



Alert

Patient Safety Alert

Second Edition 2 September 2008

NHS

**National Patient
Safety Agency**

Clean Hands Save Lives

This Alert applies to all providers (direct and commissioned) of NHS care in all healthcare settings in England and Wales.

Significant gains have been made in highlighting the need for best practice in hand hygiene over the last four years. The reduction in MRSA bacteraemia can in part be attributed to the concerted action across the NHS. However, to maintain this and other improvements it is vital that hand hygiene remains high on the patient safety agenda.

Improving the hand hygiene of healthcare staff at the point of patient care will reduce healthcare associated infection (HCAI). Hands are a repository for microorganisms that can cause infection. Healthcare staff in all healthcare settings have the greatest chance of transferring these as they move between patients, or different care activities for the same patient.

National and international studies continue to reinforce the fact that infection rates can be significantly reduced, by at least 15 per cent, where a multi-modal strategy has been introduced to improve hand hygiene.^{1, 2, 3, 4} Significant progress has been made, however hand hygiene compliance still remains lower than it should be.

This Alert highlights the following key points

1. The role of hand hygiene by healthcare staff in preventing and controlling infection
2. The point of care as the crucial moment for hand hygiene
3. The appropriate placement of alcohol handrub products
4. Which hand hygiene products to use and when
5. The current recognised standard for hand hygiene products
6. Management of risks including ingestion, storage and skin irritation

Action for the NHS by 31 March 2009

All providers of NHS care in England and Wales will:

- > Undertake an audit to review current risk management strategies including:
 - the placement, accessibility and suitability of all hand hygiene products, including handwash basins and handrub dispensers, to ensure healthcare staff are able to undertake hand hygiene at the point of care
 - all hand hygiene policies, processes and programmes to ensure they prioritise hand hygiene at the point of care
- > Develop and implement an action plan to address the issues identified in the audit.

worth
repeating...

This Alert is based on the first hand hygiene Alert (Alert number 4) issued by the NPSA in 2004 and is revised in line with current best practice guidelines in 2008.

¹ Pittet D, Hugonnet S, Harbath S, et al (2000) Effectiveness of a hospital-wide programme to improve compliance with hand hygiene, *The Lancet* 356:12

² Grayson ML, Jarvie LJ, Martin R, et al. (2008) Significant reductions in methicillin-resistant *Staphylococcus aureus* bacteraemia and clinical isolates associated with a multisite, hand hygiene culture-change program and subsequent successful statewide roll-out. *Med J Austr.*; 188:633-640

³ John PD, Martin R, Burrell LJ, et al. (2005) Efficacy of an alcohol/chlorhexidine hand hygiene program in a hospital with high rates of nosocomial methicillin-resistant *Staphylococcus aureus* (MRSA) infection. *Med J Austr.* 183:509-514

⁴ Pessoa-Silva CL, Hugonnet S, Pfister R, Touveneau S, Dharan S, Posfay-Barbe K, Pittet D. (2007) Reduction of health care-associated infection risk in neonates by successful hand hygiene promotion. *Pediatrics*; 120:e382-390



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1. The role of hand hygiene by healthcare staff in preventing and controlling infection

HCAI is a critical patient safety issue. At any one time up to eight per cent of inpatients in England and six per cent in Wales have HCAI.⁵ Statistics for England and Wales show that 5,109 deaths involved MRSA and 13,189 involved *Clostridium difficile* during the period 2001-2006 in patient/care establishments.⁶ Not all infections are preventable but evidence shows that improving hand hygiene contributes significantly to the reduction of HCAI.⁷

Healthcare staff have the greatest potential to spread the microorganisms that cause infection. Their hands can:

- transfer the patient's own microorganisms into sterile areas of the patient's body during care or treatment
- transfer microorganisms from one patient to other patients
- transfer microorganisms from the environment and equipment to a patient
- acquire microorganisms as a result of their contact with patients which places healthcare staff at risk of infection

The reason for giving preference to alcohol handrub for routine use on non-soiled hands is because it is more effective, quicker to use, better tolerated by the hands and can be provided at the point of care.

