INFECTION PREVENTION & CONTROL
PRIMARY CARE GENERAL PRACTICE
POLICIES AND SAFE PRACTICE GUIDANCE
CONTENTS

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INFECTION CONTROL MANAGEMENT POLICY

INTRODUCTION

The purpose of infection control is to limit the acquisition and spread of pathogenic micro-organisms, by using scientifically based knowledge and through planning, surveillance, education and research as part of the overall policy of achieving high quality health and social care.

The Health & Social Care Act 2008 and associated *Code of Practice on the prevention and control of infections and related guidance DH 2010,* known as the Hygiene Code will come into force for Primary Medical Care providers in April 2013. Although there is no current requirement to comply with the Code of Practice, it is acknowledged that facilities providing primary medical care should ensure that local practice mirrors the requirements of the Code to ensure consistent management of IPC arrangements and clinical care across all providers of health care.

The Health and Social Care Act 2008 requires all providers of a regulated service to be registered with the Care Quality Commission. A service is regulated if it appears in a list of activities described in legislation.

Compliance with The Code of Practice will demonstrate compliance with Regulations contained within the Health & Social Care Act and also with Outcome 8 of the Essential Standards of Quality & Safety published by the Care Quality Commission, (CQC). CQC will measure practices against this compliance as will local commissioners of services.

The Code of Practice contains (in Appendix 4) examples of interpretation (of the Code) for primary medical care providers.

This section of the Infection Prevention & Control (IPC) Manual describes the management requirements for IPC within primary medical care *assuming that such arrangements will reflect the requirements of the Code of Practice.*

The Code of Practice comprises ten criteria. These are

Compliance Criterion	What the registered provider will need to demonstrate
1	Systems to manage and monitor the prevention and control of infection
2	Provide and maintain a clean and appropriate environment
3	Provide suitable accurate information on infections to service users
4	Provide suitable accurate information on infections to any person concerned with providing further support or nursing / medical care in a timely fashion
5	Ensure that people who have or develop an infection are identified promptly and receive appropriate treatment and care to reduce the risk of passing on the infection to other people
6	Ensure that all staff and those employed to provide care in all settings are fully involved in the process of preventing and controlling infection
7	Provide or secure adequate isolation facilities
8	Secure adequate access to laboratory support as appropriate
9	Have and adhere to policies, designed for the individual's care and provider organisations, that will help to prevent and control infection
10	Ensure, so far as is reasonably practicable, that care workers are free of and are protected from exposure to infections that can be caught at work and that all staff are suitably educated in the prevention and control of infection associated with the provision of health and social care

The Practice supports the principle that infections should be prevented wherever possible and that effective arrangements for the surveillance, prevention and control of infection are provided in compliance with the Code of Practice.

SCOPE OF POLICY

This policy and guidance applies to all members of staff employed in the practice and includes agency, locum and bank workers. It is the responsibility of the registered manager / registered provider to ensure that all staff employed under contract to provide services on its behalf are also compliant with the Code of Practice and this should be reflected in contractual arrangements.

It is Practice policy to encourage the individual responsibility of every member of staff to participate in the prevention and control of infection and to comply with Health & Safety, COSHH and other legislation and regulations applying to the safe provision of primary health care. It is a requirement of Criterion 1 of the Code of Practice that such responsibilities are reflected in staff job descriptions. This should also be reflected in any contractual arrangements e.g. Doctors providing out of hours services as contractors.

GOVERNANCE

Infection prevention and control has a key role to play in the clinical governance framework of any health and social care organisation.

Practices are required to have a designated Infection Prevention & Control lead *with appropriate knowledge and skills* who takes responsibility for infection prevention and control in the practice (criterion 1). The designated lead prepares and reports on the annual IPC Programme which outlines activities required to be undertaken to provide assurance under the Code of Practice.

The IPC lead may be the registered provider or the registered manager. If someone else takes this lead role they should report directly to the registered provider / manager in this regard.

Specialist advice on IPC should be available to all staff. This may be through commissioning organisations or other local providers. It may also be contracted out to a third party. Clear guidance for staff inc. names and contact details should be made available together with the type of circumstances in which contact should be made.

The following activities should be considered an essential element of local IPC activity in primary care:

- Development of an annual IPC programme which should reflect the criteria of the Code and detail measures in place (and required to be put in place) to ensure compliance
- An annual statement which provides a review of activity undertaken over the past year as detailed in the annual programme
- the implementation and monitoring of compliance with policies, procedures and guidance through a programme of audit
- initial and ongoing training of all staff
- surveillance and reporting of occurrences of infection

INFORMATION SHARING

The Code of Practice requires primary care medical practices to share information on their approach to prevention and control of infections with patients (criterion 3). Involvement of patient participation groups is recommended.

Practices are also required to share patient information as appropriate with other health and care providers having due regard to patient confidentiality requirements (criterion 4).

TRAINING

Infection control training is a mandatory requirement at induction for all staff groups and as part of mandatory annual updates for all staff involved in service users' care (criterion 10). Training attendance records must be maintained and reported through internal governance frameworks. All training delivered should be evaluated by delegates.

Details of the IPC training programme must be outlined in the IPC Annual Programme and details of the numbers of staff (by %) trained and requiring training should be reported in the annual statement.

Third party contractors e.g. Out of Hours GPs should provide evidence of appropriate training as part of their contractual arrangements (criterion 6).

POLICIES AND PROCEDURES

All staff must have access to local policies, procedures and guidelines in order to undertake appropriate and safe care of their patients and environment. The Code of Practice (criterion 9) lists a total of 23 separate policies and procedures that are required depending on the regulated activities undertaken.

Policies and procedures are time consuming to produce and require knowledge and expertise of the subject matter to ensure all elements of practice are included. They must be reviewed regularly i.e. annually and at such times as legislation, expert guidance or the evidence base for practice changes.

AUDIT

Compliance with the policies and procedures contained within the Infection Control Manual is a requirement of the Code of Practice (criterion 1). An audit plan should be prepared annually by the IPC lead with clear timescales for completion and progress should be monitored through governance frameworks.

The audit plan should be detailed in the Annual Programme and a report included in the Annual Statement.

UNIFORM AND DRESS CODE

The organisation supports the view that staff clothing should be such that it minimises risks of the transmission of infection as well as being fit for purpose. It is a requirement of the Code of Practice (criterion 9) that all organisations have a written uniform and dress code policy. Compliance with this policy should form part of the annual audit programme.

In particular clothing must facilitate good hand hygiene practice. Stoned rings and wrist jewellery should not be worn when washing hands or performing clinical tasks. Long sleeves, if worn, should be rolled to the elbow for hand washing and clinical tasks. Ties should be tucked in when in direct patient contact e.g. clinical examination.

SURVEILLANCE & DATA COLLECTION

Surveillance and data collection is a requirement of the Code of Practice but a specific policy on this is not required in primary care. However, it is recommended that a system of reporting of infections or possible infections is implemented. In particular post procedure surgical site surveillance is strongly recommended where minor operative procedures are undertaken.

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INFECTION CONTROL PRINCIPLES

The spread of infection

The spread of infection requires three elements:

- a source of infecting organisms (bacteria, viruses, fungi)
- a susceptible host
- a route of transmission of the organism from one person / site to another

Source

The source may be service users, staff or visitors and may include persons with obvious acute illness, or those who are asymptomatic or colonized by the infectious agent. Another source may be the service user's own microbial flora. Other potential sources are objects within the environment that have become contaminated, including health care equipment.

Susceptible Host (the individual service user, staff member, visitor)

It is important to remember that it is not only service users that may be susceptible to infection but also staff members and also visitors to the facility.

An individual's resistance to pathogenic micro-organisms can vary greatly. Some individuals may be immune to or able to resist colonization by an infectious agent, others may simply be colonized and become asymptomatic carriers, whereas others will develop a clinical disease. Persons with underlying disease such as diabetes, lymphoma, leukaemia, etc. or treated with certain antimicrobial agents, corticosteroids, irradiation or immunosuppressive agents are particularly prone to infection. Extremes of age, chronic debilitating disease, shock, coma, traumatic injury or surgical procedures and the presence of invasive devices can also make an individual more susceptible to infection.

Transmission

Micro-organisms can be transmitted by a variety of routes and the same micro-organism may be transmitted by more than one route. For example the Varicella Zoster virus which causes chickenpox can spread via the airborne route as well as by direct contact and gastro-intestinal infections e.g. norovirus can spread by both indirect contact (with contaminated equipment and surfaces e.g. commodes and horizontal surfaces) as well as via the airborne route where virus particles are propelled through the air (and inhaled) and then drop onto surfaces where they contaminate hands and are then ingested.

There are four main routes of transmission:

- contact
- droplet/airborne
- infected food and water
- vectors

Contact transmission:

The most important and frequent means of transmission of infection can be divided into two main subgroups:

- **Direct contact:** Involves direct physical transfer of the micro-organism from person to person e.g. sexually transmitted diseases or from one site to another in the same individual e.g. bowel flora contaminating the urinary tract

- **Indirect contact:** This is the most significant route of spread in healthcare and involves contact with a contaminated object such as bed linen, instruments, equipment, dressings, etc. It is also the route by which the hands of healthcare workers transmit micro-organisms during service user care

Airborne /droplet transmission:

- **Droplet transmission:** by large droplets during coughing, sneezing, talking and during procedures which may generate droplets such as suctioning. The droplets are propelled only a short distance through the air

- **Airborne transmission:** caused by dispersal of smaller micro- organisms, e.g. viruses, contaminated water particles or airborne dust particles containing the infectious agent. These organisms can be widely dispersed by air currents before being inhaled or deposited on the susceptible host; by aerosolisation of water particles which are then inhaled e.g. in shower heads and in the case of dust particles, by airborne spread onto horizontal surfaces, equipment etc

Food and water transmission:

Infection can occur via contaminated food or water supplies. Organisms can be transmitted via the food chain e.g. salmonella in eggs or by inappropriate handling of contaminated raw food or inadequate cooking. Secondary spread (cross-infection) can then occur if surfaces are contaminated by food-stuff e.g. chopping board used to cut contaminated poultry then used to chop salad vegetables. Additionally, infected food handlers can transfer micro-organisms on their hands to food.

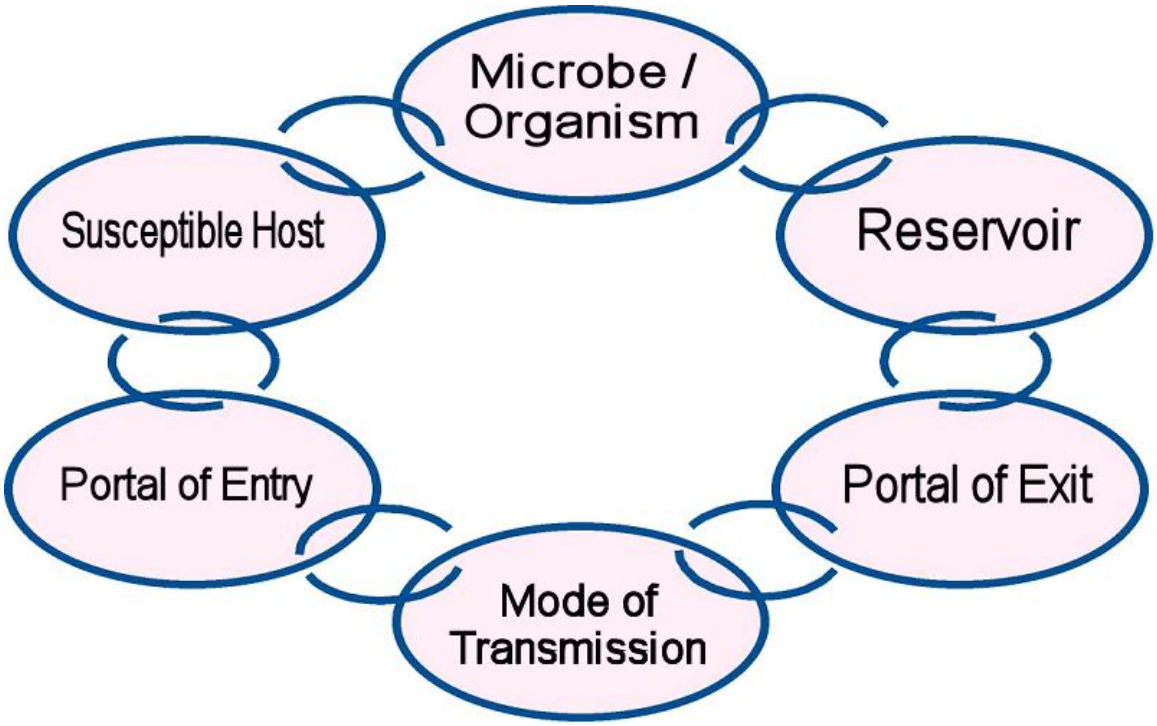
Water provides an ideal breeding ground for some micro- organisms, which can then be colonized if the water supply has not been appropriately treated. In the case of *Legionella pneumophila* the bacteria forms a biofilm in pipes / shower-heads etc. and can then be dispersed in water particles and inhaled.

Vector borne transmission:

This occurs when vectors such as flies, mosquitoes, rats and other pests transmit infection. This route of transmission is rare in healthcare in the UK although it is a route of spread requiring containment in food preparation areas.

Breaking the chain of infection

The spread of micro-organisms from their source to a susceptible host is frequently referred to as the chain of infection.



The principles of infection control relate to the implementation of a series of basic control measures whose aim is to break the links in the chain thus reducing the likelihood of spread. These control measures are referred to as standard infection control precautions.

In the prevention of spread via the **direct or indirect contact** route, the following measures apply:

- effective hand hygiene is the single most important measure in the prevention of the spread of infection
- health care staff should wear suitable gloves and other protective clothing whenever there is any possibility of direct contact with infected blood, body fluids or contaminated material
- strict adherence to the principles of aseptic technique will minimise the likelihood of contamination during the insertion and management of invasive devices and other clinical procedures such as wound care

- effective environmental cleaning and good housekeeping techniques together with appropriate cleaning, disinfection and sterilization of medical equipment

- appropriate segregation and disposal of healthcare waste and contaminated laundry

In the prevention of infection by **food and water** the following additional measures are important:

- provision of adequate hand washing facilities, especially when handling or preparing food

- strict adherence to food hygiene regulations

- healthcare environments are subject to strict controls to minimise the risk of *Legionella pneumophila*

- food handlers suffering from septic conditions of the skin or gastro-intestinal infections MUST be excluded from work until proven to be microbiologically free from infection

In the prevention of spread of infection by the **airborne** route the following additional measures are important:

- adequate un-crowded housing

- segregation of infected service users to minimise the risk of cross-infection. This is usually achieved by either physical segregation in a single room or by measures such as keeping affected service users together (cohort nursing)

- vaccination/immunisation programmes where appropriate

In the prevention of infection by **vectors** the following information is relevant.

Whilst most people readily associate rats and mice with risks to health, the part played by cockroaches, flies and other insects is not always appreciated. They have been implicated in the transmission of infection in food stores and food preparation areas as well as in medical supplies and in the home.

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STANDARD INFECTION CONTROL PRECAUTIONS (SICPs)

There is often no way of knowing which service users / clients are contaminated or infected with a transmissible micro-organism. It is essential that Standard Infection Control Precautions (SICPs) are used for all service users on every contact.

SICPs, often referred to as 'universal or standard precautions', are a single set of activities used by **all** staff for **all** service users at **all** times, in order to reduce the transmission of micro-organisms from both recognised and unrecognised sources of infection.

In many instances, pathogenic (disease-producing) organisms have already spread prior to the confirmation of a diagnosis. Furthermore, pathogenic organisms are frequently carried by individuals in their blood or body fluids or on the skin without signs of clinical infection – known as "colonisation". Therefore, it is important to institute appropriate precautions at all times, for all service users, rather than wait for confirmation of a diagnosis when it may be too late to prevent the spread of infection.

SICPs apply to the care of all service users regardless of diagnosis or presumed infection status, where there is possible contact with:

- blood
- all other body fluids
- secretions and excretions except sweat
- non-intact skin
- mucous membranes (conjunctivae, mouth, nose, vagina, rectum)

These precautions include:

- effective hand hygiene
- wearing appropriate protective clothing
- safe disposal of sharps and other healthcare waste
- safe management of spillages
- prevention and treatment of sharps injuries
- adequate and appropriate decontamination of the healthcare environment and service user-related equipment
- protecting cuts and abrasions on staff skin with an impermeable dressing, e.g. plaster and ensuring appropriate immunisations are up-to-date by means of routine pre-employment screening

Guidance on implementation of specific SICPs is given throughout this document in the relevant sections.

Additional precautions

Additional precautions may be required in certain circumstances and are used *in addition to* SICPs. For example service users with Pulmonary TB or Influenza may pose a risk of airborne transmission requiring respiratory precautions. Guidance on implementing additional precautions is given throughout this document in the relevant sections.

HAND HYGIENE

Effective hand hygiene is the single most important measure in reducing the risk of transmission of micro-organisms from one person to another or from one site to another on the same person. Decontaminating hands as promptly and as thoroughly as possible between service user contacts and after contact with blood, body fluids, secretions, excretions and contaminated equipment/articles is essential in order to minimise the risk of cross-infection.

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 and noro-viruses. 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. Most may also be destroyed by the application of alcohol gel / rub etc

- **Resident flora** are those micro-organisms that live on the skin and provide a protective function. 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 etc. 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.

Use an emollient hand-cream twice a day. Use before and after shifts to help replace the skin's oils that can be lost through frequent hand hygiene. Hand creams should be for individual use or dispensed from either a wall-mounted container or from a pump dispenser. Pots / tubes of cream should not be used by groups of staff as they can be easily contaminated.

Observe the hands for any signs of damage to the skin as this can provide a portal for micro-organisms to enter the body. Cover with a waterproof plaster or dressing before the shift begins and replace 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 bands are acceptable. Wrist watches are easily contaminated and can prevent thorough hand washing of wrists.

Nails should be kept short at all times to reduce the accumulation of micro-organisms. False nails nail extensions 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 washing and service user contact.

Types of hand hygiene/decontamination

Current research advocates a variety of processes to ensure effective hand hygiene and these are described below. The most appropriate of these processes must be used by healthcare workers depending on the work that is being undertaken.

General / clinical / social hand wash

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.

Alcohol-based general / clinical / social hand decontamination

Alternatively, an alcohol-based product can be used for general hand decontamination in the place of a hand-wash but only if hands are visibly clean and not soiled – see below.

Surgical / antiseptic scrub

This is an extended hand decontamination procedure using hand wash products containing antiseptic skin cleansers e.g. chlorhexidine or povidone-iodine. Alternatively, alcohol-based products can also be used. This type of hand wash is only required when removal of resident micro-organisms is required e.g. prior to surgical procedures and certain high risk invasive procedures.

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 e.g. NHS PASA 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 healthcare staff as it can harbour micro-organisms.

Soap impregnated wipes should **not** be routinely used by health care workers who require a more thorough hand decontamination that is best provided by the use of soap and running water. However, where access to a hand wash basin is restricted e.g. in patients own homes, soap impregnated wipes are useful.

