



Preventing Infection in the Ambulance Setting

Standard Infection Control Precautions

**A pocket guide for Ambulance
Service staff**

Potential Infection Risks

Click on the options below to access sections directly

Faeces	4
Urine	4
Vomit	4
Blood	4
Wound Exudate	6
Sputum	8
Nasal Discharge	8
Cough	8
Unexplained Skin Conditions	10
Peripheral Vascular Catheters	12
Intravenous Infusion	12
Catheter Care	12
Colostomy Care	12

Definitions of Standard Infection Control Precautions



Hand Hygiene

Wash hands or use Alcohol Based Hand Rub (ABHR)



Personal Protective Equipment

Protect yourself and your clothing from contamination (soiling and splashing)



Respiratory and Cough Hygiene

Cover mouth and nose when coughing and sneezing



Patient Placement (or those you care for)

Assess and monitor those you care for are safe in their place of care



Safe Management of Blood and Body Fluid Spillages

Safely clean up spillages of blood and body fluids

Aseptic Technique



Aseptic Technique

Method used during care procedures to prevent infection



Safe Management of Care Equipment

Ensure equipment is maintained, cleaned and/or disposed of appropriately



Safe Management of the Care Environment

Ensure the care area is kept clean and dry



Safe Management of Linen

Safely handle used or potentially infectious linen



Occupational Exposure Management

Action to take in the event of an injury or exposure to infection at work



Safe Disposal of Waste

Management of all household and care activity waste

Infection Risk:





- > **Faeces**
- > **Urine**
- > **Vomit**
- > **Blood**

You may come into contact with blood and/or body fluids during routine care and these should be considered potentially infectious. Not all contact will become a spillage but in the case of unexpected spills see the page on Management of Blood and Body Fluid Spillages for more detailed information.




By following these Standard Infection Control Precautions you can minimise infection risks to yourself and others.

Standard Infection Control Precautions




Do this

-  Hand Hygiene
-  Personal Protective Equipment
-  Safe Management of Blood and Body Fluid Spillages
-  Safe Disposal of Waste

Consider this

-  Safe Management of the Care Environment
-  Safe Management of Linen
-  Safe Management of Care Equipment

Other factors

-  Occupational Exposure Management
-  Patient Placement (or those you care for)
-  Respiratory and Cough Hygiene

Infection Risk:

> Wound Exudate

Good wound management can help prevent wound infection.

Follow the instructions on:





 **Aseptic Technique** (p39)

to ensure you minimise the risks of exposing the person you care for to micro-organisms.




By following these Standard Infection Control Precautions you can minimise infection risks to yourself and the person you care for – promoting better healing and recovery.

Standard Infection Control Precautions




Do this

-  Hand Hygiene
-  Personal Protective Equipment
-  Safe Management of Care Equipment
-  Safe Disposal of Waste

Consider this

-  Safe Management of the Care Environment
-  Safe Management of Linen
-  Safe Management of Blood and Body Fluid Spillages

Other factors

-  Occupational Exposure Management
-  Patient Placement (or those you care for)
-  Respiratory and Cough Hygiene

Infection Risk:





- › Sputum
- › Nasal Discharge
- › Cough

During routine care you are in close contact with those that you care for and coughs and sneezes are common causes of cross infection.




By following these Standard Infection Control Precautions you can minimise infection risks to yourself but, in particular, take a look at the guidance on Respiratory and Cough Hygiene.

Standard Infection Control Precautions




Do this

-  Respiratory and Cough Hygiene
-  Hand Hygiene
-  Personal Protective Equipment
-  Safe Disposal of Waste

Consider this

-  Patient Placement (or those you care for)
-  Safe Management of the Care Environment
-  Safe Management of Blood and Body Fluid Spillages

Other factors

-  Occupational Exposure Management
-  Safe Management of Care Equipment
-  Safe Management of Linen

Infection Risk:




> Unexplained Skin Conditions

The skin is an essential protective barrier to infection but skin conditions can also pose infection risks. During routine care you may encounter people with skin conditions (known and unexplained).