Definition of point of care

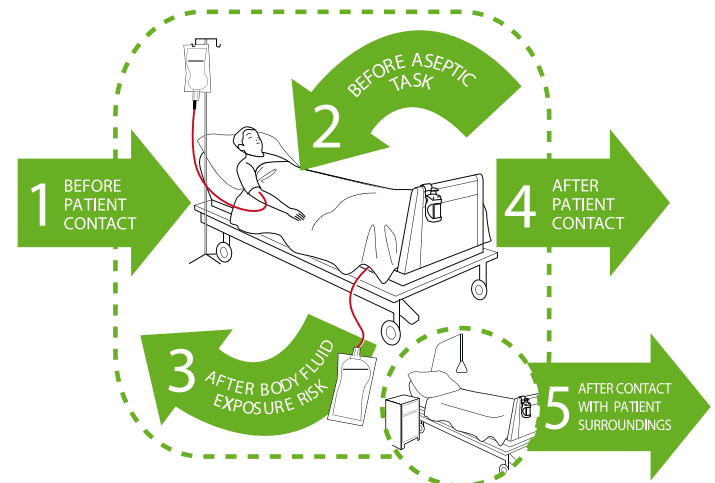
The point of care refers to the patient's immediate environment (zone) in which healthcare staff-to-patient contact or treatment is taking place. In the hospital environment it is usually at the patient's bed, but in other contexts it could be in a treatment room, cot, chair, ambulance or a patient's home for example.

2. The point of care as the crucial moment for hand hygiene

The point of care represents the time and place at which there is the highest likelihood of transmission of infection via healthcare staff whose hands act as mediators in the transfer of microorganisms.

To help healthcare staff better understand the precise moments when they need to clean their hands and why, the NPSA endorses the World Health Organization (WHO) five moments for hand hygiene⁸, which are:

The WHO five moments for hand hygiene



1. Before patient contact

- **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 an aseptic task

- **When?** Clean your hands immediately before any aseptic task
- **Why?** To protect the patient against harmful germs, including the 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 healthcare environment from harmful patient germs

⁵ Smyth ETM, McIlvenny G, Enstone JE, Emmerson AM et al (2008) Four country healthcare associated infection prevalence survey 2006: overview of the results. *Journal of Hospital Infection* 69, 230-248.

⁶ Deaths involving MRSA and *Clostridium difficile* by communal establishment, England and Wales, 2001-2006, *Health Statistics Quarterly* 1465-1645

⁷ Pratt et al (2007) epic2: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. *Journal of Hospital Infection* (2007) 65S, S1 – S64

⁸ Sax H, Allegranzi B, Uckay I, Larson E, Boyce J, Pittet D (2007) 'My five moments for hand hygiene': a user-centred design approach to understand, train, monitor and report hand hygiene. *Journal of Hospital Infection*. 67. 9-21

4. After patient contact

- **When?** Clean your hands after touching a patient and his/her immediate surroundings when leaving the patient's side
- **Why?** To protect yourself and the healthcare environment from harmful patient germs

5. After contact with patient surroundings

- **When?** Clean your hands after touching any object or furniture in the patient's immediate surroundings when leaving – even if the patient has not been touched
- **Why?** To protect yourself and the healthcare environment from harmful patient germs

3. The appropriate placement of alcohol handrub products

It is most beneficial to patient safety to place handrub dispensers at the point of care. (Refer to WHO Five Moments). This can be at the foot of the bed, on the bedside locker, or in other care settings the dispenser can be attached to the internal wall of an ambulance, patient's chair or carried by the healthcare worker.

Use of personal dispensers is best practice when caring for children, mental health patients or other patients/clients for whom permanently-sited dispensers may pose a risk.

Placement at other sites is at the discretion of local trusts/organisations and should be based on an assessment of risk, of cross infection and risk of unintended use.

