



**Infection.  
Prevention.  
Control.**

You're in safe hands

**NHS**

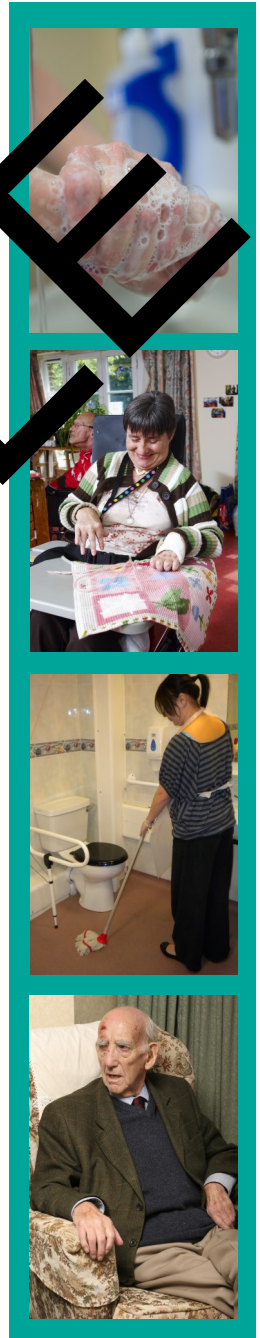
# Preventing Infection Workbook

Guidance for Care Homes

10th Edition

Name

Job Title



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SAMPLE

# 1. Introduction

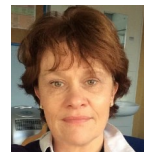
As an NHS Community Infection Prevention and Control (IPC) Team based in North Yorkshire, our aim is to support care homes in promoting best practice in infection prevention and control. This Workbook complements a range of educational infection prevention and control resources which can be viewed at [www.infectionpreventioncontrol.co.uk](http://www.infectionpreventioncontrol.co.uk).

This Workbook is intended to be the foundation for best practice for infection prevention and control. By applying the principles within this Workbook, you will demonstrate commitment to high quality care and patient safety. The Francis Report states that it is unacceptable for a patient to be injured by contracting certain types of infection as a result of the failure to apply methods of hygiene and infection control accepted by a specified standard setting body, preferably NICE". The Workbook is aimed at all staff working in a care home, this includes not only clinical staff but all staff groups including receptionists and cleaning staff.

The Workbook has been designed to be undertaken in stages. This will allow you to complete the 'test your knowledge' sections before moving on to the next section. On completion, your manager will check that you have achieved 100% competency in your infection prevention and control knowledge and sign the 'Certificate of Completion'. You should keep the Workbook as evidence of learning and as an on-going reference guide to provide you with easily accessible advice for day-to-day care of residents.

This Workbook is evidence-based and includes the latest national guidance. Completion of this Workbook also helps your organisation demonstrate compliance with the *Health and Social Care Act 2008* and the Care Quality Commission registration requirements in relation to infection prevention and control training.

**Dr Jenny Child**  
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Consultant Microbiologist**  
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# 3. Standard precautions

## 3. Standard precautions

There are seven control measures known as ‘Standard precautions’ (see table below). These underpin routine safe practice and break the chain of infection which in turn protects residents, visitors and staff. There is often no way of knowing who is infected, so by applying standard precautions to all residents and at all times, best practice becomes second nature and the risks of infection are minimised.

All care staff in all situations involving the care of residents or contact with the resident’s environment, must use infection prevention and control standard precautions.

- ◆ In most cases, without a laboratory test, it is impossible to tell who has or is carrying an infection. Since every person is a potential infection risk, it is essential that all staff apply safe systems of working at every opportunity.
- ◆ Safe working practices take the guesswork out of protecting yourself and others as you provide care.

7 standard precautions	
	Hand hygiene
	Personal protective equipment
	Sharps management
	Blood and body fluid spillages
	Waste management
	Laundry
	Decontamination of equipment

## 4. Hand hygiene

Evidence and national guidance identifies that effective hand hygiene results in a significant reduction in the carriage of harmful micro-organisms (germs) on the hands. Effective hand hygiene decreases the incidence of healthcare associated infection (HCAI) leading to a reduction in patient morbidity (disease) and mortality (death).

