Essential NURSING SKILLS

FOURTH EDITION

Maggie Nicol
Carol Bavin
Patricia Cronin
Karen Rawlings-Anderson
Elaine Cole
Janet Hunter

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FOURTH EDITION

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Essential
NURSING SKILLS
Clinical skills for caring

Fourth Edition

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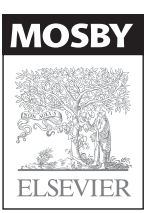
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Preface

Throughout your professional life you will constantly be learning new things, and this book is designed to help you. During your pre-registration programme you will be required to achieve the competencies specified in the Standards for Pre-Registration Nursing Education (Nursing and Midwifery Council 2010). These competencies are grouped into four domains: professional values; communication and interpersonal skills; nursing practice and decision-making; and leadership, management and team working. In addition, at various progression points, you will need to demonstrate achievement of specific skills known as the Essential Skills Clusters (NMC 2010). These reflect patients' expectations of newly qualified nurses and relate to:

- Care and compassion
- Communication
- Organisational aspects of care
- Infection prevention and control
- Nutrition and fluid balance
- Medicines management

This book will help you to achieve these skills and all the others that you need in order to become a competent, compassionate and caring nurse. *Essential Nursing Skills* focuses on the skills required by nurses caring for adult patients in a hospital setting, but the skills themselves can be adapted to any clinical setting.

New to this edition

Nursing is a dynamic and rapidly changing profession and the fourth edition of *Essential Nursing Skills* has been completely updated to reflect the changes in nursing and professional and national guidelines. Two new lecturers have joined the author team and this edition is now in full colour with photographs to further enhance your understanding of many of the procedures. It also has a new section listing commonly used biological and haematological values to help you understand your patients' test results. A number of skills have been expanded and several new skills are now included (e.g. assessing the deteriorating patient in Chapter 2, pre- and postoperative care in Chapter 9 and non-invasive ventilation [CPAP and BiPAP] in Chapter 11).

Focus on practical procedures

In order to keep the size of the book small enough to carry around, the rationale for each skill is not included but references and suggestions for further reading are provided at the end of each chapter. The focus is on the practical procedure rather than why the skill is necessary. To provide a clear structure, each skill first describes preparation of the patient, the environment and the nurse, and lists the equipment needed. This is followed by a step-by-step description of the procedure, supported by illustrations and additional information and rationale in the 'Points for Practice'.

Essential Nursing Skills is designed to act as a reminder for skills that you have been taught, and to enable you to prepare yourself for new skills. For example, after observing a registered nurse performing a skill you can refer to *Essential Nursing Skills* to help you understand the preparation required and read a step-by-step description of the procedure.

Points for practice ➜ PFP

Each skill is accompanied by ***Points for Practice (PFP)***, which provide additional guidance and explanation for some aspects of the procedure. *Essential Nursing Skills* is not a textbook and so does not include all the theory and rationale that underpins the various skills. For example, insertion of a nasogastric tube explains how to select, measure and insert the tube; it does not discuss the reasons why such a tube may be necessary. This book is designed to complement your nursing textbooks, not replace them.

Supervised practice

It is vital that you are supervised by a Registered Nurse until you have really mastered each skill and are competent to undertake them alone. As with all aspects of nursing, safety is paramount and you must know your patient's diagnosis and the reason for carrying out the procedure before you perform any skill.

Local policies and procedures

Nursing practice is subject to many local policies and protocols and you will prompted to refer to them throughout the text. Local policies and protocols refer to specific aspects of nursing practice that often vary between clinical areas. These include for example:

- drug-checking procedures (e.g. intravenous drug therapy)
- which nurses are permitted to perform the skill (e.g. male catheterisation)
- cleansing solutions and skin preparation (e.g. intramuscular injection)

Space has been included to enable you to make a note of the local policies and procedures. These must always be adhered to and nurses have a responsibility to update themselves on

these regularly. National guidelines (e.g. resuscitation council guidelines) are also reviewed frequently and again it is your responsibility to keep up to date with recent changes. References, suggested reading and useful websites are provided at the end of each chapter.

We hope that you will find this book interesting and that it will become a much used resource to support and enhance your clinical practice. Quality nursing care requires competence but also compassion, respect for patients as individuals and should safeguard their dignity. This provides the foundation for every clinical skill. We are passionate about nursing and hope that this is evident throughout this book.

London, 2012

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Chapter 1

Infection prevention and control

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1.2 Aseptic non-touch technique (ANTT) *3*
1.3 Hand washing *5*
1.4 Use of masks *9*
1.5 Use of aprons *11*
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1.8 Taking a swab *17*
1.9 Isolation (barrier nursing) *19*

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1.1 Standard precautions

The two important principles in infection prevention and control are standard precautions and aseptic non-touch technique.

Standard precautions are the standard infection control procedures that are essential in preventing cross-infection (www.rcn.org.uk). They include the precautions required when contact with body fluids is likely, previously known as universal precautions.

The standard precautions are:

- Hand hygiene (hand washing or hand decontamination with alcohol based hand rubs)
- Safe practice, for example, aseptic technique, care of people with infection or at risk of acquiring infection, risk assessing appropriate placement of patients, including isolation
- Management of invasive devices to reduce the risk of infection to a minimum
- Appropriate use of protective clothing – aprons, gloves, masks, gowns and goggles; sometimes referred to as PPE (personal protective equipment)
- Safe disposal of waste using the national colour-coding system
- Appropriate decontamination of equipment
- Safe provision of food
- Clean, safe environment
- Safe handling of contaminated linen.

