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Community Infection Prevention and Control Policy for Domiciliary Care

Hand hygiene

HAND HYGIENE

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Date Adopted: .....

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1. Introduction

The aim of this guidance is to promote thorough hand hygiene amongst all health and social care staff, to prevent healthcare associated infection, thereby reducing service user's morbidity and mortality.

All staff should have training on hand hygiene, it is best practice that this is provided on a regular basis e.g. annually. Hand hygiene is one of the most important procedures for preventing the spread of disease. It is essential that everyone takes responsibility to ensure that the care provided is carried out in a safe manner.

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

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

2. Involving service users and the public in infection prevention and control

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

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

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

3. Microbiology of the hands

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

- **Resident micro-organisms (commensal or normal flora)**
  These bacteria live on the skin of all humans, e.g., *Staphylococcus* epidermidis, diptheroids and occasionally *Staphylococcus aureus*. They live deeply seated within the epidermis – in skin crevices, hair follicles, sweat glands and beneath finger nails, their primary function is defensive in that they protect the skin from invasion by more harmful micro-organisms. They do not readily cause infections and are not easily removed, but can, however, cause infection during surgery if they enter deep surgical wounds.
- **Transient micro-organisms**
  Transient bacteria are located on the surface of the skin and beneath the superficial cells of the stratum corneum. They are termed 'transient' as they are acquired on the hands after contact with, for example, a service users wound site, equipment, service users bed, clothing and the environment. Transient micro-organisms are easily transmitted from health and social care worker's hands to vulnerable service user sites. However, unlike resident bacteria, they are easily removed by hand washing and hand disinfection.

4. Good hand hygiene practice

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

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

5. Hand hygiene facilities

Hand hygiene facilities within the health and social care setting area must be in place and not compromise standards by being dirty or poorly maintained:

- facilities should be adequate and conveniently located
- hand wash basins must be placed in areas where needed and where service user care or consultations take place
- in care homes, there should be a hand wash basin in all bedrooms
- the hand wash basin in clinical areas should not have a plug or overflow
- ideally, the hand wash basin should have an automatic elbow or wrist operated mixer tap - if an automatic/elbow/wrist tap is not provided, use a paper towel to turn off the tap to avoid contaminating the hands
- in areas where a sink is used for other cleaning purposes, e.g., sluice, treatment room, laundry, cleaners room, there should be a separate dedicated hand wash basin
- use wall mounted liquid soap dispensers with disposable soap cartridges. Do not use top up/refillable dispensers as these pose a risk of contamination of the liquid soap and the dispenser. Bar soap should not be used as they can harbour micro-organisms
- use wall mounted alcohol handrub dispensers with disposable cartridges
- place disposable paper towels in a dispenser next to the basin, but not so close as to risk contamination of the dispenser or towels. Soft paper towels will help to avoid skin abrasion
- keep all dispensers clean and replenished
- a foot operated lidded pedal bin, lined with a disposable plastic bag, should be positioned near the hand wash basin
- nail brushes should be avoided. If nail brushes are used, they should be single use and disposed of after use
- communal linen hand towels must not be used.

6. Choice of hand hygiene preparations

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

Research and evidence suggests that:

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

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

7. Three main levels of hand hygiene

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

1. **Routine (social) hand washing**
   Removes dirt, organic matter and most transient organisms acquired through direct contact with a person, and from the environment. Liquid soap and warm water is adequate for this procedure. A fifteen to thirty second hand wash using liquid soap is acceptable.
   - Ensure you are 'bare below the elbows' (see Section 4).
   - Wet hands under warm running water.
   - Apply liquid soap.
   - Vigorously rub all parts of the hands for at least 10-15 seconds using the steps shown in steps 2-8 of Appendix 1, ensuring that all surfaces of the hands and wrists are covered with soap.
   - Rinse hands thoroughly under running water.

   Dry hands thoroughly using disposable paper towels (for home care, a supply of paper towels can be carried by the health or social care worker, or left in the home). Alternatively, kitchen roll can be used.

2. **Aseptic hand washing**
   Disinfects the hands by removing transient organisms and reducing resident organisms. This should be carried out prior to dressing wounds healing by primary intention or invasive procedures. Aseptic hand washing can be achieved through either routine hand washing with liquid soap and

warm water followed by an application of alcohol handrub or washing with an antiseptic solution containing antimicrobial agents.