Hand hygiene is the single most important way to prevent the spread of infection. Hands may look visibly clean, but micro-organisms are always present, some harmful, some not. Removal of transient micro-organisms is the most important factor in preventing them from being transferred to others.

Hands may become contaminated by direct contact with a resident, handling equipment and contact with the general environment.

Hand hygiene refers to the process of hand decontamination where there is physical removal of dirt, blood, body fluids and the removal or destruction of micro-organisms from the hands.

**There are two categories of micro-organisms present on the skin of the hands**

<b>Transient</b>	Transient bacteria are found on the surface of the skin. They are called 'transient' as they do not routinely live on the hands. They are transferred to hands after contact with residents or the environment and are easily removed by routine handwashing with liquid soap and warm running water.
<b>Resident</b>	Resident bacteria are found on the hands in the deep layers and crevices and live on the skin of all people. They play an important role in protecting the skin from harmful bacteria and are not easily removed by routine handwashing with liquid soap and warm running water.

# 5. Personal protective equipment (Standard precaution)

Glove selection guide	Sterile		Non-sterile			
	Latex	Nitrile	Latex	Nitrile	Vinyl	Domestic
Procedure and type of contact						
Aseptic technique	✓	✓				
Blood/blood stained body fluids			✓			
Body fluids, e.g. urine, faeces			✓	✓		
Decontamination of equipment			✓	✓	✓	
Domestic tasks						✓
Sorting soiled laundry				✓	✓	
Urinary catheterisation	✓	✓				
Urine drainage bag emptying			✓	✓	✓	

## Do not wear gloves for

✗	Feeding residents
✗	Routine bed making
✗	Answering the telephone
✗	Writing records

## Aprons

A single use disposable apron should be worn whenever there is a risk of exposure to blood and/or body fluids, non-intact skin, mucous membranes or a known infection.

Aprons should also be worn when there is a risk of soiling to the front of uniforms or workwear and before an episode of direct 'hands on' care with a resident. Aprons should be disposed of as soon as the activity is completed.



6. Sharps Management (Standard precaution)

**Sharps containers**

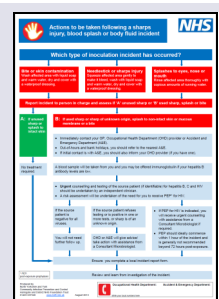
- ◆ Should be the correct size according to usage.
- ◆ Must be assembled correctly as per manufacturer’s instructions, ensuring the lid is snapped firmly in place all around the rim to avoid spillage or injury.
- ◆ Must have the label dated and signed on assembly for traceability purposes.
- ◆ Must be located in a safe position that avoids spillage and are at a height that allows the safe disposal of sharps. They should not be placed on the floor.
- ◆ Must be away from public areas and out of the reach of children, to avoid accidents.
- ◆ Must have the lid temporarily closed in position after each use, to prevent the risk of spillage.
- ◆ Should not be shaken or the contents pressed down to make room for more sharps or attempts to move or retrieve an item from the sharps container.
- ◆ Must be disposed of when the ‘fill line’ is reached, to avoid sharps protruding from the opening, or every 3 months if not full, in accordance with NICE Guidance.
- ◆ Containers awaiting disposal should be stored in a secure location. They must be locked, dated, signed and the location put on the label.
- ◆ Must only be used for the disposal of sharps.

**Notes**

- The use of a needlestick or sharps injury flowchart is good practice.

For further details visit:

[www.infectionpreventioncontrol.co.uk](http://www.infectionpreventioncontrol.co.uk).



