Hand hygiene is a term used to describe the removal of microorganisms from the hands using soap or a cleansing solution and water (hand washing), or a waterless antimicrobial agent (hand rubbing) (National Institute of Health and Clinical Excellence [NICE], 2013; World Health Organization [WHO], 2013).

It is accepted as one of the simplest and effective ways to prevent the spread of healthcare acquired infections (HCAIs) (Pratt et al, 2007; Kilpatrick et al, 2013). However, it is also recognised that nursing staff and other healthcare professionals do not perform hand hygiene rituals as often as they should or use the correct techniques, because, in the course of a busy day, these actions are not always intuitive and the effectiveness of such a simple act is underestimated (Kilpatrick and Hosie, 2013; Kilpatrick et al, 2013). Understanding the need for, and performing hand hygiene at the right time and in the right way is therefore crucial to prevent avoidable HCAIs.

WHY IS HAND HYGIENE IMPORTANT?

Hands are a very effective way of transferring microorganisms, giving healthcare professionals who frequently come into contact with patients the potential to spread the microorganisms that commonly cause HCAIs (WHO, 2009).

These opportunist microorganisms may come from the patient’s own body, or from contact with a healthcare professional, other people, equipment, or the environment, and cause infection by taking advantage of a breach in host defences against infection, e.g. a wound, site of an invasive device such as a urinary catheter or intravenous device.

Within the community, HCAIs can arise across a wide range of clinical conditions and affect patients of all ages. However, certain groups of patients are at an increased risk of infection, including:

- The elderly
- The very young
- People with cancer and other malignant disease
- People with impaired immunity
- People with invasive devices
- The very ill
- Surgical patients (Gould, 2009).

For all patients, but these groups in particular, contracting a HCAI can exacerbate underlying conditions, delay recovery and adversely affect quality of life. In the extreme, HCAIs may be fatal.

In addition to the risk to the patient, clinicians, family members and carers are also at an increased risk of HCAIs if infection control practices are not followed.

HOW TO MAKE HANDS HYGIENIC

The hands of healthcare workers will always carry bacteria, their own or acquired from the environment, or from patient contact. Although it is not possible to sterilise hands, the number of bacteria can be greatly reduced by good hand hygiene practice.

In the current climate of strained resources and staffing levels, it is unrealistic to expect staff to continually wash and decontaminate their hands all day. In response to this, the WHO (2009) developed the ‘5 moments for hand hygiene’ to simplify when hand hygiene is recommended (WHO, 2009).

WHEN TO UNDERTAKE HAND HYGIENE

Hands must be decontaminated immediately before each and every episode of direct patient contact or care, and after any activity or contact that could potentially result in hands becoming contaminated. Specifically:

- Before touching a patient: to protect him/her against germs carried on the hands
- Before touching a patient site/device that is vulnerable to infection, e.g. wound, catheter
- Before any clean/aseptic task: to prevent germs, including the patient’s own, from entering his/her body
- After body fluid exposure risk (e.g. blood, vomit, faeces, urine, etc) to protect the environment and the people in it from exposure to germs
- After touching a patient: to protect the environment and the people in it from exposure to germs
After touching patient surroundings: hands should be cleaned after touching objects, including furniture in the patient’s surroundings, when leaving, even if the patient has not been touched, to prevent transfer of germs from the environment (WHO, 2006).

Hands that are visibly soiled or contaminated with dirt or organic material, must be washed with liquid soap/cleansing solution and water. Otherwise, hands should be decontaminated using an alcohol-based handrub unless hands are visibly soiled, between caring for different patients and between different care activities for the same patient. The technique for both of these procedures can be seen below (step-by-step guide). Correct technique is important as otherwise areas of the hands may remain contaminated with microorganisms (Figure 1).