1.2 Aseptic non-touch technique (ANTT)

Many healthcare procedures pose an infection risk. For example, in wound care, any break to the continuity of the skin forms a wound, which provides an entry point for any microorganisms to enter, and increases the risk of infection (Dealey 2005). To reduce the risk of microorganisms entering the body, a number of measures can be taken:

- An aseptic technique is the method used to reduce the risk of introducing contamination to the wound or any insertion sites, to protect the patient from the risk of infection.
- Aseptic non-touch technique (ANTT) refers to standardised guidelines for aseptic technique procedures and applies to all healthcare procedures where there is a risk of infection and a healthcare associated infection, e.g. wound care, administration of intravenous medication and catheterisation (Pratt et al 2007). ANTT means that you must avoid touching any part of the equipment that will come into contact with the patient e.g. the centre of a sterile wound dressing, the tip of a needle or intravenous cannula. It is also important to avoid touching the ends of equipment when connecting them e.g. the spike of the intravenous giving set when inserting it into the intravenous fluids (see p. 113). ANTT is designed to maintain asepsis and avoid contamination of wounds or vulnerable sites from microorganisms.
- It is important to assess the risk of contamination before carrying out the aseptic technique as the measures taken will depend on the procedure being undertaken. For example, some procedures will require sterile gloves, sterile dressing pack, sterile towel and dressing e.g. wound care; others may only need sterile equipment and non-sterile gloves e.g. IV cannulation; both will require non-touch methods.

There are a number of considerations for the use of ANTT, including:

1. Explain all procedures and give the patient the opportunity to wash their hands and bathe or shower. This is often possible even with a wound.
2. Use sterile equipment when carrying out procedures where there is a risk of contamination (e.g. sterile dressing pack, intravenous cannula, syringe and needle).
3. Only handle the part of the equipment that is not in contact with the patient or other medical equipment (Pratt et al 2007).
4. Never place sterile equipment on to a non-sterile surface or touch sterile equipment without sterile gloves. Contamination will occur if you touch the outside of a sterile glove with a non- gloved hand or place a sterile staple remover onto a non-sterile surface.
5. All items used for the procedure must be sterile; the packaging must be intact and within the expiry date.
6. Appropriate choice of personal protective equipment, including gloves, aprons, and face masks (p. 9-12)

7. Appropriate choice of hand hygiene to include hand washing, and the use of alcohol hand rub (p. 5)
8. The environment should be clean. Some procedures will be carried out in a clean treatment room (e.g. wound dressing), some in a ward environment (e.g. catheterisation). Surfaces (e.g. dressing trolley) should be cleaned according to local policy, before and after the procedure. It is important to avoid sterile procedures (e.g. wound dressings) during bed making and at mealtimes.
9. All non-disposable equipment (e.g. blood pressure cuff or transfer hoist) should be decontaminated after each patient according to local policy (p. 16).

1.3 Hand washing

Preparation

- The hands should be decontaminated before and after all patient contact ➔ **PFP1**

Equipment

- A sink with elbow-or foot-operated mixer taps is best
- Liquid soap or antiseptic detergent hand washing solution ➔ **PFP2**
- Disposable paper hand towels
- Foot-operated waste bins.

Nurse

- The arms must be bare below the elbows ➔ **PFP3**
- Remove rings, jewellery and wrist watches ➔ **PFP3**
- Cuts or abrasions on the hands should be covered by a waterproof, occlusive dressing
- The fingernails should be short with no nail polish or artificial fingernails ➔ **PFP4**.

Procedure

1. Adjust the taps so that the temperature is comfortable and the water flow is steady and does not splash the surrounding area. Wet the hands.
2. Apply sufficient soap or antiseptic detergent solution to create a good lather.
3. Rub the hands briskly together, making sure that the thumbs, fingernails, fingertips, palms, backs of the hands and the wrists are thoroughly washed ➔ **PFP5** (Figure 1.1).
4. Scrubbing the skin with a brush is not recommended as it causes microabrasions. Only if the fingernails are visibly dirty should a nailbrush be used.
5. Continue to wash the hands for at least 20 seconds, then rinse thoroughly until all traces of soap/antiseptic detergent are removed ➔ **PFP6**.
6. Turn off the taps with your foot or elbow and allow the water to run off your hands by holding them with the fingers pointing upwards. If the taps are not elbow- or foot-operated, leave the water running until after drying your hands and then use a paper towel to turn off the taps.
7. Dry your hands thoroughly using disposable paper towels, working in one direction from your fingertips towards the wrists. Use a separate towel for each hand. Thorough drying is essential to minimise the growth of microorganisms and to prevent the hands becoming sore.
8. Discard the used paper towels according to local policy ➔ **PFP7**.

