CUTAN HAND HYGIENE GUIDE

BEST PRACTICE FOR HEALTHCARE WORKERS

deb Make Hands Matter in the Workplace

Introduction

Deb's Hand Hygiene Best Practice Guide has been developed to provide clear and easy to understand guidance for all those with responsibility for patient care, no matter what the level of skill, training or seniority. The booklet aims to provide useful advice on the process of hand washing, hand sanitising, and the requirements for hand hygiene.

The Importance of Hand Hygiene

Healthcare Associated Infections (HCAI's) are infections that patients acquire during the course of receiving treatment within a healthcare setting. It is estimated that HCAI's are the direct cause of 5,000 deaths and are the contributing cause of 15,000 deaths in the UK (NHS Scotland, 2009).

Hospitals, long term care facilities, Clinics and other Healthcare Service Providers emphasise hand hygiene (washing and sanitising) as the primary way to prevent infection. However, low compliance and increased risk of infection occurs due to:

- Lack of availability of hand hygiene products at every point of care
- Dry, chapped and irritated skin
- Patient care priorities and emergencies
- Time constraints

It has been estimated that at least 20 percent of HCAI's are preventable. Healthcare workers and patients can work to reduce the number of preventable HCAI's by following these guidelines:

- Following good hand hygiene technique
- Providing education for healthcare workers and patients on hand hygiene

The Role of Hand Hygiene

Hand hygiene is one of the most cost-effective measures healthcare workers can take to reduce the incidence of HCAI's.

Not only does hand hygiene compliance reduce morbidity and mortality in patients, it also lowers treatment costs related to HCAI's. A single severe infection could cost a hospital as much as its hand hygiene supplies for the year!

Microbiology of the Hands

What are your hands carrying?

It is important to have a basic understanding of micro-organisms before considering the process involved in Deb's 3 Step Hand Hygiene Best Practice.

We all carry enormous numbers of micro-organisms on our skin and our bodies - they are invisible to our eyes. Some are good, the ones that live in our guts that assist us to function, but some can be bad. One micro-organism that has caused so much concern in healthcare environments is Methicillin Resistant Staphylococcus Aureus (MRSA).

It is estimated by the Department of Health 2005 that approximately 30% of the population carry S.Aureus, either on their skin, nose, ear or throat. For most people this is a harmless organism, but when it enters the blood stream of sick or compromised people it can cause life threatening infections.

Our hands carry two broad categories of micro-organisms:

1. Resident Micro-organisms - as the name suggests, live permanently on and in the skin, but generally pose little threat.

2. Transient Micro-organisms - in contrast, these organisms are those that we pick up as a result of interaction with our environment, such as people and objects we touch.

Generally good hand hygiene technique will reduce transient organisms, and surgical hand washing will remove some resident organisms.

Deb's 3-Step Hand Hygiene Best Practice

Maintaining good skin condition is vital to protecting the health of both staff and patients. By following Deb's 3-step procedure, it will help staff to retain good skin condition and minimise the risk of spreading potentially harmful micro-organisms to others, thereby safeguarding their own health and the wellbeing of patients.

The role of hand washing or decontamination is generally well understood. However, retaining good skin condition is one subject often ignored and can be affected by the activity of frequent or aggressive hand washing.

Maintaining intact skin is vital if dry, sore or even cracked skin is to be avoided. If skin is in poor condition the likely result will be reduced levels of hand hygiene compliance and in extreme cases can even lead to individuals needing to seek alternative employment or have lengthy periods of time off work. By following the 3-step procedure, the potential for this to happen can be minimised, if not prevented altogether.

CLEANSE

Step 1: Hand Wash

A fundamental step in hand hygiene best practice. Apart from removing any visible soiling from hands, the physical action of a good hand washing technique will remove high levels of bacteria and viruses also present on the skin.

SANITISE

Step 2: Sanitise

Hand sanitising is very useful in reducing bacterial counts on visibly clean hands when access to soap and running water is inconvenient. In healthcare environments alcohol is the preferred active biocide for skin sanitising without the need for rinsing.

RESTORE

Step 3: Restore

This is the most important step in maintaining good skin condition. As a consequence of frequent hand washing it is vital to regularly replenish the natural oils lost from the skin with the use of a reconditioning cream.

Step 1: HAND WASHING

Why Should I Perform A Regular Hand Wash?

Hands are the principle route by which cross-infection occurs, it is vitally important that you regularly remove the transient organisms from your hands. This is to protect patients and yourself from potential infections.

