Hand Hygiene Guidelines

Mid Cheshire Hospitals NHS Trust

Contents

Hand Hygiene Guidelines

Policy Statement

Hand hygiene forms an integral part of risk management and clinical governance within each Trust. It is essential that healthcare workers recognise the importance of hand hygiene in relation to their own personal safety and that of their patients or clients.

Patients are put at risk of developing a healthcare-associated infection when a healthcare practitioner caring for them has contaminated hands. Effective hand hygiene can greatly reduce the transmission of infection and decrease the incidence of preventable healthcare associated infection, leading to a reduction in patient morbidity and mortality.

The Health & Safety at Work Act 1974 and COSHH Regulations (Amendment) 2003, require all employees to follow safe working practices which involves effective hand decontamination. The adoption of safe working practices will assist in the control of existing infectious diseases and help to prevent the acquisition of infection at work.

The following guidance outlines measures relating to hand hygiene that must be taken by all members of staff in order to prevent the acquisition or spread of infection. As clinical care is provided in a variety of settings in both hospital and community, the prevention of infection is essential in any healthcare environment. Consequently, this guidance applies to any area where healthcare is performed.

Definition of Terms

Transient micro-organisms - are not constantly present on the skin but are acquired by touch from direct patient contact, equipment or the general environment. They can, however, survive on hands and are easily transmitted to others and items of equipment. They can easily be removed by handwashing.

Resident micro-organisms - live on the skin and protect the skin against invasion by harmful bacteria/transient micro-organisms. Unlike transient micro-organisms, they are not easily removed by the friction of handwashing but their removal is desirable when handwashing before procedures which break the patient's natural defences – eg: surgical procedures.

Social handwashing - the aim is to remove transient micro-organisms during a 10-15 second handwash with liquid soap and running water by mechanical action/friction.

Hygienic hand disinfection - the aim is to destroy and remove transient micro-organisms by the use of antiseptic agents and running water. Prior to and following most clinical activity a social handwash should be adequate. If providing treatment or care to a patient in isolation, or prior to an aseptic procedure, a social handwash can be followed by the application of an alcohol hand gel. Topical antiseptics should not routinely be used unless for surgical scrub purposes.

Surgical scrub/handwash - will be necessary in situations where a reduction in resident micro-organisms is required. Antiseptic agents should be used with running water, hands should be washed for a minimum of two minutes. Some antiseptic agents have a residual effect to provide continued anti-microbial activity. The on-going activity is of benefit during surgical procedures if glove punctures occur.

Hand Decontamination – Indications for handwashing

Hand decontamination has a dual role to protect both the patient and the healthcare worker from acquiring micro-organisms which may subsequently cause harm.

To prevent the transfer of micro-organisms it is essential to decontaminate hands immediately before each and every episode of direct patient contact/care and after any activity or contact that potentially results in hands becoming contaminated.

Hands readily pick up and transfer micro-organisms and should be decontaminated between any activity that will result in more than superficial contact. There is no set frequency for hand decontamination as it is determined by clinical actions; those completed and those intended to be performed.

Healthcare workers need to assess the risks of their clinical environment, as some patients may be more vulnerable than others.

There will be differences in the requirements for hand decontamination between an Intensive Care Unit where highly invasive procedures are routine, compared to areas where little invasive treatment is delivered.

However, hand decontamination will generally be required prior to and following direct patient contact. ***(See Table 1 –Examples of when to wash your hands)***

Table 1 – Examples of When to Wash Your Hands

BEFORE
➢ Starting duty or when entering a client's home ➢ Before direct patient contact ➢ Before performing invasive procedures, before manipulating medical/invasive devices or performing aseptic procedures ➢ Before caring for susceptible patients, eg: immuno-compromised ➢ Before preparing or serving food/drinks or medicines ➢ Before dispensing ear/eye drops ➢ Between different procedures on the same patient (when moving from a contaminated site on a patient's body to an uncontaminated site) ➢ Before eating, drinking or smoking ➢ Before taking breaks or leaving the ward/department
AFTER
➢ After performing invasive procedures, manipulating medical/invasive devices or performing aseptic procedures ➢ After situations during which contamination of the hands is likely to have occurred – eg: handling linen and bedding handling waste cleaning equipment or spillages direct patient contact ➢ After applying topical preparations ➢ After dispensing ear/eye drops ➢ After visiting other departments ➢ After removing protective clothing – including gloves ➢ After dealing with blood/body substances ➢ After visiting the toilet or toiletting others ➢ After eating, drinking or smoking ➢ Leaving a single room or cohort bay used for isolation nursing

Types of Cleansing Agents:

Soap and water - the type of solution used to wash hands is less important than the handwashing technique used.

