Sheffield Teaching Hospitals NHS
NHS Foundation Trust

HAND HYGIENE POLICY

REFERENCE NUMBER	VERSION	STATUS	SPONSOR(S)/AUTHOR(S)
48	3	current	Professor Hilary Scholefield Chris Morley Rachael Duckworth on behalf of IPCT

AMENDMENTS

The Health and Social Care Act 2008, The Health Act 2006, NPSA cleanyourhands campaign and safety alert re storage of alcohol hand rub, Bare below the elbows.

DOCUMENT OBJECTIVES

To ensure the Trust has a comprehensive hand hygiene protocol and to ensure all STHFT staff are aware of the principles and practice of good hand washing and disinfection, which will help maintain the highest standards of infection control and prevention thus reducing the risk of healthcare associated infection in patients and NHS staff.

INTENDED RECIPIENTS

All members of staff with patient contact

GROUPS/PERSONS CONSULTED

TEG, General Managers, Directors of Nursing, Risk Forum, Infection Control Committee, JNCC

MONITORING ARRANGEMENTS AND INDICATORS

All policies to be issued electronically by Legal Services and Corporate Governance
Hand washing training and auditing

TRAINING/RESOURCE IMPLICATIONS

To be included as part of mandatory training.

RATIFYING BODY AND DATE RATIFIED	Infection Prevention and Control Committee August 2009, TEG November 2009
DATE OF ISSUE	December 2009
REVIEW DATE	December 2011
CONTACT FOR REVIEW	Rachael Duckworth, ICN Central Campus

Associated Documentation:
Policies

Legal Framework

Codes of Practice and Guidance:

STH Dress Code - due our later in 2009

External Documentation

The Health and Social Care Act 2008, Code of Practice for the NHS on the prevention and Control of Healthcare Associated Infections and related Guidance

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Version history

Version	Date Issued	Brief Summary of change	Owner's Name:
2	18/11/09	Inclusion of changes required by: a) The Health and Social Care Act 2008 and The Health Act 2006 b) NPSA cleanyourhands campaign c) Safety alert re storage of alcohol hand rub. d) Department of Health 'Bare below the Elbows' requirements	Rachael Duckworth
3	15/12/09	• Issue and review date changed • Updated information regarding wearing jewellery • Monitoring section changed to provide detail and clarity particularly regarding training	Rachael Duckworth

Document Imprint

Contents

Purpose of this document

The Health and Social Care Act 2008; Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance supersedes The Health Act 2006; Code of Practice for the Prevention and Control of Health Care Associated Infections, and states that all staff should demonstrate good infection control and hygiene practice.

The Health Act 2006; Code of Practice for the Prevention and Control of Health Care Associated Infections states that an NHS body must ensure that;

" patients,staff and other persons are protected against risks of acquiring Healthcare associated infections, through the provision of appropriate care, in suitable facilities, consistent with good clinical practice."

The Health and Social Care Act 2008 states the NHS body must provide and maintain a clean and appropriate environment for health care and ensure there is adequate provision of suitable hand washing facilities and antibacterial hand rubs. The NHS body must also provide information on healthcare associated infections to patients and the public and provide information to encourage compliance by visitors with hand washing and visiting restrictions

The Term "Health Care Associated Infections (HCAI) includes any infection by any infectious agent acquired as a consequence of a person's treatment by the NHS or which is acquired by a health care worker in the course of their NHS duties(DH 2006)

Hand hygiene is one of the most critical factors in preventing the spread of infections in healthcare settings (Appendix 1) Evidence shows that poor hand hygiene spreads some of the micro-organisms which cause infections, including Meticillin resistant Staphylococcus aureus (MRSA) and *Clostridium difficile.*

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

1 Transfer the patient's own micro-organisms into sterile areas of the patient's body during care or treatment
2 Transfer micro-organisms from one patient to other patients
3 Transfer micro-organisms from the environment and equipment to a patient
4 Acquire micro-organisms as a result of their contact with patients which places healthcare staff at risk of infection (NPSA 2008)
5 Transfer their own micro-organisms to the patient.