Patients who are at greatest risk of catching infections are the very young, the elderly (i.e. those with underdeveloped immune systems or those whose immune system are compromised), patients undergoing treatment for cancer and patients who have undergone invasive surgical procedures.

What soaps do I use?

- For non-surgical procedures applying a mild soap followed by a good hand washing technique will remove potentially harmful transient micro-organisms.
- For surgical procedures antiseptic soap will be required to kill and remove transient micro-organisms and resident micro-organisms to a safe level.
- In UK healthcare environments, antiseptic surgical soaps are required to meet the European standard EN12791, which demonstrate their statistically greater effectiveness on normal (resident) skin flora compared with a reference alcohol.

"Hand washing is the single most important method of controlling infection."

When Should I Wash My Hands?

You should wash your hands in accordance with the WHO Five Moments. Some of the micro-organisms faced in today's healthcare environments, for example spore forming organisms such as Clostridium Difficile, which causes diarrhoea, are best dealt with by hand washing i.e. physically removing them from the skin. Spore forming bacteria cannot be killed by alcohol sanitiser.

Soap and water are the best way to kill germs that cause Norovirus or the 'flu'. During times when people are affected by diarrhoea and vomiting or the 'flu', we must all clean our hands with soap and water.

When to Wash Hands

- Before starting and after finishing work
- Whenever they are visibly dirty
- Whenever they are visibly soiled with blood or other body fluids
- After suspected exposure to potential spore-forming pathogens
- After using the toilet
- Before preparing or handling food

Step 1: HAND WASHING

How should I wash my hands?

Diagram 1 illustrates a step-by-step technique on hand washing. The diagram is in line with guidance from the WHO (2009) and NHS National Patient Safety Agency.

For effective routine hand washing, soap should be lathered and rubbed vigorously around the hands and wrists for at least 40-60 seconds. The temperature of the water supplied to the hand basin should also be set before washing commences, to avoid the need to adjust for temperature part way through.

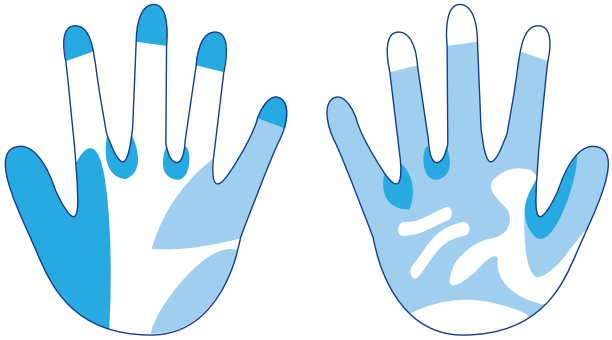
DIAGRAM 1

REMEMBER

Wash hands when visibly soiled. Otherwise use hand sanitiser.

Areas Frequently Missed

Research shows that many people's hands are still far from clean, even after they have washed them properly (Taylor 1978). You should pay particular attention to include the areas of the hand which are most frequently missed.



BACK PALM

The areas not adequately washed	Less frequently washed	Areas that are thoroughly clean

Preparation Checklist Before Hand Washing

- Keep nails short and pay attention to them when washing hands - most microbes on the hands come from beneath the finger nails
- Avoid wearing rings, total bacterial counts are higher when rings are worn
- Do not wear artificial nails or nail polish - they discourage vigorous hand washing
- Remove wrist watches and bracelets and roll up sleeves, the wrists must be included when washing the hands

Hand Drying

Wet hands transfer micro-organisms more effectively than dry hands. Therefore, the method of drying hands is also important in the maintenance of hand hygiene.

Step 2: SANITISE

Why Should I Use A Hand Sanitiser?

In healthcare environments alcohol-based hand sanitisers are the preferred active biocide for skin sanitising without the need for rinsing.

Where hands are visibly clean and there is no convenient access to washing facilities an alcohol-based hand sanitiser should be used.

In contrast to soap and water, an alcohol-based hand sanitiser kills a high proportion of the micro-organisms present on the hands, rather than physically removing them.

Hand hygiene plays a vital role in keeping patients safe. Hands should be sanitised with hand sanitiser at the bedside or washed in the hand sinks provided. Alcohol-based sanitisers should be conveniently located, usually at main ward entrances, at entry points into ward or treatment rooms and close to where patient care will be delivered, e.g. at bed ends.

"Hand sanitising is very useful in reducing bacterial counts on visibly clean hands when at the point of care"

When Should I Sanitise My Hands?

The World Health Organisation's 'Five Moments for Hand Hygiene' approach defines the key moments when all healthcare workers should perform hand hygiene.

The key emphasis is that hand hygiene should be carried out at the point of care.

