

Prevention of healthcare- associated infections in primary and community care

**Understanding NICE guidance –
information for patients, their carers
and the public**

*National Institute for
Clinical Excellence*

MidCity Place
71 High Holborn
London
WC1V 6NA

www.nice.org.uk

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To order copies

Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0219). A version in English and Welsh is also available, reference number N0220. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0220. The NICE clinical guideline on which this information is based, *Infection control: prevention of healthcare-associated infection in primary and community care*, is available from the NICE website (www.nice.org.uk). Copies can also be obtained from the NHS Response Line, reference number N0218.

National Institute for Clinical Excellence

MidCity Place
71 High Holborn
London
WC1V 6NA

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Contents

About this information	3
Clinical guidelines	4
What the recommendations cover	4
How guidelines are used in the NHS	5
If you want to read other versions of this guideline	6
About infection control	6
About hand washing	7
When to wash your hands	8
How to wash your hands	8
About protective equipment	9
Gloves	10
Aprons	10
Face masks and eye protection	11
About sharps	11
Important things about sharps	11
About urinary catheters	12
Avoiding infection – what you can do	13

About enteral feeding	16
Avoiding infection – what you can do	17
About central venous catheters	19
Avoiding infection – what you can do	19
Further information	21
Glossary	22

About this information

This information describes the guidance that the National Institute for Clinical Excellence (called NICE for short) has given to the NHS on preventing infection in people receiving healthcare at home or in GP surgeries, health centres or clinics, or elsewhere in the community. It is based on a clinical guideline called *Infection control: prevention of healthcare-associated infection in primary and community care*, produced by NICE for doctors, nurses and others working in the NHS in England and Wales. The NICE guideline describes what procedures healthcare workers (such as doctors and nurses) should follow to minimise any risk of infection to their patients.

Although this booklet explains how you and your carer can help reduce the risk of infection, your doctor or nurse should follow exactly the same procedures described here. If you have any concerns about the precautions taken by your doctor or nurse please discuss this with them. A conscientious healthcare worker will not mind being asked, and if necessary reminded, to follow the advice in the guideline.

Although the information in this booklet has been written chiefly for patients and carers, it

may also be useful for family members and for people with an interest in infection prevention or healthcare in general.

There is also a glossary at the back explaining some of the technical words used.

Clinical guidelines

Clinical guidelines are about improving the care and treatment given by the health service. The recommendations in NICE guidelines are prepared by groups of health professionals, lay representatives with experience or knowledge of the condition or problem being discussed, and scientists. The groups look at the evidence available on the best way of treating or managing a condition or problem and make recommendations based on this evidence.

What the recommendations cover

NICE clinical guidelines can look at different areas of diagnosis, treatment, care, self-help or a combination of these.

The recommendations in *Infection control: prevention of healthcare-associated infection in primary and community care* provide a set of measures to avoid infection that should be

followed by anyone giving or receiving care at home, at a health centre or clinic, or elsewhere in the community. They cover:

- ways of avoiding infection, including hand washing, using gloves and aprons, using sharps safely, and educating patients and their carers about infection
- ways of avoiding and controlling infection for people who need a urinary catheter (see page 12), enteral feeding (see page 16) or a central venous catheter (see page 19).

This booklet does not describe specific infections or the diagnosis or treatment of infections. If you want to find out more about infections you should ask your community nurse, doctor or other healthcare worker.

How guidelines are used in the NHS

In general, healthcare workers in the NHS are expected to follow NICE's clinical guidelines. But there will be times when the recommendations won't be suitable for someone because of his or her specific medical condition, general health, wishes or a combination of these. If you think that the treatment or care you receive does not match the treatment or care described here, you should discuss your concerns with your doctor or other healthcare worker.

If you want to read other versions of this guideline

Infection control: prevention of healthcare-associated infection in primary and community care, a guide for professionals, and the full guideline (which contains all the details of the guideline recommendations and how they were developed) are both available from the NICE website (www.nice.org.uk).

About infection control

Infections are caused by germs such as bacteria, fungi or viruses entering the body. They can be minor and stay in one area, like a boil, or they can spread throughout the body, like flu. Often, infections are easily dealt with, but sometimes they can cause serious problems. The recommendations on infection control in the NICE guideline are about preventing infections that are associated with healthcare – for example, ways of preventing germs being spread on the hands of a healthcare worker or a carer.

The advice below is for anyone giving or receiving care at home or in the community.