### Use of disinfectant

- ◆ Always use the appropriate personal protective equipment (PPE), e.g. disposable apron and gloves, and wear facial protection if there is a risk of splashing to the face.
- ◆ Some disinfectants supplied as tablets must be made up with the specified amount of water using a diluter bottle in order to achieve the correct concentration.
- ◆ If the dilution of the chlorine-based disinfectants is incorrect and a weak solution is used, any blood-borne viruses e.g. hepatitis B, hepatitis C and HIV will not be killed. If the dilution is too strong, the equipment or surfaces may be damaged.
- ◆ Diluted chlorine-based disinfectant solutions become less effective after 24 hours. When a solution is made, the date and time should be recorded and the solution disposed of after 24 hours.
- ◆ To ensure that micro-organisms are killed, always leave chlorine-based disinfectant solutions for 5-10 minutes contact time or as specified on the container.
- ◆ Do not use a chlorine-based disinfectant solution directly on urine as toxic fumes will be released.
- ◆ \*Chlorine-based disinfectants may damage soft furnishings and carpets. Detergent and warm water, carpet cleaning machine or steam cleaner, should be used.



### Note

- Regularly check spillage kits, wipes and chlorine-based disinfectant products to ensure they are within the expiry date.

## 7. Blood and body fluid spillages (Standard precaution)



**Waste stream guide note**

\* Colour waste streams may vary depending on waste contractors - check with your local contractor before implementing the waste stream guidance.

**Note**

- Waste bins should be foot pedal operated with a lid. Always use the foot operated mechanism to open the bin to prevent hand contamination.
- Waste bins in non-clinical areas, e.g. offices should have a liner, but do not need to have a lid.
- Sharps containers awaiting collection should not be placed inside a waste bag.

**Remember**

- ◆ Offensive/hygiene waste: items contaminated with urine, faeces, vomit, pus or wound exudate, from residents **with no risk of known or suspected infection.**

<b>Test your knowledge</b> <i>Please tick the correct answer</i>	<b>True</b>	<b>False</b>
1. When handling tied bags only hold by the neck.	<input type="checkbox"/>	<input type="checkbox"/>
2. Waste from a resident with a known or suspected infection is 'offensive' waste.	<input type="checkbox"/>	<input type="checkbox"/>
3. Waste bins in clinical areas and toilets should be foot operated with a lid.	<input type="checkbox"/>	<input type="checkbox"/>
4. Clear or opaque waste bags can be used for domestic waste.	<input type="checkbox"/>	<input type="checkbox"/>

# 10. Decontamination of equipment (Standard precaution)

A disinfectant product should be used that is bactericidal and virucidal for the disinfection of equipment that has been in contact with a resident with an infection, non-intact skin, body fluids or mucous membranes, e.g. areas of the body producing mucus, such as inside of the nose or mouth.

Disinfectant products can be wipes, tablets or solutions, e.g. Clinell Universal Wipes, Chlor-Clean tablets, Milton solution. Some of which are chlorine-based, e.g. Milton.

If a chlorine-based disinfectant solution is used it should be at a dilution of 1,000 parts per million (ppm).

Chlorine-based disinfectant solution 1,000 ppm available chlorine	
<b>When to use 1,000 ppm</b>	On equipment in contact with an infected resident, non-intact skin, body fluids (not blood) or mucous membranes.
<b>What to use (as per manufacturer instructions)</b>	<ul style="list-style-type: none"><li>• Sodium hypochlorite 2%, e.g. Milton (dilution of 1 in 20, e.g. 50ml of Milton in 1 litre of water).</li></ul>

If equipment is contaminated with blood or blood stained fluids a chlorine-based disinfectant solution at a dilution of 10,000 parts per million (ppm) should be used.

### Sporicidal disinfectant

If residents with *C. difficile* it is **extremely important** that a sporicidal disinfectant is used, e.g. Milton, Chlor-clean, to clean equipment, as other non-sporicidal disinfectants will be ineffective at killing the bacteria.

### 3. Sterilisation

Sterilisation is a specialist means of decontamination of equipment. Items requiring sterilisation must be sent to an accredited Decontamination Services Department.









## 12. Aseptic technique (Key topic)

- ◆ Inserting an invasive device, e.g. urinary catheter.
- ◆ If a resident is immunosuppressed, diabetic or at high risk of infection.