- Ensure you are 'bare below the elbows' (see Section 4).
- Wet hands under warm running water.
- Apply liquid soap or antiseptic solution containing antimicrobial agents.
- Vigorously rub all parts of the hands for at least 10-15 seconds using the steps shown in steps 2-8 of Appendix 1, ensuring that all surfaces of the hands and wrists are covered with soap.
- Rinse hands thoroughly under running water.
- Dry hands thoroughly using disposable paper towels (for home care, a supply of paper towels can be carried by the health or social care worker, or left in the home). Alternatively, kitchen roll can be used.
- If hands are washed with liquid soap (not antiseptic solution), follow with an application of alcohol handrub using the steps 2-8 as shown in Appendix 1, ensuring that all surfaces of the hands and wrists are covered with the product until the solution has dried (about 20-30 seconds).

3. Surgical hand washing/scrub

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

a) Surgical hand wash/scrub using aqueous skin disinfectants

The disinfectant solutions available for surgical skin hand washing are:

- 4% Chlorhexidine gluconate skin cleanser
- 7.5% Povidone iodine
- 2% Triclosan skin cleanser.

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

Procedure

- Ensure you are 'bare below the elbows' (see Section 4).
- Wet hands and forearms under running water.
- Dispense an adequate amount of aqueous disinfectant solution into a cupped hand and cover all surfaces of the hands and forearms, scrubbing for three minutes using the steps shown in Appendix 1.
- A single use disposable brush should be used to scrub under the nails at the beginning of the list.
- Rinse thoroughly under running water and dry using sterile disposable hand towels.

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

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

Procedure

- Ensure you are 'bare below the elbows' (see Section 4).
- Dispense at least 5 mls of alcoholic disinfectant solution (Hibisol) into the cupped palm and rub all skin surfaces of the hands and forearms.
- Rub vigorously for three minutes using the steps 2-8 shown in Appendix 1, ensuring that all surfaces of the hands and wrists are covered with the product until the solution has dried.

8. Use of hand hygiene products

Alcohol handrub

- Alcohol handrub (60-80%) is an effective alternative when hand washing facilities are not readily available. It is useful when there is a need for rapid hand disinfection.
- Alcohol handrub should only be applied to physically clean skin.
- Alcohol handrub **should not be used** when caring for service users with *Clostridium difficile* or other diarrhoea illness.
- **Alcohol handrub is less effective if used immediately after the application of a hand cream/lotion.**

Technique for using alcohol handrub

- Ensure you are 'bare below the elbows' (see Section 4).
- Dispense manufacturers recommended amount of alcohol solution on to hands.
- Ensure the solution will cover all of hand and wrist surfaces.
- Rub vigorously using the steps 2- 8 shown in Appendix 1, ensuring that all surfaces of the hands and wrists are covered with the product until the solution has dried (about 20-30 seconds).

Availability of alcohol handrubs

The availability of alcohol handrub at the point of service user contact was recommended by the National Service user Safety Agency (NPSA) as part of their 'cleanyourhands' campaign in 2005. Although initially implemented only in the acute setting, this was later promoted nationally for use in community health and social care settings.

Alcohol handrubs should be:

- available at the entrance to all health and social care settings, e.g., GP surgeries, Health Centres, care homes

- available at the point of care, e.g., treatment /consulting room. In care settings where wall or bed mounted dispensers or free-standing pump-top dispensers are either not available or appropriate, staff should be issued with personal dispensers which can be carried in a pocket, bag or clipped to clothing.

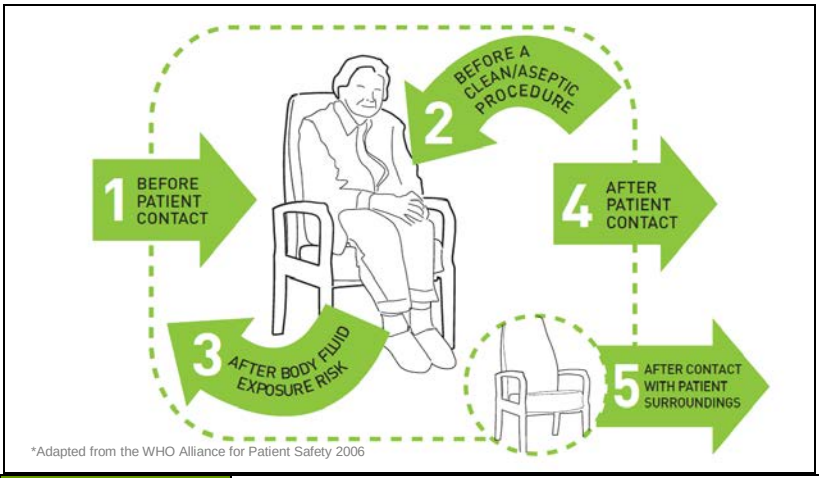
Hand cream and moisturisers

The use of hand cream and moisturisers will help to prevent skin problems and irritations, therefore, promoting compliance with hand hygiene.