This includes patients, their carers (this could include family members), community nurses, dietitians, and others involved in caring for people. There is additional advice for people who use a urinary catheter, have enteral feeding or have a central venous catheter. Before leaving hospital, you will be shown how to manage at home and the advice you'll be given will include important ways of reducing your risk of infection. Where applicable, you will be advised on the need for liquid soap, disinfectant handrub, towels and sharps containers and how to obtain supplies.

If you have questions about anything in this booklet, talk to your healthcare worker.

About hand washing

Regular, careful hand washing is vital if you are looking after yourself or somebody else at home.

When to wash your hands

- If your hands look dirty.
- Before and after any activity that could have dirtied your hands, even if they look clean, such as after going to the toilet and before and after preparing food.

- Before and after every activity or procedure involving contact with the patient, before contact with your body (if you are the patient), or with equipment.
- If you are caring for more than one person, wash your hands in between looking after each person.

How to wash your hands

- Cover any cuts or grazes with a waterproof plaster.
- Keep your fingernails short, clean and free from nail polish.
- Take off your watch and any jewellery such as bracelets or rings (if you can).
- Wet your hands under luke-warm running water.
- If your hands look dirty, use a liquid soap or antimicrobial (anti-germ) solution and water.
 - Make sure the handwash you are using covers all of the surfaces of your hands. Rub your hands together vigorously for at least 10 to 15 seconds, remembering the tips of your fingers, your thumbs and the areas between the fingers.
 - Rinse your hands with warm water and dry them with good quality paper towels that are absorbent and soft.

- If your hands look clean, use an alcohol-based handrub, where supplied.
 - Make sure the solution used covers all the surfaces of your hands. Rub them together vigorously, remembering the tips of your fingers, your thumbs and the areas between the fingers.
 - Rub it in until it has evaporated and your hands are dry.
- Use a moisturising hand cream regularly to prevent dry hands. Tell your healthcare worker if a particular soap or product irritates your skin.

About protective equipment

You may need to use protective equipment at home to stop infection passing between you and the person you are caring for.

Gloves

You will be given supplies of special protective gloves if you need them. They act as an additional barrier, but you should still wash your hands before and after you use them. If you are sensitive to rubber, or experience a skin reaction using gloves, tell your healthcare worker.

Put on your gloves before having any contact with the inside of the body (including inside the mouth) or with a wound, or if you're carrying out an activity that might lead to contact with blood or body fluids or with sharp or dirty instruments.

Each pair of gloves should only be used once. Gloves should be changed between patients, and between different activities or procedures for the same patient.

Your healthcare worker should advise you on how to dispose of the gloves. After you've disposed of them, wash your hands (as described on page 8).

Aprons

You should be given a supply of disposable plastic aprons if there is a risk of body fluids or blood splashing onto your clothes. Wear the apron for one procedure only. Your healthcare worker should advise you on how to dispose of the apron. After you've disposed of it, wash your hands (as described on page 8).

Face masks and eye protection

Face masks and eye protection will be provided if there is a risk of fluids splashing into your face or eyes.

About sharps

'Sharps' are anything that might cut, graze or prick you such as needles, lancets or sharp instruments.

Important things about sharps

- Handle sharps as little as possible.
- Discard sharps immediately after use.
- Put used sharps in your special sharps container. Keep the container in a safe place, off the floor and out of the reach of children.
- Do not hand sharps from one person to another.
- Do not re-cap needles, break them, or take them apart before using them or disposing of them in a sharps container.
- Ask your community nurse or doctor about how to dispose of sharps containers. They should not be put in normal domestic waste.

About urinary catheters

You may be given a catheter if you cannot pass water (urinate). There are several reasons why this could be the case – for example, because of an injury or operation, or because your bladder is not working properly.

A catheter is a hollow tube that drains urine from your bladder into a special drainage bag. You may have a catheter valve instead of a bag; this is opened at regular intervals to drain the urine from your bladder.

An indwelling catheter is one that's in place all the time. An intermittent catheter is inserted at regular intervals or when you feel the need to urinate. An intermittent catheter may be used if it is considered appropriate for your medical condition.

Usually, the catheter is inserted through the urethra (the tube where urine normally comes out). Sometimes a catheter is inserted into the bladder through a specially made hole in the side of the abdomen (this type of catheter is called a 'suprapubic catheter'). A small balloon keeps the catheter in place inside the bladder.

With practice, many people find it easy to manage a catheter at home. Before you leave hospital you will be shown how to look after your catheter and drainage system. You will be given some supplies and told how you will be able to get more supplies when you need them, and how to get support and help after you return home.