By following these Standard Infection Control Precautions you can minimise infection risks to others, yourself and promote better healing and recovery.

Standard Infection Control Precautions





Do this

-  Hand Hygiene
-  Personal Protective Equipment
-  Safe Management of Linen

Consider this

-  Safe Management of the Care Environment
-  Safe Management of Care Equipment
-  Patient Placement (or those you care for)

Other factors

-  Safe Disposal of Waste
-  Occupational Exposure Management
-  Safe Management of Blood and Body Fluid Spillages
-  Respiratory and Cough Hygiene

Infection Risk:

- › Peripheral Vascular Catheters
- › Intravenous Infusion
- › Catheter Care
- › Colostomy Care

Some procedures you carry out when caring for others may require you to handle equipment that has crossed the skin barrier. This can be a potential route of infection into the body.

When using this equipment you may need to consider the risk of exposing the person you care for to micro-organisms.

The instructions on:





 **Aseptic Technique** (p39)

will ensure you minimise these risks.


By following these Standard Infection Control Precautions you can minimise infection risks to those receiving care, yourself and others.

Standard Infection Control Precautions






Do this

-  Hand Hygiene
-  Personal Protective Equipment
-  Safe Management of Care Equipment
-  Safe Disposal of Waste

Consider this

-  Safe Management of the Care Environment

Other factors

-  Occupational Exposure Management
-  Safe Management of Blood and Body Fluid Spillages
-  Patient Placement (or those you care for)
-  Safe Management of Linen
-  Respiratory and Cough Hygiene



Hand Hygiene

Hand hygiene is the single most important thing you can do to prevent the spread of infections.

Good hand hygiene means washing your hands properly with liquid soap and warm water or, when your hands are not visibly soiled using Alcohol Based Hand Rub (ABHR). ABHR is available on every ambulance, and personal issue ABHR is carried by ambulance staff.

Note: Alcohol based hand rubs are not effective against gastrointestinal infections such as *Clostridium difficile* (*C.difficile*) or Norovirus so if the person you are caring for has diarrhoea or vomiting it is recommended that hands are washed with liquid soap and warm water. If you have no immediate access to hand washing facilities skin wipes are available on ambulances to clean hands prior to application of ABHR. Hands should be washed with liquid soap and water at the first available opportunity, and if visibly soiled or dirty.

Before performing hand hygiene:

- Expose your forearms (roll up long sleeves)
- Remove all hand/wrist jewellery (a single, plain metal finger ring is permitted but should be removed (or moved up) during hand hygiene)
- Ensure finger nails are clean, short and that artificial nails or nail products are not worn
- Cover all cuts or abrasions you have with a waterproof dressing.

ALWAYS carry out hand hygiene:

- Before touching a person
- Before clean/aseptic technique
- After body fluid exposure
- After touching a person
- After touching a person's surroundings.

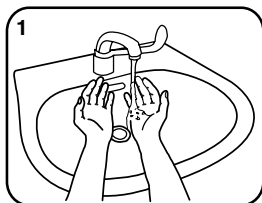
Remember:

- Hands are covered in micro-organisms – even if they look clean
- Hand hygiene is the most effective thing you can do to reduce the spread of infection
- Alcohol based hand rub can also be used in appropriate circumstances (as noted before).

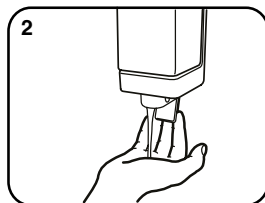
[See over for Hand Washing and Rubbing Actions >](#)



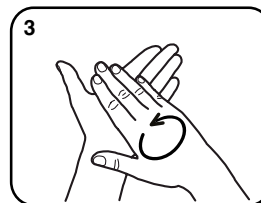
Hand Washing Actions



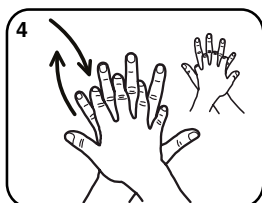
1 Wet hands with water



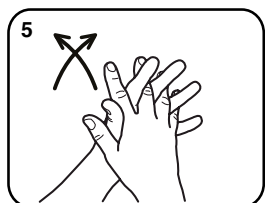
2 Apply enough soap to cover all hand surfaces



