Milton Keynes University Hospital
NHS Foundation Trust

Infection Prevention and Control (Level 1)

Non-clinical Staff Only

Please ensure you read the workbook thoroughly before completing the online assessment

Learning Outcomes

After completing this workbook you will be able to:

- Describe the consequences of healthcare-associated infections (HCAI) to patients and to healthcare organisations

- Identify your role and responsibilities and those of your organisation in preventing the spread of infection

Healthcare-associated infections occur as a direct result of receiving care or treatment in any healthcare setting. These infections are distressing to patients and their families and may worsen their underlying condition and complicate their recovery.

These infections are no longer just associated with acute care in hospital; patients are also at risk of infection in a wide range of community and primary care settings including nursing homes, mental health facilities, and dental surgeries.

Take a minute to think about the following:

- What is your personal experience of working with patients who have developed healthcare- associated infections?

- Do you know how many healthcare-associated infections have occurred recently where you work?

- What can you do to help reduce it?

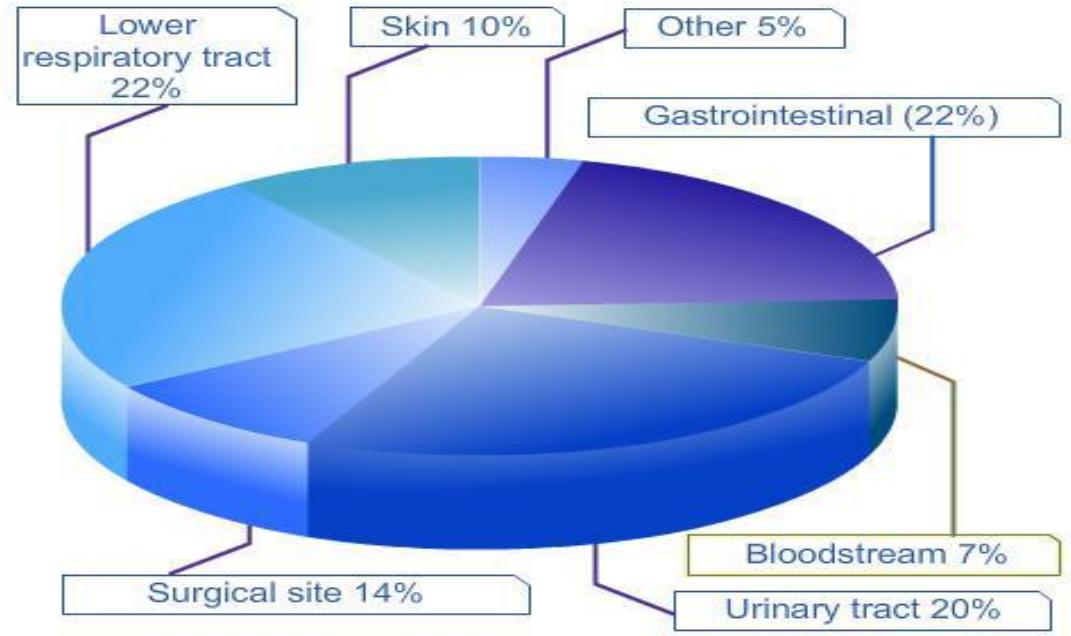
Introduction

Most healthcare treatments are uneventful and the patient makes a full recovery. But some patients develop a healthcare-associated infection (HCAI) during their care and treatment. These infections can have serious consequences for both patients and all healthcare services.

Although not always avoidable, many HCAIs can be prevented and everyone must do everything possible to minimise the risk of infection.

HCAI is the term used for a wide range of infections. The most frequently occurring include: Wound, Urinary tract, Respiratory and Gut infections.

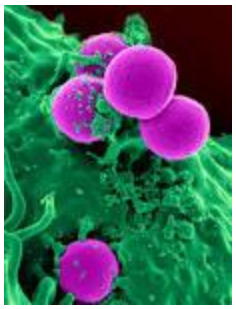
Types of infections



Another example of an organism that causes a lot of problems in the health care setting is Norovirus; this organism is responsible for outbreaks of diarrhoea and vomiting.

Antimicrobial Resistance

Healthcare-associated infections are caused by pathogenic microorganisms (bugs that cause infections). Many of these microorganisms can be treated with common antibiotics, but some are resistant to many antibiotics (antimicrobial resistance). For example, Meticillin-resistant *Staphylococcus aureus* (MRSA).



Antimicrobial resistance is a serious problem as it reduces the options we have to treat seriously ill patients.