If you become able to pass urine without your catheter, it should be removed by your healthcare worker as soon as possible.

Avoiding infection – what you can do

It is very common to get an infection when you are using a urinary catheter. Bacteria get into the urethra from the drainage bag, or at the point where the tube enters your body.

Following the advice below will help to reduce and control infection.

Handling the catheter

- Wash your hands (as described on page 8) before and after handling your catheter or drainage bag.
- Clean the place where the catheter enters your body daily with soap and water and dry it.

Preventing catheter blockages

- Your doctor or nurse should make sure that there are procedures in place that will help to reduce the risk of having problems with your catheter, such as blockages in the tube.

Intermittent catheters

- When inserting an intermittent catheter, use the lubricant you have been given (some intermittent catheters are supplied ready lubricated). The lubricant makes it easier to put the catheter in place and helps avoid infection. If you are using a sachet of lubricant, then this should be used once then thrown away. Containers or tubes of lubricant can be used more than once, but should only be used by one patient.

- Wash your reusable intermittent catheter with water and store it, dry, according to the manufacturer's instructions (your healthcare worker should tell you how to do this).

Managing the drainage system

- Keep your drainage bag or catheter valve connected to the catheter at all times, except when changing the bag. This 'closed system' reduces your risk of infection.
- At night, add on your special night drainage bag without breaking the closed system.
- Keep your drainage bag lower than your bladder to allow urine to drain.
- Don't let the bag touch the floor when you are in bed or resting, because this can increase the infection risk. Use the stand provided.
- Empty your drainage bag regularly – for example, when it is full, you feel uncomfortable, or when it pulls on the catheter.
- Your healthcare worker should advise you about how often the drainage bag should be changed.
- Ask your community nurse to advise you about the signs and symptoms of infection, and what to do if the catheter does not appear to be draining.

About enteral feeding

Enteral feeding, sometimes called enteral nutrition or artificial feeding, is prescribed for adults and children who cannot eat normally. Liquid feed is given through a fine tube that enters the body by one of three ways:

- through the nose into the stomach – naso-gastric feeding
- directly into the stomach – gastrostomy or PEG feeding
- directly into the small bowel – jejunostomy feeding.

Some people who have serious problems with their digestive system may need to receive feed through a tube for a long time or even for life. Many can manage their own nutrition therapy at home.

Before you leave hospital, you and your carer/s will have thorough training until you feel confident about managing at home. You will get support and help from healthcare workers once you get home and for as long as you need tube feeding.

Avoiding infection – what you can do

Avoiding infection is very important for people who are on enteral feeding because infections such as gastroenteritis (stomach upset) can occur. You should follow the detailed instructions and procedures you have been shown. Careful and regular hand washing is very important (see pages 7–9).

Whenever possible, you should be given pre-packaged feed that is ready to use and does not need mixing or diluting. If you or your carer have to prepare the feed, it is important not to touch it directly with your hands, and to use a clean working area and clean equipment when preparing it. Cooled boiled water or fresh sterile water (not bottled mineral or table water) should be used to mix the feed. It may be prepared up to 24 hours in advance and kept in the fridge, if the manufacturer's instructions say it is alright to do so.

Important points about enteral feeding

- Store the feed according to the manufacturer's instructions.
- Wash your hands thoroughly (see page 8) before preparing the feed or touching the equipment.
- Handle the equipment as little as possible.

- Wash the place where the tube enters the body (insertion site or stoma) with water every day and dry it well.
- To prevent blockage, the enteral feeding tube should be flushed with fresh tap water before and after feeding or administering medications. Enteral feeding tubes for people whose immune systems are not functioning properly (who are 'immunosuppressed') should be flushed with either cooled freshly boiled water or sterile water (not bottled mineral or table water) from a freshly opened container.
- Handle the feeding system as little as possible when connecting it to the tube.
- A pack of pre-packaged feed can be used for up to 24 hours in a feeding session. Feeds that you have prepared yourself should not be used for longer than 4 hours in a feeding session.
- After each session dispose of the bags and administration sets as household rubbish.
- Ask the healthcare worker who looks after the enteral feeding aspect of your care about signs and symptoms of infection. Find out what to do if you think you have an infection.

About central venous catheters

A central venous catheter (CVC) is a tube that is put into a major vein, normally in the chest or neck. (A vein is a blood vessel that carries blood to the heart.)

