swash®
simply smile

Use biocides safely

Swash® Antiseptic

Kills 99,9% of all harmful bacteria* on the skin/body!

* St.aureus, VRE, MRSA, E. coli, ESBL, Pseudomonas aer. en Candida alb.

www.swash.eu

Health care-associated infections

What is a Health care-associated infection?

Health care-associated infections (HCAI), also known as nosocomial or hospital infections, affect patients in a hospital or other healthcare facility, and are not present or incubating at the time of admission. They also include infections acquired in the hospital of facility but appearing after discharge, and occupational infections among staff. [1]

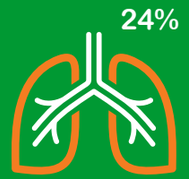
HCAIs pose a serious risk to patients, clients, staff and visitors of health- and social-care premises. HCAIs are the most frequent adverse events in healthcare worldwide. With each passing year, hundreds of millions of patients are affected by HCAIs around the world. [1]

What causes a Health care-associated infection?

Many areas of the body specialize in fighting germs. All of the germs-fighting areas of the body together make up the immune system. Sometimes germs can get past the immune system's defenses and cause infection and inflammation. If the immune system does not win the fight against an infection, the infection can spread to the blood or other parts of the body. If not treated, these infections can be life-threatening.

Most infections are caused by endogenous ("own") bacteria. Several well known pathogens are likely to reside on the skin, including methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant Enterococci (VRE) and highly-resistant Enterobacteriaceae (HRE). Recent data suggest that infections with resistant clones add to the number of infections caused by non-resistant bacteria, rather than replacing them, thus contributing to the burden of disease. [2,3]

The 4 most frequent types of HCAI are: [4]



RTI
Respiratory Tract Infection

SSI
Surgical Site Infection

UTI
Urinary Tract Infection

BSI
Bloodstream Infection

What is the impact of health care-associated infections?

Health care-associated infections are becoming increasingly common worldwide and occur in more than 4 million hospitalizations in Europe each year. [5] Due to an increase in invasive procedures and a growing resistance to antibiotics, HCAI's have increased by 36% in the last 20 years and are consuming more health care euros each year. [6] The burden these infections place on our health care system is divided into the cost of human lives, quality cost, and financial cost.

Each year in Europe alone, HCAIs.....

Affects more than **4.000,000 patients** [6]

Affect 1 out of every 18 patients on any given day in hospitals alone [4]

Affects 30% of patients in intensive care units [1]

Increases ICU stays by **8 days**, and increases average hospital stay between **7.4 and 9.4 days** [7]

Have **3x more** financial impact [8]

Account for an extra **16 million days** in hospitals [6]

Account for a financial loss **€ 7 Billion** in direct costs alone [6]

Directly causes **37.000 deaths** and contribute to another **100.000 deaths** [6]

Be in control! Prevent it!

Various studies have shown that in many cases water plays a prominent role in transferring pathogens from one care recipient to another. Many waterborne microorganisms are opportunistic pathogens that can increase the risk of infection. The first step in infection prevention, if it concerns bathing is getting rid of the washbasin with water.

Bathing 21®

By eliminating wash basins, microbial counts are reduced and the exposure of care recipients and care givers to potentially contaminated wash basins and tap water is avoided. In the end, there is less risk of spreading pathogenic organisms and of cross-contamination.

Bathing 21® is the key component in reducing transmission between care recipients and their care givers and environment. It is the body wash solution for care-dependent people. By using single-use products for bathing instead of a traditional bed bath using soap, water, washcloths and towels, a more hygienic body wash is offered.

Other advantages Bathing 21®

- Each body part is washed separately
- A warm comfortable body wash in seconds
- Patient bound products
- Predictable costs
- Consistent care
- Cost effective
- No more dirty basins
- Less risk of cross contamination
- The washing process is carried out in a single step instead of four
- More time for personal attention

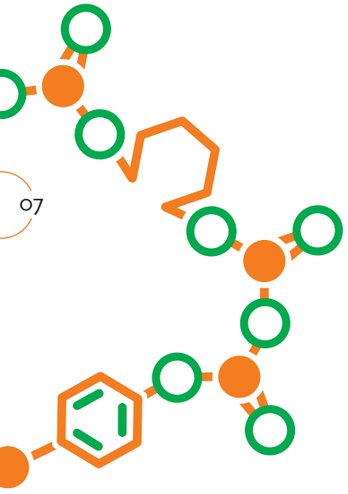
Bathing 21® and 2% Chlorhexidine Digluconate.

The patients' skin is a source of bacteria that can cause infection. By rapidly removing the bacteria from the skin and providing persistent antimicrobial effect against a wide variety of microorganisms, the chance of infections is reduced.

The active ingredient Chlorhexidine Digluconate (CHG) has been in use for almost 60 years. It is the standard in patient care for prevention of disease and nosocomial infection and works on a broad range of bacteria. [9] This means that it can fight many types of microbes that cause infection. CHG has low toxicity and both immediate and long acting protection.