- For maximum benefit, hand cream or a moisturiser should be used three times daily.
- Communal pots of hand cream or moisturiser should not be used as these can become contaminated.
- It is good practice to provide hand cream/moisturiser in a wall mounted pump dispenser.
- Only use hand creams which are non-irritant.

9. When to wash your hands

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



*Adapted from the WHO Alliance for Patient Safety 2006

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 health and social care 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 health and social care 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 health and social care environment from harmful patient germs.**

Adapted from the NPSA clean your hands campaign

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

10. Skin care

- To minimise the risk of skin damage, hands should be moistened under running water before applying any soap or antiseptic solution.
- Rinse hands well to remove residual soap and dry thoroughly.
- Always cover cuts and abrasions with an impermeable (waterproof) dressing.
- Wash hands after glove removal.
- Seek occupational health or GP advice if you have a skin irritation.

11. Glove choice

If contact with blood and/or body fluids, non-intact skin or mucous membranes is anticipated, or the service user has a known infection, you should wear disposable gloves that are appropriate for the task (see Appendix 2: Glove selection guide). Gloves must be worn as single use items and changed between each different task on a service user.

Employers may advise against the use of latex following a risk assessment, as it can cause skin sensitivity and allergies (see section 12 Latex allergy). Employers must provide an alternative to latex gloves for service users and health or social care workers who have a sensitivity to latex.

Latex gloves have resistance to puncture and resealing properties making them the glove of choice when handling sharps. Latex gloves are made from natural rubber, latex and cornstarch powder is commonly added to them. Users may react to the latex proteins or the cornstarch powder. The Medical Devices Agency recommends that only powder-free gloves are purchased. Gloves must comply with British Standard.

Nitrile gloves are a synthetic alternative to latex gloves. To be worn if employer has a latex-free policy or if the service user/health or social care worker is latex sensitive.

Vinyl gloves are not recommended for contact with blood and blood stained body fluids. These are looser fitting, less durable for procedures involving twisting and are more likely to tear and develop holes. They are not associated with skin irritation. Vinyl gloves should only be worn when there is no risk of exposure to blood or blood stained body fluids, and if tasks are short and non-manipulative.

Polythene gloves are not recommended for clinical use.
NB: Do not wash or disinfect gloves as this can cause deterioration and holes.

12. Latex allergy

Latex allergy varies from mild irritation to anaphylaxis. Cornstarch powder can absorb latex proteins, enabling them to become airborne when gloves are put on or removed. This exposes other potentially sensitive people to latex proteins.

Cornstarch powder has been linked to adhesions in surgical wounds and poor healing.

- Powder free gloves should be used by health and social care workers.
- Always seek Occupational Health or GP advice if you suspect a latex allergy.
- Ask service users if they are sensitive to latex.
- Do not wear latex gloves when there are no clinical indications to do so.
- Always wash hands after removing gloves.

13. Additional IPC resources

The North Yorkshire and York Community Infection Prevention and Control (IPC) team have produced a wide range of innovative educational and other IPC resources, including support for hand hygiene, e.g., Hand Hygiene Technique for Staff poster. These resources are designed to assist your organisation in achieving compliance with the Health and Social Care Act 2008 and CQC requirements. Further information on these high quality evidence-based resources is available at www.infectionpreventioncontrol.co.uk

14. References

Department of Health (2013) *Prevention and control of infection in care homes – an information resource*

Department of Health (2010) *The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance*

Department of Health (2010) *Uniforms and workwear: Guidance on uniform and workwear policies for NHS employers*

Department of Health (2007) *Essential Steps to safe, clean care*

Loveday HP et al (2014) epic3: National Evidence-Based Guidelines for Preventing Healthcare Associated Infections in NHS Hospitals in England *Journal of Hospital* Infection 86S1 S1-S70 http://www.his.org.uk/files/3113/8693/4808/epic3_National_Evidence-Based_Guidelines_for_Preventing_HCAI_in_NHSE.pdf