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

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

Alcohol hand rub/gel

Alcohol-based hand products – usually rubs or gels are currently recognised as being the primary method of hand decontamination for most health care interventions where rapid hand decontamination is required *at the point of use.*

Alcohol-based products are also useful where adequate facilities are not available e.g. when visiting service users in their own homes.

Alcohol is inactivated in the presence of organic matter i.e. body fluids etc. and therefore is not to be used on soiled, grubby hands. Alcohol products also build up on the skin and hands will need to be washed with soap and water after a maximum of 5 – 6 applications of alcohol products to remove residues.

Alcohol-based products should be purchased from an approved supplier of medical products e.g. NHS PASA thus ensuring that an appropriate product suitable for healthcare activities is supplied and of the required strength (usually 70%) and type (usually isopropanol). Alcohol products should be used from wall-mounted

dispensers (see below) or can be provided for individual staff use in bottles that can be attached to uniforms or carried in clinical bags e.g. visiting GPs thus ensuring that the product is available at the point of care.

Alcohol is not as effective as soap and water in removing *Clostridium difficile* spores or some viruses including Norovirus 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.

In primary care facilities e.g. GP surgeries, urgent care centres etc. antiseptic detergent products should be available where minor surgical procedures and / or Minimal Access Interventions (MAIs) are undertaken.

Hand wash facilities:

Soap and alcohol containers / dispensers

All soap and alcohol products should be dispensed from a sealed container, which delivers a measured amount of product. The nozzle must be cleaned regularly to prevent clogging and contamination. Open containers 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.

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.

Hand cream

Hand cream should be available for staff use. Ideally, it should be provided in wall-mounted dispensers or from a pump-action container. Tubes or jars of hand cream must be avoided as they are easily contaminated. Nozzles must be cleaned regularly to prevent clogging and 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 (HBN) 00-10 (2011) *Performance Requirements for building elements in healthcare facilities* 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 to minimise the potential for Legionella spp. biofilm formation in pipe-work

In primary care environments, the provision of adequate clinical hand wash basins is often overlooked. As a general rule, where-ever clinical care is provided e.g. in a clinical, treatment or consulting room as well as in dirty utility or decontamination rooms then a clinical hand wash basin should be fitted.

The following basic principles apply:

- A clinical hand wash basin compliant with HBN 00-10 should be available where-ever clinical activity takes place

- Clinical hand wash basins should be used for hand washing only and not for other purposes e.g. decontamination of equipment

- 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 lever (wrist or elbow-operated) taps

- Disposable paper hand towels and liquid hand soap in wall mounted dispensers must be available at each clinical hand wash basin

- Alcohol hand gel should also be available in wall-mounted dispensers and as an individual container for each staff member

- 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 clinical 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

Alternative hand hygiene technique

This method should be used wherever 'twist taps' are used instead of the recommended elbow, knee or sensor operated taps. The rationale is that during normal hand washing procedures, a dirty hand will turn the tap on effectively contaminating the tap. If that tap is then touched following hand washing, the clean hands will become re-contaminated and a risk of transmission will exist.
Follow the recommended six point hand hygiene technique as normal but instead of turning the tap off prior to drying hands, leave the water running, dry the hands with paper hand towels and then use those paper towels to turn the tap off. This will ensure that hands are not re-contaminated following hand washing.

Equipment required for effective hand hygiene in home care settings

Many primary care interventions take place outside healthcare facilities e.g. in the patient's own home. Resources available for hand decontamination will vary significantly and should not be relied upon. Providing staff with personal alcohol gel dispensers facilitates hand decontamination at the bedside or in other locations where there is limited / no access to a hand wash basin. For staff attending patients in their own homes e.g. visiting GPs then a range of hand decontamination equipment should be available in portable form e.g. pouches or small cases which hold dispensers of soap (or soap-based hand wipes) and alcohol gel together with disposable paper towels. These are widely available from medical suppliers.

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 should take 10-15 seconds.

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 areas most in contact with the service user and can be heavily contaminated with micro-organisms.

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 into all surfaces of the hand up to the wrist until the product has dried

Application of liquid soap

- Wet hands under running water
- Apply the recommended amount of hand cleanser
- Rub hands together vigorously to make a lather covering all surfaces up to the wrist using the technique pictured
- rinse hands thoroughly under running water
- dry hands thoroughly with clean paper towels
- turn off taps using elbows or clean paper towels to prevent recontamination
- 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 health care settings and professions. The concept forms an integral part of the NPSA Clean Your Hands Initiative and 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 micro-organism 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.

Applying the "5 moments for hand hygiene" in primary care

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

The *patient zone* includes the patient and his / her immediate surroundings e.g. all surfaces that are touched by or in direct physical contact with the patient e.g. chair arms, walking aids, medical devices etc. It also includes all surfaces frequently touched by staff whilst caring for the service user e.g. monitors, knobs and buttons, chair handles, computer keyboards, telephones 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 he / she goes e.g. from the chair to examination couch etc.

The *health-care area* corresponds to all surfaces in the health-care setting outside the patient zone i.e. other patients 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, treatment rooms, toilets, waste disposal areas etc.

In the primary care environment there are a number of occasions when clinical care is delivered in settings that are not deemed to be *health care areas* e.g. in the patient's own home. These environments cannot be controlled. However, hand hygiene CAN be controlled and should be used as the first line of defence against micro-organism transmission in ANY environment where clinical care is delivered.

When should hands be decontaminated?

Given what we now know about the environment within which the patient is cared for e.g. *the patient zone,* how do we decide **when** to decontaminate our hands?

There is a useful principle to apply:

- What did I just do that could have contaminated my hands?
- What am I about to do that could transfer micro-organisms to the patient?

5 Moments	Examples of care activity
1 Before touching a patient	• Before any **direct** contact with the patient
2 Before clean / aseptic procedure	• Before applying disposable gloves • Before examining a patient • Before undertaking an aseptic or clean wound dressing • Before handling / inserting an invasive device • If moving from a contaminated body site to another body site during examination / treatment of the same patient
3 After body fluid exposure risk	• After contact with body fluids, excretions, mucous membrane, non-intact skin or wound dressings • If moving from a contaminated body site to another body site during examination / treatment of the same patient • After removing gloves
4 After touching a patient	• After any **direct** contact with the patient • After removing gloves
5 After touching patient surroundings	• After contact with inanimate surfaces and medical equipment in the immediate vicinity of the patient i.e. within patient zone

As these examples show, hand hygiene is required both **before** and **after** contact or procedure. Decontaminating hands **before** contact or procedure will protect the patient. Decontaminating hands **after** contact or procedure will protect the HCW and subsequent contamination of the health-care environment

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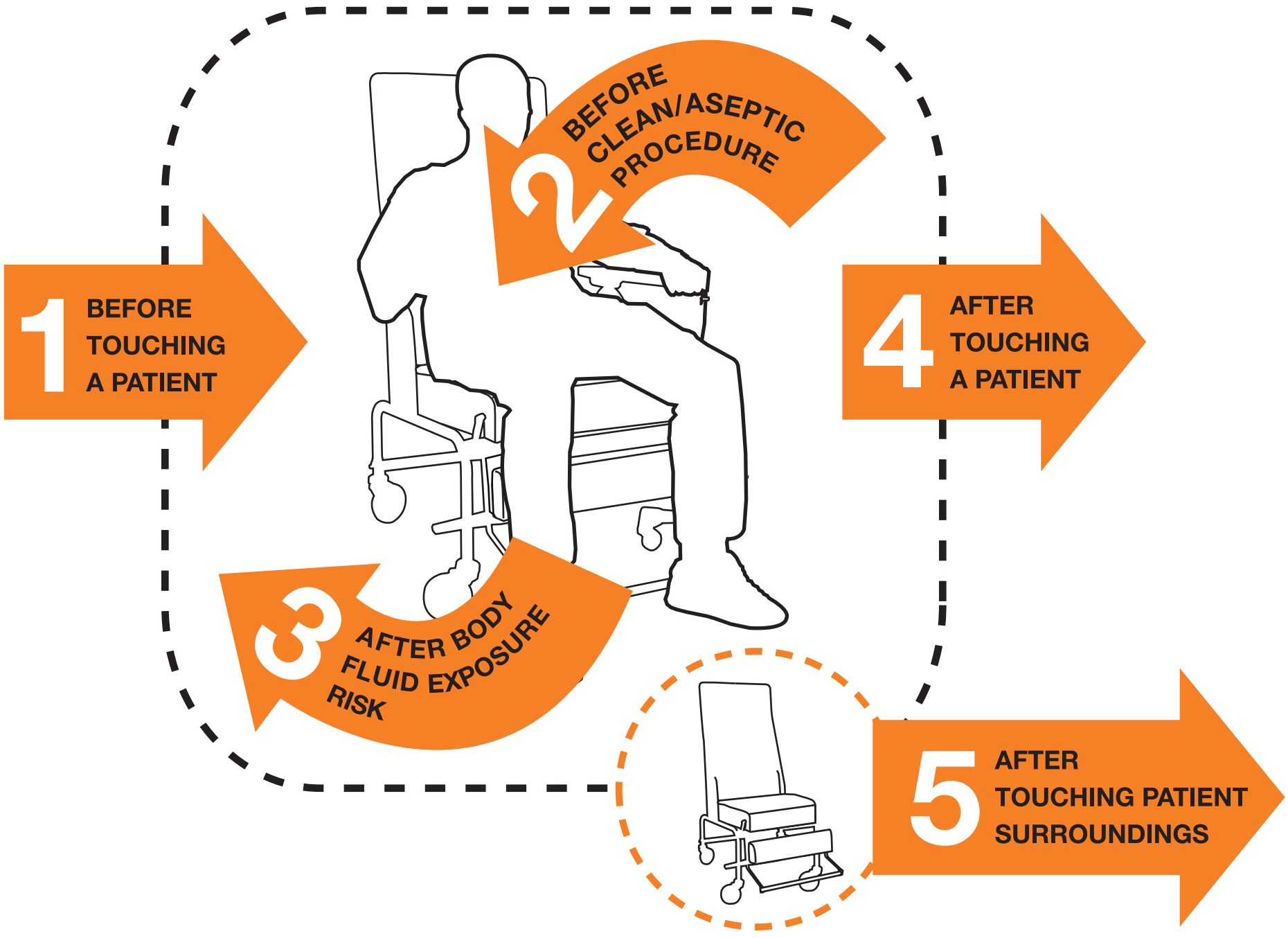
Your 5 Moments for Hand Hygiene



1	BEFORE TOUCHING A PATIENT	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 CLEAN/ ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a 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 health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	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 health-care environment from harmful patient germs.
5	AFTER TOUCHING 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 health-care environment from harmful patient germs.

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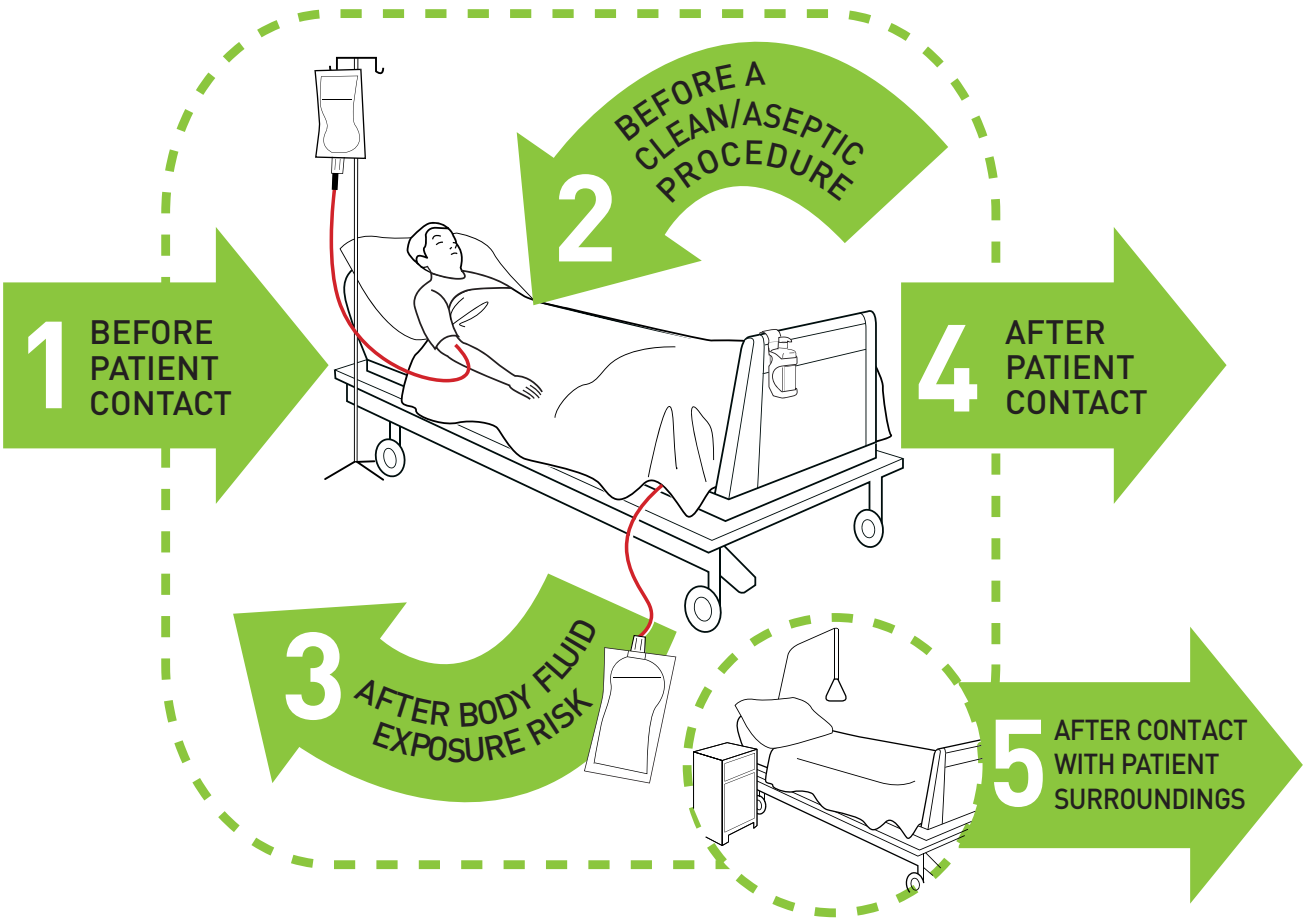
May 2009

NHS
National Patient Safety Agency

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

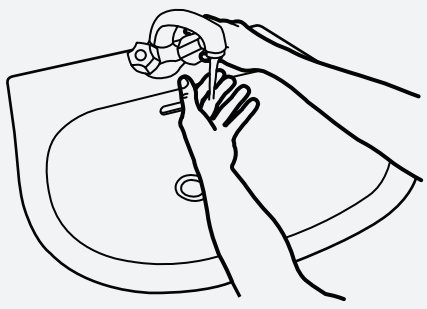
cleanyourhands® campaign

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

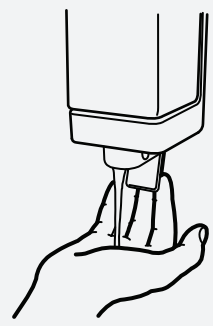
Duration of the entire procedure: 40-60 seconds

0



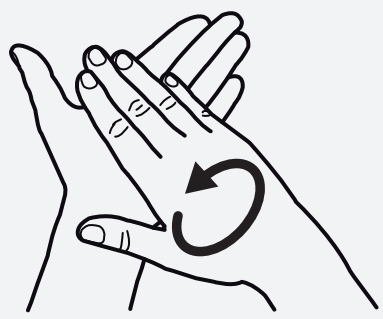
Wet hands with water;

1



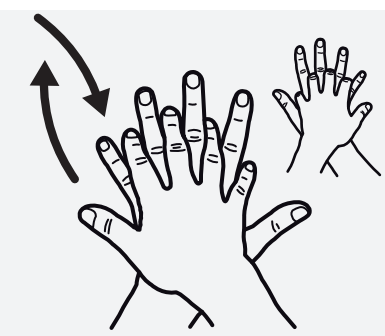
Apply enough soap to cover all hand surfaces;

2



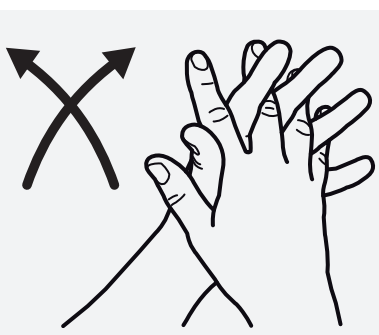
Rub hands palm to palm;

3



Right palm over left dorsum with interlaced fingers and vice versa;

4

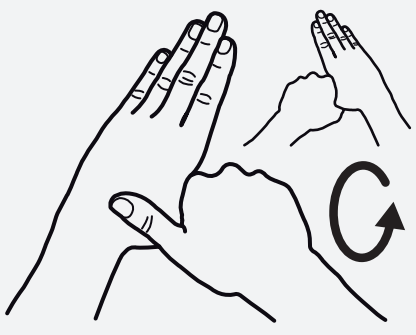


Palm to palm with fingers interlaced;

5

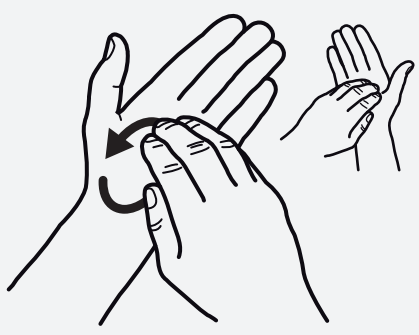
Backs of fingers to opposing palms with fingers interlocked;

6



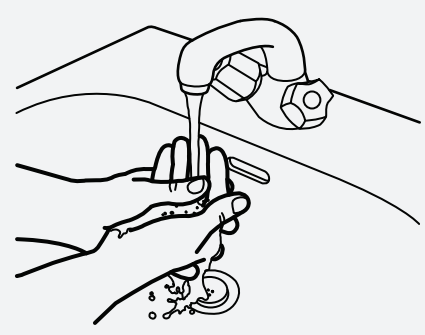
Rotational rubbing of left thumb clasped in right palm and vice versa;

7



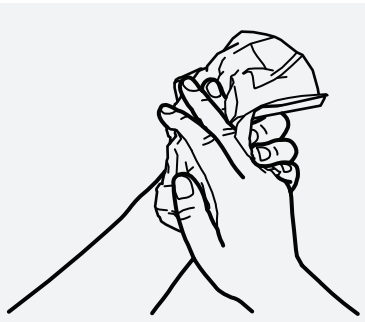
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



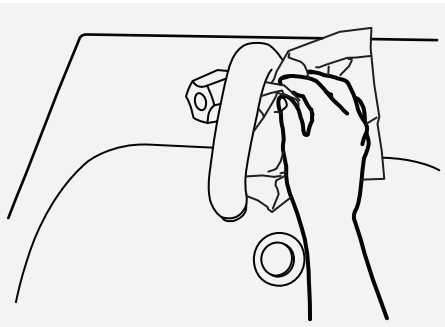
Rinse hands with water;

9



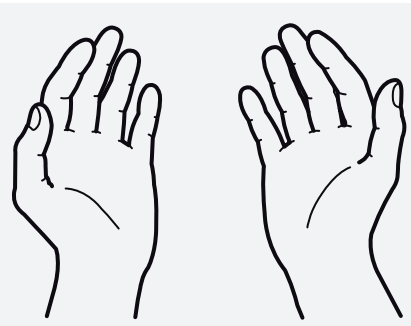
Dry hands thoroughly with a single use towel;

10



Use towel to turn off faucet;

11



Your hands are now safe.

