



# National Infection Prevention and Control Manual

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2.1	January 2013	Amended after Hospital (ICN Leads) Consensus Meeting 9 January 2013.	
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<b>HPS ICT Document Information Grid</b>	
<b>Description:</b>	National manual to be used by all those involved in care provision. The manual currently contains information on Standard Infection Control Precautions and it is planned to further develop the manual, with the next planned chapter being Transmission Based Precautions.
<b>Update/review schedule:</b>	Updated in real time with changes made to practice recommendations as required i.e as evidence emerges/legislation changes.
<b>Cross reference:</b>	<a href="#">Standard Infection Control Precautions Literature Reviews</a>

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## Introduction

The National Infection Prevention and Control Manual was first published on 13 January 2012, CNO (2012)1: [http://www.sehd.scot.nhs.uk/cmo/CNO\(2012\)01.pdf](http://www.sehd.scot.nhs.uk/cmo/CNO(2012)01.pdf), CNO (2012) issued on 17 May 2012: [http://www.sehd.scot.nhs.uk/cmo/CNO\(2012\)01update.pdf](http://www.sehd.scot.nhs.uk/cmo/CNO(2012)01update.pdf).

This national manual provides guidance to all those involved in care provision and should be adopted for infection prevention and control practices and procedures.

The manual aims to:

- Embed the importance of infection prevention and control into everyday practice.
- Reduce variation in infection prevention and control practice and standardise care processes.
- Improve the application of knowledge and skills in infection prevention and control.
- Help reduce the risk of Healthcare Associated Infection (HAI) cross-contamination.
- Help align practice, monitoring, quality improvement and scrutiny.

The practice recommendations set out in the manual are drawn from appraisals of the available professional literature on infection prevention and control for hospital settings which can be found at

<http://www.hps.scot.nhs.uk/haic/ic/standardinfectioncontrolprecautions-sicps.aspx>.

## Responsibilities for the implementation of this manual

### Organisations must ensure:

- Systems and resources are in place to facilitate implementation and compliance monitoring with infection prevention and control amongst all staff, including all agency or external contractors e.g. COSHH requirements.
- There is an organisational culture which promotes incident reporting and focuses on improving systemic failures that encourage safe working practices e.g. risk assessing the need for sharps in clinical areas as per European Union. COUNCIL DIRECTIVE 2010/32/EU of 10 May 2010.

### Managers of all services must ensure that staff:

- are aware of and have access to infection prevention and control policy/guidance documents;
- have had instruction/education on infection prevention and control through attendance at events and/or completion of training e.g. [NHS Education Scotland \(NES\)](#) and/or local board/organisation;
- have adequate support and resources available to implement, monitor and take corrective action to ensure compliance with infection prevention and control policies/procedures;
- with health concerns (including pregnancy) or who have had an occupational exposure e.g. occupational related skin issues, are referred to the relevant agency e.g., General Practitioner and/or Occupational Health;
- undertaking Exposure Prone Procedures (EPP) have undergone the required health checks/clearance; and
- are responsible for including infection prevention and control as an objective in their Personal Development Plans (or equivalent).

### Staff providing care must ensure that they:

- understand and apply the principles of infection prevention and control set out in this manual;
- maintain competence, skills and knowledge in infection prevention and control through attendance at education events and/or completion of training e.g. [NHS Education Scotland \(NES\)](#) and/or local board/organisation;
- communicate the infection prevention and control practices to be taken by colleagues, those being cared for, relatives and visitors without breaching confidentiality;
- have up to date occupational immunisations/health checks/clearances requirements as appropriate;
- report to line managers and document any deficits in knowledge, resources, equipment and facilities or incidents that may result in transmission of infection; and
- do not provide direct care while at risk of potentially transmitting infectious agents to others. If in any doubt they must consult with their line manager, Occupational

Health Department or Infection Prevention and Control Team (IPCT)/Health Protection Team (HPT).

**Infection Prevention and Control Teams (IPCTs)/Health Protection Team (HPT) must:**

- engage with staff to develop systems and processes that lead to sustainable and reliable improvements in relation to the application of infection prevention and control;
- provide expert advice on the application of infection prevention and control in the care setting and on individual risk assessments as required.