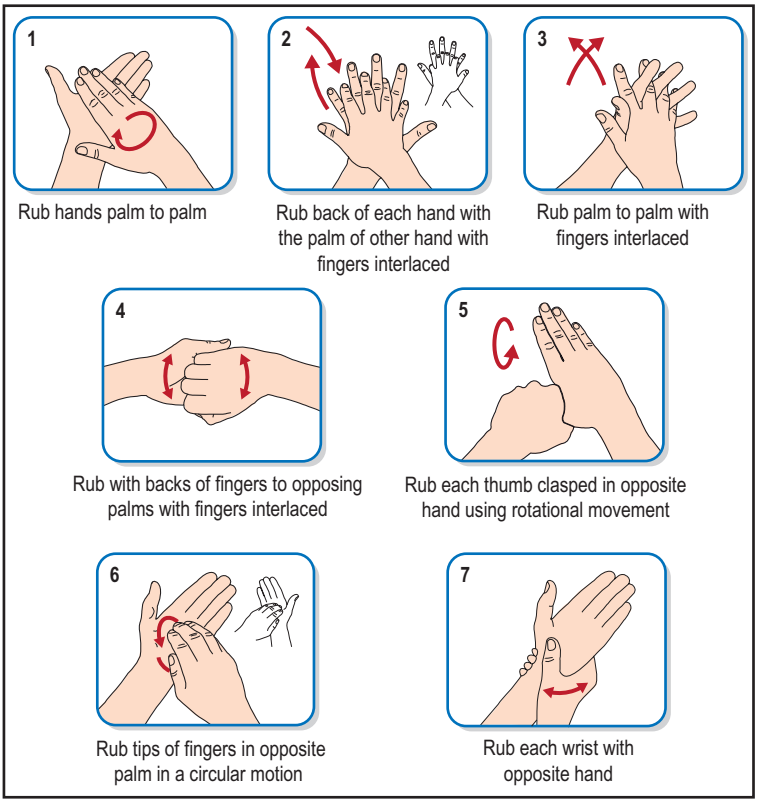


Figure 1.1 Hand washing technique (adapted from NPSA T/09).

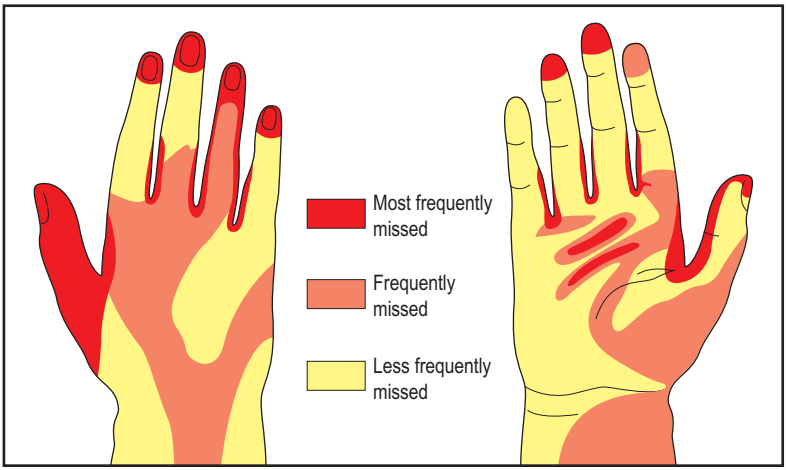


Figure 1.2 Areas often missed when the hands are washed.

Points for practice

PFP1 Methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* are both important causes of healthcare acquired infection (HCAI). The most important route of transmission is on the hands of healthcare workers. Alcohol hand-rub may be used instead of washing when the hands are socially clean (i.e. not visibly soiled or likely to be contaminated). The alcohol must be applied to all areas of the hands and wrists and the hands then rubbed vigorously until dry. Alcohol effectively reduces microbial counts in clean hands, but it is ineffective if used on hands contaminated with body fluids or excreta. Alcohol-based hand-rub is effective against MRSA but the spores of *C. difficile* can survive in the environment and are not killed by alcohol and so the hands must be washed with soap and water after contact with *C. difficile* patients or their environment (www.dh.gov).

PFP2 Bars of soap should never be used in clinical areas as they provide the ideal environment for growth of micro-organisms when left sitting on the sink in a pool of water. Liquid soap is usually sufficient for hand washing in most situations, but an antiseptic detergent hand washing solution containing chlorhexidine or iodine may be required before invasive procedures such as urinary catheterisation. The local infection control policy will indicate when this is necessary.

PFP3 The forearms must be bare below the elbows because cuffs become heavily contaminated and are likely to come into contact with patients (DoH 2010).

Local policy may permit the wearing of a wedding band. This should be a plain band and loose enough to allow washing and drying underneath it. Wrist watches must not be worn as they prevent effective washing of the wrist area.

PFP4 Winslow and Jaconson (2000) reviewed several studies into the wearing of artificial nails and nail polish. They report that operating theatre personnel with artificial nails harboured gram-negative rods both before and after surgical scrubbing and artificial nails also had higher bacterial loads. Although the evidence about the effect of nail polish is unclear, they found that nurses with chipped nail polish had significantly more organisms than freshly polished or natural nails.

PFP5 Many research studies have shown that hand washing techniques are not always effective. Areas of the hands that are commonly missed are the thumbs, fingernails, fingertips, palms, backs of the hands and the wrists (Figure 1.2), (Wilson 2006).

PFP6 The hand washing technique should take at least 40–60 seconds (NPSA 2009).

PFP7 In some hospitals, hand towels are considered to be clinical waste and so should be discarded in the orange clinical waste bin. In others they are deemed to be household waste and are discarded in the black non-clinical waste bin. Check your local policy.

1.4 Use of masks

Preparation

Patient

- Patients with pulmonary tuberculosis should wear a surgical mask when they leave their single room.
- Ensure the patient understands why staff or the patient is required to wear a mask

Equipment

- **Surgical masks** are recommended for use in the operating theatre and if in contact with patients with pandemic flu ➔ **PFP1**.
- **Respirator masks are** worn to protect healthcare workers from inhaling harmful respiratory particles ➔ **PFP2**.

Nurse

- Staff should wear FFP2 (filtration face piece) or FFP3 masks when caring for patient with pandemic flu. FFP3 masks must not be worn by patients as they are designed to allow expired air to escape via the valve in the mask and therefore will not prevent droplet or aerosol spread.
- The apron or gown should be put on before the mask. Check carefully that you have the right type of mask.