Once the hands have been washed, following these steps, they should be rinsed and dried well using disposable paper towels, since wet hands transfer microorganisms more effectively than dry ones, and any bacteria remaining after washing will be removed by friction. Drying is also important to reduce the risk of developing sore, dry skin (Gould, 2009). Hand cream should be used to maintain good skin condition and protect from damage due to washing. Bacterial numbers on the skin increase when it becomes sore and chapped, and painful, and damaged skin may also act as a deterrent to performing hand hygiene. Both factors increase the likelihood of cross-infection (Larson et al, 1998; Gould, 2009).

Hands cleaned with hand rubs should be allowed to air dry for 20–30 seconds (WHO, 2006).

In addition, there are a number of things that can be done to reduce the risk of harbouring bacteria on the hands:

- Keep nails short, clean and free of polish, nail decorations or false nails
- Do not wear wrist watches or jewellery, such as bracelets or rings, particularly those with stones

**Step-by-step guide to hand hygiene**

1. Rub palm to palm.
2. Run right palm over the back of the left hand, then vice versa.
3. Rub palm to palm with interlaced spread fingers.
4. Rub back of the interlocked fingers on the opposing palms.
5. Rub the right thumb in the closed palm of the left hand using a circular motion, and vice versa.
6. Rub the closed fingertips of the right hand on the left palm using a circular motion, and vice versa.

Figure 1. *Areas of the hand for washing.*

© 2014 Wound Care People Ltd
To enter, simply tell us in around 250 words why your nominated person has gone the extra mile to help improve hand hygiene. We are looking for people who have made a real difference to improve hand hygiene from across hospital, community, care home, and social care settings. No matter how big or small your initiative, we want to hear from you!

The judging panel will include Julie Storr, president of the Infection Prevention Society (IPS), and entries will be judged on merit of the initiative and its outcome. The closing date for entries is the 30th June, and both the winners and runners up will receive a unique engraved crystal trophy, certificates, and photographs & publicity in a number of professional publications.

The awards will be presented on the schülke exhibition stand at the Infection Prevention Society annual conference, in October and the winner, and the person who nominates them will receive travel, accommodation and entrance tickets to the event, plus a years supply of desderman® pure for their workplace.

You can enter in a number of ways, either online at www.schulke.co.uk, or E-mail your nomination to: handhygienechampion@schulke.co.uk

Call: 0114 254 3500 Or send the entry FREEPPOST to Schulke & Mayr UK Ltd, Freepost, NEA17, Cygnet House, 1 Jenkin Road, Sheffield, S9 1AT

Full terms and conditions can be found at: www.schulke.co.uk
What’s your next step?

In order to use the knowledge you have gained from this article to inform your continuing professional development (CPD), you should take the following steps before logging onto the website (www.jcn.co.uk/learning-zone/) to take the learning zone test:

Reflect
What is hand hygiene?
Why is hand hygiene important?
When should it be performed?
How should it be carried out?

Evaluate
Do you understand the importance of hand hygiene practices? What strategies can you put in place to ensure you use good hand hygiene practice when visiting patients in the community?

Act
Read the article when you have a spare few minutes in the day.
Make some notes on what you have learned, then visit the online test (www.jcn.co.uk/learning-zone/) to complete this subject.
The whole test, which involves reading this article and answering the online questions, should take you 90 minutes to complete.
Finally, download your certificate to show that you have completed the JCN e-learning unit on hand hygiene as part of your CPD portfolio.

PATIENT EDUCATION

Patients and carers are often reassured by seeing their healthcare worker carry out hand hygiene procedures. Raised awareness of HCAIs among patients now means that many may question their healthcare professionals on their hand hygiene. Within the community setting, family members and carers delivering care will also benefit from education about hand hygiene. Nurses can talk to patients, their families and carers about how best to avoid HCAIs and outline the role that hand hygiene plays in this.

CONCLUSIONS

Preventing HCAIs remains a priority in the NHS and it needs sustained compliance with routine safe practice, which includes standard infection control precautions, to protect both staff and clients from microorganisms that may cause infection.

The act of hand hygiene is performed to significantly reduce the number of microorganisms on the hands and to make it safe to touch a patient or perform a procedure.

The importance of hand hygiene in reducing the risk of transmitting HCAIs in the community should not be overlooked.

REFERENCES