



HAND HYGIENE PROCEDURE

ICPR010

Version No.	Date Ratified/ Amended	Date of Implementation	Next Review Date	Reason for Change (eg. full rewrite, amendment to reflect new legislation, updated flowchart, minor amendments, etc.)
1	01/03/16			Changed from policy to procedure
2	01/03/2018	29/06/2018	01/03/2020	Review of procedure no changes

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Introduction

Hands are the most common ways in which micro-organisms such as bacteria can be transported and subsequently cause infection, especially to those most susceptible to infection. In order to prevent the spread of micro-organisms, hand hygiene must be performed adequately to reduce the transmission of infectious agents, including Healthcare Associated Infections (HAI) during the delivery of care. The aim of this procedure is to promote thorough hand hygiene amongst all health and social care staff, to prevent healthcare associated infection, thereby reducing service user's morbidity and mortality.

Hand hygiene is one of the **simplest and most effective** procedures for preventing the spread of disease. It is essential that everyone takes responsibility to ensure that the care provided is carried out in a safe manner.

The transmission of micro-organisms from one service user to another via the hands, or from hands that have become contaminated from the environment, can result in adverse outcomes.

Two routes of infection exist; micro-organisms can be introduced into susceptible sites, such as surgical wounds, intravascular cannulation sites or catheter drainage systems by direct contamination, or potential pathogenic (harmful) organisms can be transmitted by hands and establish themselves as temporary or permanent colonisers of the service user and subsequently causes infection at susceptible sites.

Involving service users and the public in infection prevention and control

In order to comply with The Health and Social Care Act 2008, health and social care workers should encourage the involvement of service users and the public in infection prevention and control.

In order to facilitate compliance, the following should be introduced:

- provide alcohol handrub (except where contra-indicated) at the entrance to service user areas, for the use of visitors
- notices and hand hygiene posters should be displayed to attract the attention of service users and visitors regarding hand hygiene
- hand hygiene information leaflets should be distributed to those in isolation during outbreaks of infection, e.g., viral gastroenteritis
- hand hygiene information leaflets should be distributed to service users (where appropriate) suffering from Alert Organisms, e.g., E coli 0157, *Clostridium difficile* and MRSA infection.

Microbiology of the hands

The skin of our hands may harbour two types of bacteria:

Resident micro-organisms (commensal or normal flora) These bacteria live on the skin of all humans, e.g., *Staphylococcus epidermidis*, diptheroids and occasionally *Staphylococcus aureus*. They live deeply seated within the epidermis – in skin crevices, hair follicles, sweat

glands and beneath finger nails, their primary function is defensive in that they protect the skin from invasion by more harmful micro-organisms. They do not readily cause infections and are not easily removed, but can, however, cause infection during surgery if they enter deep surgical wounds.

Transient micro-organisms Transient bacteria are located on the surface of the skin and beneath the superficial cells of the stratum corneum. They are termed 'transient' as they are acquired on the hands after contact with, for example, a service users wound site, equipment, service users bed, clothing and the environment. Transient micro-organisms are easily transmitted from health and social care worker's hands to vulnerable service user sites. However, unlike resident bacteria, they are easily removed by hand washing and hand disinfection.

Skin integrity Bacteria count increases when the skin is damaged, so maintenance of skin integrity is important for all healthcare staff.

- Nail brushes must be avoided; if used they should be single use and preferably sterile.
- It's important to avoid any breaks in the skin with waterproof dressing whilst working.
- Kitchen staff should use blue waterproof dressing
- Although emollients are now standard in most liquid soap and alcohol hand rubs, some individuals continue to experience soreness or sensitisation
- Rinsing the hands before and after washing will reduce this.
- If a particular soap, antimicrobial hand wash or alcohol products is thought to cause skin irritation the occupational health team should be contacted.

Good hand hygiene practice

To facilitate effective hand hygiene when delivering direct care, health and social care workers should ensure they:

- cover cuts and abrasions with waterproof dressings
- are 'bare below the elbows', which entails:
 - wearing short sleeved clothing or rolling sleeves up to the elbows
- removing wrist and hand jewelry. Rings with jewels, stones, ridges or grooves should not be worn as these may harbour bacteria and also impede hand hygiene. A plain band ring may be worn, but ensure the area under the ring is included when hands are washed or alcohol handrub applied
- keeping nails clean and short (fingertip length), as long finger nails will allow build-up of debris and bacteria under the nails and impede effective hand washing and disinfection keeping nails free from applications, e.g., nail polish or gels, as flakes of polish/gel may contaminate a wound and broken edges of polish/gel can harbour bacteria and debris keeping nails free from acrylics/artificial finger nails as these may harbour micro-organisms, become chipped or detached.