Effective hand hygiene is used to remove transient and resident micro-organisms (Appendix 2).

Duties of all staff employed by STHFT

- Every member of staff is responsible for their own actions and every member of staff must be constantly vigilant to ensure that something as basic as hand hygiene is practised correctly
- It is the duty of all staff to ensure that they receive training and regular updates on effective hand hygiene and practice

Duties of Line Managers

- It is the duty of Line managers to ensure all their staff have access to and receive hand hygiene training
- If staff fail to receive training and fail to attend yearly mandatory updates on hand hygiene, this will be followed up by their Line manager and actions taken to remedy this

Duty of Infection Prevention and Control Team (IPCT)

- It is the duty of the IPCT to ensure good training and resources are available on hand hygiene, including regular updates for Infection Control Link workers.

Hand Hygiene at the Point of Care

All disciplines of staff have a responsibility to both their patients/clients and to themselves, to employ effective hand hygiene. STHFT expects its staff to follow the procedures described in this document in order to reduce the instance of healthcare associated infection in the trust.

The point of care as defined by the NPSA (2004, 2008) 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 patients' bed, but in other contexts it could be the treatment room, cot, chair, ambulance or a patient's home for example" (NPSA 2008).

STH expects all staff to clean their hands

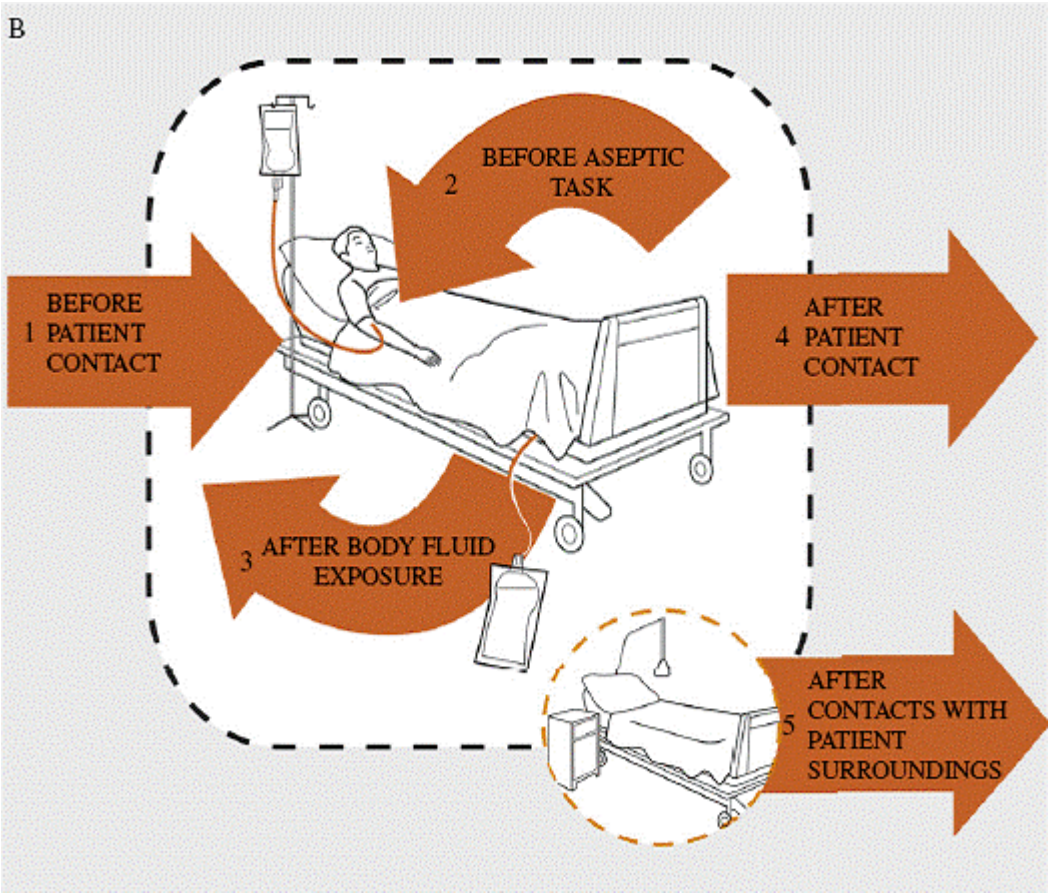
1. **Before patient contact**
When? Clean your hands before touching a patient when approaching him/her
Why? To protect the patient against harmful micro-organisms carried on your hands