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May 2009

How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

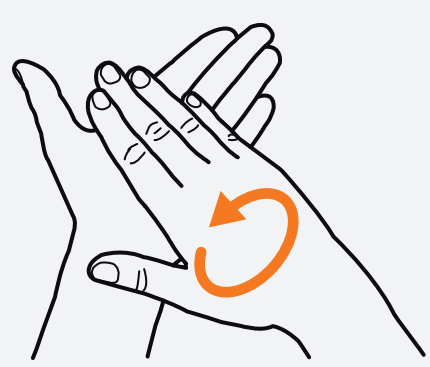
Duration of the entire procedure: 20-30 seconds

1a

Apply a palmful of the product in a cupped hand, covering all surfaces;

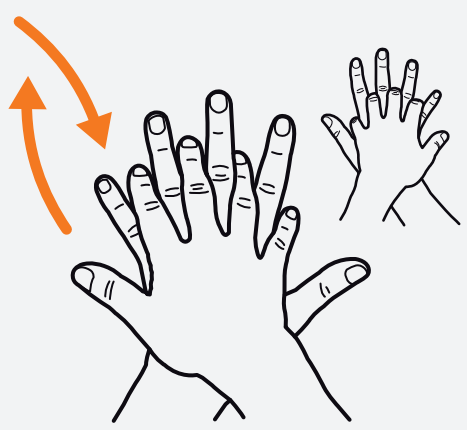
1b

2



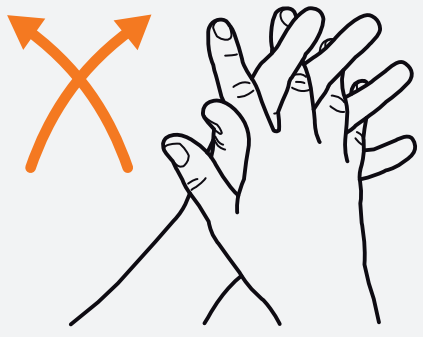
Rub hands palm to palm;

3



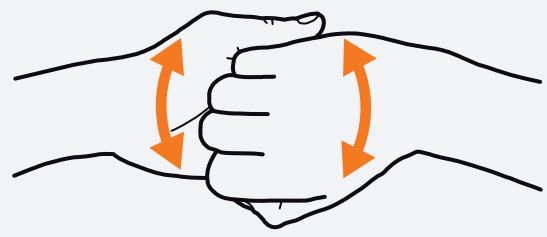
Right palm over left dorsum with interlaced fingers and vice versa;

4



Palm to palm with fingers interlaced;

5



Backs of fingers to opposing palms with fingers interlocked;

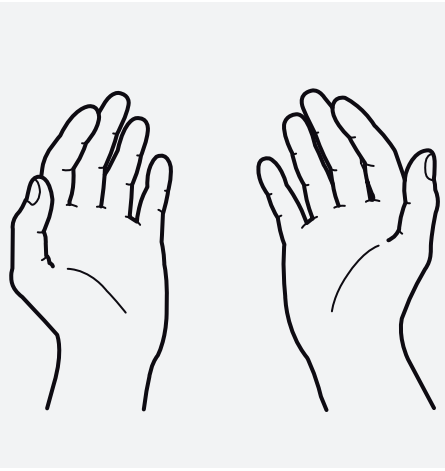
6

Rotational rubbing of left thumb clasped in right palm and vice versa;

7

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



Once dry, your hands are safe.

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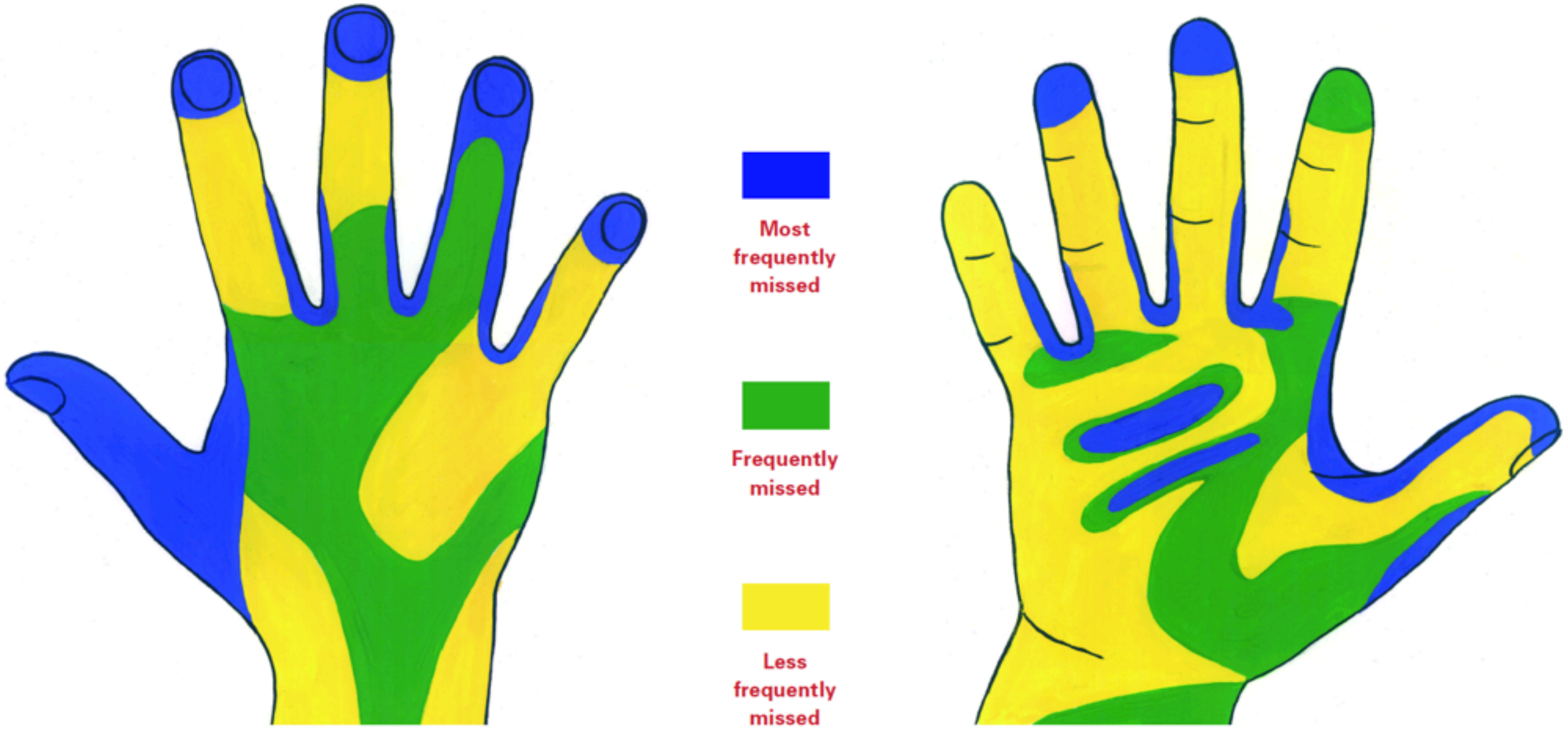
Areas missed during handwashing



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment is designed to protect the healthcare worker from coming into contact with potentially infectious body fluids. It may also protect the service user from the healthcare workers own microbial flora. Personal protective clothing includes:

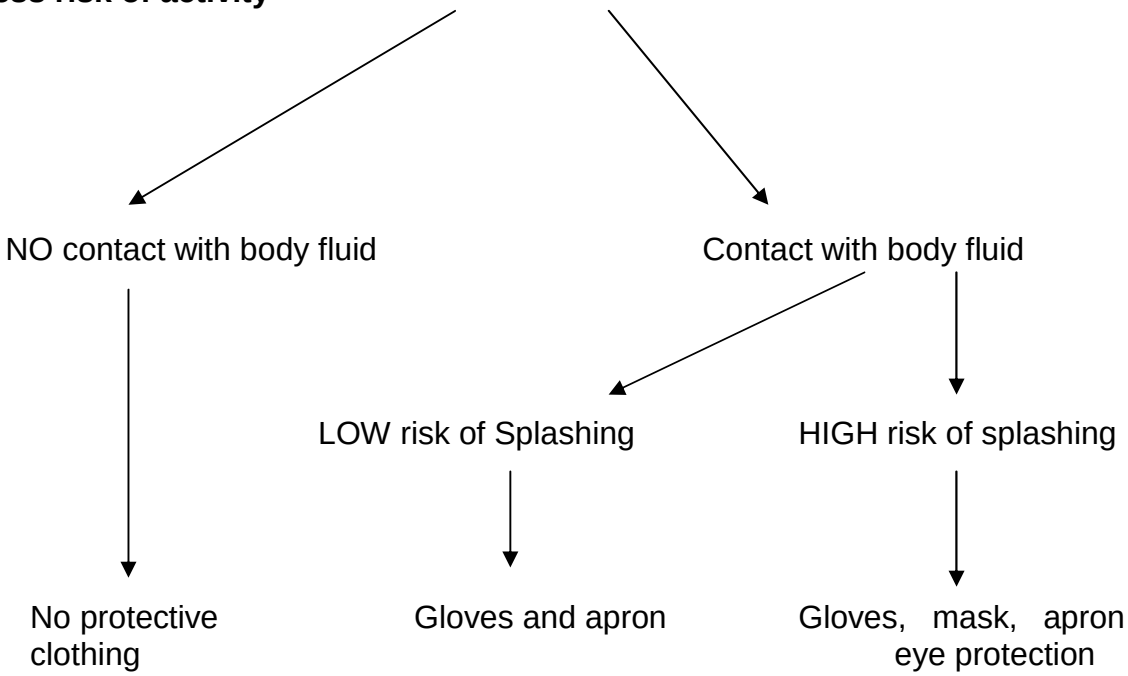
- gloves
- water repellent aprons / gowns
- masks
- eye protection

Personal protective equipment is governed by Health and Safety Legislation including the Personal Protective Equipment Regulations and should only be used when risks cannot be averted by other work practices.

Risk assessment for PPE

The choice of PPE selected depends on the activity and the anticipated risk of exposure to body fluids. Many activities pose no risk of exposure to body fluids therefore there will be no need for any PPE. Risk assessment forms an integral part of Health and Safety legislation.

Assess risk of activity



Disposable Gloves

Glove use has increased significantly over the last two decades mainly since the emergence of HIV and in response to the implementation of standard infection control precautions to protect both service users and staff from the potential transmission of blood-borne viruses. However, it must always be remembered that staff have a duty of care to protect their service users from risk as well as a responsibility to protect themselves. Gloves need to be changed between service users and also between tasks on the same service user to ensure that risk of transmission is reduced.

The use of latex-containing products inc. disposable gloves is the subject of on-going concern in relation to latex sensitisation/allergy. All healthcare providers should undertake a risk assessment relating to the provision of latex-free products to minimise the risk of inadvertent allergic reactions in those service users and staff known to be sensitive to latex and to prevent the acquisition of a sensitivity reaction in at-risk individuals e.g. those with known skin conditions such as eczema, dermatitis etc. Where risk assessment has been undertaken, a decision may be made to remove from use all latex products and to provide a suitable latex-free alternative. In the case of disposable gloves, a variety of latex-free products are available with the same properties as latex e.g. increased sensitivity, tactility etc. These include products made of nitrile.

In addition to effective hand hygiene, disposable gloves of the recommended type play an important role in reducing the risks of transmission of micro-organisms.

Gloves are worn to:

- reduce the likelihood of micro-organisms being transmitted to service users during invasive or other care activities
- reduce the likelihood that hands of personnel contaminated with micro-organisms from a service user or equipment can transmit these organisms to another service user
- provide a protective barrier and to prevent gross contamination of the hands when anticipating contact with blood, body fluids, secretions, excretions, mucous membranes and non-intact skin
- protect staff from potentially harmful organisms

Glove use

Non sterile, powder-free latex or synthetic latex e.g nitrile and vinyl gloves should be worn whenever contact with body fluids, contaminated equipment, non-intact skin or mucous membranes is anticipated.

Sterile, non-powdered, latex or synthetic latex e.g nitrile gloves which provide greater dexterity and tactility are available for surgical and other invasive procedures requiring sterile gloves. These are supplied in a range of sizes for accurate fit.

For the majority of routine clinical tasks vinyl gloves provide adequate protection and should be the glove product of choice

Gloves are not required when handling unsoiled articles or for contact with intact skin in the absence of body fluids.

Gloves must be removed at the end of each individual procedure/healthcare activity, and hands washed thoroughly.

It is essential to keep the time of wearing gloves to a minimum to avoid skin sensitization. Staff experiencing skin conditions which may be exacerbated by glove wearing should contact Occupational Health or their GP for further advice / assessment.

Disposable plastic aprons

Plastic aprons should be worn to protect staff uniform/clothing when contamination with body fluids is possible during healthcare procedures. This may include:

- testing urine specimens
- undertaking wound dressings

In addition, a plastic apron should be worn during the following activities to minimise microbial contamination of clothing:

- during environmental cleaning or decontaminating/cleaning equipment
- when handling used/soiled linen

Always remove the apron at the end of each care-giving procedure and discard into a waste bag, and wash and dry hands to reduce the likelihood of transferring organisms to another site.

Water repellent (sterile) surgical gowns

During Minimal Access Interventions (MAIs) and *some* minor surgical procedures (where a sterile device is being implanted) or when there is a risk of significant post-procedure infection then it is recommended that a sterile (water repellent) gown is

worn to minimise the risk of surgical site contamination (Humphreys H., Coia J.E. et al (2012) *Guidelines on the facilities required for minor surgical procedures and minimal access interventions* Journal of Hospital Infection 80 103 – 109)

Face masks / eye protection

These are worn when there is a possibility of splashing of blood or body fluids or chemical/detergents into the eyes and/or mucous membranes. Face masks, goggles, safety glasses or shield masks are all suitable products and the most appropriate should be chosen and should be readily available for staff. If these products are disposable they should be disposed of as clinical waste or if non-disposable, cleaned as recommended in the disinfection policy/manufacturer's recommendations, usually with detergent and warm water. Managers should ensure that appropriate masks and eye protection are available for staff use.

Face masks are not usually required during minor surgical procedures except when a sterile device is being implanted or when there are other issues predisposing to infection.

In certain circumstances, respiratory masks may need to be of increased efficiency in order to minimise the risk of transmission of highly infectious micro-organisms. Currently this includes pandemic influenza and some cases of sputum-positive pulmonary TB e.g. MDRTB. Current guidance recommends the use of FFP3 respiratory masks which provide 99% particle filtration efficiency. These must conform to European Standard EN149 2001 (box is CE marked) and must be worn when exposed (within 3 feet of a service user). These masks are single use only. The Health and Safety Executive recommends that staff who are required to wear FFP3 masks are fit tested to ensure that masks adequately fit the individuals' face thus minimising the likelihood of infected respiratory droplets leaking through or around the facemask.

Storage of PPE

All personal protective equipment (PPE) should be stored appropriately to minimise the risk of contamination prior to use.

Wall-mounted dispensers are available for the hygienic storage and dispensing of both disposable gloves and plastic aprons. These are recommended for use in primary care facilities where routine clinical interventions are undertaken for example examination, consulting or treatment rooms.

Care should be taken when removing disposable gloves from boxes in order to minimise the risk of contaminating the contents with unwashed hands.

PPE must be available for staff visiting patients in their own homes. As a minimum, disposable gloves should be provided. Ideally these should be purchased in individual packages (as a pair) or transported (in pairs) in a suitable container e.g. plastic bag to avoid contamination prior to use.

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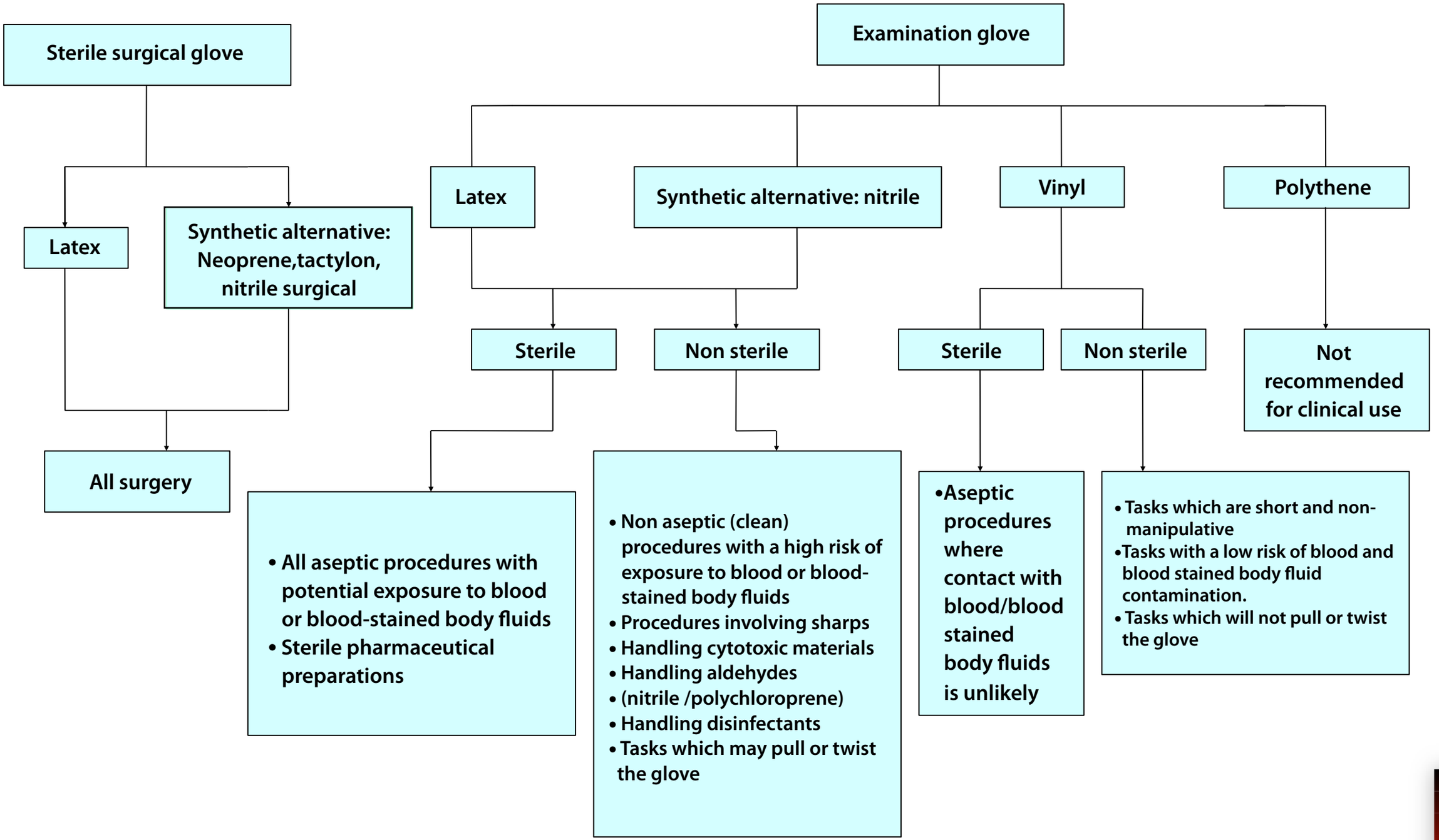
RISK ASSESSMENT FOR GLOVE CHOICE



SAFE USE AND DISPOSAL OF SHARPS

See also Section 10 – Management of Healthcare Waste

Many needle-stick injuries are preventable providing staff are informed of the appropriate procedures which will minimise the risks associated with handling sharps. The following practices should be taught to all staff likely to handle sharps, at induction/orientation and regularly thereafter.