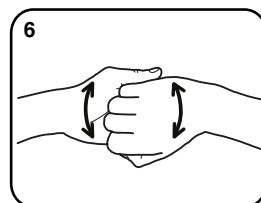
3 Rub hands palm to palm



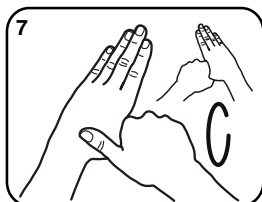
4 Right palm over the back of the other hand with interlaced fingers and vice versa



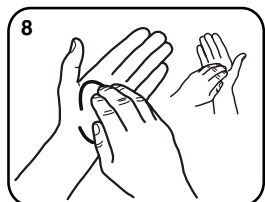
5 Palm to palm with fingers interlaced



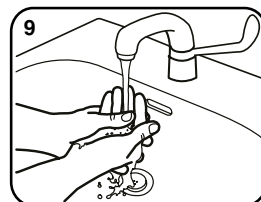
6 Backs of fingers to opposing palms with fingers interlocked



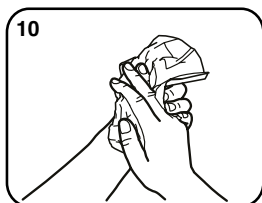
7 Rotational rubbing of left thumb clasped in right palm and vice versa



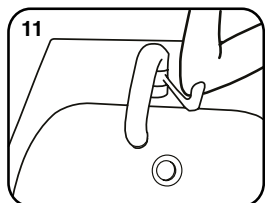
8 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



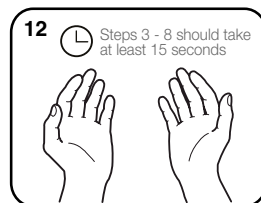
9 Rinse hands with water



10 Dry thoroughly with towel



11 Use elbow to turn off tap




12  Steps 3 - 8 should take at least 15 seconds

...and your hands are safe



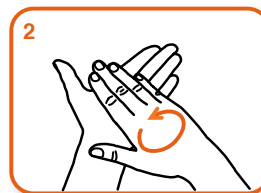
Hand Rubbing Actions

Steps 2-7 should take at least 15 seconds

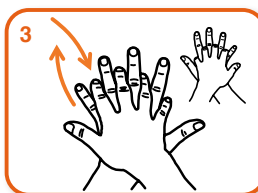
 Duration of the entire procedure: **20-30 sec.**



Apply a palmful of the product in a cupped hand and cover all surfaces



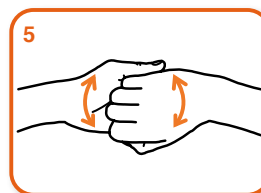
Rub hands palm to palm



Right palm over left dorsum with interlaced fingers and vice versa



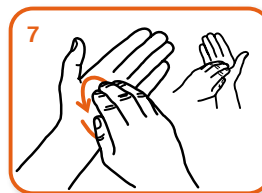
Palm to palm with fingers interlaced



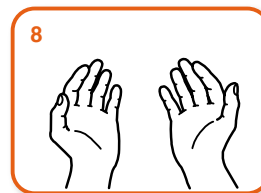
Backs of fingers to opposing palms with fingers interlocked



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



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



...once dry, your hands are safe

Personal Protective Equipment



The use of Personal Protective Equipment (PPE) such as disposable plastic aprons and disposable gloves is a requirement of health and safety legislation. PPE protects you (your uniform) from direct contact with any potential blood and/or body fluid contact.

Disposable Gloves must be:

- Worn when exposure to blood and body fluids is anticipated or likely
- Changed for each person you are caring for, and each new task
- Appropriate for use and well fitting.

Note: Jewellery must not be worn under gloves (a single plain metal finger ring is permitted). NEVER wash gloves or reuse disposable gloves.