## **Disclaimer**

**When an organisation e.g. NHS board uses products or adopts practices that differ from those stated in this National Infection Prevention and Control Manual, the individual organisation is responsible for ensuring safe systems of work including the completion of a risk assessment.**

## Part 1: Standard Infection Control Precautions (SICPs)

### Introduction

Standard Infection Control Precautions (SICPs), covered in this document, are intended for use **by all** staff, **in all** care settings, **at all** times, **for all** patients<sup>1</sup> whether infection is known to be present or not to ensure the safety of those being cared for, staff and visitors in the care environment.

SICPs are the basic infection prevention and control measures necessary to reduce the risk of transmission of micro-organisms from recognised and unrecognised sources of infection. These sources of (potential) infection include blood and other body fluids secretions or excretions (excluding sweat), non-intact skin or mucous membranes and any equipment or items in the care environment that are likely to become contaminated.

The application of SICPs during care delivery is determined by the assessment of risk and includes the task/level of interaction and/or the anticipated level of exposure to blood or other body fluids.

This document is the practice guide for SICPs to be applied by all care staff.

The literature reviews that underpin and inform the practical application for the SICPs and highlight implication for research are available at

<http://www.hps.scot.nhs.uk/haic/ic/standardinfectioncontrolprecautions-sicps.aspx>

There are ten elements of Standard Infection Control Precautions (SICPs):

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### 1. Patient Placement/Assessment for infection risk

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The potential for transmission of infection or infectious agents should be assessed at the patient's entry to the care area and should be continuously reviewed throughout their stay. This assessment should influence placement decisions in accordance with clinical/care need(s).

Patients who may present a cross-infection risk e.g. have diarrhoea, vomiting, a rash or previous recent hospitalisations (including hospitalisation abroad in the last 6 months), must be assessed and placed in a suitable environment to minimise cross transmission e.g:

- in a single room with a wash hand basin;
- cohort area; or
- if in an ambulance, transported on their own.

Avoid unnecessary movement of patients between care areas.

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<sup>1</sup> The use of the word 'Persons' can be used instead of 'Patient' when using this document in non-healthcare settings



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## 2. Hand Hygiene

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Hand hygiene is considered to be the single most important practice in reducing the transmission of infectious agents, including Healthcare Associated Infections (HAI), when providing care.

### Before performing hand hygiene:

- expose forearms;
- 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; and
- cover all cuts or abrasions with a waterproof dressing.

### Performing hand hygiene:

Alcohol Based Hand Rubs (ABHRs) should be used for hand hygiene and must be available to staff as near to point of care as possible. Where this is not practicable, personal ABHR dispensers should be used.

Hand hygiene should be performed:

- before touching a patient;
- before clean/aseptic procedures;
- after body fluid exposure risk;
- after touching a patient; and
- after touching a patient's immediate surroundings.

Hands must be washed with non-antimicrobial liquid soap and water if:

- hands are visibly soiled or dirty;
- exposure to spore forming organisms such as *Clostridium difficile* or a gastrointestinal infection e.g. norovirus, is suspected or known.

Antimicrobial hand wipes should not be used in a hospital setting. Outwith the hospital setting, if running water is not available, then staff should use antimicrobial hand wipes followed by ABHR and wash their hands at the first available opportunity.

**For how to wash hands see [Appendix 1](#)**

**For how to hand rub see [Appendix 2](#)**

### Skin care:

- Following hand washing ensure hands are always thoroughly dried.
- Emollient hand cream should be used by staff during work breaks and when off duty.
- Hand creams that affect the effectiveness of hand hygiene products or glove integrity must not be used when on duty.
- Communal tubs of hand cream must not be used in care settings.

**Surgical scrubbing/rubbing:**

- Surgical scrubbing/rubbing must be undertaken before donning sterile theatre garments or at other times e.g. prior to insertion of central lines.
- All hand/wrist jewellery must be removed.
- Nail brushes should not be used. Nail picks can be used if nails are visibly dirty.
- An antimicrobial liquid soap licensed for surgical scrubbing or an ABHR licensed for surgical rubbing (as specified on the product label) must be used.
- ABHR can be used between surgical procedures if licensed for this use.