Procedure

1. Secure the ties or stretch the elastic straps over the head. One tie should be above the ears in the middle of the head and the other below the ears at the neck.
2. Adjust the flexible band at the nose to ensure a close fit. Make sure the mask fits snugly over the nose and below the chin
3. Avoid touching the mask when it is being worn ➔ **PFP3**.
4. Remove the gloves, apron or gown and goggles (if worn) and then the mask. If goggles are the reusable type they should be washed in hot, soapy water and dried thoroughly.
5. To remove the mask, untie/break the lower tie first so that the mask stays in place as you unfasten the second tie.
6. Hold the mask by the straps only and away from your body as you discard it into the clinical waste.
7. Wash your hands and dry thoroughly or use alcohol-based hand rub.

Points for practice

PFP1 Surgical masks are worn, by healthcare staff and patients, to prevent droplets being expelled from the mouth and nose into the environment. Eye protection (goggles or a visor) is added when there is a risk of splashing blood or body fluids into the mouth, nose or eyes (Pratt et al 2007).

PFP2 Respirator masks are categorised according to their filtration efficiency and their use will be determined by your institution's Infection Control Policy. FFP2 masks, which offer 95% efficiency, may be required when caring for patients with active pulmonary tuberculosis. FFP3 masks, which offer 98% efficiency, will be required when performing aerosol-producing procedures such as tracheal suctioning (Pellowe 2009).

PFP3 All masks are single use only and cannot be re-used once removed. Surgical masks can be used until they feel moist or humid. FFP2 and FFP3 masks can be worn up to 8 hours if necessary but once removed cannot be re-used.

1.5 Use of aprons

Preparation

Patient

- Aprons should be worn when there is direct patient contact or contact with body fluids. Also when handling bed linen, excreta, equipment etc. from patients with infections such as MRSA, *C. difficile* etc.

Equipment

- Plastic aprons may be available in a variety of colours. In some hospitals, different coloured aprons are used for specific purposes, e.g. for serving meals or performing aseptic dressings.

Nurse

- The apron should be put on after the hands have been washed.

Procedure

1. Wash and dry your hands thoroughly.
2. Pull the apron over your head; avoid touching your hair and clothing with your clean hands.
3. Tie the apron loosely at the back to avoid it becoming gathered at the waist, so that water splashes will run off easily.
4. If gloves are required, put them on after the apron and remove them before the apron is removed at the end of the procedure ➔ **PFP1**.
5. To remove the apron, pull at the top to break the neckband and let the top fold down. Break the waist-ties and carefully fold the apron, touching only the 'clean' side, to prevent the spread of microorganisms ➔ **PFP2**. Do not allow your hands to touch your uniform.
6. Discard the used apron into the clinical waste bag.
7. Wash and dry your hands thoroughly or use alcohol hand rub (see p. 5).

➔ Points for practice

PFP1 Your gloves are likely to be more heavily contaminated than your apron. Removing your gloves before the apron reduces the risk of contamination of your clothing when breaking the neckband and waist-ties to remove the apron.

PFP2 Folding the apron carefully as it is removed reduces the risk of shaking organisms into the air and your hands only touch the 'clean' side of the apron.

1.6 Use of gloves (non-sterile)

Preparation

Patient

- Gloves should be worn whenever patient care involves dealing with blood or body fluids.
- Gloves will also be required when there is contact with patients with infections such as hepatitis, methicillin-resistant *Staphylococcus aureus* (MRSA) or *C. difficile*.
- Check whether the patient has a latex allergy ➔ **PFP1**.

Equipment/Environment

- Seamless, single-use gloves are recommended. These fit either hand ➔ **PFP1**.

Nurse

- The use of gloves does not reduce the need for hand washing. The hands must be washed before and after gloves have been worn ➔ **PFP2**.

Procedure

1. It is important to choose the correct size of glove; otherwise dexterity will be severely impaired.
2. If the gloves are required for a 'clean' procedure (e.g. blood glucose monitoring), they should be taken from those stored in a clean area where they are protected from dust.
3. When removing gloves, do not touch your wrists or hands with the dirty gloves. Using a gloved hand, pinch up the glove of the other hand at the wrist (Figure 1.3A) and pull it off, turning it inside out. With the non-gloved hand, slip your fingers into the wrist of the other glove (Figure 1.3B) and pull it off, again turning it inside out.
4. Used gloves must be discarded in the orange clinical waste bag.
5. Wash and dry the hands thoroughly ➔ **PFP2**.

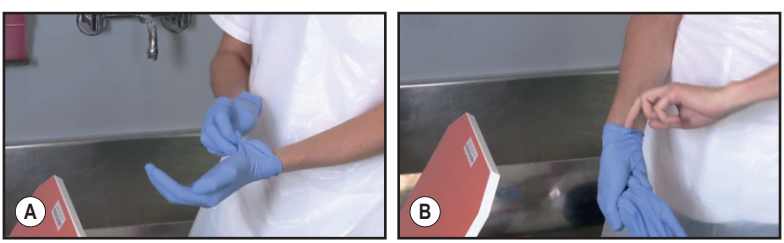


Figure 1.3 Removal of gloves.

Points for practice

PFP1 Latex-free non-sterile gloves are now used more commonly than those containing latex but packs such as dressing or catheterisation packs may still include them. Latex gloves should not be used if the patient has a latex-allergy.