2. **Before aseptic technique**
When? Clean your hands immediately before any aseptic task
Why? To protect the patient against harmful micro-organisms, including the patient's own, from entering his/her body

3. **After body fluid exposure risk**
When? Clean your hands immediately after an exposure to body fluids (and after glove removal)
Why? To protect yourself and the healthcare environment from harmful patient micro-organisms

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 micro-organisms

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 micro-organisms



<u>"Bare Below the Elbows" and hand hygiene</u>

The Department of Health has confirmed its commitment to the implementation of "Bare Below the Elbows" (BBTE) by all NHS Trusts (Johnson 2007).

All clinical staff will need to comply with "BBTE" when providing direct care to patients or touching the immediate patient environment (see diagram B above).

Although staff do not need to be BBTE for the entire time they are in a clinical area, in practice rolling up sleeves, taking off wrist watches etc. between patients is impractical in most contexts, especially in areas where emergencies may occur e.g. wards, theatres etc. Therefore, staff should be BBTE whenever they are in a clinical area where they can reasonably expect to come into contact with patients or the immediate patient environment. This will include in-patient wards (particularly when undertaking ward rounds), theatres and out-patient departments".

A clinical area is any location in STH premises or off site at an outreach facility in which a clinical colleague undertakes physical examination or direct hands on care.

If staff fail to comply with "BBTE", this will result in a failure in their hand hygiene audits carried out by both the IPCT and by trained ward staff.

All staff should be prepared to approach their colleagues if they are not complying with ”BBTE”. Line managers will be informed by the IPCT if staff are persistently not adhering to the policy

Sheffield Teaching Hospital Foundation Trust supports “BBTE” and therefore requires that;

- All clinical staff remove wrist watches/bracelets when attending to a patient or when likely to touch the immediate patient environment
- Jewellery must be kept to a minimum; jewelled rings or rings with stones should not be worn, a plain/wedding ring is permitted
- Sleeves should be rolled up and above the elbow
  "*Hands cannot be thoroughly and effectively washed if restricted by the wearing of a wrist watch or long sleeves, thus increasing the risk of cross infection for patients. Cuffs can become heavily contaminated and are likely to come into contact with patients"*
- Ties be removed or secured
  "*This will reduce the risk of cross contamination. Ties are rarely laundered but worn daily. They perform no beneficial function in patient care and have been shown to be colonised by pathogens*."
- Long hair should be tied back and off the collar.
  "*Patients generally prefer to be treated by clinical staff with neat and tidy hair. Hair which is tied back off the collar is less likely to shed skin cells onto the patient/environment/wounds/medical devices, thus reducing the risk of cross contamination."*
- Staff with direct patient contact must not wear false nails.
  "*False nails encourage the growth of bacteria and fungi around the nail bed, mainly because they severely limit the effectiveness of hand washing, but also because the nail bed is abraded to facilitate attachment of the false nail, and the fixative can sometimes give rise to nail bed damage. These issues may result in infection, particularly fungal infection, for the wearer and will certainly present a risk of cross infection for the patient."*

N.B Staff who need to wear an “alert bracelet” should be encouraged to wear their alert around their neck and ensure that the Ward Manager is aware of their medical alert situation

Which hand hygiene product to use and when

Washing Hands with Soap and Water

SOAP AND WATER SHOULD BE USED IN THE FOLLOWING SITUATIONS;

