

INFECTION PREVENTION AND CONTROL POLICY AND PROCEDURES Sussex Partnership NHS Foundation Trust (The Trust)

IPC8

HAND HYGIENE

INTRODUCTION

Effective hand hygiene and hand washing are the most significant interventions that can be undertaken by healthcare staff to reduce the risk of transmission of microorganisms from one person to another or from one site to another on the same person. Decontaminating hands as promptly and thoroughly as possible between service user contacts and after contact with blood, body fluids, secretions, excretions and contaminated equipment/articles is essential. It is expected that all staff working directly with clients (in all care groups) will adhere to the following procedure.

AIM

The aim of hand washing is to remove visible contamination from the surface of the hands, and remove or reduce the level of transient organisms on the skin surface to a level below that of an infecting dose before they are transferred to another person or surface. To facilitate this it is recommended that staff are 'bare below the elbow' in accordance with national guidance.

BACKGROUND

Hands are contaminated with both transient and resident flora:

- **Transient flora** are those micro-organisms that are not resident on the skin but are acquired by day-to-day activity including direct contact with service users, contaminated equipment and environmental surfaces. It is these micro-organisms that are responsible for the majority of episodes of cross infection. Transient flora includes the vast majority of bacteria, viruses and other pathogenic micro-organisms that our hands come into contact with during the course of daily living. This includes organisms such as *Staphylococcus aureus*, *Clostridium difficile*, gram negative bacilli (gut organisms) and norovirus. Transient microorganisms are located on the skin surface, are easily colonised, and readily transferred from hand to skin or surface. Transient flora are loosely attached to the skin and are readily removed by the mechanical action of washing, rinsing and drying hands using soap and water, thereby reducing and/or removing the potential for cross-infection from person to person. Most may also be destroyed by the application of alcohol based hand rubs, however not Norovirus and *Clostridium difficile*.

- **Resident flora** are those micro-organisms that live on the skin and provide a protective function. Resident microorganisms, commonly named 'normal flora', live deeply seated in the surface layer of the hands (epidermis) in sweat glands, skin follicles, skin crevices and beneath fingernails. Their role is primarily defensive and in the vast majority of instances these flora do not cause cross-infection and it is unnecessary to eradicate them from hands during most healthcare activities. However, in certain circumstances resident flora can pose a risk to susceptible individuals. They are a particular risk during surgery and the insertion of some invasive devices such as central venous cannulae. Resident flora are not easily removed by mechanical methods and require the application of skin antiseptics e.g. chlorhexidine or povidone iodine to reduce their numbers to acceptable levels. Thus the use of skin antiseptics is standard practice prior to surgical procedures and the insertion of some invasive devices

BASIC HAND CARE

To keep hands in good condition and to perform effective hand hygiene, staff should perform some basic hand care.

Hands should be observed for any signs of damage to the skin as this can provide a portal for micro-organisms to enter the body. Breaks in the skin should be covered with a waterproof plaster or dressing before the shift begins and replaced if necessary. If cracks or breaks do not heal, then occupational health advice should be sought. Dermatitis can be caused by sensitivity to ingredients in hand cleansers. Always seek guidance from Occupational Health or local GP if skin problems on hands do not clear.

Hand and wrist jewellery (including wrist watches) should not be worn by staff undertaking direct care. Rings containing stones or mounts should not be worn by care staff as micro-organisms are known to readily colonise such items providing an on-going source of potential pathogenic micro-organisms. Plain wedding / civil partnership bands / rings are acceptable (ideally these should be removed during hand washing and hand drying). Wrist watches are easily contaminated and can prevent thorough washing of wrists.

Nails should be kept short at all times to reduce the accumulation of micro-organisms. False nails nail extensions, nail varnish and nail jewellery should NOT be worn by care staff as they too are recognised sources of potential pathogenic micro-organisms and discourage staff from thorough hand decontamination.

Long sleeves should not be worn by staff undertaking direct care. In the event that long sleeves are worn, they must be rolled up above the elbows prior to hand decontamination.

Cuts and abrasions must be covered with a waterproof dressing.

All staff carrying out direct clinical care are recommended to be 'bare below the elbow' to facilitate good hand hygiene practices.