Choice of hand hygiene preparations

The need to remove transient or resident organisms from hands must be considered. Preparations with a residual effect, e.g. chlorhexidine, are not normally necessary for routine social hand washing, but may be used for some invasive procedures.

Research and evidence suggests that:

- soap and water is as effective as hand washing preparations containing antimicrobial agents (antiseptic solutions) for decontaminating hands and removing transient micro-organisms
- alcohol-based handrubs are not effective in removing physical dirt or soiling and should, therefore, only be used on visibly clean skin
- alcohol-based handrubs are more effective in destroying transient micro-organisms than antimicrobial hand washing solutions or soap and water, and give a greater initial reduction in hand flora
- preparations containing antimicrobial agents are more effective in removing resident micro-organisms than those without an antimicrobial agent
- preparations containing antimicrobial agents have different effects on specific micro-organisms.

Whichever solution is chosen, it must be acceptable to the user in terms of ease of application, time, access and dermatological effects.

Use of hand hygiene products

Liquid soap and water

- Hand washing with soap suspends transient micro-organisms in solution, allowing them to be rinsed off effectively (mechanical removal).
- Wall mounted liquid soap dispensers should be used in all clinical settings.
- Dispensers should be replenished as soon as necessary and should have individual replacement containers that can be discarded when empty.
- Responsibility for daily cleaning, checking and replenishment of liquid dispensers should be clearly defined in each clinical area, e.g. written into cleaning schedules and monitored by site managers. Bar soaps are not appropriate for clinical care as they easily become contaminated with bacteria.
- Community staff should have community bags (containing liquid soap, alcohol hand rub, hand cream, paper towels and hand hygiene techniques) for use on home visits.

Alcohol handrub

- Alcohol handrub should only be applied to physically clean skin.
- Alcohol-based hand rub provide an acceptable alternative to soap and water in most situations, including surgical hand decontamination. However, hands will need to wash with soap and water after several applications to prevent a build up of emollients on the skin.
- Alcohol handrub **should not be used** when caring for service users with *Clostridium difficile* or other diarrhoea illness.
- Available in free standing pump containers, wall mounted containers and pocket sized containers.

- Alcohol handrub is less effective if used immediately after the application of a hand cream/lotion.

Hand cream and moisturisers

- The use of hand cream and moisturisers will help to prevent skin problems and irritations, therefore, promoting compliance with hand hygiene.
- For maximum benefit, hand cream or a moisturiser should be used three times daily.
- Communal pots of hand cream or moisturiser should not be used as these can become contaminated.
- It is good practice to provide hand cream/moisturiser in a wall mounted pump dispenser.
- Only use hand creams which are non-irritant.

Bare Below the Elbow as per dress Code Policy

- Staff in clinical contact, direct patient care or involved in the cleaning of the environment/patient equipment, must be “bare below the elbow” to facilitate good hand hygiene practice.
- Sleeves should be short or rolled up
- All wrist and hand jewellery should be removed with the exception of a wedding ring
- Finger nails should be kept short, clean and free from nail varnish, artificial nails and nails extensions.

Levels of hand hygiene

Hand washing is probably the most important method of protecting the service user. The technique is more important than the solution used. There are three main levels of hand hygiene:

Routine (social) hand washing Removes dirt, organic matter and most transient organisms acquired through direct contact with a person, and from the environment. Liquid soap and warm water is adequate for this procedure. A fifteen to thirty second hand wash using liquid soap is acceptable.

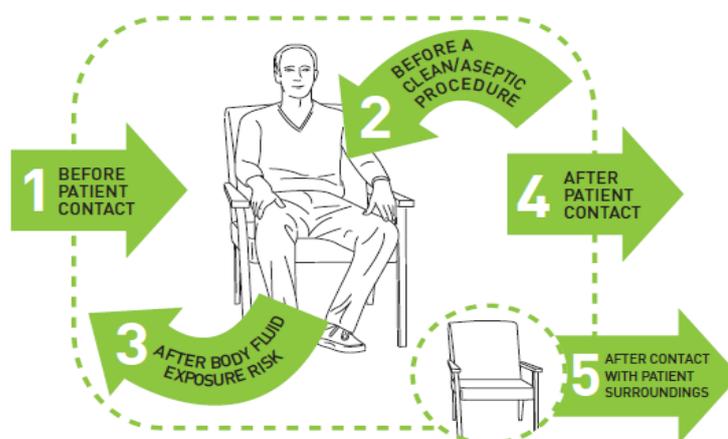
Aseptic hand washing Disinfects the hands by removing transient organisms and reducing resident organisms. This should be carried out prior to dressing wounds healing by primary intention or invasive procedures. Aseptic hand washing can be achieved through either routine hand washing with liquid soap and warm water followed by an application of alcohol handrub or washing with an antiseptic solution containing antimicrobial agents. Ensure you are ‘bare below the elbows’.