1 When hands are visibly soiled
2 The patient is experiencing vomiting and/or diarrhoea
3 There is direct hand contact with bodily fluids; i.e. if gloves have not been worn.
4 There is an outbreak of *Norovirus*, *Clostridium difficile* or other diarrhoeal illnesses
5 After using the toilet
6 Before and after preparing, handling or eating food
7 Before and after an aseptic technique
8 After removal of gloves
9 At the start of a shift and at the end of a shift
10 After completing a task i.e. cleaning equipment

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

Washing Hands with Alcohol hand rub

The NPSA (2008) advice that alcohol hand rub is the recommended product to use in the majority of patient care situations on non-soiled hands because it is more effective, quicker to use, better tolerated by the hands and can be used at the point of care.

It is most beneficial to patient safety to place hand rub dispensers at the point of care. 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 be carried by the healthcare worker.

Hand washing technique

A good technique at the correct time, which covers all surfaces of the hands, is more important than the cleanser used or the length of time of hand washing

The duration of washing needs to be as long as required to ensure all areas of hands have been covered. Hands should be systematically rubbed ensuring all parts of the hands and wrists are included taking particular care to include the areas of the hand which are most frequently missed.

1. Hands must be washed under running water using a sink with elbow or wrist operated taps

2. Hands must be wet before applying liquid soap (soap applied to dry hands will potentially be more drying to the skin surface and the majority of the soap will be washed off as soon as the hands are put under running water)

3. Thoroughly wash all hand surfaces and beneath rings

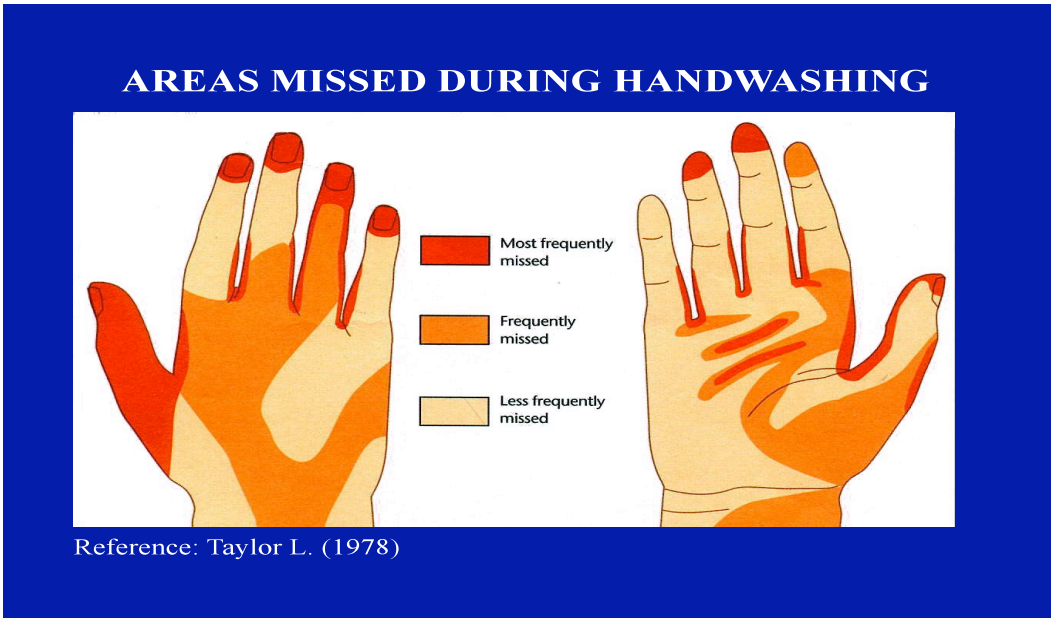
4. Rinse thoroughly (this helps to reduce sensitivity to cleaning products)

5. Dry hands thoroughly with single use paper towels – discard after us (wet hands are more likely to be come damaged and also harbour more micro-organisms)

6. Bar soap must not be used as it poses a cross infection risk

All healthcare staff should be taught how to correctly clean their hands with alcohol hand rub and with soap and water to avoid missing areas on their hands.