Although MRSA and other antimicrobial-resistant infections are a major problem for healthcare services, it is important that we prevent and control the spread of infection caused by any pathogenic microorganism.

Effects of Healthcare-Associated Infection on Patients

Patient Concerns

Some patients' lives are significantly disrupted by a HCAI. Media coverage on HCAI can worry patients even before they have treatment.

Reduced Quality of Life

Patients may suffer pain, worsening illness and long-term disabilities, which affect their quality of life. All suffer anxiety and delays in returning to work and normal social activities.

Fear of Infection

News stories on HCAI can be alarming to patients. Fear of infection causes them to lose confidence in our ability to safely treat and care for them.

Cost of Healthcare-associated Infections

So, how much do each of these types of infection cost us? A study was carried out in the 1990s to determine the cost and impact of HCAI to both secondary and primary healthcare. It was estimated that HCAI cost the NHS £1 billion a year.

Your Role in Preventing Healthcare-associated Infection

This topic explores:

- Your own role in preventing HCAI
- The responsibilities of NHS and independent healthcare providers in preventing HCAI
- How to protect the health of others and yourself

Preventing Healthcare-associated Infection

Preventing HCAI is not impossible. It was previously thought that only 15-30% of infections could be avoided. In recent years however, we have significantly reduced the number of bloodstream infections caused by MRSA and also serious infections caused by *Clostridium difficile*.

This success may not be achievable in all HCAIs but it shows that significant reductions can be made if everyone takes responsibility for their prevention. Also, as a member of staff, patients and visitors expect you to do your utmost to minimise the risk of infection and carry out best practice.

Duty of Care

We all have a duty of care under the Health and Social Care Act 2008, (updated 2015) to provide the safest possible environment and highest standards of clinical practice for patients in all healthcare settings.

Every clinical and non-clinical person working in healthcare has an important role to play in protecting patients from the risk of infections. This includes the Chief Executive, Nurses, Doctors, Dentists, Paramedics, Pharmacists, Domestic staff and Support staff etc.

Expected Standards of Care

As preventing HCAI is everyone's responsibility, how does it affect our day-to-day work?

High quality care needs to be clinically effective and should be based upon the best available evidence. The Department of Health and the National Institute for Health and Clinical Excellence (NICE) provide national evidence-based guidelines on infection prevention and control.

These guidelines highlight the standard precautions that should be used by everyone working in healthcare at all times, with all patients and in all circumstances. By applying these precautions in our everyday practice, we all play an important part in preventing HCAI.

In addition, the Department of Health provides a range of resources for healthcare providers to use. These help managers and staff to deliver clean, safe care.

National evidence based guidance from the Department of Health and the National Institute for Health and Clinical Excellence (NICE) on preventing HCAI can be easily found on www.nice.org.uk and hcai.dh.gov.uk

Standard Infection Control precautions

These are the standard precautions that everybody should follow to prevent infection.

Hand Hygiene

The hands of any staff are the most common means of spreading microorganisms between patients. Hands are contaminated during simple routine procedures as well during contact with blood and body fluids. It is therefore very important to know how and when to decontaminate your hands so that you do not transfer microorganisms that may cause infection

Hands should be cleaned at the following 'Five Moments':

- before touching a patient
- before a clean/aseptic procedure
- after body fluid exposure
- after touching a patient
- after touching patient surroundings

1) **When?**
Clean your hands before touching a patient when approaching him/her

Why?
To protect the patient against harmful germs carried on your hands

2) **When?**
Clean your hands **before** performing a clean/aseptic task

Why?
To protect the patient against harmful germs, including the patient's own germs, entering his/her body

3) **When?**
After body fluid exposure risk (and after glove removal)

Why?
To protect yourself and the healthcare environment from harmful patient germs

4) **When?**
After touching a patient and his/her immediate surroundings, when leaving the patient's side

Why?
To protect yourself and the healthcare environment from harmful patient germs

5) **When?**
Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched

Why?
To protect yourself and the healthcare environment from harmful germs

Decontaminating Hands

There are two methods you can use to decontaminate your hands: alcohol-based hand rub or liquid soap and water.

Alcohol-based hand rubs

Alcohol hand rub is quick, convenient, and very good for killing germs if your hands are physically clean. Alcohol hand rub should not be used in the presence of diarrhoea and/or vomiting. It should be applied in a similar principle to the hand washing technique below in order to cover all surfaces of your hands. Alcohol products should cover ALL surfaces of the hands. Hands are decontaminated once the alcohol is dry.