Non-compliance with these guidelines may carry medico-legal or health and safety implications.

DEFINITIONS

Clean / used sharp describes a sharp that has been used for a "clean" procedure such as drawing up injections. Such a sharp will not have had contact with a service user's blood or body fluids and poses less of a risk to the HCW should a sharps injury occur, although from a Health and Safety perspective such injuries are still of significance.

Contaminated / dirty sharp describes a sharp that has been used invasively and has had contact with a service user's blood or tissues thus posing a higher risk of potential cross-infection with a blood-borne virus should a sharps injury occur.

COLOUR-CODING OF SHARPS CONTAINERS

Recent revision of the expert guidance relating to the management of Healthcare Waste (HTM 07-01) included changes to the colour-coding of sharps containers to indicate their contents and the route for final disposal by incineration. In brief, the colours of sharps container lids have been modified to show, by means of colour coding, the contents of the container and which waste stream they are required to enter for final disposal by incineration. Three colour-coded sharps waste streams now apply:

- sharps containing NO residues of prescription only medicines (POMs)
- sharps which may contain residues of prescription only medicines
- sharps which may contain residues of cytotoxic/cytostatic medicines

At local level this requires providers of healthcare to assess the sharps that they generate and to ensure that appropriate colour-coded containers are used. This will usually be undertaken at a strategic (organisation-wide) level in discussion with the registered waste contractor responsible for the collection and ultimate disposal of clinical waste.

The rationale for these changes relates to the fact that POMs and cytotoxic / cytostatic medicines are classed as hazardous waste and require separate licensing, transportation and final disposal arrangements.

In applying this to local practice, the following guidance should be followed:

- sharps waste that contains ONLY blood or saline / dextrose products requires an orange lidded sharps container
- sharps waste that MAY contain residues of prescription only medicines (POMs) e.g. antibiotic residues, sedatives, anaesthetic agents etc. requires a yellow lidded container
- sharps waste that MAY contain residues of cytotoxic / cytostatic medicines requires a purple lidded container
- where a mix of sharps is likely e.g. blood residues, saline / dextrose products AND residues of POMs then a yellow lidded container is required
- where there is no likelihood of POMs or cytotoxic residues being discarded e.g. in phlebotomy then a orange lidded container can be used

Further guidance on the implementation of the revised waste guidance can be found in the section entitled Management of Clinical Waste.

ASSEMBLY OF SHARPS CONTAINERS

Only approved sharps containers must be used which comply with current standards. (BS 7320:1990, UN 3292)

Ensure that the sharps container is correctly assembled and that the lid is securely fitted. Follow the manufacturer's recommendations for assembly, as all containers differ. Label the sharps container with the date of assembly, the name of the member of staff who assembled it and location e.g. GP practice name.

PROVISION AND LOCATION OF SHARPS CONTAINERS

.

Adequate sharps containers must be available in all healthcare facilities where sharps are in use. Ideally, they should be available in all places of regular use ie at the point of use such as treatment and consulting rooms. Where sharps are required for use by GPs and other staff visiting patients in their own homes, containers must be carried in clinical bags.

Containers should be available in a range of sizes appropriate to the number of sharps generated and where they will be used. For example, small containers are available for portable use at the bedside or for home care. Large containers should only be used when a high volume are sharps are generated e.g. phlebotomy.

All sharps containers must be stored out of the reach of children and others who may be at risk.

Sharps containers must never be stored on the floor or above shoulder level. They should be ergonomically positioned between waist and shoulder height to allow ease of access and to ensure the lid of the container can be visualised to avoid sharps injuries from over-full containers.

Sharps containers should be placed on a secure, stable surface and away from the edge of work surfaces. Most manufacturers can supply brackets to mount them on the wall or trolleys for ease of movement e.g. in minor surgical procedure rooms.

Wherever possible, sharps containers must be taken to the point of use to ensure immediate disposal. Small, portable containers, ideally mounted on trays provide a suitable mechanism for such use.

The temporary closure mechanism should be activated when sharps bins are left unattended and whenever a sharps bin is transported.

SAFE DISPOSAL OF USED SHARPS

It is the responsibility of the individual who has used the sharp equipment, to safely dispose of it in an approved container. Sharps must not be left for others to clear away.

Place all disposable sharps into an approved (BS 7320:1990, UN 3292) puncture proof sharps container immediately at the point of use. Some containers have a temporary closure, which should be activated between uses particularly when in transit.

Re-sheathing sharps should NEVER occur. Recent EU legislation has banned re-sheathing with immediate effect (2010/32/EU).

Do not attempt to remove the needle from the syringe. Discard the needle and syringe as a single unit, into an approved sharps container.

Fill sharps containers to the ‘fill’ line only. Do not overfill any sharps container, as this is a significant risk to both you and others.

When full to the “fill” line, the permanent locking mechanism should be activated and the container then labelled with the date, name of the person disposing of the full container and the location details e.g. GP practice name.

Full sharps containers should be kept in a dedicated, lockable, area. Full containers must NOT be placed inside clinical waste bags.

SERVICE USERS OWN SHARPS

Many service users self-administer medications e.g. diabetics. A variety of administration and monitoring systems are available including pens as well as needles, lancets and syringes. All systems involving the use of sharps have the potential to cause injury if handled inappropriately.

Service users self-administering medication must be supervised and trained in safe practices prior to being allowed to self-medicate.

Appropriate equipment must be provided for the service user either by their GP or hospital consultant / nurse specialist (now on prescription). Small portable sharps boxes complying with relevant standards should be used. These must be returned to the service user's GP practice / pharmacy if distributed from there for disposal as hazardous waste or arrangements for collection should be made with the PCT or local authority. For self-medicating housebound patients, the GP or healthcare worker responsible for prescribing treatment should advise on collection arrangements (for which a charge may be made, dependent on local arrangements in place). Care must be taken to ensure returned sharps boxes are transported appropriately by the service user to minimise risk to the individual and members of the public.

Service user's own sharps must not be disposed of into the household waste stream. This is no longer acceptable. This includes lancets used for blood glucose analysis.

Care must be taken by staff using self-administration systems on behalf of service users. An assessment of risk must be undertaken especially regarding needle disposal.

TRANSPORTING SHARPS CONTAINERS

Healthcare workers producing sharps waste in non-NHS environments e.g. in the patients' own home may be required to transport the waste back to base in some circumstances (e.g. where such interventions are temporary and the householder does not have a waste collection arrangement in place or visiting GPs).

Sharps waste must be transported in suitable UN-approved rigid sharps containers (as would be used in healthcare environments). These must be provided by the healthcare provider. If the healthcare worker is travelling by public transport (or bicycle) then arrangements must be made to collect such sharps boxes from a suitable location. They should not be transported by such means.

PROTECTIVE CLOTHING AND VENEPUNCTURE

Gloves must be worn when handling or using sharps.

Gloves cannot prevent needle-stick injuries but they may reduce the likelihood of infection by reducing the volume of blood inoculated during the incident.

Some individuals highly experienced in venepuncture may prefer not to wear gloves because of a perceived reduction in manual dexterity. However, all experienced staff and new trainees, including doctors, should be taught and encouraged to wear gloves whilst taking blood in line with expert guidance.

The following is advised:

- gloves must always be available for venepuncture
- inexperienced staff should be taught to wear gloves from the beginning of their training
- everyone taking blood should wear gloves if they have cuts, abrasions or skin lesions on their hands which cannot be covered by waterproof dressings
- gloves should also be worn if the service user is uncooperative or restless

(Expert Advisory Group, 1998)

RISK ASSESSMENT OF WORK PRACTICES
SAFETY ENGINEERED PROTECTION MECHANISMS

Recent EU legislation (2010/32/EU) requires healthcare providers to undertake a risk assessment of all situations where there is injury, blood or other potentially infectious material. This includes measures designed to eliminate exposure risks and the consideration of possible alternative systems by 2013.

With regard to sharps use, there is a requirement to eliminate unnecessary use of sharps and, if risk assessment identifies that risks exist, then the provision of medical devices incorporating safety engineered protection mechanisms must be considered. These include:

- needleless intravenous systems
- syringes with advanceable needle guards or retractable needles
- self-sheathing trocars etc

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SHARPS / "SPLASH" INJURY ACCIDENTAL EXPOSURE TO BLOODBORNE VIRUSES

All staff have a responsibility to ensure the safe management of sharps

Sharps injuries can arise from needles, scalpel blades, lancets, other pointed instruments and equipment, glass shards, sharp pieces of bone, penetrating bites and scratches

PREVENTION

- Hepatitis B, Hepatitis C or HIV may be present in blood and some blood-stained body fluids, so wear gloves when handling these fluids and eye protection if splashing is likely

- Ensure that approved sharps containers are available in all areas where sharps are in use and are kept safely, labelled, secured when 3/4 full and collected by a registered waste contractor

- The user should discard sharps immediately after use

- Cover fresh cuts / abrasions with waterproof dressings (no visible air holes)

- Hepatitis B vaccination is recommended for staff who handle 'sharps' or are exposed to blood or blood-stained body fluids

- Used needles should not be re-sheathed – discard as one unit

MANAGEMENT OF HEALTHCARE WASTE IN PRIMARY CARE

INTRODUCTION

This waste document has been written to provide guidance on managing waste in health and social care environments. Guidance is drawn from Safe Management of Healthcare Waste 7658 version 2.0 (2012), produced by the Dept. of Health and available from Space for Health: www.spaceforhealth.co.uk Registration is required for accessing the document from the website. This document contains specific guidance for General Practice (pages 345-361).

This protocol is intended to provide organisations and their staff with insight into the legislation and regulation that applies to waste management together with guidance on infection control related elements of clinical waste management. **This document is NOT intended as a waste management policy.**

Organisations should produce a Waste Policy and Strategy which will ensure compliance with the requirements outlined below.

Good waste management is important for the following reasons:

- to reduce the health and safety risk to staff, service users and visitors from waste;
- to manage waste disposal costs and reduce where appropriate;
- to ensure compliance with environmental legislation which includes the reduction of carbon impacts of managing waste.
-

LEGISLATION AND REGULATION

To effectively manage waste generated, those responsible for the management of waste should understand and comply with the requirements of different regulatory regimes;

- Health and Safety;
- Environment and waste;
- Medicines Management;
- Infection Prevention & Control;
- Transportation

The management of healthcare waste is directed by statute and regulation from the United Nations, European Union, UK parliament and devolved national parliaments. Such legislation and regulation is regularly reviewed and re-issued. For waste management practices to comply with these requirements, appropriate waste management services need to be procured. Organisations procuring such services should be aware that, under the Environmental Protection (Duty of Care) Regulations (England Scotland and Wales) contained within the Environmental

Protection Act 1970, they have a duty of care for the safe management of waste "from cradle to grave" and not just within their own premises. A Code of Practice for compliance with this Duty of Care has been produced by DEFRA and is available from the DEFRA website – www.defra.gov.uk . Steps should be taken to ensure and demonstrate the services procured from waste contractors provide compliance with the requirements.

Organisations that produce waste are required to register with the Environment Agency as a waste producer. This registration process should commence with an assessment of the types of waste to be produced and audit of same (pre-acceptance audit). Specialist advisors (Dangerous Goods Safety Advisors, DGSA) may be required depending on the volumes and types of waste generated.

It is recommended that a Waste Manager is identified to lead the production of a Waste Policy and strategy which will include sourcing appropriate advice. Guidance on such policy production can be found in the reference document Safe Management of Healthcare Waste.

RESPONSIBILITIES OF THE PRIMARY CARE PROVIDER

Where primary care services are undertaken in third party shared / rented premises i.e. within health centres or community/acute hospitals (e.g. urgent care centres, Out of Hours GP services) the provider should satisfy itself that appropriate standards are being maintained by the host in accordance with relevant national specifications.

This section is reprinted directly from: *Safe management of healthcare waste 7658: 2.0: England (2012): Sector guide: General Practices and Health Centres 345 – 361.*

General medical practices have a statutory duty of care. This applies to everyone in the waste management chain from producer to disposer. It requires the practice to manage the waste and to take all reasonable measures to ensure that the waste is dealt with appropriately from the point of production to the point of final disposal. **The general practice's responsibilities do not end when it hands its waste to a waste collector.**

The practice is solely responsible for ensuring that waste is:

- Correctly segregated;
- Appropriately labelled;
- Packaged appropriately for transport;
- Stored safely and in a secure place away from areas of public access within the premises (that is, taking all reasonable precautions to prevent waste escaping and to prevent the public getting access to it – this could be a fenced, locked compound);
- Described accurately and fully on the accompanying documentation when removed;
- Transferred to an authorised person for transport to an authorised waste site.

In addition the general practice should ensure that:

- Each of its premises is registered as a hazardous waste producer (unless exempt from registration); and
- It keeps a register of the necessary records and returns in the appropriate location (normally the practice's premises)

The practice manager should also ensure that staff are trained and aware of the local waste procedures.

The waste management contractor should be willing to advise on fulfilling the requirements for the above responsibilities. However:

- **It remains the legal responsibility of the practice,** not the waste contractor, to ensure full compliance; and
- the waste contractor will have less knowledge than the practice about what is in the waste

RISK MANAGEMENT OF WASTE

Risks from waste disposal can be properly controlled by:

- Assessing risk
- Developing appropriate policies
- Putting arrangements in place to manage risks
- Monitoring, auditing and reviewing the way in which arrangements work and
- Being aware of statutory requirements, legislative change and managing compliance

Precautions should be in place when handling waste including:

- Training and information
- Personal hygiene; immunisation and PPE
- Segregation and storage of waste
- Appropriate packaging and labelling
- Suitable transport on-site and off-site
- Clear procedures for accidents, incidents and spills and
- Appropriate treatment and disposal of waste

Systems should be in place to ensure that the risks to service users from exposure to infections caused by waste present in the environment are properly managed, and that duties under environmental law are discharged. The most important of these are:

- Duty of care in the management of waste
- Duty to control polluting emissions to the air
- Duty to control discharges to sewers and
- Obligations of waste managers

- Collection of data and obligations to complete and retain documentation including record keeping
- Requirement to provide contingency plans and have emergency procedures in place.

There is a unified methodology and definitions that will allow everyone who handles waste to determine whether the waste fits in to one of the following defined categories;

- infectious clinical waste
- non infectious clinical waste
- hazardous waste
- offensive/hygiene waste
- dangerous for carriage

This unified approach has been developed to enable those involved with waste management to comply with waste regulations. While it is not mandatory to comply with this unified approach it is considered best practice.

SEGREGATION OF WASTE

Segregation of waste into separate streams ensures appropriate and safe disposal in order to reduce costs and treat waste appropriately.

It is essential that all staff are aware of and comply with safe methods of disposal which should be clearly documented in local procedures.

Segregation can be easily achieved by careful use of the correct receptacles (bags and bins), together with appropriate storage prior to collection.

It is the responsibility of the person who disposes of an item to ensure that it enters the waste stream in the correct receptacle.

DEFINITIONS OF WASTE

Clinical and Hazardous Waste

The definition of clinical waste (as defined by the Controlled Waste Regulations – issued under the Environmental Protection Act) is:

1. ".....any waste which consists wholly or partly of:
   - human or animal tissue
   - blood or other body fluids, excretions
   - drugs or other pharmaceutical products
   - swabs or dressings
   - syringes, needles or other sharp instruments

being waste which unless rendered safe may prove hazardous to any person coming into contact with it; **AND**

2. any other waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practice, investigation, treatment, care ……..being waste which may cause infection to any person coming into contact with it."

Clinical waste can be divided into three broad categories of materials:

- any healthcare waste which poses a risk of infection (and thus by definition possesses a hazardous property categorised as H9 infectious)
- certain healthcare wastes which pose a chemical hazard
- medicines and medicinally contaminated waste containing a pharmaceutically active agent

Offensive/hygiene waste describes waste that is non-infectious and which does not require any specialist form of treatment or disposal. In the past this has been described as Human Hygiene or Sanpro Waste. Offensive/hygiene waste is healthcare waste (or similar from municipal sources) which meets the following criteria

- It is not clinical waste
- It is not dangerous for carriage
- The producer has identified, after segregation at source, that it is suitable for disposal at a non-hazardous landfill site without further treatment
- It may cause offense to those coming into contact with it

Items that are considered to be offensive/hygiene waste are;

- incontinence and other waste produced from human hygiene
- sanitary waste
- disposable medical items and equipment that do not pose a risk of infection, including PPE (that is items that are not clinical waste)
- nappies

Such waste must be assessed for medicinal, chemical or infectious properties before being assigned to this category.

Sharp waste is defined as any item that could pierce the skin. This includes; needles, broken crockery and glass

Items that may explode on incineration must not be disposed of as clinical waste, but must be decontaminated before disposal as per local authority guidance. This includes aerosol cans (even if empty) and batteries.

Other Waste streams

There are other waste streams which do not carry infection risks but are covered by regulation. These streams should be defined in the organisations Waste Policy.

National colour-coding approach

Segregation of waste at the point of production into suitable colour-coded packaging is vital to good waste management. Health and Safety, carriage and waste regulations require that waste is handled, transported and disposed of in a safe and effective manner. The following colour-coded waste segregation guide represents best practice and ensures, at minimum, compliance with current regulations.

Proper segregation of different types of waste is critical to safe management of healthcare waste and helps control management costs. The use of colour-coded receptacles is an essential element of good segregation practice.

The national waste colour-coded segregation system identifies and segregates waste on the basis of waste classification and suitability of treatment/disposal options.

Appendix 1 summarises the colour-coding system currently in use.

