Nearly 90% on nosocomial bloodstream infections are attributable to central venous catheter.[5] Attributable mortality for central venous catheter bloodstream infections averages 27%.[6]

5 Richards MJ, Edwards JR, Culver DH, Gaynes RP. Nosocomial infections in medical intensive care units in the United States: National Nosocomial Infections Surveillance System. Critical Care Med 1999;27:887-92.
6 Laupland KB, Lee H, Gregson DB, Manns BJ. Cost of intensive care unit-acquired bloodstream infections. J Hosp Infect 2006;63: 124-32

Product Feature

PROVON® ANTIMICROBIAL SKIN CLEANER WITH 2% CHG

Handwashing is still recognized as the most important action to reduce healthcare associated infection when hands are visibly dirty or after contact with spore forming bacteria.[1] The CDC recommends washing your hands with either an antimicrobial soap and water or non-antimicrobial soap and water when hands are visually dirty.

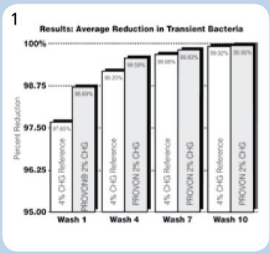
PROVON offers a wide range of highly efficacious hand cleansers that help prevent the spread of germs and are mild and gentle to the skin. PROVON products are tested in a variety of ways to ensure efficacy which could include in-vitro, in-vivo and clinical outcomes to help ensure healthcare safety and acceptance of the products.

PROVON Antimicrobial Skin Cleaner with 2% CHG

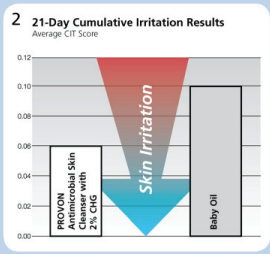
PROVON Antimicrobial Skin Cleaner with 2% CHG is a highly efficacious hand soap for high acuity patient units. With 2% Chlorhexidine Gluconate, a broad spectrum antimicrobial agent that kills pathogenic Gram-positive and Gram-negative bacteria, this hand soap formula is mild to the skin and has a rich lather and gentle fragrance that helps maintain the skin's natural oils and moisture.

- Significantly reduces the number of microorganisms on the hands and forearms prior to surgery
- Helps reduce bacteria that potentially can cause disease

Meets Healthcare Personnel Handwash[1]



PROVON® Hand Soap Clinically Proven Milder than Baby Oil[2]



1. Center for Disease Control and Prevention. (2002) Guideline for Hand Hygiene in Health-Care Settings. 51(No. RR-16):p.32.

Directions for use

Surgical hand scrub:

1. Wet hands and forearms with water
2. Scrub for 3 minutes with about 5 mL of product and a wet brush, paying close attention to the nails, cuticles and skin between the fingers , a separate nail cleaner may be used
3. Rinse thoroughly
4. Wash for an additional 3 minutes with 5 mL of product and rinse under running water
5. Rinse and dry thoroughly

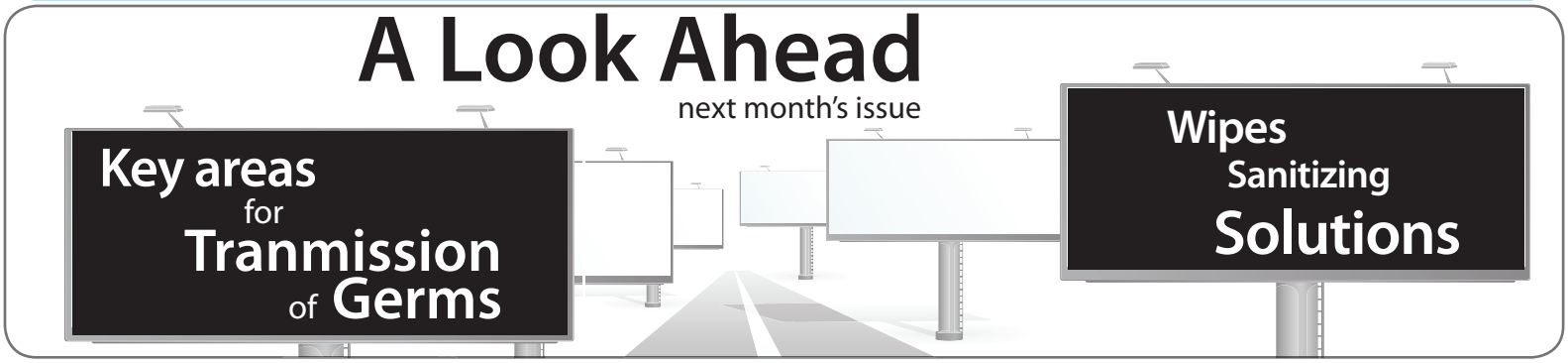
Healthcare personnel handwash:

1. Wet hands with water
2. Dispense about 5 mL of product into cupped hands and wash in a vigorous manner for 15 seconds
3. Dry thoroughly

Description	Order Number	Use With
PROVON Antimicrobial Skin Cleanser		
1200 mL TFX Refill	5306-04	2845-12
1200 mL FMX Refill	5304-03	5172-06
Dispensers & Accessories		
TFX Touch Free Dispenser — Dove Gray	2845-12	
TFX SHIELD Floor and Wall Protector	2760-06	
FMX-12™ Dispenser — Dove Gray	5172-06	
FMX SHIELD Floor and Wall Protector	5145-06	

A Look Ahead

next month's issue



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