Liquid soap and water

In order to thoroughly decontaminate your hands the following technique should be used;


1. Rub palm to palm


2. Rub palm over back of hand, fingers interlaced


3. Palm to palm, fingers interlaced


4. Fingers interlocked into palms


5. Rotational rubbing of thumb clasped into palm


6. Rotational rubbing of clasped fingers into palm

Wrist watches, bracelets, rings (other than a plain band), long nails, false nails and nail varnish are **NOT** permitted. This is applicable to all staff in the clinical area **both** clinical and non-clinical.

Personal Protective Equipment (PPE)

PPE – gloves, aprons and face protection – protects you and your uniform/work wear from exposure to microorganisms during procedures or care activities, by forming a barrier between you and the patient/body fluids etc. it is important that you remove PPE as soon as possible, in a way that prevents self-contamination.

Hands must be decontaminated after the removal of gloves. Gloves and aprons also protect patients from exposure to microorganisms that you may have on your hands and clothing. Employers have a duty to provide PPE. You have a duty to use it appropriately. Please refer to the Personal Protective Equipment policy for further details available on Intranet.

Environmental Hygiene

Both clinical and non-clinical staff have a responsibility for environmental hygiene. Clinical staff are responsible for ensuring that the medical equipment they use on patients is clean and safe for use. Non- clinical staff are responsible for ensuring that patients are cared for in a safe and pleasant environment. Clutter impedes thorough cleaning. Keep clinical areas tidy and uncluttered so that effective cleaning can take place.

Dealing with Spillages

Blood and body fluids provide an ideal environment for microorganisms to multiply. For this reason, spillages of blood or body fluids should be cleaned up as soon as possible by a person trained for the job.

Depending on your local policy, different members of staff may be responsible for managing spillages of blood and body fluids. Everyone who deals with spillages must be fully trained and know what to use and how to use it. If you notice a spillage, don't ignore it.

If you've been trained to clean up spillages and are up to date with your Hepatitis B vaccination deal with it immediately **using appropriate protective** and cleaning equipment.

If you are not, report it to your supervisor or whoever is responsible for that area. Refer to spillage policy on Intranet.

Body fluid spillages should be cleaned up immediately and protective clothing worn

	Surface	Method
Blood/blood stained fluid	Hard surface	Treat spill with chlorine releasing agent (follow instructions on container) Then clean area with detergent & water
Blood/ blood stained fluid	Carpets or soft furnishings	Clean with detergent & water then steam clean
Non-blood stained body fluids	Any surface	Clean with detergent & water – *do not put chlorine directly on a urine spill*

The spill and method of treatment must be assessed by a competent person. Special advice will be given in the event of an outbreak.

Safe Disposal of Healthcare Waste

Domestic waste stream – Black bag e.g. flowers, newspapers

Offensive waste stream – Tiger stripe bag e.g. nappies, incontinence pads

Anatomical waste stream – Yellow bag

Clinical waste stream – Orange bag infectious or potentially infectious waste e.g. soiled dressings, gloves, swabs

Healthcare waste may be contaminated with blood and body fluids, and therefore microorganisms. It should be separated from non-healthcare waste and should be safely disposed of and managed so that it does not cause harm to patients, staff or visitors.

Linen/laundry - Please be aware of local policies and operating procedures for Linen and Patient laundry.

Sharps Bins

Clinical staff are responsible for correct disposal of the sharps such as needles and scalpels that they use. Small sharps bins can be taken to the point of use e.g. the bedside to enable immediate disposal. Never re-sheath a needle or use an overfilled sharps bin.

If you sustain a **sharps/needlestick injury** then you must:

- ☑ Bleed it
- ☑ Wash it under running water
- ☑ Cover with waterproof dressing
- ☑ Report to your manager
- ☑ See Occupational Health or Emergency Department
- ☑ Datix

If you sustain a **splash injury** then you must:

- ☑ Rinse with saline/ sterile water for injection
- ☑ Report to your manager. See Occupational Health or Emergency Department
- ☑ Datix

The Code of Practice

We have considered how individuals can help to prevent HCAI. How can the public be sure that healthcare providers are doing all that they can to prevent HCAI?

We have established that every person working in health care has a responsibility for preventing infection. No matter what your job, you can help to protect patients from infection.

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All healthcare providers must comply with the Code of Practice under CQC Regulation 12 (formerly outcome 8) Cleanliness & Infection Control, thus adhering to the Health & Social Care Act 2008 (updated 2010). This requires all NHS Trusts, Care Homes and General Dental Practitioners to have effective measures for preventing, monitoring and investigating cases of HCAI. This process is monitored by the Care Quality Commission (CQC).