For most routine activities, handwashing with soap and water is sufficient. Within all healthcare premises, soap must be supplied as liquid soap in sealed units. Liquid soap dispensers should be regularly maintained and kept clean to prevent contamination.

All hand products; liquid soap, alcohol gel and hand cream should be dispensed from single use cartridges.

In the home setting, where possible, liquid soap or a designated bar of soap should be provided for the visiting healthcare worker.

Alcohol gel hand rubs - these are an accepted alternative to soap and water when handwashing facilities are not available, or there is a frequent need for hands to be decontaminated. Alcohol gel should not replace handwashing and should not be used if hands are visibly dirty or following the removal of gloves. However, if used appropriately alcohol gel preparations can reduce the carriage of transient micro-organisms.

The application of alcohol does not mechanically remove micro-organisms but destroys them by chemical activity. Whilst alcohol solutions are effective against most viruses and bacteria, they should not be used in the presence of visible soil or organic matter – eg: blood, faeces, urine, sputum etc. The chemical activity will be inactivated by organic material.

Personal gel pumps should be provided for all staff involved in direct patient care. Individual pumps must be kept clean and on no account be refilled. Personal pumps should not be used each and every time alcohol gel is required. Staff should be encouraged to use wall mounted dispensers where they are easily accessible. "Hand Hygiene Stations" will be situated at the entrance to each ward and will consist of an alcohol gel dispenser and educational posters. All visitors to the ward (staff and relatives) will be expected to decontaminate their hands on entering and leaving the ward, unless a proper handwash is required for clinical purposes.

Alcohol hand gel dispensers will require regular maintenance and cleaning.

If providing treatment or care to a patient in isolation, or prior to an aseptic procedure, a social handwash with soap and water can be followed by the application of an alcohol gel. (See Table 2 – When to use alcohol gel)

Alcohol Based Hand Products – Guidance for Use:

- Alcohol is an accepted alternative to soap and water, when handwashing facilities are not available, or if minimal patient contact has occurred. Alcohol gel should not

replace handwashing, but if used appropriately can reduce the carriage of transient micro-organisms.

- All areas of the hands should be covered with the solution to ensure that certain areas (eg: tips of the fingers and thumbs) are not missed.

- If after several applications hands start to feel slightly sticky, this indicates that hands need washing with soap and water.

Table 2- When to use alcohol gel

Use ✓	**Do Not Use X – WASH HANDS INSTEAD**
✓ Before and after minimal patient contact	**X** If hands contain visible soil or organic matter
✓ If performing multiple tasks on the same patient	**X** After contact with dressings, catheters, or cannulae
✓ Within the same bay after minimal contact – ie: taking observations	**X** If moving form bay to bay or ward to ward
✓ In an emergency situation; moving to another patient	**X** Following removal of gloves
✓ During ward rounds providing dressings/wounds are not handled	**X** If hands start to feel sticky after several applications
✓ In the community setting where handwashing facilities may not be available	
✓ Following isolation nursing, providing hands are washed initially with liquid soap	
✓ After a handwash with liquid soap to provide a higher level of disinfection prior to performing clinical procedures	

Antiseptic solutions - used with water, eg: Chlorhexidine, Iodine, Triclosan, should be limited to specialist areas i.e. ICU, NICU, Theatres or be used prior to highly invasive procedures.

Solutions should be dispensed from a wall mounted container or pump dispenser. Regular cleaning of the dispenser must be maintained.

Hand Decontamination Technique - A good technique covering all surfaces of the hands at the right time is more important than the agent used, or length of time taken to perform it. The ideal technique should be quick and thorough.

Preparation of the hands prior to decontamination - The efficacy of hand decontamination is improved if the following principles are adhered to;

- Keep nails short and pay attention to them when washing hands – most microbes on the hands come from beneath the finger nails.

- Total bacterial counts on hands are higher when rings are worn. Avoid wearing rings with ridges or stones as bacteria can harbour in crevices and around stone settings. Plain rings with smooth surfaces are acceptable, providing they are kept to minimum.

- Do not wear artificial nails or nail polish as they discourage vigorous handwashing. Nail polish can flake and crack and itself become a source of contamination. Ridges caused by cracked nail polish can also harbour bacteria.

- Nail extensions and false nails can cause fungal infections, additionally certain types of bacteria can thrive under false nails. Therefore, neither false nails or extensions should be worn in clinical areas.