**Follow the technique in [Appendix 3](#) for Surgical Scrubbing**

**Follow the technique in [Appendix 4](#) for Surgical Rubbing**

Hand Hygiene posters/leaflets can be found at  
<http://www.washyourhandsofthem.com/home.aspx>

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### **3. Respiratory Hygiene and Cough Etiquette**

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Respiratory hygiene and cough etiquette is designed to contain respiratory secretions to prevent transmission of respiratory infections this includes:

- covering the nose and mouth with a disposable tissue when sneezing, coughing, wiping and blowing the nose;
- disposing of all used tissues promptly into a waste bin;
- washing hands with non-antimicrobial liquid soap and warm water after coughing, sneezing, using tissues, or after contact with respiratory secretions or objects contaminated by these secretions. Antimicrobial hand wipes should not be used in the hospital setting. Outwith the hospital setting, if running water is not available, then staff should use antimicrobial hand wipes followed by ABHR and wash their hands at the first available opportunity; and
- Keeping contaminated hands away from the mucous membranes of the eyes and nose.

Staff should promote respiratory hygiene and cough etiquette to all individuals and help those (e.g. elderly, children) who need assistance with containment of respiratory secretions e.g. those who are immobile will need a receptacle (e.g. plastic bag/waste bag) readily at hand for the prompt disposal of used tissues and offered hand hygiene facilities.

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### **4. Personal Protective Equipment (PPE)**

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The type of PPE used must provide adequate protection to staff against the risks associated with the procedure or task being undertaken.

**All PPE should be:**

- located close to the point of use;
- stored to prevent contamination in a clean/dry area until required for use (expiry dates must be adhered to);
- single-use only items unless specified by the manufacturer, disposed of after use into the correct waste stream i.e. healthcare waste or domestic waste.

Reusable PPE items, e.g. non-disposable goggles/face shields/visors must have a decontamination schedule with responsibility assigned.

**Gloves must be:**

- worn when exposure to blood and/or other body fluids is anticipated/likely;<sup>2</sup>
- changed immediately after each patient and/or following completion of a clinical procedure or task;
- changed if a perforation or puncture is suspected; and
- appropriate for use, fit for purpose and well fitting to avoid excessive sweating and interference with dexterity.

**Double gloving** is recommended during some Exposure Prone Procedures (EPPs) e.g. orthopaedic and gynaecological operations, attending major trauma/road traffic collision.

*For appropriate glove use and selection see [Appendix 5](#)*

**Aprons must be:**

- worn to protect uniform or clothes when contamination is anticipated/likely e.g. when in direct care contact with a patient; and
- changed between patients and/or following completion of a procedure or task.

**Full body gowns/Fluid repellent coveralls must be:**

- worn when there is a risk of extensive splashing of blood and/or other body fluids e.g. in the operating theatre; and
- changed between patients and immediately after completion of a procedure.

**Eye/face protection (including full face visors) must be:**

- worn if blood and/or body fluid contamination to the eyes/face is anticipated/likely by members of the surgical theatre team and always during Aerosol Generating Procedures (AGPs)<sup>3</sup>. Regular corrective spectacles are not adequate eye protection.

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<sup>2</sup> Scottish National Blood Transfusion Service (SNBTS) adopt practices that differ from those stated in the National Infection Prevention and Control Manual.

<sup>3</sup> Procedure performed on patients that are more likely to generate higher concentrations of respiratory aerosols than coughing, sneezing, talking, or breathing, presenting healthcare personnel with an increased risk of exposure to infectious agents present in the aerosol e.g. endotracheal intubation and extubation, bronchoscopy.

**Surgical face masks must be:**

- worn if splashing or spraying of blood, body fluids, secretions or excretions onto the respiratory mucosa is anticipated/likely;
- well fitting and fit for purpose (fully covering the mouth and nose);
  - manufacturers' instructions must be adhered to ensure the most appropriate fit/protection; and
- removed or changed;
  - at the end of a procedure/task;
  - if the integrity of the mask is breached, e.g. from moisture build-up after extended use or from gross contamination with blood or body fluids; and
  - in accordance with manufacturers' instructions.