Hands must be washed after removal of gloves.

The correct procedure to remove gloves is to:

- Grasp the outside wrist area of the glove with the opposite gloved hand; peel off
- Hold the removed glove in the gloved hand
- Slide the fingers of the ungloved hand under the remaining glove at the wrist
- Peel the second glove off over the first glove
- Ensure safe disposal into healthcare waste bag.

Aprons

Tasks that you assess as requiring disposable gloves may also require a disposable apron to be worn. As with disposable gloves, aprons should be changed for each person you are caring for and each new task.

You should always assume your worn apron is contaminated and remove safely by:

- Firstly, unfasten or break ties
- Touching only the inside of the apron, pull the apron away from neck and shoulders
- Fold or roll into a bundle
- Ensure safe disposal into healthcare waste bag.

Eye/Face Protection (including full-face visors) must be:

- Worn if blood and/or body fluid splashes to the eye/face are anticipated.

Note: Regular corrective spectacles are not considered eye protection. For further information on Eye/Face Protection refer to local policy.

Remember:

- Personal Protective Equipment is a requirement of health and safety legislation
- Disposable gloves and aprons must be used only once then discarded
- Gloves should be removed first, followed by apron
- Perform hand hygiene after you finish removing all PPE.

Respiratory and Cough Hygiene



Coughing and sneezing is a way in which our body tries to get rid of any harmful microbes and dust from the respiratory tract, i.e. from the nose, throat and lungs.

In the case of colds and flu, millions of viral particles rush out of the nose and mouth and contaminating the surfaces on which they land, e.g. on exposed food or on our hands.

Using a disposable tissue to catch these harmful microbes by covering the nose and mouth and disposing of the tissue in the bin minimises the risk of infection transmission. The individuals you care for may need assistance to catch coughs and sneezes and carry out hand hygiene.

Hands must be washed after wiping and blowing the nose or catching a sneeze or a cough because the virus will otherwise remain on the hands and can spread quickly onto everything you touch.

Note: In the ambulance, where there is no running water available, staff should use hand wipes followed by alcohol based hand rubs (ABHR) and should then wash their hands at the first available opportunity.

Disposable tissues are much more hygienic than cotton handkerchiefs. Tissues should be readily accessible to everyone and all should be encouraged to use a tissue only once, throw it away immediately and to wash their hands afterwards or apply ABHR.

Remember:

- Catch it; Kill it; Bin it
- Use a disposable tissue to catch your sneeze or cough
- Discard them immediately after use
- Encourage and assist others to adopt good respiratory hygiene practices
- Keep contaminated hands away from the mucous membranes of the eyes and nose
- Perform hand hygiene.

Patient Placement (or those you care for)



In the ambulance setting you need to consider if there is a cross infection risk to/from the person you are caring for. When a patient is confirmed or suspected of having an infection they will usually be transported in an ambulance on their own, not with other patients.

Patients can become infected in various ways:

- By touching contaminated surfaces or coming into contact with someone who has an infection
- By breathing in or swallowing harmful micro-organisms
- Through a cut or wound
- From contaminated care equipment.

Patients who may present an infection risk are those:

- With diarrhoea and vomiting
- Unexplained rash
- Fever
- Respiratory symptoms
- Previously positive with multi resistant micro-organisms such as MRSA or CPE
- Hospitalised outside Scotland in the last 12 months
- Local procedures and policies on infection risk assessment must be followed and the infection risk documented and action taken.

Note: Standard Infection Control Precautions (SICPs) maybe insufficient to prevent transmission of some infections. Additional precautions called Transmission Based Precautions (TBPs) are required to be used by staff. Refer to National Infection Prevention and Control Manual and/or local policy for further information on TBPs.

Remember:

- Standard Infection Control Precautions must still be applied when additional precautions are in place.

Safe Management of Blood and Body Fluid Spillages



Spillages of blood and other body fluids are hazardous and must be dealt with as soon as possible using the spillage kit available in the ambulance.

Follow the instructions within the spillage kit pack.