Areas frequently missed during hand washing



Hand drying

1 Wet surfaces transfer micro-organisms more effectively than dry ones.

2 Use disposable paper hand towels. This is the quickest and most effective method. Paper towels operate effectively by rubbing away transient organisms and the old, dead skin cells that are loosely attached to the surface of the hands.

Dispose of used paper towels in the foot operated bin. Do not use your hands to lift or close the lid of the bin.

Hand disinfection

Hand disinfection is necessary in circumstances where hands are more likely to be contaminated by micro-organisms e.g. when caring for a patient with barrier precautions, or where the risk to the patient is greater, for example prior to an invasive ward based procedure, aseptic technique.

Hand disinfection is usually achieved by a thorough hand wash with soap and water, followed by the use of alcohol hand rub.

It must be remembered that alcohol is not a cleaning agent and will not be effective in the presence of physical dirt; hands must be physically clean before alcohol is applied.

Procedure for using alcohol hand rub

1 Cup one hand and place under the pump dispenser
2 Press pump once to dispense required amount of the alcohol hand rub into the palm of the hand
3 Rub the disinfectant in thoroughly following the six step method, ensuring that the solution covers all surfaces of both hands until dry. Follow six step hand washing technique (Appendix 5)
4 It is unnecessary to rinse hands or use a paper towel.
5 Allow to dry

Glove usage

- Inappropriate wearing of gloves might represent a barrier for compliance with hand hygiene. Indeed healthcare workers might wear gloves with the primary intention to protect themselves and not the patient, and may be unaware that contamination on gloves occurs just as on hands
- Hand washing with either soap and water or alcohol hand rub is required following the removal of gloves.
- Failure to remove gloves and decontaminate hands after patient contact or

between dirty and clean body site care on the same patient constitutes non compliance with hand hygiene recommendations (Pittet and Boyce 2001)

- In no circumstances should the same pair of gloves be used on different patients
- Alcohol hand rub should never be applied to gloves as it will damage them
- Hands should be thoroughly dry before putting on gloves to reduce the risk of skin irritation/sweating

Skin Care

- Persistent skin irritation in healthcare personnel is a cause for concern. It can place patients at risk because hands cannot be adequately decontaminated and can place the health care worker at risk of infection due to the breaches in skin integrity. Skin damage is generally associated with the detergent base of the preparation and/or poor hand washing technique. However the frequent use of hand hygiene agents may cause damage to the skin and alter the normal hand flora. Excoriated hands are associated with increased colonisation of potentially pathogenic micro-organisms and increase the risk of infection. In addition, the irritant and drying effects of hand preparations have been shown as one of the reasons why healthcare workers fail to adhere to hand hygiene guidelines (Epic Guidelines 2001).
  - If the skin damage is extensive it may not be possible to cover all breaks with an impermeable waterproof dressing. The effect of an agent on the health of the skin will influence the frequency of hand washing. If it is not possible to cover breaks in the skin, advice should be sought from the Occupational Health Department
  - If a member of staff experiences any problems with the hand washing/ disinfectants provided by the Trust, they should firstly discuss this with their manager who will consider referral to the Occupational Health Department, who will then assess each individual and recommend an alternative product if necessary.
  - Bacterial counts increase when the skin is damaged. Drying hands thoroughly is particularly important to prevent hands becoming chapped, especially in the winter months.
  - Hands can be further protected by the use of a good quality hand cream. Hand cream should be made available in every clinical area, preferably in a pump dispenser.
  - Communal jars of hand cream must not be used, as they are very likely to become contaminated.
  - Use of a moisturiser is recommended at the end of shifts, at break times and when off duty to maintain the integrity of the skin.

Correct Storage of Alcohol Hand Rub

The recent National Patient Safety Agency (NPSA) Patient Safety Alert on 2nd September 2008 advocates that only the minimum quantities of alcohol based hand rub products should be stored at ward/department level.

1 It is recommended that no more than five litres (10 bottles) should be held in storage in a locked metal cupboard. This does not include the hand rub at the point of care, which is regarded as in use.