Waste Minimisation and Carbon impact

The guidance on which this chapter is based stresses the importance and need to minimise both the volume of waste produced and also the carbon impact of waste disposal methods used. Thus consigning all waste as clinical for incineration is not considered acceptable. Waste assessments and strategies should be devised to allow minimisation of both waste quantities and carbon impact. This potentially benefits the organisation in cost savings as well as the environment. Further guidance on achieving this can be found in the source document (Safe Management of Healthcare Waste). Additionally advice may be sought from the Waste Contractor.

WASTE STREAMS

Clinical waste - yellow

Yellow stream infectious waste requires disposal by incineration in a suitably licensed or permitted facility. This waste stream should only be used for waste items that (a) are infectious clinical waste and (b) have an additional second characteristic (for example, chemical or pharmaceutical) that makes incineration the sole disposal option. For example:

- Anatomical wastes and tissue samples preserved in hazardous chemicals
- Medicines, medicinally-contaminated syringes, medicated dressings etc.
- Diagnostic kits contaminated with potentially infectious body fluids and chemical reagents (this does not include sticks from dip tests).

This waste stream also includes waste that is, or may be contaminated with infectious micro-organisms.

Yellow-stream infectious waste is hazardous waste and is subject to the controls of the Hazardous Waste Regulations.

Red lidded Anatomical Waste

Waste which contains *recognisable* body parts should be incinerated in suitably licensed premises. Containers for such waste are yellow with red lids.

Clinical waste - orange

Orange-stream waste may be treated to render it safe prior to final disposal to landfill. Treatment may only take place in a suitably licensed facility. In addition, orange-stream waste can also be incinerated as a means of final disposal. However this carries unnecessary carbon impacts. Many waste collection companies provide their clients with orange bags for the disposal of clinical waste which then allows them – as the registered company responsible for final disposal, to determine the most appropriate means of disposal – either incineration; microwave or irradiation etc.

Examples of waste that can be placed in this waste stream include:

- Contaminated PPE
- Contaminated dressings (as long as they do not contain an active pharmaceutical agent when they should be discarded as yellow bag waste)
- Very small pieces of tissue
- Syringe bodies contaminated with body fluids but not medicines

Infectious Liquid Waste – yellow or orange receptacles

Infectious liquid waste should be contained in rigid receptacles for disposal. Some contractors require such waste to be solidified before removal.

Offensive / Hygiene Waste – yellow / black bags

Offensive/hygiene waste is disposed of by deep landfill. Such waste is collected in yellow / black striped bags – so-called "tiger stripe" bags. General practices will generate two different offensive waste streams. They should segregate:

- Domestic-type offensive hygiene waste – feminine hygiene waste; nappies from otherwise healthy children – into yellow/black bags as category 20 01 99 waste (unless total quantity is < 7 kg in a collection interval in which case it can be placed into a municipal black bag);
- Healthcare-type offensive hygiene wastes – used PPE that is not infectious; uncontaminated dressings; cardboard vomit/urine bowls (unless infection is suspected) – into yellow/black bags as category 18 01 04 waste

Liquids (urine, vomit etc.) should not be placed into this waste stream and may need to be discarded to foul sewer (toilet, slop hopper) before containers are discarded

Sharps Waste

Sharps are items that could cause cuts or puncture wounds including needles, syringes with needles attached, broken glass ampoules, scalpels and other blades and infusions sets. Sharp items such as needles attached to syringes that contain, or may potentially contain residues of Prescription Only Medicines (POMs) are also subject to classification under the Special Waste Regulations as Pharmaceutical waste (see below) and must be discarded into appropriate sharps bins with colour-coded lids. See Safe Management of Sharps Chapter of this Manual.

Municipal (domestic) waste – black bags

Municipal (domestic) waste is waste that is similar to the waste generated at home. It should not contain any infectious materials, sharps or medical products and may be placed in either black or clear bags for disposal. This stream includes items such as non-hazardous paper, magazines, food and drink containers, paper towels from hand-washing, uncontaminated paper rolls from couch covers, packaging from instruments and devices etc.

Pharmaceutical Waste

Pharmaceutical waste is described as waste containing a pharmaceutically active agent. This may include expired or unused medicinal product, and discarded items associated with medicines e.g. bottles, connecting tubing, syringes etc.

Pharmaceutical waste is further divided into Cytotoxic/Cytostatic waste and non Cytotoxic/Cytostatic waste.

All pharmaceutical waste must be disposed of into an appropriately coloured pharmaceutical waste container. This is blue for non Cytotoxic/Cytostatic waste and Purple for Cytotoxic/Cytostatic waste.

EFFECTIVE DISPOSAL OF WASTE

For effective disposal of waste it is important for consideration to be given to the placement of waste receptacles. Waste must be disposed of as close to source as possible and bins must be positioned where they are easily accessible to staff. Clinical waste bins should not be placed where visitors/service users may use them for the disposal of domestic waste.

Bins should be colour-coded or clearly labelled, fire retardant and fully enclosed with lids which must be foot-operated. All bins should be in good working order.

When bins in clinical areas are two-thirds full the bags must be removed, securely tied and labelled (to ensure traceability) and removed to a designated waste storage area or bin. In healthcare facilities (including Care Homes providing nursing) clinical waste bags should be secured with a tie and not by knotting.

The storage area or bin must be lockable (for clinical waste) and free from access to the public, pests or vermin. Waste streams should be clearly segregated in storage areas.

Domestic waste bags must also be changed when two-thirds full, secured and stored in a designated area separate from clinical waste.

Sharps bins, when full, must be closed securely, labelling completed and then be disposed of in to the clinical waste stream. Sharps bins must NOT be placed inside yellow / orange bags.

When handling any waste bag the bag must only ever be held by the neck.

The manager with designated responsibility for waste disposal must keep records that include details of the waste disposal contract and records of all clinical waste collections from the healthcare premises. Waste transfer and consignments notes for hazardous waste should be retained for 3 years.

STAFF PROTECTION

When handling clinical or hazardous waste staff should always wear appropriate protective clothing i.e. apron/overalls and gloves.

When such waste handling is complete protective clothing must be disposed of in to the clinical waste stream.

Hands must be thoroughly washed and dried after protective clothing has been removed.

All staff handling clinical waste must be offered a programme of vaccinations for Hepatitis B, Hepatitis A and Tetanus. (See section - Vaccination Programme for Staff)

All staff must be aware of the policy for exposure to blood-borne viruses and take the appropriate action after an incident. (see section - Management of Occupational Exposure to Blood Borne Virus')

SPILLAGE

All spillage must be regarded as potentially hazardous and dealt with immediately.

Under no circumstances should service users or members of the public be allowed to assist, or be involved in any way in the clearing or cleaning up of spillage.

When dealing with spillage, protective clothing (gloves and apron) must be worn.

If it is possible, ask another member of staff to assist in keeping unauthorised persons away, until the area can be barricaded off.

If dealing with a broken or split bag, re-bag the contents and ensure that the area is free of waste.

If sharps are present, puncture proof gloves/gauntlets must be worn. A pair should be available in all areas where clinical waste is handled.

If the area has been contaminated with blood or body fluids clean the area well with a solution of detergent and warm water, followed by a hypochlorite disinfectant. (See section – Spillages of Blood and Body Fluids).

After any spillage always thoroughly wash and dry your hands.

Spillages of clinical/hazardous waste should be reported using the organisation's incident reporting processes with an investigation being undertaken to identify risks and allow risk reduction actions to be implemented.

AUDIT AND MONITORING

Waste management guidance requires an audit programme of waste segregation and storage arrangements. This should include quarterly observation of waste containers (without handling the waste itself) as a minimum. Additional and more detailed audits of container contents are advised at intervals determined by the volume and types of waste produced. Such audits require careful risk assessment

and the application of control measures to ensure the safety of auditors. Such control measures will include, but not be limited to, the use of Personal Protective Equipment.

TRAINING

All staff that have contact with waste, whether through the production of waste or disposal must have training in safe management of waste and local policies. Staff should be trained at induction and regularly thereafter, at least annually.

Treatment Room Waste Segregation Chart

Sack / Box	Typical Waste Types
	**Offensive / hygiene (tiger-stripe sack)healthcare wastes;** waste contaminated with low-risk contaminants; urine, faeces, vomit and sputum. Waste from Hepatitis B, C or HIV patients with no blood present can be regarded as offensive / hygiene wastes as can wastes with high risk contaminants assessed as presenting no infection risk. PPE (personal protective equipment), e.g. aprons, gloves and masks that are contaminated with low risk contaminants. No liquids, chemicals, medicines or items that can pierce, protrude through or damage the sack.
	**Infectious waste (orange sack) healthcare waste;** wastes contaminated with high-risk contaminants; blood, pus and wound exudates, wound drains or PPE contaminated with infectious material. Low-risk contaminated items; (urine, faeces, vomit and sputum) from patients with gastric / urinary tract infections are regarded as infectious. No liquids or items that will pierce or protrude through the sack. No medicines, chemicals, alcohol gel bottles, nominally empty medicine or chemical containers.
	**Comingled recyclable municipal waste;** paper and card such as hand wash paper towels, uncontaminated couch roll and recyclable equipment packaging. Cross-cut shredded documents,rinsed alcohol-gel and hand wash soap bottles, other uncontaminated plastics (but not plastic bags), metal drinks / food cans and foil. MAXIMISE RECYCLING; ALL HAND WASH PAPER TOWELS AND UNCONTAMINATED COUCH ROLL
	**Medicinal & non-medicinal sharps healthcare waste (yellow lidded sharps box);** small quantities of non-hazardous medicines (e.g. vials and ampoules) and sharps contaminated with them. Temperature abused or out of date vaccines, small quantities of medicinal aerosols (a maximum of one aerosol per sharps box). **Blue lidded bespoke medicine boxes** should be utilised for larger quantities of non-hazardous medicine wastes; for advice & guidance contact the NHSL Waste Manager.
	**Cytotixic / cytostatic medicine sharps healthcare waste (purple lidded sharps bin);** small quantities of hazardous medicines (e.g. vials and ampoules) and sharps contaminated with them (see list of non-chemotherapy hazardous (cytotixic / cytostatic) drugs. **Purple lidded bespoke medicine boxes** should be utilised for larger quantities of hazardous (cytotixic / cytostatic)medicines; for advice & guidance contact the NHSL Waste Manager.

List of Non-Chemotherapy Hazardous (cytotoxic / cytostatic) Drugs

Anastrozole (ARMIDEX)	Dithranol containing products	Medroxyprogesterone	Raloxifene (EVISTA)
Azathioprine	Dutasteride (AVODART)	Megestrol	Ribavirin
Bacillus Calmette-Guerin Vaccine	Estradiol	Menotropins	Sirolimus
Bicalutamide (CASODEX)	Exemestane (AROMASIN)	Mifepristone	Streptozocin
Chloramphenicol	Finasteride (PROSCAR)	Mycophenolatemofetil (CELLCEPT)	Tacrolimus (PROGRAF)
Ciclosporin	Flutamide (DROGENIL)	Nafarelin	Tamoxifen
Cidofovir	Ganciclovir	Ostrogen containing products	Testosterone
Coal-Tar containing products	Gonadotropin Chlorinic	Oxytocin + Sytocinon&syntometrine	Thalidomide
Colchicine	Goserelin (ZOLADEX)	Podophyllyn	Toremifene citrate
Danazol	Interferon containing products	Progesterone containing products	Trifluridine
Diethylstilbestrol	Leflunomide		Valganciclovir
Dinoprostone	Letrozole		Zidovudine
	Leuprorelin acetate		

Optional

	**Non-recyclable municipal waste (black sack):** such as plastic bags, used tissues, food and non-paper cleaning materials.If there is no black sack waste bin in the treatment area use the tiger-stripe offensive hygiene sack for small quantities of non-recyclable residual wastes. DIVERT WASTES FROM LANDFILL, PAPER, CARD, PLASTIC & METAL MUST BE RECYCLED
	**Metal single use instrument recycling;** SRCL offer a cost neutral collection of metal only single use instruments, segregating these diverts them from the expensive incineration only yellow lidded sharps box disposal route. To arrange for delivery of a 40 litre S.U.I. recycling box contact the NHSL Waste Manager.

Consultation Room Waste Segregation Chart

Sack / Box	Typical Waste Types
	**Offensive / hygiene (tiger-stripe sack)healthcare wastes;** waste contaminated with low-risk contaminants; urine, faeces, vomit and sputum. Waste from Hepatitis B, C or HIV patients with no blood present can be regarded as offensive / hygiene wastes as can wastes with high risk contaminants assessed as presenting no infection risk. PPE (personal protective equipment), e.g. aprons, gloves and masks that are contaminated with low risk contaminants. No liquids, chemicals, medicines or items that can pierce, protrude through or damage the sack.
	**Comingled recyclable municipal waste;** paper and card such as hand wash paper towels, uncontaminated couch roll and recyclable equipment packaging. Cross-cut shredded documents, rinsed alcohol-gel and hand wash soap bottles, other uncontaminated plastics (but not plastic bags), metal drinks / food cans and foil. MAXIMISE RECYCLING; ALL HAND WASH PAPER TOWELS AND UNCONTAMINATED COUCH ROLL
	**Medicinal & non-medicinal sharps healthcare waste (yellow lidded sharps box);** small quantities of non-hazardous medicines (e.g. vials and ampoules) and sharps contaminated with them. Temperature abused or out of date vaccines, small quantities of medicinal aerosols (a maximum of one aerosol per sharps box). **Blue lidded bespoke medicine boxes** should be utilised for larger quantities of non-hazardous medicine wastes; for advice & guidance contact the NHSL Waste Manager.
	**Cytotoxic / cytostatic medicine sharps healthcare waste (purple lidded sharps bin);** small quantities of hazardous medicines (e.g. vials and ampoules) and sharps contaminated with them (see list of non-chemotherapy hazardous (cytotoxic / cytostatic) drugs. **Purple lidded bespoke medicine boxes** should be utilised for larger quantities of hazardous (cytotoxic / cytostatic)medicines; for advice & guidance contact the NHSL Waste Manager.

List of Non-Chemotherapy Hazardous (cytotoxic / cytostatic) Drugs

Anastrozole (ARMIDEX)	Dithranol containing products	Medroxyprogesterone	Raloxifene (EVISTA)
Azathioprine	Dutasteride (AVODART)	Megestrol	Ribavirin
Bacillus Calmette-Guerin	Estradiol	Menotropins	Sirolimus
Vaccine	Exemestane (AROMASIN)	Mifepristone	Streptozocin
Bicalutamide (CASODEX)	Finasteride (PROSCAR)	Mycophenolatemofetil	Tacrolimus
Chloramphenicol	Flutamide (DROGENIL)	(CELLCEPT)	(PROGRAF)
Ciclosporin	Ganciclovir	Nafarelin	Tamoxifen
Cidofovir	Gonadotropin Chlorinic	Ostrogen containing products	Testosterone
Coal-Tar containing products	Goserelin (ZOLADEX)	Oxytocin +	Thalidomide
Colchicine	Interferon containing products	Sytocinon&syntometrine	Toremifene citrate
Danazol	Leflunomide	Podophyllyn	Trifluridine
Diethylstilbestrol	Letrozole	Progesterone containing	Valganciclovir
Dinoprostone	Leuprorelin acetate	products	Zidovudine

Optional (this waste-stream is unlikely in a consultation room)

	**Infectious waste (orange sack) healthcare waste;** wastes contaminated with high-risk contaminants; blood, pus and wound exudates, wound drains or PPE contaminated with infectious material. Low-risk contaminated items; (urine, faeces, vomit and sputum) from patients with gastric / urinary tract infections are regarded as infectious. No liquids or items that will pierce or protrude through the sack. No medicines, chemicals, alcohol gel bottles, nominally empty medicine or chemical containers.

Optional (it is envisaged that there will be no requirement for this bin type)

	**Non-recyclable municipal waste (black sack):** such as plastic bags, used tissues, food and non-paper cleaning materials.If there is no black sack waste bin in the treatment area use the tiger-stripe offensive hygiene sack for small quantities of non-recyclable residual wastes. DIVERT WASTES FROM LANDFILL, PAPER, CARD, PLASTIC & METAL MUST BE RECYCLED

ENVIRONMENTAL CLEANING

INTRODUCTION

All staff have a responsibility to promote and safeguard the wellbeing and interests of service users. A dirty cluttered environment is not a standard on which any health care organisation wishes to be judged.

Cleaning is necessary to maintain the appearance, structure and efficient function of the environment and equipment. It is also required to control the microbial population and to prevent the transfer of certain micro-organisms. Cleaning, when performed effectively and regularly, is often all that is necessary to minimise the risk of cross-infection.

Standards of environmental cleaning services should be audited regularly to ensure compliance with local schedules and processes as laid down in the National Specifications for Cleanliness in the NHS: *Guidance on setting and measuring performance outcomes in primary care medical and dental premises* (NPSA 2010). Where environmental cleaning services are out-sourced to a third party contractor, local arrangements for regular audit against the contract should be undertaken by the healthcare provider. Where primary care services are undertaken in third party shared / rented premises i.e. within health centres or community/acute hospitals (e.g. urgent care centres, Out of Hours GP services) the provider should satisfy itself that appropriate standards are being maintained in accordance with relevant national specifications.

STAFF PERSONAL HYGIENE

Personal hygiene is important. Hands should be washed frequently and especially after each cleaning operation, to ensure that harmful organisms are not spread.

It is important that domestic staff report to their line manager any infections which they have or have come into contact with. (See section: Management of Infections in Staff).

Adequate and appropriate protective clothing must be available for domestic staff at all times including household gloves and plastic aprons. Staff should be trained in the use of PPE and the frequency for change of equipment.

GENERAL HYGIENE

Regular cleaning and attention to cleaning processes does more to remove environmental bacteria than any other activity, including the type of cleaning agent used.

Stained, dusty or unhygienic surroundings combine to produce an unattractive and sometimes high-risk health care environment.

Cleaning equipment should be cleaned thoroughly after use and stored dry in a clean secure place. Mops should not be left soaking as the water acts as a reservoir for micro-organisms. Mops must be wrung out and stored head uppermost to dry ideally using wall-mounted brackets. Mop heads should be either disposable or laundered regularly dependent on local risk assessment.

Appropriate protective clothing should be worn when carrying out cleaning processes, e.g. appropriate gloves (powder-free) and plastic aprons. Face protection should be available to staff handling disinfectants in compliance with Health and Safety and COSHH regulations.

COLOUR CODING OF EQUIPMENT

The aim of colour coding is to ensure that cross-infection does not occur when cleaning equipment is used in more than one type of area. Using a cloth in a consulting / treatment room following its use in the toilet would provide considerable risk of cross-contamination on environmental surfaces.

Colour coding should be applied to all housekeeping equipment in all areas of the organisation. All staff, especially domestic and healthcare staff should be familiar with the colour coding in use. Posters demonstrating this should be available for staff as a reference tool. Ideally, colour coding of housekeeping equipment should reflect the guidance issued by the National Patient Safety Agency (NPSA 2007). A chart is provided at the end of this section.