- Ensure all cuts and grazes are covered
- Put on PPE, i.e. non-sterile disposable gloves and apron
- Apply absorbent granules from the body fluid spillage kit directly to the spillage
- Once spill is absorbed scoop it up using the equipment in the body fluid spillage kit
- Discard waste into healthcare waste bag
- Clean area with Biocide cleaner from the body fluid spillage kit
- Follow manufacturer's instruction on contact time or leave for three minutes
- Dry area with paper roll
- Discard paper roll and PPE into healthcare waste bag
- Carry out hand hygiene.

Remember:

- Deal with spillages immediately
- Use PPE, i.e. disposable gloves and apron
- Follow manufacturer's instructions on body fluid spillage kit
- Perform hand hygiene on removal of all PPE.

Safe Management of Care Equipment



Care equipment can become contaminated with blood, other body fluids, secretions and excretions and transfer micro-organisms during the delivery of care.

Care equipment can generally be categorised as either:

Single Use

(equipment such as dressing packs or syringes)



- These must never be reused again even if they look in a good condition
- These must be disposed of safely after use.

Communal

(e.g. a trolley cot and mattress, carry chair)

- These must be cleaned regularly and after each patient use.

- These must be cleaned after blood and/or body fluid contamination as per local policy
- These must be cleaned at predefined intervals as part of equipment cleaning protocols
- These must be cleaned before inspection, servicing or repair.

When cleaning all reusable communal equipment it must be cleaned, dried and stored safely between uses. Cleaning and maintaining equipment is essential to prevent vulnerable and susceptible people acquiring an infection.

Remember:

- You should be aware of equipment items that are single use and should be discarded and those that are communal and can be cleaned
- You should have a good understanding of equipment cleaning procedures
- Always read and follow product/manufacture's cleaning guidelines on the use of equipment
- Wear PPE, i.e. disposable gloves and apron, when cleaning equipment
- Perform hand hygiene after every task.

Safe Management of the Care Environment



A clean environment can help to reduce the spread of infection.

There are many areas in the ambulance saloon that become easily contaminated with micro-organisms, e.g. patient seating, trolley cot, waste bin area. Fixtures, fittings and floorings in a poor state of repair can harbour micro-organisms in hidden cracks or crevices.

To minimise the spread of infection, the environment must be kept as clean and dry and where possible clear from litter or non-essential items and equipment.

Use of a general-purpose neutral detergent and hand-hot water is usually enough to make sure the environment is clean and safe. A fresh solution should be made up for each cleaning task (always check manufacturer's instructions regarding amount to use).

Staff should be aware of environmental cleaning routine/schedule and their responsibilities for the cleaning tasks required on a daily and weekly basis. The care environment must be cleaned in accordance with Health Facilities Scotland National Cleaning Specification. Ensure that the cleaning equipment you use is fit for purpose and is not a potential source of infection itself.

If you are concerned that the environment may be causing a potential risk of infection you should report this to your line manager.

Remember:

- Where possible maintain a clutter and dust-free, clean environment to prevent infection
- The use of freshly made general-purpose neutral detergent solutions for each task is usually enough to keep it clean
- Do not use antiseptics or hand hygiene products for environmental cleaning
- Perform hand hygiene after environmental cleaning tasks.

Safe Management of Linen



In the ambulance setting, linen consists mainly of blankets and staff uniforms.

Used linen harbours large numbers of micro-organisms.

There are three categories of linen:

- **Clean** – Linen washed and ready for use
- **Used** – All used linen in the care setting not contaminated by blood or body fluids
- **Infectious** – All linen used by a person known, or suspected to be, infectious and linen that is contaminated with blood or body fluids, e.g. faeces.

Clean Linen

- Clean linen should be stored in a clean, designated area
- Clean linen stored on a trolley must be completely covered with a waterproof covering
- Clean linen deemed unfit for reuse, e.g. torn, should be returned to laundry for disposal or disposed of locally.