Key Duties under the Code

The purpose of the Code of Practice (the Code) is to regulate the delivery of clean safe care. It also gives healthcare providers a framework to plan and implement how they can prevent and control HCAI.
Failure to comply with the Code may result either in an Improvement Notice being issued by the Care Quality Commission or placement on Special Measures for significant failings.

Registered providers of healthcare will need to demonstrate compliance with the following criteria:

- Systems to manage and monitor the prevention and control of infection
- Provision of a clean and appropriate environment that facilitates the prevention and control of infection
- Provision of accurate information on infections to service users
- Provision of timely information about infections to others providing healthcare
- Identification and management of people with infections to reduce the risk of transmission
- All staff are fully involved in preventing and controlling infection

- Provision of adequate isolation facilities
- Provision of adequate access to laboratory support
- Adherence to polices on the prevention and control of infection
- Healthcare workers are educated in infection prevention and control and as far as possible protected from exposure to communicable infections at work

(There should be an Annual Programme to Prevent Healthcare-associated Infection)

Caring for your Personal Health

Although everyone is potentially vulnerable to infection, the consequences of acquiring an infection are far more serious for patients whose immune system is impaired as a result of their illness or treatments.
By being aware of how infection is spread and the control measures that can be taken to prevent this spread, we can reduce the risks to patients and staff.

As a member of hospital staff, you may be a risk to patients and colleagues if you have an infection.

- Seek advice from your doctor or the Occupational Health Department if you have an infection
- You may be exposed to infectious risks from the patients you care for if you do not follow the necessary precautions to protect yourself. This includes ensuring you use personal protective equipment when appropriate, and ensuring you are immunised against certain infections

Protect Patients and Yourself

To protect both patients and yourself it is essential that you care for your own health.

Infectious Illnesses

The Occupational Health Department offers you a range of immunisation and health advice services. Occupational Health staff can advise on your suitability for work if you have an infectious illness such as diarrhoea and vomiting, a cough, cold or influenza.

Diarrhoea and/or vomiting, chickenpox and cold sores (herpes simplex) can have serious consequences for some vulnerable patients.

Skin Complaints

You should consult the Occupational Health Department if you suffer from skin conditions such as eczema or psoriasis, especially on your hands. If the skin complaint becomes severe or infected, you may require treatment and some time off work. Occupational Health Department will advise on when you should return to work.

Frequently Asked Questions

Here are some of the most frequently asked questions by healthcare staff:-

Q **Do I have to stay off work if I have a cold, 'flu' or diarrhoea and vomiting**?

A With a common **cold**, you should be fine to work. You should prevent spread to others by ensuring you cover your mouth and nose with a tissue when you cough or sneeze. Use tissues once to blow your nose, dispose of all tissues immediately and then wash your hands. You should avoid contact with patients who are immuno-compromised.

With **influenza or 'flu'** you would be too ill to work and would also put your patients and colleagues at risk. If you work with patients, you should protect them by ensuring you are vaccinated against influenza each year.

If you have **diarrhoea** or **vomiting**, stay off work until you have been without symptoms for 48 hours.

Q **What should I do if I think I have an infection?**

A Tell your manager. You should also consult a doctor and seek advice from Occupational Health.

Q **How do vaccines protect me at work?**

A Contact with blood can expose clinical staff to bloodborne pathogens. Consequently, all healthcare workers at risk of exposure to blood need to be vaccinated against Hepatitis. Other vaccinations are offered by Occupational Health.

Q **If I have a cut or small infection on my finger, may I work?**

A If you have a small clean cut on a finger, for example, cover it with a waterproof dressing. If there is any infection, indicated by redness, pus, swelling and pain, go to your GP or to Occupational Health. You may need treatment with antibiotics and also may be given alternative work until it is healed.

Please note
Be aware of seasonal information issued by the Infection Prevention & Control Team via the Communications Team on Intranet page.

To access Infection Prevention & Control polices please use the Intranet system.

Contact details for the Infection Prevention and Control team are:
Extension: 85788 or via switchboard or on bleep: 1182.

Summary

You have now completed this workbook on Infection Prevention & Control (Level 1).

You should now be able to:

- Describe the consequences of HCAI to patients and to healthcare providers
- Describe what standard infection control precautions are
- Explain how to protect yourself against infection
- Briefly explain current infection prevention & control legislation
- Briefly explain current infection prevention & control guidance