PFP2 If an apron is worn, this should be removed after the gloves, but before the hands are washed (see p. 5). The hands must be washed before and after gloves are worn because the hands sweat within the gloves, creating a warm, moist environment, which encourages microorganisms to multiply (Allen 2005). Also, gloves have been shown to develop tiny punctures that go undetected but allow microorganisms to pass through. For information on the use of sterile gloves see page 287.

1.7 Disposal of waste and care of equipment

Clinical waste

Any waste generated in healthcare settings that has been in contact with blood or other body fluids is classed as clinical waste and must be incinerated. This includes soiled dressings, catheters, urine drainage bags, sputum pots, incontinence pads, etc. Used aprons and gloves are also likely to be contaminated by blood or other body fluids and so these should also be classed as clinical waste. All clinical waste must be placed in **orange clinical waste bags** for incineration (DH 2006).

Non-clinical waste

Waste generated in hospital that poses no risk to others is classed as non-clinical waste and may be disposed of in the same way as normal household waste. This includes waste such as paper hand towels, newspapers, dead flowers, food packaging, etc. Non-clinical waste should be placed in **black plastic bags** for disposal (DH 2006).

Needles and other sharps

Many healthcare procedures involve the use of needles or other devices capable of puncturing the skin, such as scalpels, lancets, etc., which are collectively referred to as 'sharps'. An injury from a needle or other device contaminated with blood or other body fluids poses a high risk to healthcare workers and so special care must be taken when using and disposing of sharps (Blenkharn & Odd (2008)). All sharps must be discarded into special yellow sharps bins, which are rigid, puncture resistant and leak proof (Figure 1.4). They have a special opening that is designed to allow sharps to be dropped easily into the container, but will not allow items to spill out should the container topple over. Sharps bins must not be filled more than three-quarters full, and once closed, they cannot be reopened.

Used needles must never be resheathed and should not be separated from the syringe except if used for venepuncture (see p. 106). If removal of the needle from the syringe is necessary, a sharps bin with a needle-removing facility on the top should be used so that the needle is not handled (Figure 1.4). The safe disposal of needles and other sharps is always the responsibility of the person who used them; they should never be left for anyone else to clear away. Where possible, the sharps bin should be taken to the place where the sharps will be used, as this allows immediate disposal after use. If this is not possible, a rigid tray or receiver should be used to contain the sharps until they can be safely tipped, without further handling, into the sharps bin. Items **must never be forced** into an already full container, as this may result in injury.



Figure 1.4 Safe disposal of sharps.

Linen

Used linen

This refers to all bed linen, clothing, towels, etc., that has been used by patients, but is not soiled. A plastic apron should be worn when making beds and handling used linen to prevent contact with your uniform, and gloves will be necessary if the patient has an infection, such as MRSA or *C. difficile*, even when the linen is not soiled. Used linen should be placed in a polythene or fabric linen-bag. These bags must not be overfilled and should be securely fastened to prevent spillage of the contents. Check clothing, such as pyjamas, to ensure that objects, such as spectacles or hearing aids, are not in the pocket.

Soiled or fouled linen

This refers to linen contaminated with blood or other body fluids or excreta. To prevent leakage, this linen should be placed in a plastic bag (often red but the colour may vary according to local policy), which should be sealed and then placed in a linen-bag as described above. Personnel wearing protective clothing and gloves will deal with soiled or fouled linen in the laundry.

Infected linen

This refers to linen from patients with infectious conditions, such as salmonella, hepatitis, pulmonary tuberculosis or MRSA. This linen must be placed in a plastic bag with a water-soluble seam and then placed in a special fabric linen-bag, which is often red or has red markings on it. In the laundry, the infected linen is not handled by anyone, but put straight into a high-temperature (95°C) washing machine in its plastic bag. The water-soluble seam will dissolve during the wash, allowing the linen to be laundered (Wilson 2006).

Non-disposable equipment

Although the majority of clinical equipment is now disposable, some items are designed to be reused, and this requires sterilisation in the sterile supplies department of the hospital. Such equipment (e.g. surgical instruments, vaginal speculae, etc.) should not be washed after use, but placed immediately in a clear plastic bag and returned to the appropriate department for decontamination. There is usually a system whereby all such equipment is placed in a particular bin or bag (the colour of this will vary according to local policy), to await collection for cleaning and sterilisation. Items of equipment that are identified as single-use equipment must never be decontaminated and then reused for another patient (Wilson 2006). Item such as nebulisers (see p. 344) can be reused several times by the same patient before being discarded.

General equipment

Equipment such as washbowls, commodes, beds and mattresses must be cleaned thoroughly between patients to avoid cross-infection. These should be cleaned with alcohol wipes or detergent and hot water, and dried thoroughly (refer to local policy). The use of detergent is essential for effective cleaning as it breaks up grease and dirt and improves the ability of water to remove it (Wilson 2006). All equipment should be stored clean and dry between uses. Many hospital wards provide patients with individual washbowls, which are kept in the bedside locker. However, others keep a number of bowls for communal use in the sluice. Abrasive materials should not be used to clean plastic washbowls as this roughens the surface, making it easy for micro-organisms to become trapped. Once washed, bowls should be placed upside down in a pyramid to allow the air to circulate freely and they dry thoroughly (Wilson 2006). The Royal College of Nursing (RCN) has useful guidelines for the decontamination of equipment and a table to help you determine the appropriate decontamination method according to whether equipment is a high, medium or low risk (*www.rcn.org.uk/infectioncontrol*).

1.8 Taking a swab

Preparation

Patient
- Explain the procedure, to gain consent and cooperation
- Ensure comfort and privacy are maintained.