2 To assist compliance with the Safety Alert and to avoid wards/departments running out of products the majority of areas are to receive alcohol hand rub via the top up system organised by the Material Management Team.

3 Alcohol hand gels should be readily available at the entrance to all clinical ward/departments

4 It is everyone's responsibility to renew empty bottles of alcohol hand rub. However, it is recommended that each area nominate an individual(s) to ensure the ward/department is fully stocked and has the correct amount of product in storage.

Hand Hygiene for patients and their visitors

Hand hygiene for patients is also important. Whilst in a health care setting, a patient's health may become compromised for a number of reasons. This is an ideal opportunity for staff to educate patients in the importance of hand hygiene and to encourage good hand hygiene practice. Appropriate hand hygiene facilities must be provided for use by patients. Patients should be encouraged to wash their hands, especially at the following times:-

1 After using the toilet/bedpan/commode
2 Before eating or handling food
3 When caring for lines e.g. Hickman
4 When participating in dressings e.g. pin site care

Detergent hand wipes and alcohol hand rubs can provide an excellent alternative to hand washing when patients/clients experience difficulties gaining access to hand wash basins. Detergent hand wipes are widely available through the NHS Logistics catalogue and should be offered in these circumstances described above.

Visitors are encouraged to adhere to the Visitors Policy and use the alcohol hand rubs provided on entering and leaving the ward. All visitors attending a patient with *Clostridium difficile* or when entering or leaving an area with a diarrhoeal outbreak must be instructed to use soap and water to wash their hands on entering the area and when and leaving the patient.

Training on Hand Hygiene

1 All new members of staff to the Trust will receive training on hand hygiene in their Trust Induction programme, delivered by the Learning and Development Department.
2 All staff that work with or attend to patients are to receive an update on hand hygiene at the frequency stated in their areas mandatory and job specific training plan. This will be delivered at the ward/department level by either the Infection Control Link Nurse/ Clinical Educator or another appropriately trained member of staff. This training will be supported by the Infection Prevention and Control team. Participation in this training must be recorded on the individual's personal file and be monitored by Line Managers, at least annually.
3 Any staff members who have failed to participate in hand hygiene training or updates as determined by this policy will meet with their line manager and an agreed date for training allocated. A record of the outcome of the meeting will be kept on their personal file.
4 Persistent non-attendance at hand hygiene training could be considered under the Trust Disciplinary Policy.

Monitoring of compliance with the Hand Hygiene Policy

- Hand Hygiene is considered to be part of the Infection Prevention and Control element of mandatory and job specific training.
- Compliance with mandatory training is monitored in clinical areas as part of the Clinical Assurance Toolkit
- Directorates and corporate departments monitor and report on mandatory and job specific training as part of their Healthcare Governance Arrangements at least twice a year at their directorate or department governance meeting or equivalent
- Reports will be provided on at least an annual basis to the Trust Executive Group (TEG) and the Healthcare Governance Committee by the Learning and Development Department on the percentage of staff in date with their mandatory and job specific training.
- Where there are noted to be directorates or corporate departments with high percentages (25% or greater) of staff not in date with their mandatory and job specific training, the Learning and Development Department will seek evidence from Managers/Supervisors that they are addressing non participation with mandatory and job specific training. This will occur on an adhoc basis.
- An assessment of whether a clinical area has an active Cleanyourhands champion is included in the Infection Control Accreditation Programme and will be reviewed annually.
- The Infection Prevention and Control Team (IPCT) will carry out an environmental audit bi-annually in all In-patient areas and annually in Outpatient areas. This will include a check of whether alcohol hand gel/hand cleaning facilities are available.
- The ICPT will on a daily basis check availability of alcohol hand gel and hand cleaning facilities when they visit clinical areas and will address any problems identified immediately with the ward staff.
- The Infection Control Accreditation Programme includes a monthly hand hygiene audit, looking for a compliance of 90% or above to be carried out by the ward

/department staff

- The ICPT will carry out 3 hand hygiene audits per year in every clinical area; compliance of 90% or above is expected. Where compliance is below 90%, the Line manager will be notified and an action plan put in place
- More frequent hand hygiene audits will be carried out in clinical areas if a problem is identified in a clinical area.
- The ICPT will on a daily basis challenge any members of staff who are observed to practice sub-optimal/inadequate hand hygiene.
- All staff should be prepared to approach their peers/visitors if hand hygiene is not performed adequately.