USE OF DISINFECTANTS

Disinfectant solutions must only be used by staff that have been trained in their use and are aware of how to prepare the solution (including dilution), how to use the solution, what protective clothing must be worn and how to dispose of the solution after use. They must be aware of the COSHH regulations for the disinfectants used and have access to data sheets which are available from the product manufacturer. A folder containing COSHH data sheets must be kept in all areas and be available for staff to refer to at all times.

Research has shown that efficient routine cleaning using a general purpose liquid detergent will remove a high proportion of micro-organisms, including bacterial spores and in most situations thorough cleaning will be adequate. Chemical disinfectants are not cleaning agents and to use them as such is unnecessary and wasteful as well as potentially harmful.

All disinfectants must be adequately labelled with the active ingredients in case of accident/splash/ingestion in accordance with COSHH regulations.

Gloves and plastic aprons must always be worn when handling disinfectants. Eye protection must also be available.

A decision should be made by the facility to use the same disinfectant preparations throughout the building to ensure consistency and economies of scale. Decisions relating to the use of disinfectant solutions should be made in collaboration with the local Infection Control Advisor to ensure use is appropriate.

Preparations should be available in the correct concentration. Bottles should be labelled accordingly. A Hypochlorite concentration of 10,000 ppm (parts per million) is necessary for use on blood and body fluid spillages. A weaker concentration of 1,000 ppm is used for environmental disinfection (where appropriate).

Usually, the type of disinfectant solution required to deal with high risk situations can be restricted to a specific chlorine-releasing agent that is highly effective against bacteria, bacterial spores, viruses and other relevant pathogens.

An alternative system of environmental cleaning is the use of Microfibre cleaning systems which negate the requirement for the use of environmental disinfectants. Many commercial companies provide Microfibre systems which are widely used in NHS premises and are currently being evaluated with regards to their efficacy.

Where Microfibre systems are used there should be protocols in place. These should include, as a minimum:-

- Colour coding of cloths/mop heads
- Frequency of change of cloths/mope heads i.e. per room/bed space
- Maximum time of use/reprocessing of cloths/mop heads
- Method of laundering of cloths/mop heads
- Management of microfibre laundry facilities

STORAGE OF CLEANING EQUIPMENT

Cleaning equipment kept on site should be stored in a separate, lockable area ideally with a slop hopper and hand wash basin. If a separate area is not available then cleaning equipment may be located in dirty utility / sluice facilities. Under no circumstances should cleaning equipment be stored in clinical areas used for patient care, examination or treatment.

FREQUENCY OF CLEANING / CLEANING SCHEDULES

Environmental cleaning should be undertaken at a clearly defined frequency dependent on the risks associated with the specific environment. For example, clinical/treatment rooms require more frequent cleaning than office areas. The NHS Cleaning Manual (NPSA 2009) and National specifications for cleanliness in the NHS: *Guidance on setting and measuring performance outcomes in primary care medical and dental premises* (NPSA 2010) both contain comprehensive guidance on cleaning

frequencies and provide schedules for local modification and use. All cleaning frequencies must be clearly documented and staff must be adequately trained in their use. Cleaning must be formally documented in the form of a check-list/schedule that must be kept in individual areas and filled in regularly by the cleaner/ housekeeper. Such schedules must be regularly audited to ensure compliance and regular review of audits should be undertaken with remedial action taken to address inconsistencies and non-compliance with local schedules. Cleaning schedules should be available for public/service user inspection. This enhances public/service user confidence and is a requirement of the Hygiene Code of Practice.

STAFF TRAINING

It is essential that all housekeeping staff receive a fully documented induction and orientation programme including:

- Cleaning methods;
- Cleaning products and their safe use and storage;
- Use of appropriate protective clothing;
- Disposal of waste, including bagging, labelling and storage;
- Sharps safety;
- Cleaning of equipment, including care and storage;
- Personal and environmental COSHH safety;
- Hand Hygiene
- Food hygiene, if necessary;
- Incident/accident and illness reporting.

NATIONAL COLOUR CODING SCHEME

Cleaning materials and equipment

All cleaning consumables, for example, cloths (re-usable and disposable), mops, buckets, aprons and gloves should be colour coded. This also includes those consumables used to clean catering departments.

NPSA 2007

RED

Bathrooms, washrooms, showers, toilets, basins and bathroom floors

BLUE

General areas including clinical / patient areas, departments, offices and wash basins in public areas

GREEN

Catering departments, ward kitchen areas and patient food service at ward level

YELLOW

Isolation areas

NHS
National Patient Safety Agency

National colour coding scheme for hospital cleaning materials and equipment

All NHS organisations should adopt the colour code below for cleaning materials. All cleaning items, for example, cloths (re-usable and disposable), mops, buckets, aprons and gloves, should be colour coded. This also includes those items used to clean catering departments.

Red

Bathrooms, washrooms, showers, toilets, basins and bathroom floors

Blue

General areas including wards, departments, offices and basins in public areas

Green

Catering departments, ward kitchen areas and patient food service at ward level

Yellow

Isolation areas

Your local contact for hospital cleaning is:

SPILLAGES OF BLOOD AND BODY FLUIDS

Blood and body fluid spillages must be dealt with immediately. In clinical areas this is usually a healthcare worker responsibility. In public access areas, e.g. corridors, lifts, public toilets, this is usually a domestic staff responsibility. *However, in premises without domestic staff on site during working hours, this responsibility must be clearly defined.* The registered provider should ensure that local staff are aware of their responsibilities which should be included in staff induction and infection control training.

Adequate and appropriate cleaning equipment, disinfectant preparations, protective clothing and clinical waste bags must be readily available. Floor signs indicating danger of slippage must be used where appropriate.

Spillages of blood and other high risk body fluids, e.g. faeces, should be dealt with using a chlorine releasing agent e.g. sodium hypochlorite or one containing NaDCC (Sodium Dichloroisocyanurate). These are available as solutions and tablets (which require diluting to reach the correct concentration) or as powders and granules which contain an appropriate concentration. Powders and granules are available as spillage kits which often contain all the equipment required for the spill including yellow bags and card/scoop for removal of spill.

Powders and granules are the preferred method of disinfection as they require no pre-mixing and have a longer shelf-life. They are also easier to use.

Urine and vomit spills should not be treated with chlorine-releasing products as these body substances are usually acidic (with a low pH) and can react with chlorine releasing noxious gases which may be inhaled (particularly in confined spaces such as toilets). Urine and vomit should be dealt with using method 3 (in Appendix). Alternatively some manufacturers provide spill kits of granules specifically for use on vomit and urine e.g. Guest Medical.

Liquid preparations should be available in the correct concentration. A hypochlorite concentration of 10,000 ppm (parts per million) is necessary for use on blood and body fluid spillages. A weaker concentration of 1,000 ppm is used for environmental cleaning. Preparations must be diluted immediately before use and any unused liquid must be discarded. Do NOT store reconstituted solution as it rapidly loses its efficacy.

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SPILLAGE CLEANING – Methods 1 – 3

Method 1: Hypochlorite/NaDCC granules or powder (e.g. Haz-tabs, Presept)

- Put on PPE
- Cover spill completely with granules or powder
- Allow fluid to absorb and leave for approximately 2 minutes
- Collect granules/powder using paper towels and/or cardboard. Discard as clinical waste
- Clean area thoroughly using liquid detergent and warm water then dry
- Clean bucket and mop with detergent and warm water, rinse thoroughly and dry
- Discard protective clothing as clinical waste
- Wash hands

Method 2: Hypochlorite solution or tablets

- Put on PPE
- Cover the spill with paper towels and allow to absorb
- Carefully remove spillage and dispose of the towels into clinical waste
- Clean the area with detergent and warm water then dry
- Then clean area with a Hypochlorite solution in a concentration of 10 000 ppm then dry
- Clean bucket and mop with detergent and warm water, rinse thoroughly and dry
- Discard protective clothing as clinical waste
- Wash hands

Method 3: Detergent and water

- Where possible, carpets should not be laid in clinical areas
- A carpet cleaning schedule – including spot cleaning following spillage – should be in place
- Wherever possible a wet/dry vacuum should be used on carpeted areas following removal of spillage
- If the above is not feasible, a solution of warm water and detergent should be used after removing the spill using paper towels
- Clean equipment as above

PEST CONTROL

There are a number of animals that can be considered pests within the health care setting and have the potential to cause disease or harm. These can range from mammals, such as cats, foxes, mice, rats and squirrels; insects such as ants, Pharaoh ants, cockroaches, beetles, wasps and spiders; parasites such as bedbugs, mites, lice and some birds, including pigeons.

Apart from the possibility of disease transmission, food may be tainted and spoiled, fabric and building structure damaged. Furthermore, Pharaoh's ants have been responsible for the penetration of sterile packs.

Pest control is a specialist problem, which requires immediate attention. The registered provider should have a contract in place for the routine management of pest control. Alternatively, the local council (pest control officer) may provide guidance. Where primary care services are undertaken in third party shared / rented premises i.e. within health centres or community/acute hospitals (e.g. urgent care centres, Out of Hours GP services) the provider should satisfy itself that appropriate standards are being maintained and that a pest control contract is in place..

Reporting and responsibilities

All staff sighting a pest within the healthcare practice should report the incident immediately by referring to the local protocol for pest control (which should be located with estates management policies). The information required will include:

- the location including, where possible the room number
- the type of pest if known
- the possible numbers and frequency of sighting
- the name of the person reporting
- if feasible, insects etc. can be captured and kept in a clean container, e.g. specimens' pots. It may be possible to take a picture using a digital camera for identification purposes.

If the infestation is noted in a clinical or food area, then it should not be used until further assessment and an appropriate inspection has been undertaken.

General control measures

Pests require somewhere to live, food, warmth and a means of entry.

Food needs to be kept covered and in rigid, impermeable containers and any spilt food must be cleared up as soon as possible.

Ensure that there are no areas of static water, such as puddles, either in the building or in the immediate grounds.

Do NOT feed pigeons, wild cats etc. with left over food as this encourages pests and results in soilage from droppings.

Treatment with insecticides and rodenticides, by themselves, is rarely enough and it is essential that attention be paid to good general hygiene and structural maintenance.

Buildings should be well maintained, drains covered, damaged surfaces repaired, access holes sealed and leaking pipe work repaired. All of these can provide access to pests.

Close fitting windows and doors, fly screens and bird netting all help to reduce pest access.

All food preparation, storage and serving areas are subject to compliance with national and EU food hygiene legislation. Pest control in all food areas is subject to stringent controls under these regulations.

Waste storage areas should be well maintained and secure to minimise the likelihood of access by pests' esp. foxes, rats and pigeons. Clinical, household and food waste in particular will attract pests and should be stored off the ground in rigid, covered containers and, in the case of clinical / hazardous waste kept locked.

ESTATES AND FACILITIES MANAGEMENT

Increases in the incidence of Healthcare Associated Infections, and rising public concern, has highlighted the importance of appropriate management of healthcare environments and non clinical services.

Research has consistently shown that the environment can be a secondary reservoir for organisms with the potential for infecting patients. Good standards of basic hygiene, cleaning and regular planned maintenance can assist in preventing healthcare associated infections. This is more easily achieved if the built environment supports best practice.

The Code of Practice requires organisations delivering care to "provide and maintain a clean and appropriate environment in managed premises that facilitate the prevention and control of infection". Criterion 2 of the guidance states:-

"Premises and facilities should be provided in accordance with best practice guidance. The development of local policies should take account of infection prevention and control advice given by relevant expert or advisory bodies or by the ICT, and this should include provision for liaison between the members of any ICT and the persons with overall responsibility for the management of the service user's environment. Policies should address but not be restricted to:-

- Cleaning services
- Building and refurbishment, including air handling system
- Waste management
- Laundry arrangements for used and infected linen
- Planned preventative maintenance
- Pest control
- Management of drinkable (potable) and non drinkable (non-potable) water supplies
- Minimising the risk of Legionella by adhering to national guidance
- Food services, including food hygiene and food brought into the care setting by service users, staff and visitors."

Where primary care services are undertaken in third party shared / rented premises i.e. within health centres or community/acute hospitals (e.g. urgent care centres, Out of Hours GP services) the provider should satisfy itself that appropriate standards are being maintained in accordance with relevant national specifications.

Information and guidance is provided in sections of this Manual on some of these matters. This section offers guidance on the built environment (build and refurbishment works); planned preventative maintenance and water safety.

Building & Refurbishment works

Technical guidance is produced by the Dept of Health (and available via the Space for Health website) for healthcare building projects covering a range of health and social care provision. These include HBNs (Health Building Notes), HTMs, (Health Technical Memoranda) and HFN (Health Facilities Notes). A key document covering IPC aspects of buildings is HFN30, Infection Control in the Build Environment (currently under review). These documents are available at:

www.spaceforhealth.co.uk

When planning builds or refurbishment of primary care facilities, or when planning additional clinical services, the appropriate guidance must be consulted and L2 IP&C Team advice sought.

Areas or rooms where clinical activities are to be undertaken (e.g. wound dressings, insertion of urinary catheters, or other invasive procedures) or where medical consumables are to be stored should incorporate IPC requirements. If the disposal of blood and body fluids is likely to be undertaken in primary care then a dirty utility facility (sluice), is required. Consideration should be given to providing a suitable area for the testing and disposal of urine samples. Samples should never be disposed of into a hand wash sink.

Carpets are not acceptable in areas where clinical procedures are undertaken.

Minor Surgery Facilities

If enhanced services are provided consideration must be given to the suitability of the environment in which these will be conducted. Local Commissioners policies detailing this must be sourced and followed. If no such policy is available advice should be sought from IPC specialists. Details of requirements will depend on what type, or levels of procedures are to be undertaken. Minimal Access Interventions (MAIs) and ophthalmic procedures for example required mechanical ventilation systems whilst minor procedures can be conducted in a naturally ventilated room.

A range of expert guidance is available (via the Space for Health website) to support decision-making relating to minor surgery facilities. This includes:

- *Facilities for primary and community care services: policy and service context manual 2685:1.6 (2011) and planning and design manual 1183:0.8 (2011)*
- *Health Building Note (HBN) 10-02 Day Surgery Facilities (2007)*
- *Health Technical Memorandum (HTM) 03-01 Specialised ventilation for healthcare premises Parts A and B (2007)*
- *Humphreys H., Coia J.E. et al (2012) Guidelines on the facilities required for minor surgical procedures and minimal access interventions Journal of Hospital Infection 80: 103-109*

Water Safety

Legionella spp. which causes Legionnaires' disease is found naturally in water supplies. If appropriate control measures are not in place, the bacterium may multiply to a pathogenic level and outbreaks may follow. HTM 2040 and the Health & Safety Commission Approved Code of Practice (L8) give detail on the required management arrangements to reduce this risk. Processes should include routine, and repeated, risk assessment and the adoption of advice from suitably qualified specialists. There should be local policies detailing this. As stated above, if the facility is managed by a host organisation, the practice should seek assurance that water safety is appropriately managed.

Legionella risks increase where water outlets are used infrequently and thus Legionella can multiply. Staff should monitor the use of water outlets, all staff should report infrequently used outlets i.e. those not used daily, and these should be documented. Identified low use outlets should be subject to regular (usually weekly) flushing regimes. These should also be routinely documented using a simple log.

Guidance has recently been issued by the Department of Health (March 2012) on reducing risks of *Pseudomonas spp.* infections from tap water. This is of particular relevance to Augmented Care Units (renal, burns, critical care, haematology, neonatal units) however all health care providers are asked to assess the risks to their patient groups. Advice should be sought from the water advisor or from the organisation managing the facility as to whether a formal Water Safety Group is required and established and what measures practice staff should take to protect patients.

Planned Preventative Maintenance (PPM)

Most equipment used in health and social care carries PPM requirements as recommended by manufacturers. Good equipment management can prolong the life of the equipment, prevent costly breakdown, and ensure the equipment is fit for purpose. Failure of some equipment in healthcare may pose IPC risks. This would include, but is not limited to:-

- Bed Pan Washers/macerators
- Laundry equipment e.g. washers/dryers
- Vaccine/specimen Fridges
- Catering equipment e.g. fridges/dishwashers

Policies or processes should be in place to ensure this equipment is maintained in line with manufacturer's instructions and this maintenance should be documented.

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DECONTAMINATION OF MEDICAL DEVICES

INTRODUCTION

Decontamination requires the implementation of a number of processes, from purchasing equipment through to delivery and use, cleaning and disinfecting, packing, sterilizing, repair and disposal. To be effective it needs standards to be set for all elements of the device life cycle.

DEFINITION OF A MEDICAL DEVICE

A medical device is any instrument, apparatus, appliance, material or other article used alone or in combination and intended by the manufacturer to be used for humans for any of the following purposes:

- Control of conception
- Monitoring, diagnosis and investigation
- Treatment, alleviation or compensation for injury or incapacity
- Replacement or modification of anatomy and physiology

The vast majority of equipment used in patient care will be defined as a medical device.

COMPLIANCE WITH STATUTORY LEGISLATION

Effective management of medical devices involves compliance with a range of national and international legislative measures including:

- **EU Council Directive 93/42/EEC - Medical Devices Directive and EU Council Directive 93/34.EEC - Product Liability Directives**, are wide-ranging European Regulations that govern all aspects of medical devices production, management and use / re-use and form the basis of the directives used in the UK. These documents were subsequently amended by **Medical Devices Directive 2007/47/EC**

- **Health and Safety at Work etc. Regulations**, which require employers to assess the risks to their staff and service users (of all aspects of the medical devices life cycle)

- **Control of Substances Hazardous to Health (COSHH) Regulations**, which provide a framework of actions designed to control the risk from a wide range of substances, including biological agents (micro-organisms) which may contaminate medical devices

- **Health Technical Memorandum (HTM) 01-01 Decontamination of Re-usable Medical Devices (2007)** provides comprehensive guidance on all

aspects of device decontamination in compliance with European Legislation (as above)

DUTIES

It is the responsibility of healthcare staff to ensure that all medical devices used in patient care are appropriately decontaminated and fit for purpose. Duties of key personnel are clearly defined in HTM 01-01 (2007). Responsibility for the decontamination of medical devices should be clearly defined in staff job descriptions and a nominated lead should have overall responsibilities for ensuring all appropriate systems and processes are in place of relevance to the devices in use in compliance with the Code of Practice – criteria 2 and 9.

DUTIES OF THIRD PARTY CONTRACTORS

Medical devices owned / provided by third party contractors e.g. Out of Hours GPs and / or hosting organizations must comply with all legislation and expert guidance. It is the responsibility of those contracting with third party providers to assure themselves that clinicians and host organizations decontaminate and maintain medical devices in an appropriate manner (as outlined in this guidance) in order to minimize the risk of cross-infection or contamination. Cleaning schedules/check-lists would be an appropriate process for demonstrating compliance with standards.