When to Sanitise Hands

- When entering and leaving patient care e.g. ward/treatment rooms
- Before preparing or handling food
- Before and after dressing wounds, handling catheters and IV lines
- Before and after touching notes, telephones, computer keyboards
- Prior to surgical procedures, after hand washing
- After handling dirty laundry
- Before and after donning sterilised gloves

Step 2: SANITISE

What Are The Benefits Of Using A Hand Sanitiser?

- Speed of use
- Rapid reduction in the numbers of micro-organisms present on the skin
- When used frequently they can be less harmful to the skin than an equivalent number of hand washes (Winnefield et al 2000).

Studies (Boyce et al 2000, Newman and Seitz 1990) have shown that alcohol-based hand sanitisers can be less damaging to the skin than the normal washing process. The physical process of hand washing, even with the mildest soaps, can cause de-fatting of the skin compared to the lighter spreading action of alcohol-based hand sanitisers.

It is important to remember, using an alcohol-based hand sanitiser is no substitute for hand washing where hands are visibly soiled.

REMEMBER

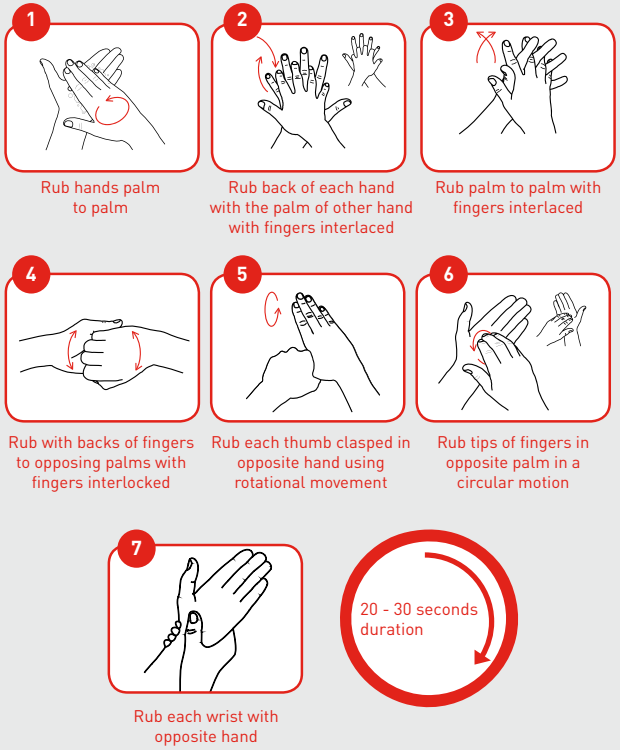
Sanitise hands for hand hygiene. Wash hands when visibly soiled.

Hand Sanitising Step-by-Step Technique

Diagram 2 illustrates a step-by-step technique on hand sanitising. The diagram is in line with guidance from the WHO (2009) and NHS National Patient Safety Agency.

In UK Healthcare it is recommended that alcohol-based hand sanitisers meet the European standard EN1500.

DIAGRAM 2



Step 3: RESTORE

Skin conditioning creams help to maintain the skin in healthy condition by keeping it soft and supple, avoiding dryness. Using conditioning creams is an important element in skin care best practice.

A conditioning cream should always be applied to clean hands and used as frequently as possible during the day to keep skin supple and hydrated.

Why Do I Need To Moisturise?

If you are cleaning or sanitising your hands regularly, your skin is at risk from the drying effects of the agents used in cleaning products. Damaged hands are not only unpleasant for you but can mean washing is less effective at removing germs.

"An essential step in helping to retain good skin condition."

Skin Care - Look After Your Hands

Cream should be applied at times such as when going for meal breaks and before finishing work for the day. The products should be provided in hygienic wall mounted dispensers rather than sharing communal tubs of cream.

The product should be easily identifiable and be located somewhere convenient for use, such as in staff rooms or at nurses' stations. The cream should be rubbed in well over all surfaces of the hands.

DID YOU KNOW?