Equipment
- Sterile swab(s) ➔ **PFP1**
- Plastic specimen bag
- Laboratory request form.

Nurse
- Wash and dry hands thoroughly
- Put on apron and gloves.

Procedure

1. Ask/assist the patient to adopt a position that allows access to the appropriate site ➔ **PFP1**.
2. Open the packaging at the handle end and remove the swab, taking care not to contaminate the absorbent tip ➔ **PFP2**.
3. Twist the end of the swab between your finger and thumb to 'roll' the swab so that all areas of the absorbent tip come into contact with the designated area. Avoid touching the surrounding skin ➔ **PFP3**.
4. Open the transport tube and carefully insert the swab. The 'handle' of the swab becomes the stopper or cap of the tube. Repeat for all the swabs required.
5. Label the specimens ➔ **PFP4** and place it in a plastic specimen bag with the laboratory request form and dispatch to the laboratory or refrigerate as soon as possible.
6. Ensure the patient is comfortable
7. Dispose of clinical waste appropriately and remove gloves and apron and wash hands.
8. Document that the swabs have been taken.

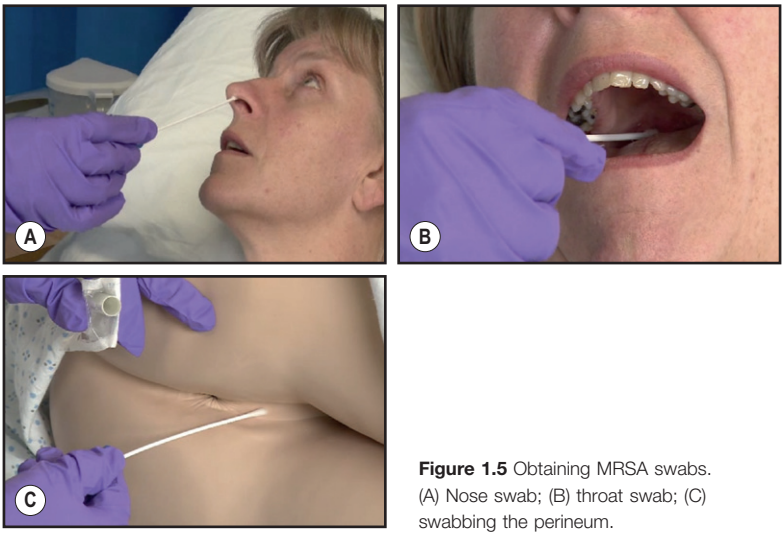


Figure 1.5 Obtaining MRSA swabs. (A) Nose swab; (B) throat swab; (C) swabbing the perineum.

Points for practice

PFP1 For MRSA screening, swabs are usually taken from the nose, throat, perineum (Figure 1.5) and any wounds. A specimen of urine will also be required if the patient is catheterised (see p. 246). Refer to local policy for the sites to be swabbed.

PFP2 The swab may come packed inside its transport tube or it may be packed separately.

PFP3 If the swab is being taken when performing an aseptic dressing technique, this should be done before cleaning/irrigating the wound with antiseptic solution. However, some authors suggest that removal of exudate prior to swabbing allows access to the organisms actually causing the wound infection, which are different from those in the exudate at the surface of the wound (Santy 2008). If there is no exudate, the tip of the swab may be moistened with transport medium supplied in the tube (unless it is a charcoal swab) or 0.9% sodium chloride according to local policy (Santy 2006).

PFP4 The patient's details should include: surname; first name; date of birth; hospital number; and ward (this is usually available on a self-adhesive label), date and where the swab was taken from (e.g. axilla).

1.9 Isolation (barrier nursing)

Principles

The 'correct and timely' isolation of infected patients (either suspected or proven) can be very effective in reducing transmission to other patients (DoH 2011). The aim of isolation is to minimise the transmission of micro-organisms from a patient with an infection to others. Isolation, also known as 'transmission-based precautions' and 'barrier nursing', should be used when patients have a known or suspected infection disease or symptoms such as vomiting, diarrhoea or pyrexia of unknown origin (Wilson 2006). Local infection prevention and control policies will indicate which patients need to be isolated. This usually includes patients with infections transmitted by the airborne route (e.g. tuberculosis), those transmitted by respiratory droplets produced during coughing and sneezing (e.g. meningococcal meningitis), and those transmitted by direct contact with patients or their environment (e.g. MRSA, *clostridium difficile*, influenza) (Wilson 2006). Protective isolation (reverse barrier nursing) is used to protect patients from infection. This is appropriate for patients whose immune system is severely compromised e.g. following bone marrow or organ transplant

Healthcare associated infection (HCAI)

The Department of Health (DoH 2011) recommends that all institutions should have a locally agreed 'isolation need risk assessment' to reduce the incidence of HCAI. Where possible, infected patients should be nursed in a single room with en-suite toilet, bath/shower and washbasin. Where single rooms are not available, patients with the same infection should be nursed in isolation wards or dedicated bays and cared for by nurses who are not caring for other patients. Movement of infected patients should only occur when there is a clear clinical need to do so (DoH 2011).

Isolation precautions

Standard precautions (see p. 2) must be used with all patients, including those in isolation (Wilson 2006). The following precautions are recommended by DoH (2011) and Wilson (2006).

Equipment

The isolation room must have a washbasin and ideally an en-suite toilet and shower. Disposable hand towels, liquid soap, plastic aprons, gloves and clinical waste bins should be provided inside or immediately outside the room. Masks and goggles/visor may be necessary (see p. 9). Door signs will be required to alert visitors and staff; however, it is important to maintain patient confidentiality (Prieto and Kilpatrick 2011). Equipment should be single-use only and should not be shared with other patients.