DECONTAMINATION OF RE-USABLE MEDICAL DEVICES

The re-processing of medical devices required to be sterilized prior to re-use (either at point of use or prior to storage) is subject to stringent process controls. Since 2007 there has been a requirement for all such devices e.g. surgical instruments to be re-processed in a registered facility. It is no longer acceptable for local re-processing to be undertaken in any provider service *with the current exception of primary dental decontamination which is subject to the requirements of HTM 01-05.*

Primary care practices have a duty to ensure that re-usable medical devices required to be sterilized have arrangements in place to ensure that they:

- Use a decontamination service registered with MHRA who are compliant with the Medical Device Regulations (2002) and who use a Notified Body as their third party auditor or:
- Use a decontamination service which is subject to Care Quality Commission (CQC) audit or:
- Use CE marked single use medical devices or:
- Employ a strategy featuring a combination of the above

DOH 2007 Gateway 8199

RISK ASSESSMENT

Medical equipment is categorised according to the risk that particular procedures pose to patients and by assessing the microbial status of the body area being manipulated during the procedure. For example, items that come into contact with **intact** mucous membranes are classified as intermediate risk and require disinfection between each use as a minimum standard. Items that enter normally sterile body areas, or items that come into contact with broken mucous membranes, are classified as high risk and must be sterile before use.

Medical devices with more than one component *where one component is single use disposable and the other(s) are re-usable* can pose a significant risk of inadequate decontamination / re-processing if the re-usable component is not risk assessed. For example, diathermy forceps may have single use disposable tips and a re-usable handle. As these are used *within a sterile field* the re-usable handle requires sterilisation despite not coming into contact with broken skin or mucous membrane.

Risk Assessment for Decontamination of Equipment

Risk	Application of Item	Minimum Standard
Low	• In contact with healthy skin e.g. furniture, mattresses, surfaces, or no contact	Clean
Intermediate	• In contact with **intact** mucous membranes • Contaminated with virulent or readily transmissible organisms (body fluids) e.g. commode pans / bed pans • For use on immuno-compromised patients	Disinfect, or single use
High	• In contact with **broken** skin or mucous membrane • For introduction into sterile body areas	Sterilize, or single use

Adapted from Medical Devices Agency, Part 2 (1996) now MHRA

DECONTAMINATION - DEFINITIONS

Decontamination of Re-Usable Devices

Decontamination is the term widely used to collectively describe the combination of processes of cleaning, disinfection and sterilisation to make a re-usable device safe for further use on patients and safe for the user. Lawrence and May (2003) describe decontamination as a process of eliminating contaminants, which include micro-organisms and other unwanted material which would otherwise be conveyed to a susceptible site and cause infection or some other harmful response. The effective decontamination of re–usable devices is essential to reduce these infection risks. Decontamination methods used will depend on the nature of the micro-organisms present and the infection risk associated with the surface, equipment, device or procedure.

Cleaning

Cleaning is a process which physically removes contamination but does not necessarily destroy micro-organisms. The reduction of microbial contamination will depend upon many factors including the efficiency of the cleaning process and the initial contamination. A further reduction will occur on drying, as some micro-organisms cannot multiply on a clean dry surface. Cleaning is the first step in the decontamination process. It must be carried out before disinfection and sterilisation to make these processes effective. Thorough cleaning is extremely important in reducing the possible transmission of all micro-organisms, including the prion protein that causes vCJD.

Liquid detergent and warm water is an effective cleaning agent. Hot water should not be used, as it will coagulate proteins (body fluids) making it more difficult to remove from the equipment. Hard surface detergent wipes are also available for equipment cleaning.

Disinfection

Disinfection is defined as a process used to kill or remove pathogenic micro-organisms but which cannot usually kill bacterial spores (Lawrence and May, 2003). Disinfection processes, if used appropriately will reduce micro-organism counts to safe levels.

Disinfection processes can be used on both equipment and environmental surfaces and usually involves the use of either a disinfectant solution or a structured process using equipment such as bed-pan washer-disinfectors, dishwashers and washing machines where temperature of water or steam provides the disinfection process.

Disinfection using antiseptic solutions is the process used to reduce microbial contamination of the skin, mucous membranes and other body tissues and cavities.

Sterilisation

Sterilisation is a range of processes used to render the device free from viable micro-organisms, including spores. Processes include moist and dry heat using autoclaves and / or hot air ovens; low temperature steam and formaldehyde; ethylene oxide and gas plasma.

In healthcare, sterilisation processes are usually confined to the application of moist heat using autoclaves.

DECONTAMINATION ADVICE FOR HEALTHCARE STAFF

If the method of decontamination is in doubt, then advice may be sought from:

- The device supplier and/or manufacturer of the equipment
- Local decontamination lead and / or infection control lead

CLEANING AND DECONTAMINATION SOLUTIONS

The following products are suitable for the decontamination of the majority of health care equipment and surfaces. Specialised equipment should be decontaminated following manufacturers' instructions.

Neutral detergent (washing-up liquid) – a mild detergent that is adequate for most cleaning of equipment and surfaces and will mechanically remove (by cleaning) the majority of micro-organisms contaminating equipment. Refer to bottle before use, but usually 5ml in 1 litre of warm water is sufficient.

Hard surface wipes – There are two main types of wipe. Some contain 70% alcohol or other disinfectants and others contain a detergent. Wipes are cheap and effective and are portable (in drums/packs) and require no access to water. They can also be used on large items of equipment. Detergent wipes can be used instead of detergent and water. Alcohol wipes can be used for surfaces requiring disinfection as well as cleaning e.g. dressing trolleys. Where gross soilage/contamination is present a detergent wipe is preferable as alcohol is inactive in the presence of soil. There is no benefit in purchasing wipes that contain other chemicals or disinfectant agents.

Chlorine-releasing agents – These contain a chlorine-releasing agent and are often referred to as bleach solutions or hypochlorite. They are used for spillages of blood and high risk body fluids such as faeces and can be used to disinfect service user contact surfaces in an isolation room and also during outbreaks of infection e.g. diarrhoea and vomiting for cleaning of both the environment and equipment such as commodes. Staff using such products must be familiar with COSHH regulations. Apron and gloves must be worn for preparation and use. Refer to bottle for correct dilution. Do not use on acids (e.g. vomit, urine) as chlorine gas may be

liberated. Do not use on stainless steel, as it will discolour. See Spillage section for further guidance.

Non-abrasive cream cleaner – Mild cleaner for general hard surface use e.g. sinks

Toilet cleanser/sanitizer – cleanser which can contain bleach and/or lime-scale remover

Thermal washer/disinfector e.g. bedpan washer/dishwasher – designated machinery for thermal (heat) disinfection of articles where a higher temperature and controlled method of cleaning are required e.g. bedpans and / or cutlery / crockery.

Decontamination of equipment prior to loan, servicing or repair

It is the responsibility of the person/department using the equipment to ensure that it is visibly clean and free of surface contamination with blood and/or body fluids if being sent for service, maintenance or repair either on or off site (HSG(93)26).

A decontamination notice must be attached to the equipment to warn others of the type of contamination it may have been exposed to and whether it has been possible to decontaminate it. Many manufacturers provide their own decontamination certificates with their equipment and will not accept returned equipment without an accompanying certificate. This is appropriate practice and should also apply to equipment being repaired or serviced on-site.

An example of a decontamination certificate is provided in an appendix to this section.

MEDICAL DEVICE CLEANING PROCESSES – GUIDANCE NOTES

- Comprehensive guidance on cleaning of both medical devices and other patient specific equipment is available in two recent publications:

  - National specifications for cleanliness in the NHS: a framework for setting and measuring performance outcomes (NPSA 2007) and revised healthcare cleaning manual (NPSA 2009)

- Third party contractors should provide assurance that medical devices are adequately decontaminated as per this guidance

- Cleaning of medical devices and other patient specific equipment should be subject to regular, on-going monitoring of the standard of cleaning

- Cleaning schedules specifying the frequency of cleaning should be devised incorporating all medical devices / equipment used locally. These schedules should be available for all staff and a simple check-list should be devised for staff to sign after completion of cleaning

- Re-usable medical devices must be decontaminated between each patient use. Some larger items of equipment e.g. IV stands, notes trolleys etc. should be cleaned weekly. Frequency of cleaning is specified in the documents above.

- The user of the device is responsible for ensuring that it is visibly clean and free from contamination with blood and/or body fluids following each procedure or care episode and prior to sending for service or repair internally and externally.

- Dirty equipment awaiting cleaning, should be stored separate from clean items and should be cleaned as soon as possible after use and then stored appropriately

- Cleaning of equipment should take place in a designated area e.g. dirty utility or away from clean items that could become contaminated during the cleaning process

- Personal protective equipment (PPE) should be worn when cleaning medical devices. Disposable gloves (or household gloves) together with a plastic apron should be worn to protect hands and clothing

ALPHABETICAL LIST OF EQUIPMENT WITH DECONTAMINATION METHOD AND FREQUENCY

This list contains common use equipment only and is not exhaustive.

EQUIPMENT	RECOMMENDED DECONTAMINATION PROCEDURE
Auriscope ear pieces	Wash with neutral detergent and dry then wipe with 70% alcohol wipe and air dry
Baby changing mats	Always replace mat if ripped or damaged Protect with disposable paper and change after each use. Clean mat at the end of the session or when contaminated with neutral detergent and hot water Follow with a hard surface disinfectant wipe if contaminated with blood or body fluids Protect mat during use with disposable paper roll
Bed pans, commode pans, urinals	Disposable or Decontaminate in washer-disinfector
Bed pan shells (holders for disposable bed pans)	Wash in warm detergent and water, rinse and dry with paper towels
Buckets (used to soak dressings)	Ideally use disposable liner and change after each patient. Always wash after removal of liner. Wash with neutral detergent and warm water, rinse and dry thoroughly. Store inverted and separated.
Computer keyboards	Cover with wipeable cover. Clean with detergent and warm water. Dry with paper towels. Alternatively use commercial wipes for electronic equipment
Pillows	Cover with impermeable cover and decontaminate using detergent and water. Dry thoroughly.
Sphygmomanometer cuffs	Follow manufacturer's recommendations if available. Wipe with detergent and warm water. Dry with paper towels. Leave to thoroughly dry at room temperature
Stethoscopes (diaphragm and ear pieces)	Alcohol wipe and air dry
Suction bottles	Disposable liners should be used and discarded as clinical waste Between patients, rinse thoroughly with neutral detergent and hot water, dry with paper towels and store dry. Ensure filters are changed regularly.
Suction catheters	Single use only. Dispose of as clinical waste after single use. This includes Yankeur catheters.
Suction tubing	Use disposable tubing and change after individual patient use.
Telephones	Alcohol wipes
Thermometers (clinical)	Wipe thoroughly with 70% alcohol wipe, store dry or use disposable covers.

Toys	Clean plastic/wooden toys with neutral detergent and warm water and dry thoroughly Soft toys must not be used due to risk of contamination and cross infection.
Treatment couch	Ensure cover intact. Protect with disposable paper and change after each use Clean at the end of the session or when contaminated, with neutral detergent and warm water. Follow with a hard surface disinfectant wipe if contaminated with blood or body fluids.
Trolleys (dressing)	Daily, wash thoroughly with neutral detergent and dry. Before use and between dressings wipe top with 70% alcohol wipes and allow to dry If visibly contaminated wash with neutral detergent and dry thoroughly prior to alcohol wipe.
Vaginal speculae	Disposable or return to SSD for sterilization
Water cooler	Clean and maintain as per manufacturer's instructions
Work surface	Clean at the end of the session or when contaminated, with neutral detergent and warm water Follow with an alcohol wipe if contaminated with blood or body fluids

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DECLARATION CERTIFICATE FOR HEALTH CARE EQUIPMENT

Prior to Inspection, Servicing, Repair or Return of Medical and Laboratory Equipment.

Tick A if applicable. Otherwise complete all parts of B, providing further information if applicable.

This equipment / item has not been used in any invasive procedure or been in contact with blood, other body fluid, respired gases, pathological samples or other hazardous substance. It has been cleaned in preparation for inspection, servicing, repair or transportation.

Has this equipment/item been exposed internally or externally to hazardous materials as indicated below?

Blood, body fluids, respired gases, pathological samples **YES/NO**	Chemicals or substances hazardous to health **YES/NO**
Radioactive substances (Detail below checks made for residual activity) **YES/NO**	Other hazards **YES/NO**

Please provide details of any hazards where necessary:

.....

Has this equipment/ item been cleaned and decontaminated? Tick appropriate boxes.

External clean	Chemical disinfection, external
Heat disinfection/sterilisation	Chemical disinfection, internal

Please specify any likely areas of residual contamination, such equipment must not be returned/ presented without the prior agreement of the recipient whose reference or contact name must be given above:

.....

I declare that I have taken all reasonable steps to ensure the accuracy of the above information, in accordance with HSG (93)26.

Authorised signature: **Date:**

Name (printed) **Dept:**

Position: **Tel No**

SINGLE USE AND SINGLE PATIENT USE MEDICAL DEVICES

Single use medical devices are manufactured to be used on a single occasion and then discarded. They are not designed or manufactured for re-use even on the same service user. The re-use of single use devices is dangerous and has legal implications under the Medical Devices Regulations (2002) and Medical Devices (Amendment) Regulations (2008).

The Medicines and Healthcare products Regulatory Agency (MHRA) issued guidance in 2006 – *DB2006(04) Single-use Medical Devices: Implications and Consequences of Reuse.* This document was re-issued as version 2 in 2011 (web version only available from MHRA).

The MHRA state that "to reuse a single-use medical device without considering the consequences could expose the patient and staff to risks which outweigh the perceived benefits of using the devices".

The MHRA advises against the reuse of any single-use medical device.

MHRA Key points:

- A device designated for 'single-use' must not be reused. It should only be used on an individual patient during a single procedure and then discarded. It is not intended to be reprocessed and used again, even on the same patient
- The reuse of a single-use device can affect their safety, performance and effectiveness, exposing patients and staff to unnecessary risk.
- The reuse of single-use devices has legal implications:
    - Anyone who reprocesses or reuses a device intended by the manufacturer for use on a single occasion, bears full responsibility for its safety and effectiveness;
    - Anyone who reprocesses a single-use device and passes it to a separate legal entity for use, has the same legal obligations under the Medical Device Regulations as the original manufacturer of the device.

Manufacturers are required to clearly identify single-use devices by displaying a “do not reprocess” symbol as shown below.

Figure 1: “Do not reprocess” symbol

TECHNICAL ISSUES

Reprocessing single-use devices may affect the capabilities and/or the materials from which the device is made.

Many single use devices are unable to withstand the decontamination and sterilization processes used in health care.

The manufacturer will provide a warranty for a medical device made for reuse if the recommended reprocessing is carried out. If a single use item is reprocessed, the manufacturer’s warranty will not apply and the re-processor will take on this responsibility

PROBLEMS ASSOCIATED WITH RE-PROCESSING

Inadequate cleaning and decontamination - the cleaning process must be able to access all parts of the device to enable complete decontamination, the cleaning agents must be completely removed at the end of the process and this process must be validated by the processor. Many single-use devices have inaccessible angles and narrow lumens making cleaning and validation impossible

Material alteration - Exposure to chemicals and other processes may cause corrosion or alteration of the device materials making it unsafe to use e.g. plastics may become brittle and break during subsequent use.

Mechanical failure - Some devices if repeatedly processed may over time become stressed and fail or break in use e.g. single-use drills, burrs and blades, etc.

Potential for cross infection – Cross infection is a major risk associated with the re-use of single-use items due to failure to clean, decontaminate, disinfect or sterilize adequately.

Reactions to endotoxins - These are residues of bacteria which withstand exposure to heat and chemicals and may remain after re-processing and sterilization. The sterilization process may not inactivate the toxins even when cleaning and sterilization is effective in killing the bacteria.

Residues from chemical decontamination agents - Some materials used in the device's manufacture may absorb the chemicals used in the decontamination process resulting in chemical burns or sensitization of the patient.

Reprocessing a medical device designed or designated as single use requires the device to undergo an extensive validation process to ensure that it is safe to reuse. The majority of organisations do not have the finances or the facilities to carry out this process as the re-use of these devices is likely to carry a significant risk.

Prion disease (inc. CJD)

The abnormal proteins associated with prion diseases are highly resistant to conventional methods of decontamination and sterilization. It is therefore an even greater risk to reprocess equipment that may have been exposed to patients known or suspected of being infected with this agent. (See section – Infections with Specific Alert Mechanisms for further information).

CONCLUSION

To re-use a single-use device without considering the consequences to the organisation, the professional and the patient could expose each or all of these individuals to significant levels of risk both personal and financial.

MEDICINES

Medicines, including topical medical products must be considered as single use items unless the label and / or supporting manufacturers' guidelines clearly state that the item has been prepared as a multi-dose item.

A risk assessment must be carried out (in conjunction with Medicines Management) for each individual product.

Ref: General Products Safety Regulations (2005)

THE USE AND RE-PROCESSING OF *SINGLE PATIENT USE DEVICES*

There are a number of medical devices that are manufactured for limited re-use by the individual to whom they are initially supplied. The majority of these devices are non-invasive and do not require sophisticated reprocessing to ensure they are safe for re-use.

It is essential that when these devices are re-used there are written manufacturer's guidelines available for their use, cleaning, decontamination and disposal. **All staff should have access to manufacturer's guidelines which must be retained in a suitable folder / location.**

Professional staff who use or supply these devices to patients must understand the requirements for safe use, decontamination between uses and disposal.

TYPES OF SINGLE PATIENT USE DEVICES

Patient self-administered intermittent urinary catheters

These are issued to an individual patient for their own use. They should be washed under running water after each use and stored clean and dry. Each catheter should be replaced according to the manufacturer's instructions or at least once a week, sooner if damaged. If used by a healthcare professional on behalf of the patient they must be treated as single use items and disposed of after a single use.

Face masks for oxygen administration

These items should be kept with the individual patient, particularly if the oxygen cylinder is shared. The facemask should be washed daily, and if soiled, with warm water and detergent, dried and stored dry. The mask should be replaced weekly. Tubing must also be single patient use, changed if wet and replaced weekly.

Feeding syringes for patient with well established PEG feeding tubes

Specific oral syringes are manufactured for use with PEG feeding tubes e.g Baxa syringes. They are supplied as a clean not sterile product. Manufacturers' guidelines for re-use must be followed. Alternatively, they should be thoroughly cleaned after each use with warm water and detergent, rinsed in running water, shaken to remove water particles from the barrel of the syringe and dried externally with disposable paper towels prior to storing in a dry, covered container e.g. plastic food container with lid. These are for use by an individual patient, and must be replaced daily (or in accordance with manufacturers' instructions).

Single use disposable syringes are NOT appropriate for use with PEG feeding tubes. If used, they must be disposed of after a single use.

Newly inserted PEG feeding tubes are classed as surgical wounds and thus feeding syringes should be sterile, used once only and discarded after single use until such times as the stoma is healed.

Nebulisers

These items should be kept with the individual patient. The nebuliser should be rinsed after each use with warm water ONLY (no detergent), shaken to remove water particles and drug residues and then dried with disposable paper towels and stored dry in a clean, dry, covered container. The nebuliser should be replaced weekly provided it maintains its efficacy or as per manufacturer's instructions. A label can be attached to the storage container indicating the date for change. Masks (if used) should be decontaminated as above.