There are many reasons why people may have a CVC. They may need blood products, liquid drugs, food or other fluids delivered slowly into their bloodstream. Some people may need to use a CVC for a long time or for life. With help and support, many patients can manage their CVC at home.

Avoiding infection – what you can do

Because a CVC is put into a major vein, serious infections can happen very quickly. People with CVCs, their carers and healthcare workers need to follow these strict rules to prevent infection.

Before you leave hospital, you and your carer/s will have in-depth training in managing your CVC safely at home. You will be given ongoing support and help after you return home so that you continue to feel confident about following these instructions.

Your healthcare workers will also have had special training in avoiding infection.

Important points about central venous catheters

- Make sure you follow the instructions given by your healthcare worker at all times.
- Wash your hands carefully with soap and water or a handrub solution (as described on page 8) before touching your CVC.
- Wear sterile gloves for touching the insertion site or changing your dressing.
- Change the dressing on your insertion site every 7 days or sooner if necessary, for example if it becomes wet, dirty or loose. Use the cleaning solution and dressings provided.
- Do not put any cream, ointment or solution on the insertion site, unless it has been prescribed for you.
- Clean your catheter and its entry points as instructed, before and after you use it, with the solutions provided.
- Change your administration set as you have been instructed.

Contact your healthcare worker or hospital's emergency department if you think you have an infection (common signs are swelling at the insertion site, feeling unwell and having a temperature), or if anything looks or feels different. You should be given an emergency number as well as one to call during office hours. It is important to act quickly.

Further information

The NICE guideline (a guide for professionals), *Infection control: prevention of healthcare-associated infection in primary and community care*, and the full guideline (which contains all the details of the guideline recommendations and how they were developed) are both available from the NICE website, www.nice.org.uk. Copies of *Infection control: prevention of healthcare-associated infection in primary and community care* are also available from the NHS Response Line; telephone 0870 1555 455 and give the reference number N0218.

NHS Direct has information on the issues covered in this booklet. See the NHS Direct website, www.nhsdirect.nhs.uk, or phone NHS Direct on 08 45 46 47.

There is more about NICE and the way that the NICE guidelines are developed on the NICE website, www.nice.org.uk. You can download the booklet *The Guideline Development Process – Information for the Public and the NHS* from the website, or you can order a copy by phoning the NHS Response Line on 0870 1555 455 and quoting reference number N0038.

Glossary

Administration set

All the tubing necessary to deliver fluids or feeds into a person.

Alcohol-based handrub

A liquid that you use to rub over your hands to kill germs that can cause infection, and which dries quickly.

Bacteria

Microscopic germs that can cause infection.

Bladder

A hollow, muscular organ in the body that holds urine.

Catheter

A thin tube used to put liquids into the body or drain them away.

Catheter valve

A valve connected to the catheter outlet that allows urine to be kept in the bladder until the valve is opened. The valve must be opened to drain urine away at regular intervals, so that the bladder doesn't get too full.

Central venous catheter (CVC)

A tube that is put into a major vein, normally in the chest or neck. (A vein is a blood vessel that carries blood to the heart.)

Enteral feeding

Giving liquid food through a tube directly into the gastrointestinal tract (gut).

Dietitian (or dietician)

A healthcare professional who specialises in diet and nutrition.

Fungi

Microscopic germs (different from bacteria or viruses) that can cause infection, especially in people who are weak and debilitated.

Handrub

See 'Alcohol based handrub'.

Indwelling urethral/urinary catheter

A catheter that is inserted into the bladder through the urethra and remains in place for a period of time.

Intermittent (urinary) catheter

A catheter you can put in and remove as needed.

Lancet

A small pointed two-edged blade (usually used to obtain blood samples).

Long-term (urinary) catheter

A catheter left in place for 28 days or more.

Ready-to-use feeds

Feeds prepared and supplied by the manufacturer, which only require attaching to the administration set or feeding tube.

Sharps

Any sharp instrument that could cause injury. This includes scalpels, needles and lancets.

Single-use

For use on one occasion only.

Sterile

Germ free, for example sterile gloves, sterile catheter.

Suprapubic catheter

A catheter that is inserted into the bladder through a hole made in the abdomen.

Urethra

The natural tube in the body that carries urine from the bladder to the outside.

Urinary catheter

A thin flexible tube used to drain urine from the bladder.

Urinary night drainage bag

A bag used for overnight urine collection.

Viruses

Germs even smaller than bacteria that can cause infection (they are responsible for many common infections, such as colds, chickenpox and measles).