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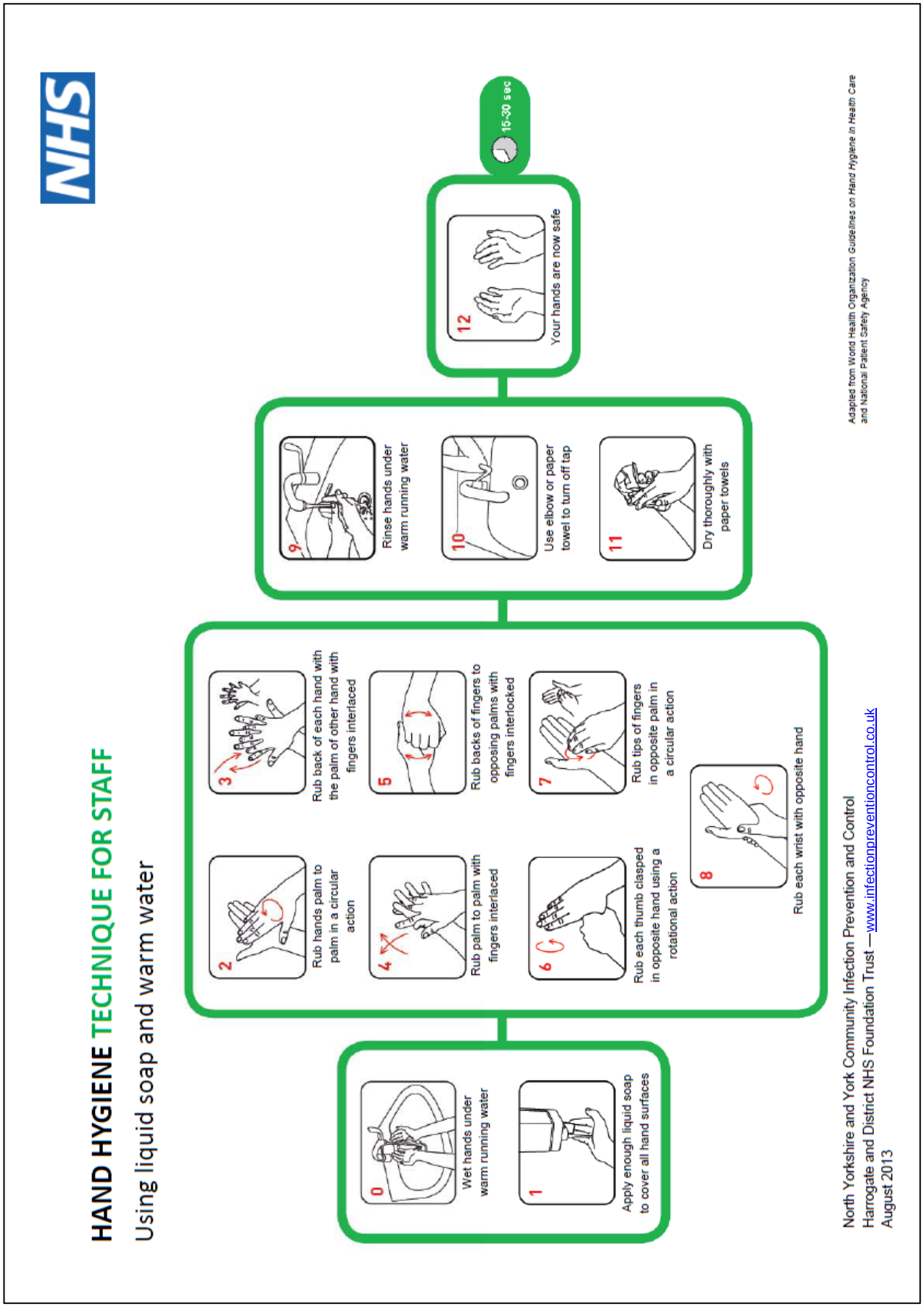
National Patient Safety Agency (2011) *Clean Your Hands Campaign 5 Moments for hand hygiene*

WHO (2009) *WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge. Clean Care is Safer Care*. World Health Organization, Geneva whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf

15. Appendices

Appendix 1: Hand Hygiene Technique for Staff

Appendix 2: Glove selection guide



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Glove selection guide

If contact with blood and/or body fluids, non-intact skin or mucous membranes, is anticipated or the service user has a known infection, personal protective equipment (PPE) should be worn. You should wear disposable gloves that are appropriate for the task.

Task to be performed	Sterile		Non-sterile				
Procedure and type of contact Ticks indicate which glove to use for the procedures listed and if they should be sterile or non-sterile. Please note that this is not an exhaustive list.	Latex	Nitrile	Latex	Nitrile	Vinyl	Polythene	Domestic
Aseptic/Aspectic non-touch technique	✓	✓	✓	✓	✓		
Blood/blood stained body fluids			✓	✓			
Body fluids, e.g., urine, faeces			✓	✓	✓		
Decontamination of equipment			✓	✓	✓		
Domestic tasks							✓
Food preparation					✓	✓	
Rectal exam			✓	✓			
Short and non-manipulative tasks					✓		
Sorting soiled laundry			✓	✓	✓		
Urinary catheterisation	✓	✓					
Urine drainage bag emptying			✓	✓	✓		
Vaginal exam			✓	✓			
Venepuncture/Phlebotomy			✓	✓			

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