

LDI Infection Control Policies

Hand Hygiene

Hospital-acquired infections have both a financial and a human cost. Hand hygiene is universally considered to be the most basic but vital infection control measure. Unfortunately it is also one of the most neglected practices. The aim of this policy is to promote and sustain improved compliance to the practice of hand hygiene. .

Key Points

- In most clinical areas hand washing with liquid soap and water is adequate.
- Always wet hands before applying soap, then rinse and dry hands thoroughly.
- Alcohol-based hand rubs are an alternative to hand washing on visibly clean skin or as a supplement to hand washing to achieve a higher level of disinfection.
- Remember to cleanse all parts of your hands, especially remembering your thumbs and finger tips.
- Think! What did I do last and what am I going to do next? – this gives you some indication as to when you should cleanse your hands.
- Always decontaminate your hands after removing gloves.
- Keep your nails short (natural nail tips less than ¼” long), clean and free of nail varnish
- Do not wear artificial fingernails or nail extenders if you have direct patient contact
- Always cover cuts and lesions with a waterproof dressing
- Use hand cream to keep skin in good condition. Skin integrity is an important barrier to cross infection.

- Think! What might prevent you from performing good hand hygiene? e.g. dress rings, wristwatches, bracelets (these are also lovely places for microorganisms to hide!).
- Always make sure that the handwash basins are adequately supplied with soap and paper towels , and that it is clearly understood who is responsible for this
- Always make sure alcohol hand products are sited where most appropriate for use

Hospital- acquired infections cost the health sector in England an estimated £1 billion per year.

Hand hygiene is a simple but effective means of protecting patients and is universally considered to be the most basic but vital infection control measure. However, it is known that sustained compliance is unacceptably low.

1. When to cleanse your hands?

- There is no frequency for hand cleansing, it is determined by actions – those completed and those intended to be performed.
- Routine hand washing removes most transient microorganisms from soiled hands.
- As a general rule, use soap and water when hands are visibly dirty or contaminated with proteinaceous material or blood/saliva/body fluids.
- If hands are not visibly soiled, use alcohol-based hand rub for routinely decontaminating hands
- Do not wash gloved hands between patients
- Products should be perfume free (to avoid sensitisation) and contain emollients (to avoid adverse drying of the skin).

Think! – What did I do last and what am I going to do next?

Handwashing schedule (Horton and Parker 2002)

Thorough hand decontamination must be carried out:

Before: e.g.

- preparing, handling or eating food
- any contact with a susceptible patient
- wearing unsterile/sterile gloves
- handling wounds

- handling any invasive device or system, e.g. intravenous cannula, urinary catheter

Before and after: e.g.

- Touching wounds/dressings
- Administering medications
- Touching urethral catheters and IV lines

After: e.g.

- removing gloves
- caring for patients with 'alert' organisms, e.g. MRSA, VRE where there is a serious risk of cross-infection
- sluice room activities
- personal contamination e.g. blowing your nose, visiting the toilet
- handling surfaces likely to be contaminated e.g. specimen pots, suction bottles

2. Which cleansing agent to use?

Hands carry both transient and resident skin flora:

- **Transient** skin flora comprises of microbes acquired on the surface of the skin through contact with other people, objects or the environment, e.g. MRSA. Whilst the antibacterial properties of the skin prevent their survival for more than a few hours, they are readily transferred to other people or objects within this time i.e. cross-infection. Fortunately, they are easily removed by the mechanical effects of hand hygiene.
- **Resident** (or normal) skin flora live deep in the skin's crevices, in hair and sebaceous glands. They are not easily removed by the mechanical action of handwashing but their numbers can be reduced by the combination of a detergent and microbicide.

Whilst the surgical scrub technique is not covered within this policy (refer to LTHT Surgical Scrub Procedure), the need for a higher level of hand antisepsis applies equally to surgical procedures outside the operating theatre setting, e.g. Certain dental procedures in-Oral surgery, sedation

Soap and Water

- The majority of transient microorganisms are removed from hands by the mechanical action of thoroughly washing hands with either bar or liquid soap and water. Bar soap should not be used in clinical areas.
- This method of hand cleansing will normally suffice for wards, kitchens and most clinical areas.

Alcohol Handrub/Solutions

- Do not remove microorganisms, but rapidly destroy them on the skin surfaces.
- Alcohols are said to exert the strongest and fastest activity against a wide spectrum of bacteria and fungi (but not bacterial spores) as well as many viruses
- Alcohol-based hand rub can be used as an alternative to hand washing on clean skin or as a supplement where higher levels of hand disinfection is required (e.g. hand antisepsis in high risk areas or prior to aseptic technique).
- Alcohol-based handrubs should not be used to decontaminate gloves.
- Alcohol-based hand rubs are particularly valuable in areas devoid of wash basins, or where return to a wash basin is impractical, e.g. teaching dental students in the clinical area, during aseptic technique.
- These solutions are also useful during some outbreaks.

NB: Alcohol-based hand rubs are less effective on *Clostridium difficile* spores.