For all used Linen:

- Put on disposable gloves and apron prior to handling used linen
- Used linen should be left at the receiving hospital in exchange for a replacement. A few stations have a laundry uplift service and in these cases a linen receptacle is provided
- Roll or fold into a bundle and place into the correct laundry bag for linen that is used
- Perform hand hygiene on removal of PPE.

Do Not:

- Shake or sort linen following removal from trolley cot
- Place used linen on floor or other surfaces
- Re-handle linen once bagged
- Overfill laundry receptacle.

Infectious Linen:

Infectious linen has been used by the patient/person who is known or suspected of being infectious and/or the linen is contaminated with blood or other body fluids.

Infectious linen should be placed directly into a water soluble laundry bag and secured before placing into a clear plastic bag then placed into a laundry receptacle at the receiving hospital.

Perform hand hygiene on removal of PPE when no longer handling linen.

Safe Management of Linen (continued)



Colour coding of outer linen bags

Linen bags are colour coded to denote the various categories of linen, e.g. used linen or infectious linen. For further information refer to your local hospital policy.

Note: Water soluble laundry bags should be used for linen assessed as being infectious i.e. soiled with blood or body fluids which can be put directly into a washing machine.

Micro-organisms are destroyed by heat and detergent and by the dilution effect of the water, preferably in the washing machine.

- Use as hot a programme that the linen allows
- Further organisms are killed by tumble drying and ironing.

For Staff Uniforms:

- These should be laundered as soon as possible or stored appropriately and separate from clean uniforms to await laundering
- Follow local policy for the laundry of staff uniforms or staff uniforms contaminated with blood or body fluids.

Remember:

- Do not mix clean and used linen
- Do not shake or sort used/infectious linen
- Wear PPE for handling linen that is used/infectious
- Perform hand hygiene after all handling of used linen.

Occupational Exposure Management (including sharps)



You may on occasions be exposed to items or substances that have the potential to be harmful. Following the Standard Infection Control Precautions will help protect you from harm.

Exposure

This means coming into contact with blood/body fluid, e.g. splashes of blood or urine.

A significant occupational exposure is:

- Any injury from a needle, instrument, or bite which breaks the skin (percutaneous injury)
- Exposure of broken skin (abrasions, cuts, eczema, etc.)
- Exposure of mucous membranes, including the eye, from splashing of blood or body fluids.

If you are exposed by splashes:

- Skin should be washed with liquid soap and warm water, if running water is unavailable use pre-packed solutions, e.g. sterile water/saline for irrigation
- Personal Protective Equipment (PPE) that is splashed should be changed immediately
- Splashes to the eyes or mouth should be rinsed immediately in water; use eye/mouth washout kit if available
- If you wear contact lenses remove them before you irrigate
- Do not swallow the water you have used to rinse your mouth.

Sharps

You may need to deal with sharps such as broken glass, razor blades, scissors – in fact anything that can cut or puncture the skin, as well as the more obvious sharps such as needles.

Needlestick injury is the most commonly reported injury amongst health and social care staff and has the potential of transferring bacteria and viruses, including the transmission of blood-borne viruses, e.g. hepatitis B, hepatitis C and HIV.

Should an injury occur that breaks the skin you should act immediately.

- Encourage the wound to bleed
- Do not suck the wound area or shake it
- Gently wash under running warm water with ordinary liquid soap, or irrigate with pre-packed solutions e.g. sterile water/saline for irrigation, and do not scrub
- Dry, then cover the area with a waterproof dressing
- Ensure the item that caused the injury is disposed of safely.

Any exposure to spillages or sharps should be reported to your supervisor/line manager and you should follow the specific accident reporting policy in your setting.

Remember:

- Following the Standard Infection Control Precautions can protect you from harm
- Follow the safe use and disposal of sharp items precautions
- Always dispose of sharps immediately at the point of use into an approved sharps container
- If exposure occurs – bleed, wash, cover
- Follow your local reporting systems following all incidents or injury.

Safe Disposal of Waste



Caring for others produces many different types of waste. Some of the waste produced requires special handling and disposal, e.g. sharps and waste generated from people who have or may have an infection.