When to wash your hands

Your 5 moments for hand hygiene at the point of care*

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Your 5 moments for hand hygiene at the point of care



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 A CLEAN/ASEPTIC PROCEDURE	WHEN? Clean your hands immediately before any clean/aseptic procedure 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
4 AFTER PATIENT CONTACT	WHEN? Clean your hands after touching a patient and her/his 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

NB: The use of gloves is not a substitute for hand washing – wash hands before applying and after removing gloves.

EQUALITY CONSIDERATIONS

The author has considered the needs of the protected characteristics in relation to the operation of this policy and protocol to align with the outcomes with IP&C Assurance Framework. We have identified that ensuring that communication reaches all vulnerable groups. The service has been designed to ensure communication relevant to any outbreaks or other healthcare associated infections reaches all sections of the community. This includes taking into consideration communication barriers relating to language or specific needs to reach the whole population. IP&C work closely with multi agency groups and community partners where appropriate we will undertake engagement and outreach activity. We targeted action to relevant groups follow public health England's communication framework. Some groups are particularly vulnerable in relation to their protected characteristics, e.g. age, ethnic minority communities and disability and where we identify that, the expectation is that staff will meet the needs appropriately.

References

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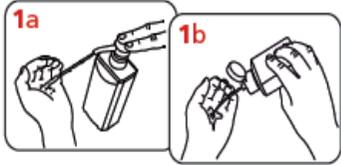
National Institute for Health and Clinical Excellence (2012) *Infection; Prevention and control of healthcare-associated infections in primary and community care NICE clinical guideline 139*

National Patient Safety Agency (2011) *Clean Your Hands Campaign 5 Moments for hand hygiene*

WHO (2009) *WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge. Clean Care is Safer Care*. World Health Organization, Geneva

APPENDIX 1 Hand Cleaning Techniques

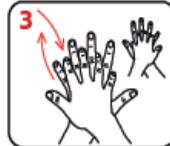
How to handrub? WITH ALCOHOL HANDRUB



Apply a small amount (about 3ml) of the product in a cupped hand, covering all surfaces



2 Rub hands palm to palm



3 Rub back of each hand with the palm of other hand with fingers interlaced



4 Rub palm to palm with fingers interlaced



5 Rub with backs of fingers to opposing palms with fingers interlocked



6 Rub each thumb clasped in opposite hand using rotational movement



7 Rub tips of fingers in opposite palm in a circular motion



8 Rub each wrist with opposite hand



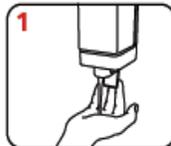
9 Once dry, your hands are safe

20-30 sec

How to handwash? WITH SOAP AND WATER



0 Wet hands with water



1 Apply enough soap to cover all hand surfaces



6 Rub each thumb clasped in opposite hand using rotational movement



7 Rub tips of fingers in opposite palm in a circular motion



8 Rub each wrist with opposite hand



9 Rinse hands with water



10 Use elbow to turn off tap



11 Dry thoroughly with a single-use towel



12 Your hands are now safe

40-60 sec



APPENDIX 2 - Surgical hand washing/scrub

Removes transient organisms and a substantial number of resident organisms. Effective skin antisepsis can be achieved by two methods:

a) Surgical hand wash/scrub using aqueous skin disinfectants

The disinfectant solutions available for surgical skin hand washing are:

4% Chlorhexidine gluconate skin cleanser

7.5% Povidone iodine

2% Triclosan skin cleanser.

It is important that mixtures of the different types of antiseptic solutions are not used together as they may inactivate each other.

Procedure

Ensure you are 'bare below the elbows' (see Section 4).

Wet hands and forearms under running water.

Dispense an adequate amount of aqueous disinfectant solution into a cupped hand and cover all surfaces of the hands and forearms, scrubbing for three minutes using the steps shown in Appendix 1.

A single use disposable brush should be used to scrub under the nails at the beginning of the list.

Rinse thoroughly under running water and dry using sterile disposable hand towels.

b) Surgical skin antisepsis using Hibi Liquid Handrub+ solution (an alcohol skin disinfectant)

70% Isopropanol plus 0.5% Chlorhexidine gluconate has been found to be as effective as any of the aqueous skin disinfectant hand washes for achieving skin antisepsis.

Procedure

Ensure you are 'bare below the elbows'

Dispense at least 5 mls of alcoholic disinfectant solution (Hibisol) into the cupped palm and rub all skin surfaces of the hands and forearms.

Rub vigorously for three minutes using the steps 2-8 shown in Appendix 1, ensuring that all surfaces of the hands and wrists are covered with the product until the solution has dried.