Appendix 1

Historical background to hand hygiene

Hand hygiene as one of the critical factors in preventing the spread of infections is not new concept. Ignaz Semmelweis (a Hungarian obstetrician) observed in 1847 that the institution of hand washing by medical students between post mortem examination and contact with labouring women brought about a dramatic reduction in deaths of mothers from puerperal fever, reducing from 11% to below 1%.

Although the last 100 years have seen many changes and improvements in hygiene practices and infection problems have changed, they have not gone away. We are now observing the emergence of old organisms causing new problems e.g. tuberculosis, enterococcus, and outbreaks of infection in hospitals associated with antibiotic resistant micro-organisms such as Meticillin Resistant Staphylococcus aureus (MRSA) and Resistant gram-negative bacteria.

Hand hygiene remains as important now as it was a century ago.

Appendix 2

Transient and Resident micro-organisms

Effective hand hygiene is a fundamental principle of good infection control, resulting in prevention of cross infection and protection for staff. Hands have been implicated in the spread of both enteric and respiratory viral infections as well as organisms such as MRSA.

Effective hand hygiene is used to remove transient and resident micro-organisms.

Transient micro-organisms

1. Are those micro-organisms found on the surface of the skin.
2. They are termed 'transient' because direct contact with other people, equipment or other body sites all result in the transfer of these micro-organisms to and from the hands.
3. Any damaged skin, moisture or ring wearing will increase the possibility of colonisation with micro-organisms.
4. Transient micro-organisms are easily removed with social hand washing and this immediately reduces the risk from cross infection.

Resident micro-organisms

1. Are those micro-organisms usually called normal flora or commensals.
2. They are located in the deep seated epidermis, hair follicles, and sweat glands and beneath finger nails.
3. Some bacteria such as coagulase-negative staphylococci that are resident on hands are designed to have a defensive function, in that they protect the skin from invasion by more harmful micro-organisms.
4. Resident micro-organisms do not readily cause infections and are not easily removed. However during surgery or via invasive devices and procedures they could enter the patient's deep tissues and establish an infection there e.g. infection in central venous catheters.

Appendix 3

Cleanyourhands Campaign and Champion

In September 2004, the National Patient Safety Agency (NPSA) launched the **cleanyourhands campaign** to acute trusts in England and Wales. The campaign was based on international studies and research undertaken in England that suggested infection rates could be reduced by up to 10-15% when staff cleaned their hands at the point of care

1 The importance of staff champions or role models in hand hygiene improvement is critical to the success of the cleanyourhands campaign.

2 Every clinical area, both inpatient and outpatient should have a nominated staff champion for hand hygiene and have their photograph taken and feature in a poster which will be displayed in the ward/department area.

3 This is a requirement for Infection Control Accreditation.

The staff champion needs to

1 To be able to demonstrate good hand hygiene practice at the appropriate times
2 Promote the campaign amongst colleagues
3 Give verbal support to the campaign in front of staff
4 Support patient involvement and encourage patients to feel comfortable about asking if they have washed their hands.