4. Which hand hygiene products to use and when

Alcohol handrub is the recommended product in all patient care situations **except** when:⁹

- Hands are visibly soiled
- The patient is experiencing vomiting and/or diarrhoea

- There is direct hand contact with bodily fluids i.e. if gloves have forgotten to be worn
- There is an outbreak of Norovirus, *Clostridium difficile* or other diarrhoeal illnesses

In these instances hands should always be cleaned with liquid soap and water. Handwash basins should be appropriately located and equipped with liquid soap dispensers and well placed disposal bins for paper towels should be available.

All healthcare staff should be taught how to correctly clean their hands with alcohol handrub and with soap and water.

5. The current recognised standard for hand hygiene products

Alcohol handrub products

As at 2 September 2008, alcohol-based products are proven to be the most effective and acceptable for hand decontamination. Any products purchased for use at the point of care must adhere to the European Committee for Standardisation (CEN) standard (EN1500).¹⁰

All alcohol handrub products on NHS contract in England and Wales comply with the EN standard and have passed rigorous safety and in-use acceptability assessments. NHS trusts not purchasing via the national contracts must ensure the products they use are of the same standard as those used on the national contract. More information is available at www.supplychain.nhs.uk/handhygiene for England and at www.whs.wales.nhs.uk for Wales.

Soap products

All soap products used by the NHS as part of routine hand hygiene patient care must meet the current standards set out in the NHS contract. More information is available at: www.supplychain.nhs.uk/handhygiene for England and at www.whs.wales.nhs.uk for Wales.

⁹ World Health Organization, WHO Guidelines on Hand Hygiene in Health Care (Advance Draft), 2006

¹⁰ Standardization ECF. Chemical disinfectants and antiseptics - hygienic handrub - test method and requirements. Brussels: European Committee for Standardization, 1997



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6. Management of risks including ingestion, storage, and skin irritation

There are a number of risks to patients and staff associated with the use of alcohol handrub, **however the benefits in terms of its use far outweigh the risks.**¹¹ A risk assessment should be undertaken and a management plan put in place. This particularly applies to clinical areas managing patients with alcohol use disorder and patients at risk of deliberate self harm.

Refer to www.npsa.nhs.uk for information on patient safety incidents reported to the National Reporting and Learning System (NRLS).

Ingestion and eye exposure

Risk of ingestion is minimised when alcohol handrub is only at the point of care. If significant ingestion occurs part of the patient care and response action may include contact with the National Poisons Information Service who provide advice via TOXBASE (www.toxbase.org) or via its 24 hour telephone service (0844 892 0111). Accidental splashes in the eye should not occur with proper use. They should be managed by irrigation. Contact TOXBASE if further advice is required.

Skin irritation

Healthcare staff need to maintain good hand skin condition as damaged skin can be prone to colonisation by microorganisms that can cause infection. Employers should manage the risks of work-related contact dermatitis arising from hand hygiene measures. More information on hand care is available from the NHS Employers Healthy Workplaces Handbook (www.nhsemployers.org).

Storage

In line with current guidance, the NPSA and the Department of Health (England) advocate that only minimum quantities of alcohol-based handrub should be stored at ward/department level. It is therefore recommended that no more than five litres should be held in storage. This does not include the handrub at the point of care, which is regarded as 'in use.' NHS Estates Alert NHSE (2005) 07 remains current practice (www.dh.gov.uk).

Existing standards

All NHS trusts in England and Wales are required to have up-to-date policies and procedures for promoting timely and effective hand decontamination. In England, trusts should refer to The Health Act 2006 Code of Practice for the Prevention and Control of Health Care Associated Infections (commonly known as the Hygiene Code). This NPSA Safety Alert will be referenced in future versions of this code of practice. Trusts in Wales should refer to the Healthcare Standards for Wales – Making the Connections: Designed for Life (May 2005) – Standard 5 and 16.

Next steps and evaluation

In April 2009 the NPSA will review how the Alert has been implemented. Compliance with hand hygiene by healthcare staff remains the responsibility of local organisations. The NPSA recommends that monitoring of hand hygiene is focused on the point of care.

All information relevant to this Alert, including supplementary advice and supporting tools, can be downloaded via the NPSA's website (www.npsa.nhs.uk).



¹¹ World Health Organization (WHO), WHO Guidelines on Hand Hygiene in Health Care (Advance Draft), 2006