TYPES OF HAND HYGIENE

GENERAL

This involves the use of liquid soap products, warm running water and disposable paper towels. This activity mechanically removes transient micro-organisms from the hands and is perfectly acceptable for the vast majority of healthcare interventions.

TYPES OF HAND DECONTAMINATION PRODUCTS

LIQUID SOAP PRODUCTS

These products are used for the vast majority of hand decontamination interventions that require the removal of transient micro-organisms. Products should be purchased from an approved supplier of medical products as these products have been independently evaluated and economies of scale will be achieved with regards to cost. Bar soap should not be used for hand decontamination by care staff as it can harbour micro-organisms and bar soap is not acceptable for service user use in this healthcare setting.

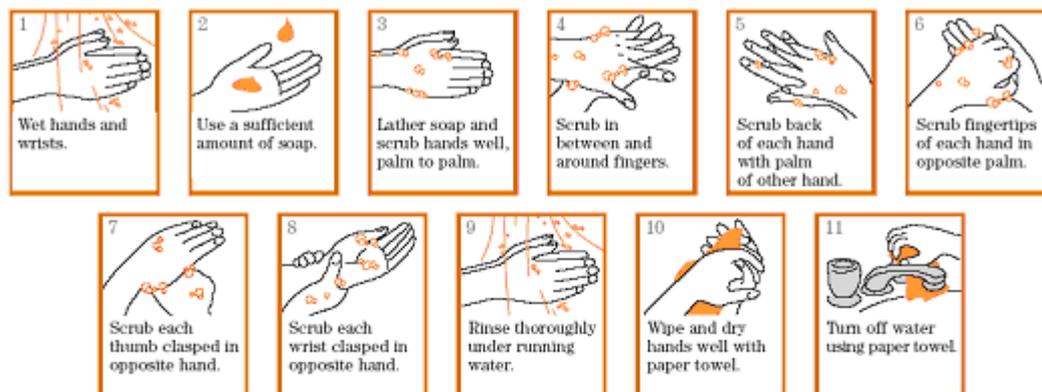
Soap impregnated wipes are also widely available for hand decontamination and can be useful in certain situations e.g. for service users who cannot easily access a hand wash basin. Wipes should **not** be routinely used by healthcare workers who require a more thorough hand decontamination that is best provided by the use of soap and running water or an alcohol based product.

Service users should be given the opportunity to clean their hands before meals, after using toilet, bedpan or commode using soap and water or a product tailored to their need.

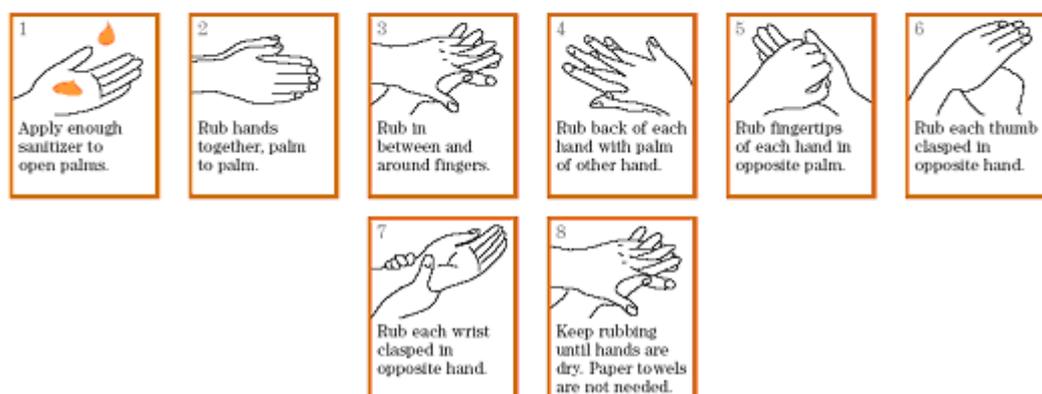
Liquid soap products containing antibacterial agents (as are widely available in supermarkets) are not necessary for routine hand decontamination and should be avoided in healthcare environments.

Some soap formulations are also available as foams. These are acceptable.