**Footwear must be:**

- non-slip, clean and well maintained, and support and cover the entire foot to avoid contamination with blood or other body fluids or potential injury from sharps; and
- removed before leaving a dedicated footwear area e.g. theatre.

**Headwear must be:**

- worn in theatre settings/clean rooms e.g. Central Decontamination Unit (CDU);
- well fitting and completely cover the hair; and
- changed/disposed of between sessions or if contaminated with blood or body fluids.


*For the recommended method of putting on and removing PPE see [Appendix 6](#)*

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## 5. Management of Care Equipment

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Care equipment can become contaminated with blood, other body fluids, secretions and excretions and transfer infectious agents during the delivery of care. Care equipment is classified as either:

- Single-use - used once then discarded. Must never be reused even on the same patient. The packaging carries this symbol. 
- Single patient use - for use only on the same patient.
- Reusable invasive equipment - used once then decontaminated e.g. surgical equipment.
- Reusable non-invasive equipment (often referred to as communal equipment) - reused on more than one patient following decontamination between each use e.g. commode, patient trolley.
- All sterile packaged items must be checked for visible contamination, expiry dates and that the package is intact.

Manufacturers' guidance must be adhered to for use and decontamination of all care equipment.

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**Decontamination of reusable non-invasive care equipment must be undertaken:**

- between each use;
- after blood or body fluid contamination;
- at regular predefined intervals as part of an equipment cleaning protocol;
- before inspection, servicing or repair.

All reusable non-invasive equipment must be rinsed and dried following decontamination then stored clean and dry.

Decontamination protocols should include responsibility for; frequency of; and method of equipment decontamination.

*For how to decontaminate non-invasive reusable care equipment see [Appendix 7](#)*

*For a decontamination status certificate; required if any item of equipment is being sent to a third party for e.g. inspection, servicing or repair see [Appendix 8](#)*

*For guidance prior to procuring, trialling or lending any reusable non-invasive patient care equipment, see [Appendix 9](#)*

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## 6. Control of the Environment

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It is the responsibility of the person in charge to ensure that the care area is safe for practice and this includes environmental cleanliness/maintenance. The person in charge has the **authority to act** if this is deficient.

The care environment must be:

- free from clutter to facilitate effective cleaning;
- well maintained and in a good state of repair; and
- clean and routinely cleaned in accordance with the Health Facilities Scotland National Cleaning Specification:
  - A fresh solution of general purpose neutral detergent in warm water is recommended for routine cleaning. This should be changed when dirty or at 15 minutes intervals or when changing tasks.
  - Routine disinfection of the environment is not recommended. However, 1,000ppm available chlorine should be used routinely on sanitary fittings.

Staff groups should be aware of their environmental cleaning schedules and clear on their specific responsibilities. Cleaning protocols should include responsibility for; frequency of; and method of environmental decontamination.

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## 7. Safe Management of Linen

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Clean linen should be stored in a clean, designated area, preferably an enclosed cupboard. If clean linen is not stored in a cupboard then the trolley used for storage must be designated for this purpose and completely covered with an impervious covering that is able to withstand decontamination.

**Safe linen management at care area level:****For all used linen (often referred to as soiled linen):**

- Ensure a laundry receptacle is available as close as possible to the point of use for immediate linen deposit. Any linen used during patient transfer e.g. blankets, should be appropriately segregated at the point of destination.
- Do not:
  - rinse, shake or sort linen on removal from beds;
  - place used linen on the floor or any other surfaces e.g. a locker/table top;
  - re-handle used linen once bagged;
  - overfill laundry receptacles; or
  - place extraneous items in the laundry receptacle e.g. used equipment/needles.

**For all infectious linen** i.e. linen that has been used by a patient who is known or suspected to be infectious and/or linen that is contaminated with blood or other body fluids e.g. faeces:

- place directly into a water-soluble/alginate bag and secure; then place into a plastic bag e.g. clear bag and secure before placing in a laundry receptacle; or
- if the item(s) is heavily soiled and unlikely to be fit for reuse following laundering then dispose of as healthcare waste and notify your linen services.