### Procedure for dressing a wound

- ◆ Be 'Bare Below the Elbows' and wash hands or use alcohol handrub.
- ◆ Decontaminate the dressing trolley with detergent and warm water or detergent wipes.
- ◆ Collect dressing pack and equipment, check all items are in date and packaging is intact. Place on the bottom shelf of the dressing trolley.
- ◆ Put on a disposable apron.
- ◆ Loosen the adhesive tape on the existing dressing.
- ◆ Decontaminate hands again.
- ◆ Open sterile dressing pack. Hold any extra items without compromising the sterile field.
- ◆ Put on non-sterile gloves.
- ◆ Remove the soiled dressing carefully, as a large amount of micro-organisms can be shed into the air, and dispose of the dressing appropriately.
- ◆ Remove gloves and decontaminate hands.
- ◆ Put on sterile gloves.
- ◆ Perform the procedure, including cleaning of the skin where applicable.
- ◆ Maintain a sterile field throughout the procedure.
- ◆ Dispose of all used items in a sealed bag and dispose of appropriately.
- ◆ Remove PPE and decontaminate hands.

Colours 1-3 suggest normal urine	
	1. Clear to pale yellow urine suggests that you are well hydrated.
	2. Light/transparent yellow urine suggests an ideal level of hydration.
	3. A darker yellow/pale honey coloured urine suggests that you may need to hydrate soon.
Colours 4-8 suggest you need to rehydrate	
	4. A yellow, cloudier urine colour suggests you are ready for a drink.
	5. A darker yellow urine suggests you are starting to become dehydrated.
	6. Amber coloured urine is not healthy, your body really needs more liquid. All fluids count (except alcohol).
	7. Orange/yellow urine suggests you are becoming severely dehydrated.
	8. If your urine is this dark/darker than this or red/ brown, it may not be due to dehydration. Seek advice from your GP.

**When to send a specimen**

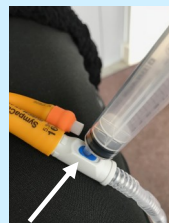
**For residents who are over 65 years**, consider sending a specimen if there are two or more symptoms of a UTI.

**For catheterised residents**, consider sending a specimen if their temperature is less than 36°C or greater than 38°C, they have a new or increased confusion or loss of diabetic control.

**Specimen collection**

Collect a mid-stream or 'clean catch' specimen.

If the resident is catheterised a sample should be taken from the sample port not from the drainage tap. Send a sample **before** starting antibiotics. Use a specimen container with boric acid (red top) as it preserves bacterial numbers for up to 72 hours. Fill with urine to the 'fill line' on the container.



## 15. Urinary catheter care (Key topic)

### Note

- If a care home does not have a bed pan washer and a re-usable container is used for emptying the urine into, it should be washed with detergent and warm water, dried thoroughly with paper towels and disinfected with a chlorine-based disinfectant solution (see page 36).
- Catheter straps should be used to secure the catheter tube to the leg to prevent trauma to the urethra. Ensure the straps are positioned behind the tube on the leg bag.

### Remember

- ◆ When changing a catheter bag, to prevent contamination and infection, do not touch the end of the catheter or tube.
- ◆ Night drainage bags are single-use.
- ◆ Wear a disposable apron and gloves when emptying a catheter or overnight drainage bag.

### Test your knowledge

Please tick the correct answer

	True	False
1. When emptying a catheter bag the drainage bag should not touch the inside of the container.	<input type="checkbox"/>	<input type="checkbox"/>
2. When removing a cap from a new catheter bag tube, the end of the catheter should not be touched.	<input type="checkbox"/>	<input type="checkbox"/>
3. Night bags are re-usable.	<input type="checkbox"/>	<input type="checkbox"/>
4. An apron and gloves are not required when emptying a catheter bag.	<input type="checkbox"/>	<input type="checkbox"/>



## 2. Hand hygiene

- Liquid soap and warm running water should be used by staff as alcohol handrub is not effective at killing viral gastroenteritis.
- Handwashing facilities including liquid soap and paper towels should be available in each resident's room for staff to use.
- Encourage residents to wash their hands or use detergent hand wipes to clean hands after using the toilet and before meals.
- Visitors should wash hands on entering and leaving.