Proven technology

Several large studies have proven that standardizing insertion-site antisepsis with the use of Chlorhexidine-containing products, can decrease the risk of infection. [10-12]



How does Chlorhexidine Digluconate work?

To protect themselves against their environment, bacteria and fungi are surrounded by a thick cell wall outside their cell membrane. This cell wall is negatively charged. Chlorhexidine Digluconate, contrarily, is a positively charged molecule that can interact with this negatively charged cell wall. Once CHG is bound to the cell wall, this causes small tears to appear in the outside of the cell, through which the inside of the cell can leak out. Ultimately, this causes the cell to burst and die. [13]

Fast acting

The anti-bacterial process with CHG occurs very rapidly, typically beginning the process of killing bacteria within 20 seconds. [14]

Long lasting

The chlorhexidine molecules bind to the proteins on human skin and release slowly, providing a layer of prolonged protection while keeping irritation to the skin to an absolute minimum. [15]

CHG, unlike many other disinfectants, works against both Gram-positive and Gram-negative bacteria. These bacteria differ in the design of their cell wall.

Gram positive bacteria are called gram-positive because their cell wall can be stained with a so-called Gram-stain. Gram-negative bacteria differ from gram positive bacteria in the fact that their cell wall is covered by an extra capsid to further protect themselves. This capsid is not stained by the gram-staining. [16] This capsid is, however, sensitive to Chlorhexidine Digluconate because it is also negatively charged. Nonetheless, action against Gram-negative bacteria is normally slightly slower than against Gram-positive bacteria, because of the extra layer that needs to be breached.

Gram-positive bacterie

Gram-negative bacterie

Our solution

The Swash® Gold Gloves Antiseptic offer a mild antiseptic cleansing solution on an unique cloth with an uniformed dose of CHG (2%). It is rinse free, quick drying and protecting. The CHG stays on the skin for persistent decolonization.

This product is part of the 24 hour care that Swash® offers. Feeling fresh and clean 24 hours a day with pre-moist wash products. Simple, easy and hygienic.

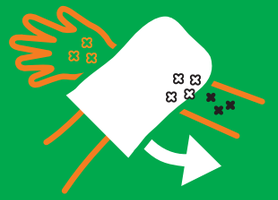
Advantage Swash® Gold Gloves Antiseptic

- **Antiseptic barrier with 2% Chlorhexidine.**
  Chlorhexidine's antimicrobial activity has been documented to last at least 6 hours on the skin. [15]
- **Contains no alcohol or other harsh detergents.**
  pH skin-neutral lotion which contains nourishing ingredients such as Vitamin E and Glycerin.
- **100% fragrance-free**
  Lotion with a neutral aroma.
- **Helps reduce bacteria that can cause skin infection.**
  Advanced formulation effective against Gram-positive and Gram-negative bacteria.
- **Dermatologically tested.** Skin decolonization according DGHM Chapter 9.1:2002.
- **Comfortable bathing experience.** Can be used both at room temperature and when warmed up.
- This product is regulated as a **biocidal product**.
- **Made in Holland.** Fully automated production process in a clean room guarantees high product quality.
- **Consistent quality.** Every Swash product is free of micro-organisms.

How the Swash® Gold Gloves Antiseptic work.....

Baterial burden present on the skin, such as MRSA, VRE and EBSL.

Chlorhexidine Digluconate kills a range of Gram-positive and Gram-negative bacteria and fungi.



It **binds to the top layer** of the skin, which results in persistent activity.

Efficacy tested at Dr. Brill + Dr. Steinmann institute

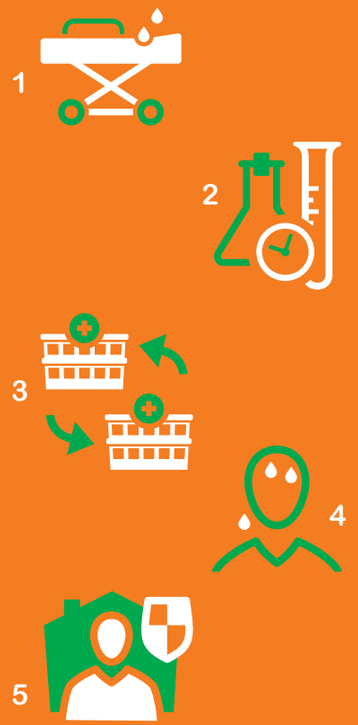
The Swash® Gold Gloves Antiseptic are tested according to international standards against the common bacteria that cause HCAIs. Extra testing has been performed to determine the action against multi-resistant bacteria such as MRSA, VRE and Extended Spectrum Beta-Lactamase (ESBL). Our products have been proven effective against all bacteria and yeast within 5 minutes.

Efficacy against various pathogens

Bactericidal (gram-positive) DIN EN 13727:2013	• Staphylococcus aureus • Enterococcus hirae (incl. VRE) • Methicillin resistent Staphylococcus aureus (MRSA)
Bactericidal (gram-negative) DIN EN 13727:2013	• Escherichia coli • Klebsiella pneumoniae ESBL • Pseudomonas aeruginosa
Yeasticidal DIN EN 13624:2013	• Candida albicans

When would you use the Swash® Gold Gloves Antiseptic?