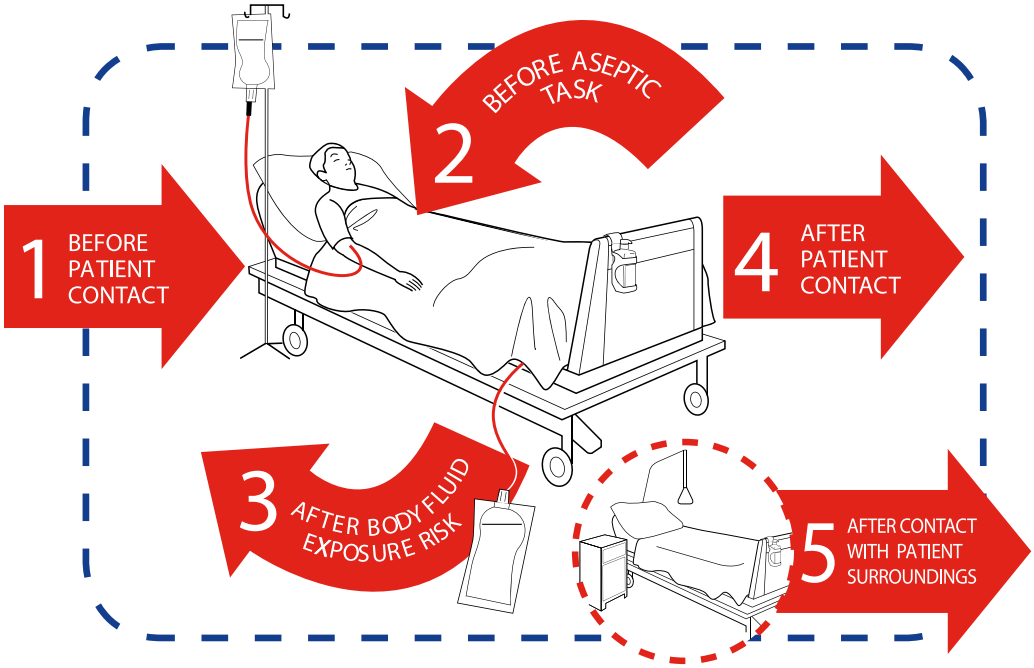
Your skin is the largest organ in the body and the first line of defence against harmful microbes, pollution and UV rays.

Regular use of moisturising cream helps maintain your skin in a healthy condition.

The World Health Organisation's
'Five Moments for Hand Hygiene'

This diagram shows the key moments at which healthcare workers should clean their hands. Despite the clear benefits of enforcing good hand hygiene practices in hospitals, compliance remains an issue.

The WHO has drawn attention to this problem and in 2005, issued the WHO guidelines on Hand Hygiene in Health Care. Generating from these initial guidelines, the WHO made recommendations for 'Five Moments for Hand Hygiene'



1. BEFORE TOUCHING A PATIENT	**WHEN?**	Clean your hands before touching a patient when approaching him/her
	WHY?	To protect the patient against harmful germs carried on your hands
2. BEFORE CLEAN/ ASEPTIC PROCEDURE	**WHEN?**	Clean your hands immediately before performing a clean/aseptic procedure
	WHY?	To protect the patient against harmful germs, including patient's own, from entering his/her body
3. AFTER BODY FLUID EXPOSURE RISK	**WHEN?**	Clean your hands immediately after an exposure risk to body fluids (and after glove removal)
	WHY?	To protect yourself and the health-care environment from harmful patient germs
4. AFTER TOUCHING A PATIENT	**WHEN?**	Clean your hands after touching a patient and his/her immediate surroundings, when leaving the patients side
	WHY?	To protect yourself and the health-care environment from harmful patient germs
5. AFTER TOUCHING PATIENT SURROUNDINGS	**WHEN?**	Clean your hands after touching any object of furniture in the patient's immediate surroundings, when leaving - even if the patient has not been touched
	WHY?	To protect yourself and the health-care environment from harmful patient germs

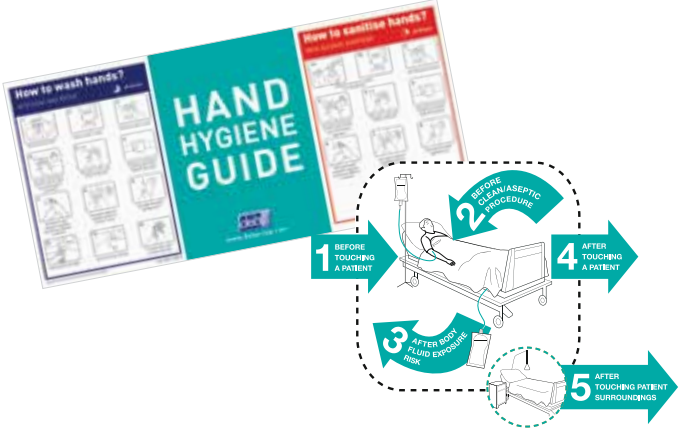
Training & Support

A comprehensive range of support materials from Deb is available to assist those responsible for infection control. The Deb support package offers innovative training and awareness materials to drive high rates of compliance amongst patients, visitors and ward staff.