Used and infectious linen bags/receptacles should be tagged e.g. ward/clinic and date.

Store all used/infectious linen in a designated, safe, lockable area whilst awaiting uplift. Uplift schedules must be acceptable to the care area and there should be no build-up of linen receptacles.

*For how to manage linen at care area level see [Appendix 10](#)*

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## **8. Management of Blood and Body Fluid Spillages**

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Spillages of blood and other body fluids are considered hazardous and must be dealt with immediately by staff trained to undertake this safely. Responsibilities for the decontamination of blood and body fluid spillages should be clear within each area/care setting.

*For management of blood and body fluid spillages see [Appendix 11](#)*

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## **9. Safe Disposal of Waste**

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Scottish Health Technical Note (SHTN) 3: NHSScotland Waste Management Guidance contains the regulatory waste management guidance for NHSScotland including waste classification, segregation, storage, packaging, transport, treatment and disposal.

### Categories of waste:

- **Healthcare (including clinical) waste** – is produced as a direct result of healthcare activities e.g. soiled dressings, sharps.
- **Special (or hazardous) waste** – arises from the delivery of healthcare in both clinical and non-clinical settings. Special waste includes a range of controlled wastes, defined by legislation, which contain dangerous or hazardous substances e.g. chemicals, pharmaceuticals.
- **Domestic waste** – waste similar in composition to waste from household premises e.g. paper towels.

### Waste Streams:

- **Black - Trivial risk**
  - Domestic waste or yellow and black stripes (hygiene waste). Final disposal to Landfill. Clear/opaque receptacles may also be used for domestic waste at care area level.
- **Orange, Light Blue(laboratory) - Low risk<sup>4</sup>**
  - **Orange** - consists of items which are contaminated or likely to be contaminated with infectious blood and/or body fluids. Final disposal following heat disinfection is to landfill.
  - **Light Blue** – laboratory/microbiological waste that must be autoclaved before disposal via the orange stream.
- **Yellow - High risk**
  - Waste which poses ethical, highly infectious or contamination risks. This includes anatomical and human tissue which is recognisable as body parts, medical devices and sharps waste boxes that have red, purple or blue lids. Disposal is by specialist incineration.
- **Red - Special waste**
  - Chemical waste.

### Safe waste disposal at care area level:

Always dispose of waste:

- immediately and as close to the point of use as possible;
- into the correct segregated colour coded UN 3291 approved waste bag (either orange/yellow for healthcare waste or black/clear/opaque for domestic); or
- into approved sharps waste box which must be no more than 3/4 full.

Sharps boxes must have a dedicated handle and a temporary closure mechanism, which must be employed when the box is not in use.

Liquid waste e.g. blood must be rendered safe by adding a self-setting gel or compound before placing in a healthcare waste bag.

Waste bags must be no more than 3/4 full or more than 4 kgs in weight; and using a ratchet tag/or tape (for healthcare waste bags only) with a 'swan neck' to close or label (for sharps waste boxes) with point of origin and date of closure.

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<sup>4</sup> Not required for boards with an on-site incinerator facility. This applies only to NHS Borders.

Store all waste in a designated, safe, lockable area whilst awaiting uplift. Uplift schedules must be acceptable to the care area and there should be no build-up of waste receptacles.

*For management of waste at care area level see [Appendix 12](#)*

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## 10. Occupational Exposure Management (including sharps)

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Sharps handling must be kept to a minimum and eliminated if possible with the use of approved safety devices following manufacturers' instructions for use and disposal.

Needles must not be re-sheathed.<sup>5</sup>

There is a potential risk of transmission of a Blood Borne Virus (BBV) from a significant occupational exposure and staff need to understand the actions they should take when a significant occupational exposure incident takes place.

A significant occupational exposure is:

- a percutaneous injury for example injuries from needles, instruments, bone fragments, or bites which break the skin; and/or
- exposure of broken skin (abrasions, cuts, eczema, etc); and/or
- exposure of mucous membranes including the eye from splashing of blood or other high risk body fluids.

*For the management of an occupational exposure incidents see [Appendix 13](#)*

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<sup>5</sup> **Only** exception is local anaesthetic administration in dentistry.