Categories of Waste

- **Healthcare (including clinical) waste**
- **Special (hazardous) waste**
- **Domestic waste:**
 - **Dry recyclates**
(glass, paper, plastics, metals and cardboard)
 - **Residual waste**
(any waste that cannot be recycled).

Waste Streams

Waste bags in care settings must be colour coded to denote the various categories of waste. It is suggested that the following colour coding is used

- **Black** – Domestic waste
- **Orange (Low Risk)** – Healthcare waste contaminated or likely to be contaminated with infectious blood/body fluids
- **Yellow (High Risk)** – Disposal of special (hazardous) waste, including human tissue recognisable as a body part, medical devices and sharps containers.

Safe Disposal of Waste

- Always use appropriate personal protective equipment (PPE)
- Dispose of immediately and as close to the point of origin as possible
- Dispose of into the correct UN 3291 approved waste bag or sharps container
- Waste bags should never be overfilled, i.e. once three-quarters full, using a ratchet tag to close. Healthcare waste bags should be labelled with date and point of origin prior to disposal at receiving hospital
- Liquid waste, e.g. blood, should be made safe following local policy
- When you have finished handling waste remove PPE and perform hand hygiene.

Safe Disposal of Waste (continued)



Sharps

Used needles or lancets must not be re-sheathed and all sharps must be discarded directly into a sharps container.

Sharps containers must be:

- Labelled and dated when assembled
- Available where the procedure is taking place and the sharp immediately disposed of after use
- Only filled to the mark that indicates that the bin is full – that is no more than three-quarters
- Not be placed on the floor and the temporary closure mechanism must be activated when not in use
- Labelled with date and vehicle registration at point of closure, and disposed of at receiving hospital. A few stations have contracted waste uplifts in place for healthcare waste and sharps.

Remember:

- Wear disposable gloves and apron when dealing with waste
- Never overfill waste bags
- Never have items protruding from sharps containers
- Always perform hand hygiene immediately after handling waste of any kind
- Always ensure that sharps containers are assembled correctly.



Aseptic Technique

Definition: Aseptic Technique is a healthcare procedure designed to minimise the risks of exposing the person you care for to pathogenic micro-organisms during simple and complex procedures.

Aseptic Technique steps for a care procedure

1. Perform hand hygiene
2. Explain the procedure to the person you are caring for and ensure their consent
3. Gather equipment onto a suitable clean surface
4. Perform hand hygiene and apply disposable gloves and apron
5. Prepare the patient/area for the procedure, e.g. remove old dressing
6. Remove disposable gloves and apron and perform hand hygiene
7. Create a sterile field/area, e.g. using a sterile dressing pack/drape, or the inside packaging of a sterile dressing
8. Protect the immediate care area from splashes or spillages using a drape, paper towel or absorbent padding making sure the absorbent side is against the skin area and plastic side away from the skin

9. Perform hand hygiene and apply disposable gloves and apron
10. Perform the procedure and assess, e.g. wound improvement or deterioration
11. Once the procedure is completed, the sterile field and/or drape should be rolled or folded up and placed in a leak-proof disposable bag
12. Remove disposable gloves and apron
13. Dispose of waste into a healthcare waste bag and any sharp objects into an appropriate sharps disposal container
14. Perform hand hygiene
15. Update all relevant documents.

Any procedure that crosses the skin barrier carries a risk of introducing infection. By following an aseptic technique you can prevent this risk occurring.

For Peripheral Venous Catheter (PVC) insertion refer to the PVC Insertion Bundle on @sas.

If you would like to know more about Aseptic Technique please see: www.nes-hai.info for more information.



Preventing Infection in the Ambulance Setting

Acknowledgements

Developed by NHS Education for Scotland in collaboration with Health Protection Scotland 2013, and adapted for Scottish Ambulance Service 2016.



© NHS Education for Scotland 2016.
You can copy or reproduce the
information in this document for use
within NHSScotland and for non-
commercial educational purposes.
Use of this document for commercial
purposes is permitted only with the
written permission of NES.