For further information on training and compliance materials please contact your Deb Sales Executive or visit Deb on **www.debgroup.com/uk**

Deb Training Pack

Deb training packs have been developed to provide staff training on hand hygiene compliance. The pack contains mini training cards showing step-by-step techniques on hand washing and hand sanitising, a training DVD, interactive learning materials such as quiz sheets and workplace activities. The pack has been developed in line with WHO guidelines on 'Five Moments of Hand Hygiene' and NHS National Patient Safety Agency.



Compliance Materials

We have a range of innovative compliance materials ranging from Ward Signs, Sanitising Boards, Dispenser Surrounds and Posters to help drive awareness amongst patients and visitors.

Hand Hygiene Kit

An easy to use educational kit for teaching your personnel the correct procedures for:

- Hand cleansing
- Surface cleansing
- Aseptic techniques
- Prevention of cross infection and environmental contamination

Summary

This booklet aims to provide practical advice and information on Hand Hygiene Best Practice.

This can be summarised as follows:

1. Hand Hygiene Best Practice can be applied by all healthcare staff who care for patients whatever their level.
2. Hospital Associated Infections (HCAI's) are infections that a patient acquires during the course of receiving treatment for other conditions within a healthcare setting.
3. Hand hygiene is one of the most effective and cost effective measures Healthcare workers can take to reduce the incidence of HCAI's.
4. Hand hygiene refers to the process of preventing the transmission of potentially harmful micro-organisms and keeping skin in good condition.
5. Poor skin condition reduces compliance and increases the risk of micro-organisms being transmitted.
6. Best practice is concerned with achieving effective compliance i.e. appropriate frequency, occasions and technique for usage.
7. There are two types of micro-organisms: Transient and Resident, and it is Transient organisms which cause the greatest concern in non-surgical environments.
8. Hand Hygiene Best Practice consists of Deb's 3 Steps on hand Hygiene (Cleanse, Sanitise, and Condition), whether in surgical or non-surgical environments, to wash and decontaminate hands and help ensure the skin stays in good condition.
9. Hands are the principle route by which cross-infection occurs. Hand washing is the most important step in helping to reduce the potential for transmitting micro-organisms.
10. Hands should always be washed when physically soiled.
11. Good hand hygiene product application technique consists of a 6-step procedure as developed by Ayliffe et al 1978. However, additional steps have been added to ensure high rates of compliance in line with World Health Organisation and NHS National Patient Safety Agency.
12. Alcohol based hand sanitisers are the preferred active biocide for skin sanitising without the need for rinsing.
13. Alcohol based hand sanitisers work rapidly to help save time without the need to use water.
14. Alcohol based skin sanitisers should always be used on physically clean hands.
15. WHO 'Five moments for hand hygiene' encourages ward staff to comply with hand hygiene at the point of care.
16. Using skin conditioning cream is an essential step in terms of helping to retain good skin condition.
17. Conditioning creams should be non-ionic to ensure compatibility with chlorhexidine-based antiseptic hand wash products.
18. A comprehensive Deb support package on Hand Hygiene Compliance is available through your Deb Sales Executive.

References

World Health Organisation, Five Moments for hand Hygiene, 2005.

NHS National Patient Safety Agency, Hand Hygiene Technique on Hand Washing and Hand Sanitising.

HAI statistics UK, NHS Scotland, 2009.

Ayliffe GAJ, Babb JR, Quoraishi AH (1978) A test for hygienic hand disinfection. Journal of clinical pathology. 31; p 923.

BoyceJM, Kelliher S, vallande N (2000) Skin irritation and dryness associated with two hand hygiene regimes: soap and water hand washing versus hand antiseptics with an alcohol hand gel. Infection Control and hospital Epidemiology. 21; 442-448

Larson E (1995) APIC guideline for handwashing and hand antisepsis in healthcare settings. American journal of Infection control. 23(4); 251-269

Larson E, Kretzer EK (1995) Compliance with hand washing and barrier precautions. Journal of hospital infection. 30, 88-106

Larson E (1999) Skin hygiene and infection prevention: more of the same or different approaches. Clinical Infectious diseases. 29; 1287-1294.

Rotter ML (1990) Hand washing and hand disinfection. Chapter 87, pp 1339-55. In: Hospital Epidemiology and infection Control, USA.

Winnefield M, Richard MA (2000) Skin tolerance and effectiveness of two hand decontamination procedures in everyday hospital use. British journal of Dermatology. 143; 546-550.

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XUKLIT0873/1215