Hand washing with soap and water



Cleaning hands with alcohol sanitisers



ALCOHOL GEL DISPENSERS - All hand washing and disinfection agents should be dispensed from a sealed container that delivers a measured amount of soap/alcohol gel/antiseptic detergent. The nozzle must be checked and cleaned regularly to prevent clogging and contamination. Ideally containers should be wall mounted and pump action. Open containers and bars of soap should not be used since they can harbour microorganisms and cross infect. Personal alcohol gel dispensers are available for individual staff use in the clinical setting. Wall mounted alcohol gel dispensers must only be in staff attended/locked areas and are not for general patient access.

HAND RUB / GEL

Wall-mounted Alcohol is not provided in mental health settings due to the risk of ingestion by service users. Therefore alcohol hand products can be provided for staff use in bottles that can be attached to uniforms/clothing, thus ensuring that the product is available at the point of care.

Alcohol is not as effective as soap and water in removing some viruses including norovirus and is completely ineffective against *Clostridium difficile* spores and must therefore not be used whilst caring for service users with diarrhoeal illness.

ANTISEPTIC DETERGENT PRODUCTS (E.G. CHLORHEXIDINE, POVIDONE IODINE)

These products are designed for use when a higher level of antimicrobial kill is required e.g. when it is necessary to remove / reduce resident as well as transient micro-organisms. This is usually only necessary prior to surgical procedures and certain high risk invasive procedures.

The use of antiseptic-containing detergent products is rarely necessary in mental health facilities and is an unnecessary expense.

HAND WASH FACILITIES

Effective hand washing requires easy access to clinical hand wash basins, liquid soap, alcohol hand rubs / gel and disposable paper towels. A foot operated lidded pedal bin should be available at every clinical hand wash basin for the hygienic disposal of paper hand towels (domestic waste).

SOAP AND ALCOHOL CONTAINERS / DISPENSERS

All soap and alcohol products should be dispensed from a sealed container, which delivers a measured amount of soap/alcohol gel/antiseptic detergent. The nozzle must be checked and cleaned regularly to prevent clogging and contamination. Ideally containers should be wall mounted and pump action. Open containers, bars of soap and refillable containers must not be used as they can become contaminated with micro-organisms.

Ideally, containers should be wall mounted with a pump-action and operated with heel of hand or wrist, not fingers.

NB: The provision of wall mounted alcohol gel dispensers in mental health settings to which service users and the public have access should be subject to a documented risk assessment of the risks of ingestion. All wall mounted dispensers (soap, gel or paper) should be of an anti-ligature, vandal resistant type.

Personal alcohol gel dispensers are available for individual staff use in the clinical setting.

PAPER TOWELS

Good quality, absorbent paper towels should be available for use at all hand wash basins. Towels should be dispensed from wall-mounted dispensers to avoid contamination.

EQUIPMENT REQUIRED FOR EFFECTIVE HAND HYGIENE IN CLINICAL SETTINGS

All hand wash basins and taps in clinical areas should conform to the requirements of Health Building Note 00-10 Part C Sanitary Assemblies (2013) which outlines the minimum requirements for such equipment. This includes the need for:

- Elbow / wrist / automatically operated lever taps
- Mixer taps ensuring that water is delivered at an appropriate temperature
- Basins without plugs or overflows
- Taps that are situated so that water does not flow directly into the waste outlet but are off-set
- Taps without swan necks

The following basic principles apply:

- A clinical hand wash basin compliant with guidance (above) should be available where-ever clinical activity takes place including in service users rooms (if clinical care is undertaken in the room)
- Clinical hand wash basins should be used for hand washing only and not for other purposes e.g. decontamination of equipment, washing of cutlery/crockery etc.
- Clinical hand wash basins must be equipped with warm running water from a mixer tap. Separate taps are not acceptable as they do not allow for water to be delivered at the correct temperature
- Hand wash basins in clinical areas should be equipped with elbow operated or automatic taps
- Disposable paper hand towels and liquid hand soap in wall mounted dispensers must be available at each clinical hand wash basin
- A foot operated pedal bin should be available at each hand wash basin for the hygienic disposal of paper hand towels. (Used towels do not need to be disposed of as hazardous waste unless contaminated by blood or body fluids)
- A hand washing poster demonstrating an effective hand washing technique should be displayed near hand wash basins in each clinical area. (See Appendices 1 for hand decontamination techniques).