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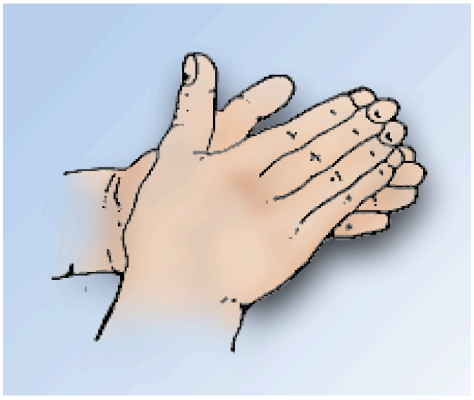
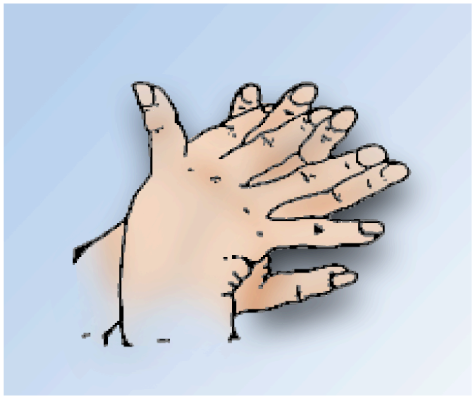
Appendix 4 HAND DECONTAMINATION

Six steps to washing hands correctly, and reducing infection

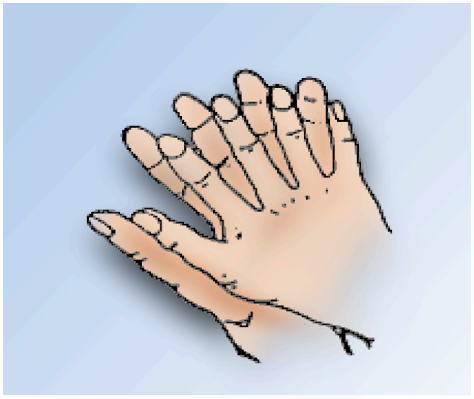
Wet hands under warm running water, apply soap, and then follow this procedure.



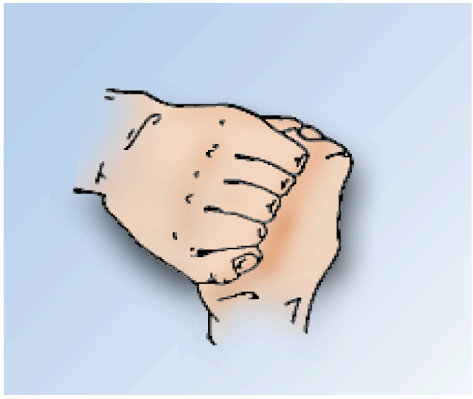
1. Rub palm to palm



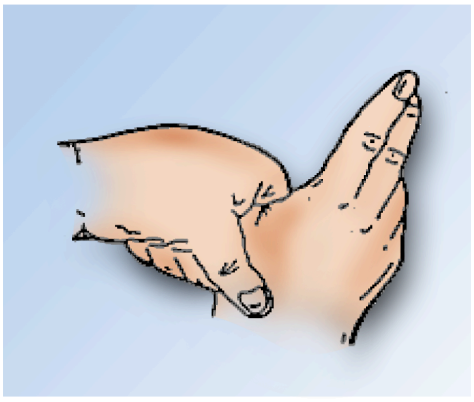
2. Rub the back of both hands (right palm over left back and then *vice versa*)



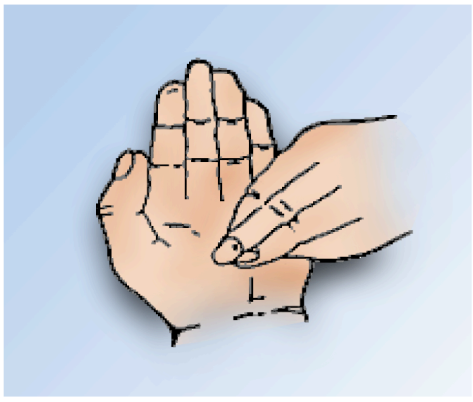
3. Rub palm to palm interlacing the fingers



4. Rub the backs of fingers by interlocking the hands



5. Rub the thumbs (rotational rubbing of right thumb clasped in the left palm, and then *vice versa*)



6. Rub palms with fingertips rotational rubbing of right fingers on left palm, and then *vice versa*)

Rinse the hands under running water, and **dry thoroughly**.

Standard technique based on that of Ayliffe *et al* (1978)

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