Antiseptic Handwash Solutions

- These are a combination of a detergent and a microbicide, such as chlorhexidine, povidone-iodine, or triclosan.
- Resident microorganisms can only be inhibited by the use of antiseptic solutions; therefore, they can be used in clinical areas where resident bacteria could cause infection if introduced during an invasive procedure, e.g. theatres, Oral surgery, sedation unit.
- Antiseptic solution should usually not be used in general dental clinic situations as frequent washing of hands with such solutions can damage the skin. This may cause an increase in levels of bacteria on the hands, and also a reluctance to wash hands if they are sore.
- If antiseptic products are used in conjunction with alcohol-based hand rubs, it is important that they are compatible, (i.e. contain the same active ingredient), e.g. they both contain triclosan – Aquasept/Manusept.

During an OUTBREAK the Infection Control Team will advise on which hand hygiene products should be used.

3. How should you cleanse your hands?

- Hands should be cleansed by systematically rubbing all parts of the hands and wrists with soap and water and or alcohol rub/gel, being particularly careful to include the

areas of the hands that are most frequently missed. The most important element in effective hand decontamination is mechanical friction.

Areas most frequently missed following hand washing (Taylor, 1978) or hand decontamination

BACK

FRONT

Most frequently missed



Less frequently missed



Not missed



Hand washing with soap and water – sequence of events

- Wet hands under running water
- Dispense one dose of soap into cupped hand
- Hand wash for a minimum of 15 seconds vigorously and thoroughly without adding more water

NB *Above the hand wash basins in each clinical area there are posters depicting the six-step hand washing technique – please look at these and follow the steps suggested*

- Use six step hand wash technique (See appendix 1)
- Rinse hands thoroughly under running water
- Dry hands with disposable paper towels
- Do not contaminate your hands when disposing of paper towels i.e. use the pedal bin

Hand cleansing with alcohol- based hand rubs – sequence of events

- Dispense required amount of solution on to dry cupped hands
- Rub hands together covering all surfaces (you can use the hand washing six step method)
- Rub until it evaporates, you do not need a towel

4. How should you dry your hands?

- Wet surfaces transfer microorganisms more effectively than dry ones. Moisture left on the hands may cause the skin to become dry and cracked. The method of hand drying is therefore very important in infection control.

Paper disposable hand towels

- Good quality paper towels can dry the hands quickly and effectively, and are convenient to use.
- Brisk rubbing movements of paper towels – remembering the back of hands and inter digital spaces.
- Use at least two paper towels for effective drying.
- Remember – to dispose of the paper towels carefully!

Other methods

- Communal hand towels must not be used as they have been recognised as a source of cross infection.
- Hot air dryers, which dry hands slowly and in some cases inadequately, may discourage people from washing their hands and therefore should not be used in clinical areas.

6. What might help good hand hygiene?

- Create an environment in which everyone is happy to remind and be reminded about hand hygiene.
- Keeping nails short, clean and free of nail varnish.
- Ensuring all clinical areas have an adequate number of well-placed hand-wash basins fitted with elbow-operated mixer taps.
- Easily accessible hand-wash basins (i.e. access not blocked by wheel chairs etc) that are free from extraneous items.
- Availability of soap
- The availability of good quality paper towels.
- Clean soap and paper towel dispensers (cleaned as part of the domestic cleaning schedules).
- Posters depicting a correct hand hygiene technique displayed in clinical areas.
- Availability of alcohol-based hand rubs
- Using a non-ionic based hand cream – hand creams containing an anionic emulsifying agent reduce the residual effect of chlorhexidine.
- Using individual tubes/pots or hand cream provided by dispensers. Do not use communal pots of hand cream as these can easily become contaminated.

7. Don't forget your patients!

- Whilst in hospital, patients can easily pick up transient microorganisms on their hands. From their hands the micro-organisms can be transferred to a more susceptible site where they may cause an infection.
- Please take every opportunity to emphasise the importance of hand hygiene to patients and visitors.
- Always encourage patients to wash their hands thoroughly **before** meals and **after** using the toilet/urinal.

It is up to YOU to challenge your own and your colleagues' HAND HYGIENE practice.

8. How might we evaluate practice?

In an era of quality improvement, it is important to consider the use of performance indicators in order to evaluate practice and make improvements where necessary. Whilst the Infection Control Team undertake such evaluation and feedback results, staff are encouraged to evaluate their own practice too.

Examples:

- Audit hand hygiene facilities using infection control audit tool e.g. – sink:bed ratio adequate; No empty soap dispensers; No empty towel dispensers; Elbow operated taps in clinical areas; Alcohol hand rub products placed strategically in ward/department environment; Alcohol gel at point-of-use;
- Monitor volume of gel, soap and paper towels used per 1,000 patient bed days
- Monitor adherence to policy, e.g. hands decontaminated appropriately pre/post certain interventions - correct time, choice of material, method etc. Hand hygiene posters displayed.
- Monitor prevalence of certain 'Alert organisms' e.g. MRSA, in relation to hand hygiene awareness campaigns

APPENDIX 1

References and further reading

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