Aprons and gloves

An apron and gloves should be worn for all patient contact. These should be discarded between procedures and before leaving the room. Gloves must be worn when there is contact with body fluids or contaminated items such as dressings. Visitors should also wear aprons and gloves when entering the room/designated isolation area.

Hand hygiene

Hands must be washed (see p. 5) when gloves are removed and before leaving the room. Visitors must also be asked to wash their hands before leaving the room/designated isolation area.

Excreta

If en-suite facilities are not available, a commode should be left in the room. Excreta (urine, faeces, vomit) should be discarded directly into the toilet, macerator or flushing sluice. Disposable bed pans, vomit bowls and urinals should be used, which are then macerated or incinerated. If reusable bed pans are used these must be decontaminated in the bed pan washer with a temperature of 80°C for at least one minute during the wash cycle.

Linen

All linen must be treated as contaminated and placed in a plastic bag with a soluble seam (alginate bag) and then into another bag, according to local policy (see p. 15). With highly infectious diseases, disposable linen may be used, which is then incinerated with the clinical waste.

Psychological effects of isolation

Patients being nursed in isolation may feel embarrassed or in some way 'dirty' and report feeling shunned, neglected, lonely, abandoned, frustrated and stigmatised. Isolation also limits visual, auditory and sensory cues, creating potential communication barriers between patient and nurse (Cassidy 2006). Thus psychological support and 'social' interaction as well as nursing care is vital.

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Demonstrates that wearing gloves creates a moist, warm, nutrient-rich environment in which bacteria can grow and multiply, and stresses the need for hand washing before and after wearing gloves.

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An interesting study which found that the imposed 'barriers' altered the caring experience and students found balancing the need of the individual whilst preventing the spread of infection difficult.

Dealey, C., 2005. The care of wounds: a guide for nurses. Blackwell Publishing, Oxford.

A comprehensive book that covers the history of wound care, physiology of wound healing, types of dressings and all types of wounds including pressure ulcers and skin care for patients undergoing radiation.

Department of Health. 2006. Technical Memorandum 07-01: Safe Management of Healthcare Waste. Available from the Department of Health website (see below).

A comprehensive document that covers all aspects of waste management in healthcare, within hospitals and in community settings.

Department of Health, 2010. Uniforms and workwear: guidance on uniform and workwear policies for NHS employers. DoH, London.

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Department of Health, 2011. Isolating patients with healthcare associated infection. A summary of best practice. Available from: http://hcai.dh.gov.uk/files/2011/03/Document_Isolation_Best_Practice_FINAL_100917.pdf. [Accessed 6.6.11].

A useful summary of best practice in relation to isolation of patients with HCAI.

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An interesting article, which argues that recommended practice standards in relation to hand hygiene can be unrealistic and lead to non-compliance. By developing a more pragmatic approach this may lead to better compliance and an overall improvement in standards.

Gould, D., 2002. Hand decontamination. Nursing Times 98 (46), 48–49.

Gould, D., 2002. Preventing cross infection. Nursing Times 98 (46), 50–51.

These two articles outline the hand washing technique and discuss when soap is sufficient and when antiseptic solutions should be used. They also discuss use of gloves, care of the nails and the wearing of rings and wrist watches.

Girou, E., Loyeau, S., Legrand, P., et al., 2002. Efficacy of hand rubbing with alcohol based solution versus standard hand washing with antiseptic soap: a randomised clinical trial. BMJ 325, 362–364.

An interesting study conducted in three intensive care units in France, which found that the reduction in bacterial contamination of the hands was significantly higher when alcohol-based solution was used rather than hand washing.

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Practical evidence-based guidelines regarding the appropriate use of protective clothing as part of infection prevention and control.

May, D., Brewer, S., 2001. Sharps injury: prevention and management. Nursing Standard 15 (32), 45–53.

A continuing professional development article to help you review the risks associated with needlestick injury and blood-borne viruses and develop safe systems of working. Also discusses what to do if a sharps injury occurs.

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O'Connor, H., 2000. Decontaminating beds and mattresses. Nursing Times 96 (46):NTPlus, 2–5.

This article defines the terms decontamination, cleaning, disinfection and sterilisation and provides a practical guide to the decontamination of beds and mattresses.

Pellowe, C., 2009. When should staff wear face masks? Nursing Times 105 (34), 16

A useful guide to when to wear surgical masks and when respirator masks are required. It also emphasises the importance of wearing masks correctly and disposing of them safely.

Pratt, R.J., Pellowe, C.M., Wilson, J.A., et al., 2007. epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. Journal of Hospital Infection 65, S1–S64.

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Reports an audit of glove use in which it was found that gloves were sometimes being used inappropriately. Provides a good overview of when they should be worn and a nice diagram, based on work by the ICNA, to show which type of gloves should be worn for which activity.

Royal College of Nursing, 2007. Safe Management of healthcare waste. RCN, London.

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Santy, J., 2008. Recognising infection in wounds. Nursing Standard 23 (7), 53–60.

This article provides an overiew of wound healing and reviews the evidence to support whether the wound should be cleaned prior to taking a wound swab and the most effective technique.

Wilson, J., 2006. Infection control in clinical practice, third ed. Baillière Tindall, Elsevier, Edinburgh.