- **First,** CHG reduces skin colonization by many pathogens, thus protecting patients in the ICU from their own microbiota during a period of heightened vulnerability to infection. [17-18]
- **Second,** CHG can be used as universal decolonization as of the first day of admission, thus avoiding the delay in decolonization pending the results of screening tests.
- **Third,** CHG bathing at transitions of care: consider prior to transfer to or from long term care facility depending on status of infection and/or screening results.
- **Fourth,** daily bathing for patients colonized with multi-drug organisms such as MRSA, VRE and ESBL or undergoing treatment for MRSA, VRE or ESBL infection (select high-risk units). Universal decolonization reduces the environmental microbial burden, reducing opportunities for patient-to-patient transmission.
- **Fifthly,** reduces potentially harmful skin microorganisms before admission. Prepare the patients with an antiseptic agent on at least the night before the day of admission.



Arion

Arion was the first company to introduce the Bathing 21® concept to Europe back in 1999 with its Swash® product line. It has since been widely implemented and integrated in the health care sector, substituting wash basins and causing a positive cultural shift in many health care institutions.

Thanks to its vast experience and knowledge, Arion is able to offer institutions not only the best washing-without-water products on the market, but also accompaniment and assistance with its implementation processes by a certified registered nurse. Arion has its own production facility with a clean room environment and quality assurance laboratory, guaranteeing optimum and consistent product quality.

simply smile

References

[1] World Health Organizations, Health-care associated infections, fact sheet. http://www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf?ua=1 _ [2] De Kraker MEA, Jarlier V, Monen JCM, Heuer OE, van de Sande N, Grundmann H. The changing epidemiology of bacteraemias in Europe: trends from the European Antimicrobial Resistance Surveillance System. *Clin Microbiol Infect* 2012; _ [3] L.P.G. Derde1, M.J.M. Bonten2, Controlling antibiotic resistance in intensive care units, *Neth J Crit care* 2015;19;1. _ [4] ECDC Carl Suetens, Susan Hopkins, Jana Kolman, Liselotte Diaz Högberg, ECDC, PPS of HAI and antimicrobial use in European acute care hospitals 2011–2012, Stockholm 2013. _ [5] Report on the burden of endemic healthcare associated Infection Worldwide, 2011. http://apps.who.int/iris/bitstream/10665/80135/1/9789241501507_eng.pdf?ua=1 _ [6] European Centre for Disease Prevention and Control. *Annual Epidemiological Report 2013*. ISBN 978-92-9193-543-7. http://ecdc.europa.eu/en/publications/Publications/annual-epidemiological-report-2013.pdf _ [7] David Schwegman, MD. Prevention of Cross Transmission of Microorganisms is Essential to Preventing Outbreaks of Hospital Acquired Infections. http://intl.welchallyn.com/documents/Blood%20Pressure%20Management/FlexiPort%20Blood%20Pressure%20Cuffs/MC5032WHP%20White%20PaperHR.pdf _ [8] Scottisch parlement report: "SPICe Briefing: Health care associated infections. http://www.scottish.parliament.uk/ResearchBriefingsAndFactsheets/Factsheets/SB_11-80.pdf _ [9] http://www.chlorhexidinefacts.com/history-of-chlorhexidine.html _ [10] Warren DK, Cosgrove SE, Diekema DJ, et al. A multicenter intervention to prevent catheter-associated bloodstream infections. *Infect Control Hosp Epidemiol* 2006;27:662-669 _ [11] Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med 2006;355:2725-2732*[Erratum, N Engl J Med 2007;356:2660.] _ [12] Pronovost PJ, Goeschel CA, Colantuoni E, et al. Sustaining reductions in catheter related bloodstream infections in Michigan intensive care units: observational study. BMJ 2010;340:c309-c309 _ [13] http://chlorhexidinefacts.com/mechanism-of-action.html _ [14] McDonnell, Gerald and A. Denver Russell. "Antiseptics and Disinfectants: Activity, Action and Resistance." *Clinical Microbiology Reviews* 12.1 (1999): 147-79. Print. _ [15] Hibbard J. Analysis comparing the antimicrobial activity and safety of current antiseptics: a review. *Journal of Infusion Nursing* 2005; 28(3): 194-207. _ [16] Medical morphology: http://micro.digitalproteus.com/morphology2.php _ [17] Climo et al; The effect of daily bathing with chlorhexidine on the acquisition of methicillin-resistant Staphylococcus aureus, vancomycin-resistant Enterococcus, and healthcare-associated bloodstream infections: Results of a quasi-experimental multicenter trial *Crit Care Med*, 2009;37:6. _ [18] Kassakian et al; Impact of Chlorhexidine Bathing on Hospital-Acquired Infections among General Medical Patients. *Infection control and hospital epidemiology; 2011*;32:3.

swash®
simply smile

ARION
simply smile

Arion Export B.V. • Rutherford 11 • 6422 RE Heerlen, The Netherlands
+31 45 209 4014 • export@arion-group.com • www.arion-group.com

SWA15-207B