HAND HYGIENE FACILITIES IN THE SERVICE USER'S HOME

Service users and relatives should be provided with information about their need for hand hygiene and how to keep their hands clean.

HAND HYGIENE METHODS

To ensure all surfaces of the hands are adequately decontaminated, it is helpful to use a standardised technique. To wash all surfaces thoroughly using the correct technique should take 40-60 seconds and rubbing with the alcohol gel should take 20-30 seconds. (See Appendix 1 for hand decontamination techniques).

Some areas of the hands are more frequently missed than others during hand decontamination. It is important to pay attention to all areas of the hands, whilst washing, but paying particular attention to the finger tips and nail area. These are the area's most in contact with the service user and can be heavily contaminated with micro-organisms. (See Appendix 2 for areas most frequently missed during hand decontamination).

Application of alcohol gel /rub

- Ensure hands are not soiled – if necessary wash with soap and water beforehand
- Dispense a measured dose of the gel / rub into the palm of one hand
- Rub vigorously for 20 – 30 seconds, into all surfaces of the hand following the WHO technique in Appendix 3; up to the wrist until the product has dried

Application of liquid soap

Effective hand washing involves three stages:-

Preparation

- Wet hands under running water
- Apply the recommended amount of hand cleanser

Washing

- Rub hands together vigorously to make a lather covering all surfaces up to the wrist using the WHO technique in appendix 4
- Hand wash for 40 - 60 seconds, ensuring that all of the hand surface is covered and vigorously washed, up to the wrist, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers
- Rinse hands thoroughly under warm running water
- Turn off taps using elbows or clean paper towels to prevent recontamination

Drying

- Dry hands thoroughly with clean good quality paper towels
- Discard paper towels into a foot operated pedal bin. Do not lift up the lid of the bin with hands as this will re-contaminate them
- If in service user's home, dispose of towels into domestic waste

APPLYING HAND HYGIENE PRINCIPLES IN CLINICAL PRACTICE

WHO “My five moments for hand hygiene” initiative

The World Health Organisation (WHO) concept of “5 moments for hand hygiene” has been adopted internationally as a means of providing a user- and patient-centred approach to hand decontamination with minimal complexity and across a wide range of healthcare settings and professions. The concept is widely used in the UK.

The concept of “5 moments” is intended to make it easier to understand the occasions (moments) when there is a risk of germ transmission via the hands, to memorize these “5 moments” and to assimilate them into health-care activities. The concept does not define specific and multiple procedures and care situations but helps focus on essential moments embedded within the care sequence that are essential for hand hygiene. (See Appendix 5 for the WHO 5 moments for Hand Hygiene Poster).

Applying the “5 moments for hand hygiene”

The need for hand hygiene is closely connected with the activities of HCWs within the physical area surrounding the service user. This can be divided into two areas – the *patient zone* and the *health-care area*.

The *patient zone* includes the patient and their immediate surroundings e.g. all surfaces that are touched by or in direct physical contact with the patient e.g. chair arms, walking aids, linen, tubing etc. It also includes all surfaces frequently touched by staff whilst caring for the service user e.g. monitors, knobs and buttons, rails, chair handles, moving and handling equipment etc.

The patient zone is not static – it changes as the service user is moved from place to place and the zone accompanies the individual where-ever they go e.g. from their bed -chair / wheel-chair etc.