- Remove wrist-watches, bracelets and roll up long sleeves prior to handwashing. Wrist watches, bracelets etc must not be worn by those performing prolonged patient care – eg: nursing/midwifery/therapy staff, or by staff whose watches or other jewellery will become contaminated during the course of their work.

NB: Ornamental rings may also penetrate gloves.

Routine hand decontamination using soap and water - Handwashing is generally defined as a vigorous, brief rubbing together of all surfaces of lathered hands, followed by rinsing under running water.

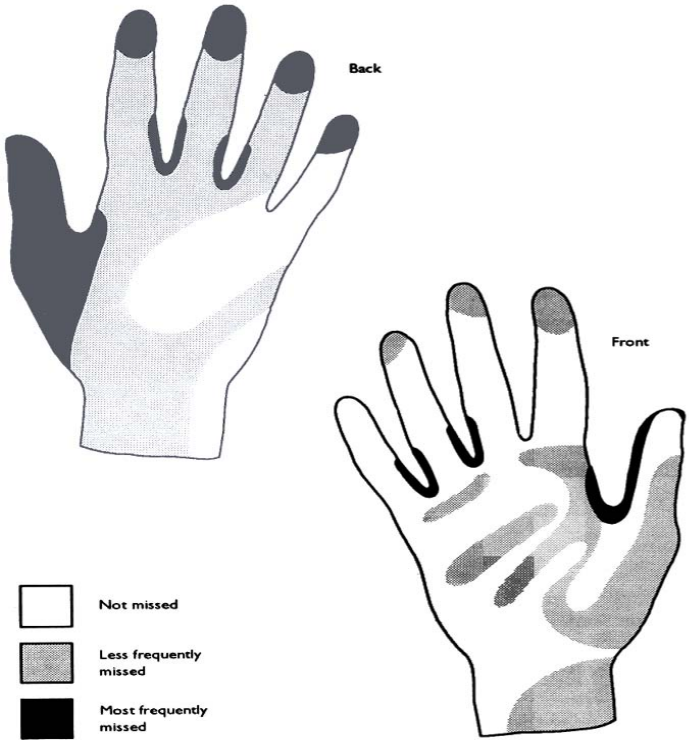
The correct technique for routine handwashing involves;

- Wetting the hands under running water.
- Applying the soap and covering all surfaces of lathered hands for 10-15 seconds.
- Rinsing hands under running water to remove residual soap.
- Thoroughly drying hands.

During handwashing, particular attention should be paid to those areas of the hands which are most frequently missed; thumbs, tips of fingers and in between fingers.

See following diagram for areas commonly missed during handwashing:

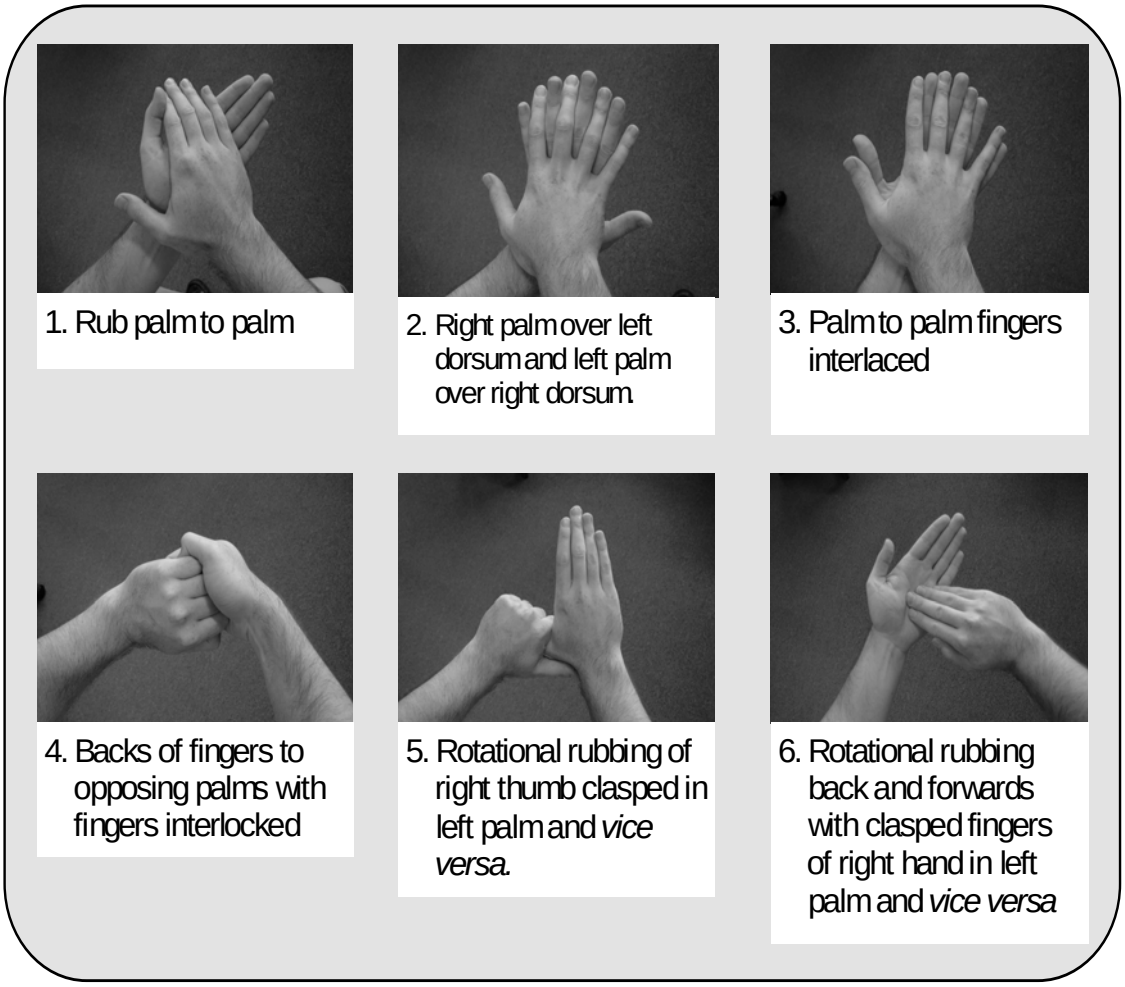
Areas Commonly Missed During Handwashing:



The following diagram outlines the recommended and widely recognised ‘six step technique’ for handwashing, that can be used to ensure that all parts of the hands are covered. Each step consists of five strokes forward and five strokes backwards.
Wrists should also be included in the handwashing process.

Six Step Handwashing Technique:

Wet hands before applying liquid soap



Ensure hands are thoroughly rinsed and dried following handwashing.

Routine hand decontamination using alcohol products -

- Apply alcohol to clean, dry hands.
- Rub hands together covering all surfaces until hands are dry. (This takes about 15 seconds).
- Follow manufacturer's recommendations on the volume of product to be used.
- If hands become unduly sticky after several consistent applications, ensure hands are washed with soap and water.

Surgical hand decontamination - There are a number of alternative methods for preparing the hands, nails and forearms prior to undertaking a surgical procedure;

1. Wash hands with an aqueous antiseptic solution for 3-5 minutes.

OR

2. Apply an alcohol-based product to clean hands for 3 minutes.

OR

3. Wash hands with an aqueous antiseptic solution for 3 minutes, followed by an alcohol-based product for 4-5 minutes.

A single use scrubbing brush may be used for the nails, but it is not recommended for use on hands or forearms.

NB: Before using any type of soap or antiseptic solution, hands must first be wet to prevent the risk of dermatitis developing.

Hand drying - Effective drying of hands after washing is important as wet surfaces can transfer micro-organisms more effectively than dry ones. Additionally, inadequately dried hands are more prone to skin damage.

Cloth towels are not suitable for use in healthcare facilities as hands that have been washed can be re-contaminated. Paper disposal hand towels are quicker and more effective than warm air dryers.

Additionally, paper towels not only dry the skin but can also rub away transient micro-organisms and dead skin cells loosely attached to the surface of the hands. Hand towels must be sterile if used prior to a surgical procedure.

Limited options for hand decontamination - In certain circumstances, options for hand decontamination may be reduced or limited, for instance;

- Within the patient's/client's own home.
- Clinics and other healthcare establishments with limited handwashing facilities.
- During the loss of water supply to a domestic or healthcare setting.

Hand hygiene under any of the above circumstances can consist of the following;

- Handwash with specifically designated soap and towel (provided by patient/client for use in the home).
- Handwash with liquid soap and paper towels (provided by place of work for use in the home.
- Detergent based hand wipes followed by alcohol gel.(Only during loss of water supply)
- Alcohol based preparation.

Patient/Client hand hygiene - Whilst this Policy centres around the need for healthcare workers to practice effective hand decontamination methods, it is important to consider the hygiene needs of patients and clients.

If the hands of patients or clients become contaminated via faecal matter, wounds or other body substances, there is an increased risk of acquiring infections. Furthermore, the environment and equipment is likely to become contaminated, placing other patients/clients and healthcare workers at risk from a variety of infections.