A comprehensive text that explains basic microbiology, types of organisms and how they are spread. It then provides guidance on infection control practices, disposal of waste, decontamination of equipment and advice about all aspects of infection control. It includes a helpful table of major infectious diseases with route of transmission and whether isolation is required.

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This article reviews several studies into the effects of artificial and polished nails on hand-hygiene practices. They conclude that artificial nails could contain more bacteria than natural nails and so place patients at increased risk of infection. The evidence regarding the use of nail polish is less clear, but they recommend that if polish is worn it should be freshly applied and clear so that the nails can be inspected for cleanliness.

www.doh.gov

The website of the UK Department of Health has a good overview of MRSA and Clostridium difficile and how they are spread. Also, latest figures on infection rates in hospitals, etc., and good practice guidelines.

www.ips.uk.net/

The website of the Infection Prevention Society, which and has free downloads about hand washing (5 moments) and leaflets explaining MRSA screening in a number of different languages.

www.rcn.org.uk

The Royal College of Nursing website provides a lot of guidance about all aspects of infection control, hand washing technique, standard precautions, management of clinical waste and guidance on uniform. Many of the resources are freely available to non–members.

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Chapter 2

Observation and monitoring

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2.1 Temperature recording: oral & axillary

Preparation

Patient
- Explain Procedure, To Gain consent and cooperation
- Assess the patient regarding suitable site ➔ **PFP1**
- The patient should be rested

Equipment
- Disposable chemical thermometer, e.g. TempaDot™ ➔ **PFP2** ➔ **PFP3**
- Watch
- Observation chart

Nurse
- Hands must be clean
- Additional protective clothing may be necessary if indicated by the patient's condition (see Ch. 1)

Procedure

Oral

1. Check the patient has not had a hot or cold drink, or smoked a cigarette within the previous 20 minutes as this will lead to an inaccurate measurement (Childs 2011).
2. Check the expiry date of the thermometer and open the packaging. Remove the thermometer taking care not to touch the end with dots.
3. Ask the patient to open their mouth, and gently insert the thermometer under their tongue, next to the frenulum. This is adjacent to a large artery (sublingual artery), so the temperature will be close to core temperature (Figure 2.1A).
4. Ask the patient to close their lips, but not their teeth, around the thermometer, to prevent cool air circulating in the mouth.
5. It is vital to leave the thermometer in position for the recommended length of time (usually 1 minute). However, it does not affect accuracy if it is left for longer than the minimum time.
6. Remove the thermometer, taking care not to touch the part that has been in the patient's mouth. In accordance with the manufacturer's instructions, read the temperature by noting the way that the dots have changed colour (Figure 2.1C).

Axillary

1. Check the expiry date of the thermometer and open the packaging. Remove the thermometer taking care not to touch the end with dots.
2. Ask/assist the patient to expose their axilla. For an accurate recording, the axilla must be dry and free from sweat.
3. With the dots facing the chest wall, position the thermometer vertically between the arm and the chest wall.
4. Ask/assist the patient to keep their arm close against the chest to ensure good contact with the skin (Figure 2.1B).

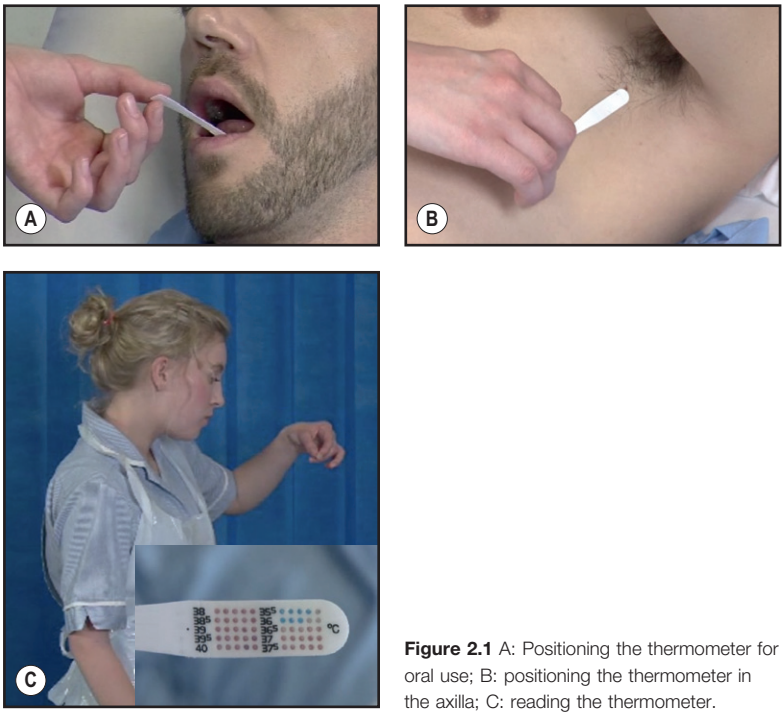


Figure 2.1 A: Positioning the thermometer for oral use; B: positioning the thermometer in the axilla; C: reading the thermometer.

5. It is vital to leave the thermometer in position for the recommended length of time (usually 3 minutes). However, it does not affect accuracy if it is left for longer than the minimum time.
6. Remove the thermometer. In accordance with the manufacturer's instructions, read the temperature by noting the way that the dots have changed colour (see Figure 2.1C).

Oral and axillary

1. Dispose of the thermometer into the clinical waste.
2. Ensure patient comfort; replace clothing etc. as necessary
3. Document the findings according to local policy (see p. 52 for an example of charting) and report any abnormalities. The normal range for adults is 36–37.2° Celsius.
4. Use alcohol rub or wash and dry your hands.