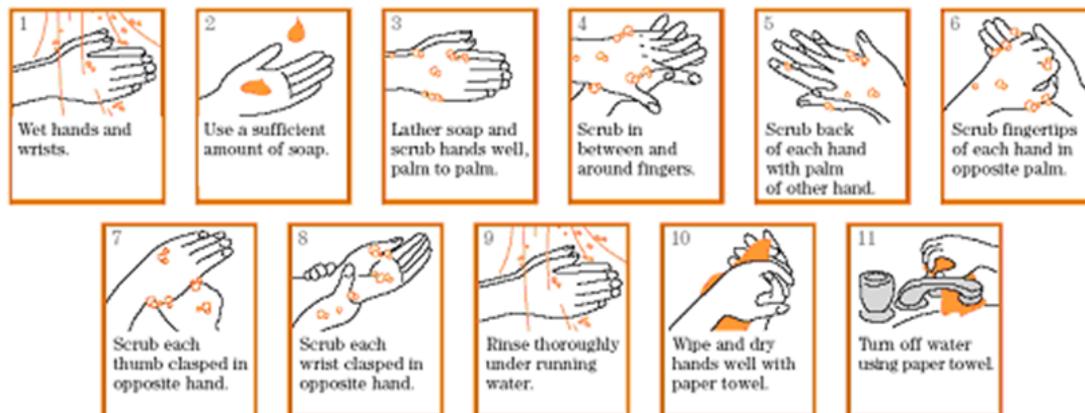
The *health-care area* corresponds to all surfaces in the health-care setting outside the patient zone i.e. other service users and their zones and the wider health-care environment. This environment still poses a risk – particularly from staff who may acquire micro-organisms within the wider health-care environment that are then transferred to service users when the staff member enters the patient zone to provide direct care. Examples include: dirty utility areas, laundry rooms, toilets, kitchens, waste disposal areas etc.

5 Moments	Examples Of Care Activity
1 Before touching a patient	<ul style="list-style-type: none">• Before any direct contact with the patient
2 Before clean / aseptic procedure	<ul style="list-style-type: none">• Before applying disposable gloves• Before oral care; oral suction• Before undertaking an aseptic or clean wound dressing

<p>3 After body fluid exposure risk</p>	<ul style="list-style-type: none"> • After contact with body fluids, excretions, mucous membrane, non-intact skin or wound dressing • If moving from a contaminated body site to another body site during care of the same patient • After removing gloves
<p>4 After touching a patient</p>	<ul style="list-style-type: none"> • After any direct contact with the patient • After removing gloves
<p>5 After touching patient surroundings</p>	<ul style="list-style-type: none"> • After contact with inanimate surfaces and medical equipment in the immediate vicinity of the patient i.e. within patient zone

APPENDIX 1 HAND DECONTAMINATION TECHNIQUES

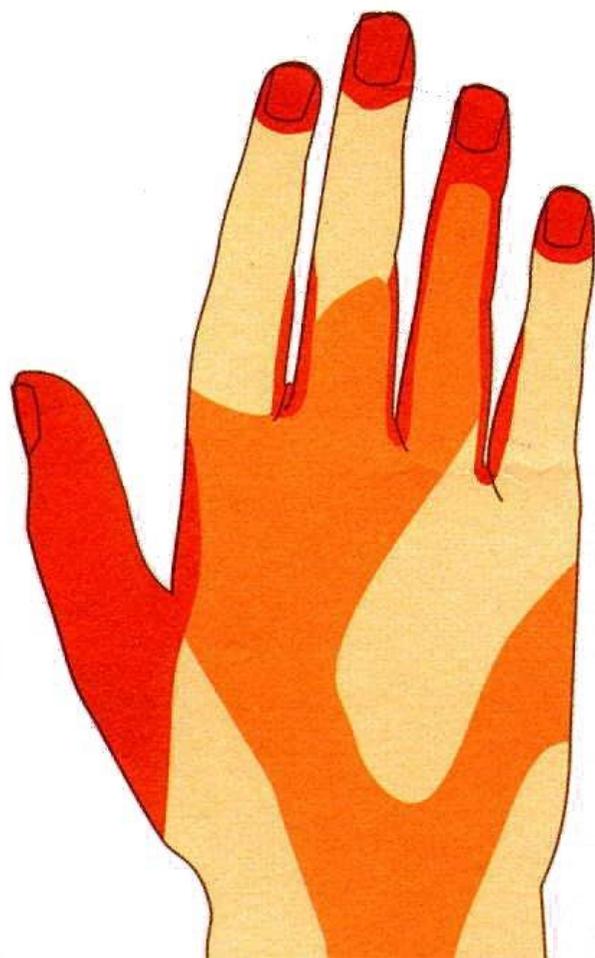
Hand washing with soap and water



Cleaning hands with alcohol sanitisers

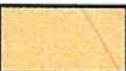


APPENDIX 2 AREAS FREQUENTLY MISSED DURING HAND HYGIENE



 Most frequently missed

 Frequently missed

 Less frequently missed