Where practicably possible, patients/clients should be provided with, and encouraged to use, soap and water for hand hygiene purposes.
Hand wipes containing a mild detergent should be provided as an alternative method if mobility is restricted. (Single pack per patient).

Visitors to the ward should be encouraged to use alcohol hand gel prior to and after visiting . Some visitors may prefer to wash their hands instead. Visitors entering side rooms used for isolation nursing should be instructed to wash their hands prior to both entering and leaving or use alcohol hand gel appropriately.

Hand Hygiene leaflets are currently under development by the IPCS. Wards/Departments will be advised how to access and order leaflets for both patients and staff when available.

Skin Care

Occupations within the healthcare profession where frequent handwashing is required can be susceptible to long term changes in the skin. These can result in irritant contact dermatitis and eczema if preventative steps are not taken. The repeated use of harsh, abrasive soaps or solutions may produce a contact dermatitis, whilst failure to remove jewellery can result in eczema developing under a ring and subsequently spreading over the hand.

Bacterial counts rise when the skin is damaged, increasing the risk of cross-infection, while skin lesions and cracked or sore skin provide a disincentive to correct hand hygiene.

Prevention of skin damage - Skin damage can be associated with the detergent base of the preparation and/or poor handwashing technique.

To minimise the risk of skin damage, hands should always be wetted before applying soap or antiseptic solutions. After washing, hands should be thoroughly rinsed to remove residual soap and then dried carefully.

If a particular preparation causes skin irritation advice should be sought from the Occupational Health Department. When the hands are nor visibly soiled, alcohol gel can be used instead of soap and water as it is associated with less skin damage.

Hand cream should be applied regularly to the hands to protect the skin from the potential drying effects of frequent hand decontamination. Communal containers must not be used as the contents may become contaminated and subsequently become a source of cross-infection.

Hand cream must be dispensed in single shot units and be compatible with the soap/hand rub in use.

All breaks in the skin must be covered with a waterproof dressing.

Roles and responsibilities of individuals/departments

It is the responsibility of every individual working within the Trust to ensure that the hand hygiene guidelines are complied with.

It is the responsibility of the Trust and Ward/Departmental Managers to ensure that adequate facilities are provided so that staff are encouraged to wash their hands regularly and appropriately. This must include the adequate provision of handwash basins containing wrist or elbow mixer taps, liquid soap and disposable paper towels.

Alcohol hand rub and surgical scrub solutions must be provided within the appropriate areas. It is also the responsibility of Ward/Departmental Managers to ensure that staff within their area maintain compliance with the hand hygiene guidelines. The Infection Prevention and Control Team incorporates hand hygiene training into all Infection Control sessions; on induction and as part of in-service training.

Additionally, hand hygiene campaigns will periodically offer an opportunity for the up-dating of hand hygiene awareness.

Legislation, Guidance and References

Pittet et al (2000).
Effectiveness of a hospital-wide programme to improve compliance with hand hygiene,
The Lancet , Vol.356

COSHH regulations (Amendment 2003)
HMSO : London

Health & Safety at Work Act (1974) London : HMSO

Hand Decontamination Guidelines (2002)
Infection Control Nurses Association

Gould (2001)
Encouraging Health Professionals to Practice Hand Hygiene safely in Hospital
Infection UK 1: 1

Ayliffe GA, Fraise, AP, Geddes AM, Mitchell U, (2000)
Control of Hospital Infection. A Practical Handbook, 4th edition. Arnold : London

Thames Valley University (2001)

Pratt et al (2001). The epic Project: Developing National Evidence-based Guidelines for Preventing Healthcare Associated Infections.
The Journal of Hospital Infection, Vol. 47. Supplement January 2001

Cookson et al (2001).
Draft Hand Hygiene Standards
Journal of Hospital Infection;49,12 P153

Policy Management

The Hand Hygiene Policy has been issued in Dec 2004 and ratified by the Infection Control Committee.

Compliance with the policy is required by all members of staff within Mid Cheshire Hospitals NHS Trust.

Compliance with the policy should be measured by Ward/Departmental Managers and senior staff within the organisation.

The Infection Prevention and Control Team will formally measure compliance as part of the audit process.

NB – A policy audit is available for this particular policy. Refer to the appendix in the policy entitled Guidelines for the Review of Infection Control Practice.

This policy is due for revision on or before Dec 2006 and will be updated by the Infection Prevention and Control Team.

Policies/documents to read in conjunction with the hand hygiene guidelines;

- Good Practice Guidelines
- Hand Decontamination Guidelines (ICNA) - previously circulated to Wards/Departments within MCHT