Placebo inhalers (for prescribed inhaled therapy)

Currently there is no evidence upon which to base local protocols for decontamination of these devices, when a mouthpiece cannot be used, therefore manufacturer's instructions must be followed. Ideally, devices that can be fitted with a disposable mouthpiece should be used.

Where these products are in use, guidance should be sought from the local respiratory nurse or clinician who prescribed the device. As a minimum, patients with a known or suspected respiratory infection should not use communal inhalers.

Appropriate methods of decontamination (in the absence of manufacturer's guidance) include: washing with liquid detergent and warm water followed by thorough rinsing in cold water, shaking to remove water particles and drying with paper towels. In addition, disinfecting in a freshly prepared solution of sodium hypochlorite (1,000 ppm) followed by rinsing under running water, shaking to remove water particles and then drying with paper towels can be undertaken after initial washing in detergent.

Other items

There may be other items that can be designated single patient use. Each of these must have written guidelines for use, decontamination and frequency of replacement, preferably supplied by the manufacturer.

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ASEPTIC TECHNIQUE

A: CARE OF INVASIVE DEVICES

INTRODUCTION

The following section provides guidance for the most commonly performed nursing procedures and clinical practices in relation to the control of infection. The following advice reflects current expert opinion and guidance incorporating relevant research and best practice recommendations.

Expert advice should always be sought should staff require it. Further guidance can be obtained from the following specialists:

- Nutritional Support Team
- Tissue Viability/Wound Management Nurse Specialist
- Respiratory Nurse Specialist
- Continence Advisor

PRINCIPLES OF ASEPSIS

Asepsis means “without micro-organisms” thus an aseptic technique is a method used to prevent contamination of wounds and other susceptible body sites or invasive device insertion sites by potentially pathogenic organisms which may lead to infection. This can be achieved by ensuring that clinical staff understand the principles, follow the recommended practices and that only sterile equipment is used during invasive procedures.

All staff performing invasive procedures or managing wounds should receive appropriate training.

INFECTION RISKS IN IMMUNOCOMPROMISED PATIENTS

Infection is caused by micro-organisms which invade the host’s immunological defence mechanisms, although susceptibility to infection may vary from person to person. The risk of infection is increased if the patient is immunocompromised by:

- Age – neonates and the elderly are more at risk due to less efficient immune systems
- Underlying disease – for example those patients with a severe debilitating or malignant disease or conditions such as diabetes
- Prior drug therapy – for example immunosuppressive drugs, steroids or broad-spectrum antimicrobials
- Patients undergoing surgery

In addition, the following factors should be considered when undertaking aseptic procedures on immunocompromised patients:

- Classic signs and symptoms of infection are often absent
- Untreated infection may disseminate rapidly
- Infections may be caused by unusual organisms or organisms which, in most circumstances are non-pathogenic i.e. do not cause disease
- Some antibiotics are less effective in immunocompromised patients
- Repeated infections may be caused by the same organism
- Super-infections, where a patient acquires a more pathogenic organism (of the same or a different species) than the one already causing infection, require nursing care of the highest standard, including strict adherence to aseptic technique to prevent such infections

WHEN TO USE AN ASEPTIC/NON-TOUCH TECHNIQUE

An aseptic technique should be used during any invasive procedure which breaches the body's natural defences e.g. the skin, mucous membranes, or when handling equipment which will enter a normally sterile area. The principles of asepsis should be applied to:

- Wound dressings
- Insertion *and manipulation* of invasive devices e.g. urinary catheters, all intravenous devices, PEG tubes etc.

THE PRINCIPLES OF ASEPSIS

Action	Rationale
Hand hygiene	Hand washing is the single most important procedure for preventing cross infection. Transient bacteria can be almost completely removed by effective hand hygiene techniques. In addition, resident bacteria (which can cause infections following highly invasive procedures) can be reduced by the use of an antiseptic detergent or the application of an alcohol hand gel following a social handwash. Hands should always be washed before and after contact with susceptible sites. Hand Hygiene may be required several times during a procedure.
Gloves	Gloves should be worn for all contact with mucous membranes and invasive devices e.g. urinary catheters. Sterile gloves should be worn for the insertion of invasive devices and minor surgical procedures. Clean, non-sterile gloves are acceptable for most wound care procedures and on-going device-related care.
Protective clothing	Water repellent plastic aprons will need to be worn to prevent staff clothing from becoming contaminated with bacteria from wounds or invasive devices. It will also protect the wound/invasive device from bacteria that may be present on staff uniform/clothing. Sterile impermeable gowns may be required for some minor surgical procedures.
Non-touch technique	The susceptible site should not come into contact with any item that is not sterile.
Equipment	All instruments, fluids and materials that come into contact with a wound, surgical site or during the insertion/manipulation of an invasive device, must be sterile to reduce the risk of contamination. This includes not only products used during the procedure but any final dressing (s). The sterility of the device/fluids/materials must be protected from contamination.
Dressing trolley	The trolley should be cleaned with detergent and water if it becomes physically contaminated. Alcohol wipes may be used between uses if necessary. The sterile field will normally protect the trolley from contamination. Ensure sticky tape residues are removed from the trolley rails. (Ideally these trolleys should not be used for other purposes). Alternatively, for some procedures, plastic trays may be used. These must be cleaned before and after each use.

CHRONIC WOUND MANAGEMENT

Early referral of patients with chronic wounds to specialist health professionals e.g. tissue viability teams and, in the case of diabetic foot ulcers, urgent referral to a multidisciplinary foot care team, is indicated to promote healing and reduce the risk of infection.

This section is written using the following guidance documents:

1. Department of Health (2011*) High Impact Intervention – reducing the risk of infection in chronic wounds care bundle*
2. Dougherty L and Lister S (editors) (2008) *The Royal Marsden Hospital Manual of Clinical Nursing Procedures Ch. 48 wound management*

Comprehensive advice on the management of wounds should be sought from specialist tissue viability nurses as this is a complex and constantly evolving practice. This section refers to those aspects of chronic wound care that may contribute to infection / cross-infection.

A chronic would in defined as a wound that does not heal within an expected time frame i.e. 6 weeks despite optimal correction of any underlying pathological processes interfering with the body's normal process of wound healing. The majority of chronic wounds are:

- Venous ulcers
- Pressure ulcers
- Diabetic ulcers

Other types of chronic wounds include arterial leg ulcers and wounds from fungating carcinoma. Acute wounds may also become chronic.

In chronic wounds there is a clear increase in colonisation, bacterial burden and infection caused by micro-organisms, including MRSA. Chronic wounds colonised with MRSA are at increased risk for both wound infection and systemic infection (especially blood stream infections) particularly if another acute illness occurs requiring hospitalisation. Patients with MRSA-colonised wounds present an increased cross-infection risk to others and the environment.

PREVENTING CONTAMINATION AND CROSS INFECTION

Wound care should only be carried out by those who are deemed competent to do so and have received training in the principles of asepsis and appropriate wound management.

The principles of asepsis should be applied to all wounds irrespective of causation or type e.g. surgical wound, trauma wound, chronic wound etc.

Personal protective equipment – disposable apron and gloves – must be worn and changed between each patient

Wounds must be assessed as per local policy at every dressing change

The wound must be dressed creating an optimum wound healing environment according to the local wound management formulary

The use of systemic antibiotics is considered, as per local formulary, for non healing or progressive ulcers with clinical signs of localised and / or systemic infection

Dressing type and frequency of change, wound assessment and next wound review date must be routinely documented

There must be clear communication – between team members and with other health or social care providers – of those service users known to be infected or colonised with pathogenic micro-organisms inc. MRSA. This is a requirement of the Code of Practice 2010.

Service users with pressure ulcers must be placed on appropriate pressure relieving / reducing mattresses and cushions

Pressure is offloaded in service users with diabetic foot ulcers, including provision of appropriate footwear and insoles

In addition, the following may help to reduce wound contamination/cross-infection:

- Wound dressings are best performed in a designated treatment room, which is subject to regular cleaning
- Dirty dressings should be placed immediately into a clinical / offensive waste bag for disposal
- Wounds and any sterile equipment should be exposed for the shortest possible time. Wound temperature can fall by 12°C if the procedure is prolonged or the cleansing lotion is cold. It can take 3 hours or longer for the wound to return to normal temperature during which time cellular activity is reduced and therefore the healing process slowed. During exposure of the wound there is a much higher risk of environmental contamination of tissues particularly if wound care is undertaken in a well ventilated, draughty or high activity area
- Sodium chloride 0.9% (normal saline) is a physiologically balanced solution that is compatible with human tissue and used *at body temperature* it is the safest and best cleaning solution for non-contaminated wounds

- Evidence has demonstrated that tap water can be used for cleaning chronic wounds e.g. leg ulcers and pressure sores. However, even if using tap water the principles of asepsis still apply.
- Wound dressings should be kept dry at all times when in situ. Leakage from wounds e.g. leg ulcers will be contaminated with bacteria even if not clinically infected. “Strike through” can contaminate surfaces and hands leading to cross-infection.

INFLAMMATION AND INFECTION or bacterial burden

All chronic wounds are known to harbour a variety of bacteria to some degree and this can range from contamination through colonization to infection. When a wound becomes infected it will display the characteristic signs of heat, redness, swelling, pain, heavy exudate and malodour. The patient may also develop generalized pyrexia. However, immunosuppressed patients, diabetic patients or those on systemic steroid therapy may not present with the classic signs of infection. Instead they may experience delayed healing, breakdown of the wound, presence of friable granulation tissue that bleeds easily, formation of an epithelial tissue bridge over the wound, increased production of exudate and malodour and increased pain. Careful wound assessment is essential to identify potential sites for infection, although routine swabbing is not considered beneficial. Methods available for the management of wound infection or to decrease the bacterial burden in the wound include debridement, antimicrobial dressings e.g. those containing iodine or silver, topical negative pressure therapy and antibiotic therapy. Honey and essential oils have also been used. Appropriate antibiotic treatment of the infection should be determined from a positive wound swab.

WOUND SWABS

Routine wound swabs are not recommended unless there are clinical signs of infection or when non-healing persists. Many chronic wounds will be colonised with a variety of bacteria, the presence of which may not be clinically significant. Swabs, if indicated, should be taken from the base or margin of the wound following the removal of dressing residues and slough if present.

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ASEPSIS IN MINOR SURGICAL PROCEDURES

See local commissioning / contracts policy.

MANAGEMENT OF OCCUPATIONAL EXPOSURE TO BLOOD-BORNE VIRUSES

What to do in the event of an inoculation injury

Identify your injury

Blood or bodily fluids contaminating the mucous membranes
The skin is penetrated by a sharp contaminated with blood or bodily fluids
A bite or scratch, creating a break in the skin.

What do I do next?

Mucutaneous injury	Percutaneous injury
Rinse with copious water	Encourage bleeding by placing pressure on the area
	Wash with soap and water
	DO NOT suck or scrub
	Dry and cover with a water proof dressing

IMMEDIATELY inform the following about the injury.

Manager
Occupational Health

Is there anything else I need to do?

A local incident reporting form needs to be completed: IR1

How do I contact Occupational Health?

9am – 5pm Monday – Friday

United Lincolnshire Hospitals NHS Trust Occupational Health

Telephone Lincoln 01522 573597.
Telephone Boston 01205 445315.
Telephone Grantham 01476 464228.

OUT OF HOURS CONTACT ACCIDENT AND EMERGENCY

SHARPS / "SPLASH" INJURY
ACCIDENTAL EXPOSURE TO BLOODBORNE VIRUSES

SHARPS injuries can arise from needles, scalpel blades, lancets, other pointed instruments and equipment, glass shards, sharp pieces of bone and penetrating bites and scratches. ALL STAFF have a responsibility to ensure the safe management of sharps and to follow these guidelines if a sharps injury occurs

FOLLOWING

WASH

- Wash area well with warm running water and soap
- Encourage gentle bleeding. Do not suck wound.
- Dry and cover with waterproof dressing (no visible air-holes)
- Rinse eyes or mouth with copious water

REPORT

- Report to occupational health / line manager / A and E using local reporting framework. Reporting of the sharp injury / splash must not be delayed because the staff member may require risk assessment and treatment e.g. PEP.

RECORD DETAILS

- Try to identify source patient. If a patient/source can be identified, obtain basic details (name, DOB, contact number, GP). Bring these with you when attending for risk assessment.
- Insert local contact details here (OH / A/E etc.):

- Complete accident form.
- Ensure source patient details are collected. If appropriate notify patient that they may be contacted once the risk assessment has been completed.

BLOOD SAMPLES

- It may be necessary to obtain blood samples from the source patient but INFORMED CONSENT must be obtained. The OHD/risk assessing doctor should organise this with the source's GP. The OHD should then follow up results and co-ordinate any further action.

MANAGEMENT OF INFECTIONS IN STAFF

REFER TO OCCUPATIONAL HEALTH

United Lincolnshire Hospitals NHS Trust Occupational Health

Telephone details:

- **Lincoln 01522 573597**
- **Boston 01205 445315**
- **Grantham 01476 464228**

INTRODUCTION

From time to time, health care staff may develop infections which could expose some service users and colleagues to the risk of infection.

Symptoms or signs of infection can appear trivial to staff who are usually fit and well, but can cause severe problems in vulnerable service users.

REPORTING

Early reporting and implementation of suitable control measures can prevent cross-infection and subsequent outbreaks of infection.

Confirmed or suspected transmissible infections in health care staff should be reported by the staff member to the Practice Manager or lead clinician. In addition, advice can be sought from the local Infection Control Advisor / HPU / Consultant Medical Microbiologist if there is concern regarding spread to other staff and/or service users.

TREATMENT

If necessary, treatment should only be undertaken by the Occupational Health provider (OH) or the individual's General Practitioner (GP), as appropriate.

EXCLUSION FROM WORK

The necessity for exclusion from work should be discussed with the lead clinician and in liaison with the Infection Control Advisor / Health Protection Unit (HPU) / Consultant Medical Microbiologist / Environmental Health Officer (EHO) as necessary.

Staff with gastro-intestinal infections who handle or prepare food in the course of their work may be required to stay off work until their stool specimens are free of micro-organisms. Guidance must be sought from Occupational Health or the individual's GP who will make the decision regarding return to work after liaising with a medical microbiologist/CCDC where necessary.

Although not an exhaustive list, the following table summarises the risks to service users from staff with some infectious diseases.

INFECTIOUS DISEASES AND ADVICE TO STAFF

INFECTION	SERVICE USER RISKS	ADVICE TO STAFF
BLOOD BORNE VIRUSES (BBV) including Hepatitis B Hepatitis C HIV	The risk of transmission of a blood borne virus from a HCW to a service user is extremely low. Not all staff will be aware of their possible infectious status therefore standard infection control practice should be applied at all times.	Staff should seek confidential advice from their GP or local clinician as soon as possible following diagnosis, or if concerned that they may have been exposed to a BBV. An assessment will be made regarding further clinical management, in consultation with the HPU. If a staff member is diagnosed with a BBV some modification of working practices may be necessary in some situations.
INFECTED SKIN LESIONS or skin conditions, i.e. psoriasis, eczema, impetigo etc.	A bacterial infection is the usual cause which can then be spread to service users. Particularly vulnerable service users are those with open lesions, surgical or traumatic wounds, the immuno-compromised or elderly.	Staff suffering with these infections may be required to remain off duty until the infection has resolved unless it can be covered by an occlusive dressing. Antibiotics are often required.
CHICKEN POX (varicella)	Non-immune and immune-suppressed service users may require active protection e.g. immunisation and guidance should be sought from the service users GP immediately exposure is confirmed or suspected.	Non-immune health care staff, i.e. those who have not had the disease or vaccination, should seek immediate medical advice and may be medically suspended from clinical work from day 8-21 post- exposure. Non-immune pregnant staff (particularly < 20 weeks pregnant or in last 3 weeks of pregnancy) must discuss with their Obstetrician urgently. Immune-suppressed staff who have had contact with an infectious case must discuss their exposure with their clinician and / or Occupational Health provider immediately. Immunisation against varicella (chickenpox) is now widely available for non-immune individuals. See section – Vaccination Programme for Staff
COLD SORES and GENITAL HERPES INFECTIONS	Caused by the herpes simplex virus, which may expose some service users who are immuno-compromised, neonates and pregnant women to particular risks. Viral encephalitis may ensue in these susceptible service users.	Depending on working environment staff may need to remain off duty until resolution of symptoms and lesions are dry. Seek medical guidance. Do not touch lesions, wash hands thoroughly.
DIARRHOEA and/or VOMITING	These may be symptoms of food poisoning or viral infection, which can result in cross infection causing outbreaks. Viral outbreaks spread rapidly & vulnerable service users are at particular risk especially babies and the elderly.	Staff must remain off duty until 48 hours after resolution of the symptoms. Notify the Practice Manager / lead clinician if more than 2 staff affected.

INFECTION	SERVICE USER RISKS	ADVICE TO STAFF
INFLUENZA	A viral infection which usually spreads to service users and other staff if prompt action is not taken. It can cause high morbidity and mortality rates, particularly in the elderly.	Staff should remain off duty until resolution of symptoms. Uptake of influenza vaccine is recommended for both care workers and vulnerable service users.
MEASLES, MUMPS and RUBELLA	Cases are highly infectious.	Non-immune staff must inform Practice Manager / lead clinician of exposure to an infectious source. Non-immune pregnant staff, i.e. those who have no history of disease and/or no positive antibody test must seek medical guidance especially in the first trimester of pregnancy.
SCABIES	Staff may be infected by skin to skin contact with service users. Scabies is often difficult to diagnose in the elderly.Service users remain contagious until 24hrs post-treatment. If > 1 service user affected, treatment will need to be undertaken simultaneously.	Staff contacts of infested service users may require treatment but this is unlikely to occur in General Practice. If staff member is affected, family contacts will also require treatment. Contact IC/HPU for further guidance. .
SORE THROATS	These may have many causes but are usually viral. Bacterial causes e.g streptococcal infections can cause severe infections in vulnerable service users.	Staff should remain off duty until resolution of symptoms, if unwell and with a severe sore throat associated with pyrexia. Notify the Practice Manager / lead clinician if more than one member of staff is affected.
TUBERCULOSIS	Physical isolation is only required for those who are pulmonary smear positive for AFBs (acid fast bacilli). Isolation should continue until at least 14 days after commencing appropriate anti-tuberculosis therapy and/or until advised by TB specialist/team.	The necessity for exclusion of diagnosed staff members from work will require discussion by the lead clinician in conjunction with the TB specialist team. Contacts will be investigated by the TB nurse specialist and HPU
PARVOVIRUS (FIFTH DISEASE)	Mild, non-febrile viral disease characterized by erythema of cheeks. Most infectious prior to development of rash but not infectious thereafter.	Can cause foetal abnormality. Pregnant staff less than 20 weeks pregnant should seek advice from their obstetrician.

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