## 3. Isolation

- Where possible, infected residents should be cared for in single room accommodation until symptoms have resolved for 48 hours. If the resident is unable to be isolated, e.g. due to dementia, staff should, where possible, ensure the resident's hands are washed or detergent hand wipes are used to clean hands frequently.
- Disposable aprons and gloves should be worn when in direct contact with a resident who is symptomatic and when dealing with diarrhoea and vomit. PPE should be removed, disposed of and hands washed before leaving the room.
- Affected care homes can accept new admissions when all the residents are (a) symptom free for 48 hours and (b) a deep clean of affected and communal areas has taken place.

## 4. Decontamination

- It is essential for environmental cleaning to be undertaken during an outbreak at least twice daily to include all communal items regularly touched by residents, e.g. hand rails, tables, door knobs. These should be wiped with a hypochlorite solution, e.g. Milton (see page 36). A fresh solution should be made every 24 hours.
- Toilets and commodes should be dedicated to residents who have symptoms and cleaned after each use with a chlorine-based disinfectant solution.
- Wash laundry from an infected resident as infected linen.
- Open windows to help remove the virus from the air.



## 17. Clostridium difficile

*Clostridium difficile* (*C. difficile*) is a spore-forming bacteria. It is an important cause of infectious diarrhoea. *C. difficile* is present in the bowel (gut) of 3-5% of people. Our 'good' bacteria (normal flora) keep the growth of *C. difficile* in check. However, when antibiotics are given for an infection, the antibiotics can kill off some of the good bacteria which leaves room for *C. difficile* to multiply rapidly. The rapid growth of *C. difficile* produces poisons (toxins) that cause inflammation of the bowel and diarrhoea. Diagnosis can be confirmed by laboratory testing of the patient's stools.

### Risk factors for *C. difficile*

People most at risk of *C. difficile* are usually those over the age of 65 years and who have had any of the following:

- ◆ Recent antibiotic treatment (within 3 months)
- ◆ Recent hospital admissions
- ◆ Previous history of *C. difficile*
- ◆ Bowel surgery or laxatives
- ◆ Proton pump inhibitor medication, such as omeprazole

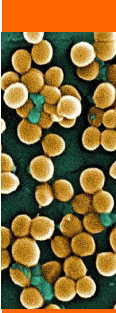
### What does *C. difficile* cause?

Extensive watery diarrhoea ranging from mild to severe which may have blood in it, abdominal pain or tenderness, fever. The illness can have serious consequences, including death.

### How is *C. difficile* spread?

*C. difficile* can spread from person-to-person and can cause outbreaks in care homes. It is spread mainly by:

- ◆ Contaminated hands of residents and staff
- ◆ Contaminated surfaces and equipment, *C. difficile* spores can survive on surfaces for months or even years



18. MRSA

infection (bacteraemia). Signs of infection include fever, redness, pain and increased wound discharge. Urgent medical advice should be sought. If infection is present, antibiotic treatment will be prescribed and suppression treatment may be given.

**MRSA screening**

In accordance with Department of Health guidance, screening is routinely undertaken by hospitals. Screening is not usually required in a care home.

If a MRSA positive result is diagnosed after a resident has been discharged from hospital, the GP will be informed, and if appropriate will prescribe suppression treatment.

**Suppression treatment**

The aim of suppression treatments is to reduce the number of MRSA bacteria to a less harmful level.

Treatment usually consists of a 5 day course of an antibacterial body wash as well as a nasal ointment. At the end of the 5 day course, swabs to check for MRSA clearance are usually required.

**Management of a resident with MRSA**

It is important to refer to your local policy for guidance. To help reduce the spread of MRSA, standard precautions should always be followed together with the following four key principles.

1. <b>Communication</b>	3. <b>Isolation</b>
2. <b>Hand hygiene</b>	4. <b>Decontamination</b>

**1. Communication**

- There is no justification for refusing to admit residents with MRSA into any health and social care setting.



SAMPLE

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