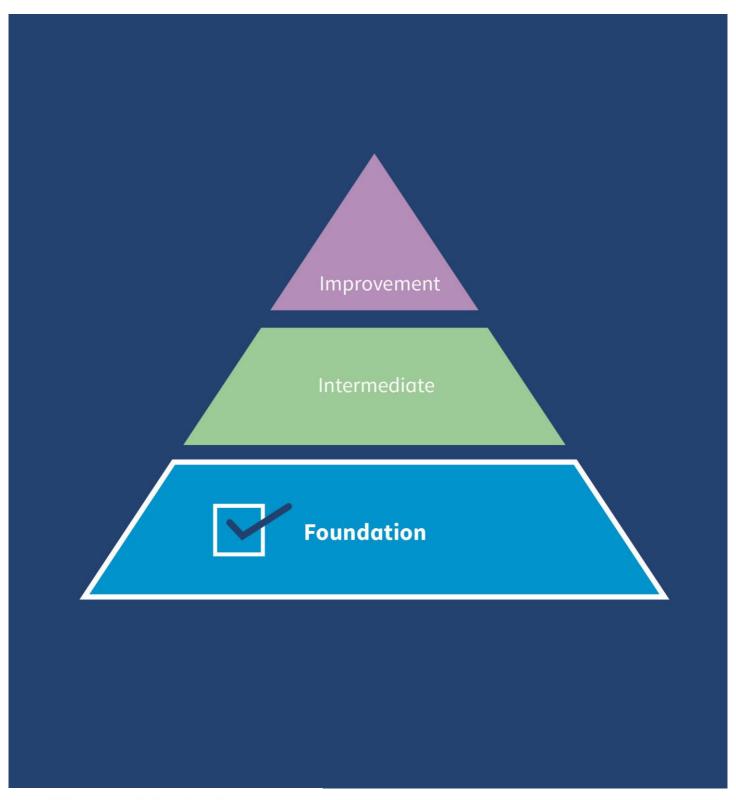


# **Why Infection Prevention and Control Matters**

Scottish Infection Prevention and Control Education Pathway





### Why Infection Prevention and Control Matters

### **Printable learning resource**

#### What is this resource?

This resource is based on the e-learning module "NES: Why Infection Prevention and Control Matters" from the **Scottish Infection Prevention and Control Education Pathway**.

The aim of this document is to make the e-learning content available to learners who

- do not have regular access to a computer and/or a network
- do not yet have the necessary IT skills or confidence to complete e-learning
- have different needs and therefore e-learning is not suitable for them.

All screen captures from the original module are included.

#### How should this resource be used?

This resource can either be

- uploaded as a PDF file to tablets or other digital devices without internet access, or
- printed. (Printing in black and white is sufficient.)
- All navigational instructions on the screens in this document should be ignored.
- We have given instructions on how to complete interactivities and questions.
- A space has been provided for staff to make any additional notes after each topic.

#### Internet access

Internet access is required for the following:

**Online feedback form and web links** for additional resources. Staff should be enabled to use web links and complete the feedback form if at all possible.

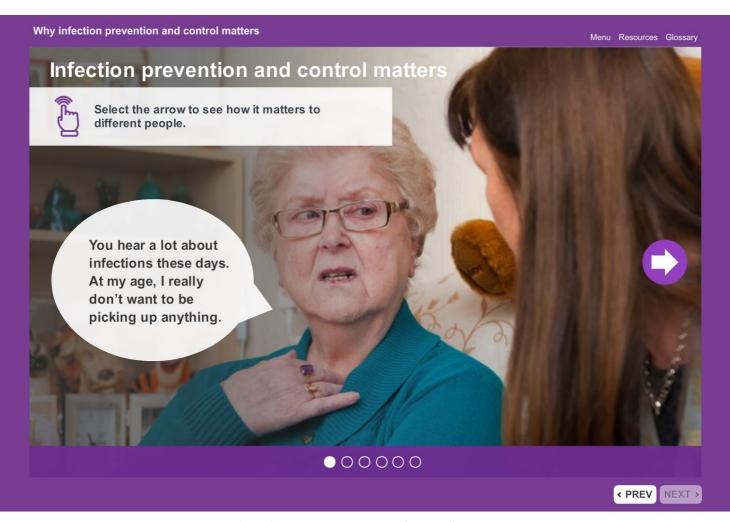
**Online assessment**. The online version of this resource consists of the e-learning module and a separate online assessment, and staff should be enabled and encouraged to complete this online assessment locally.



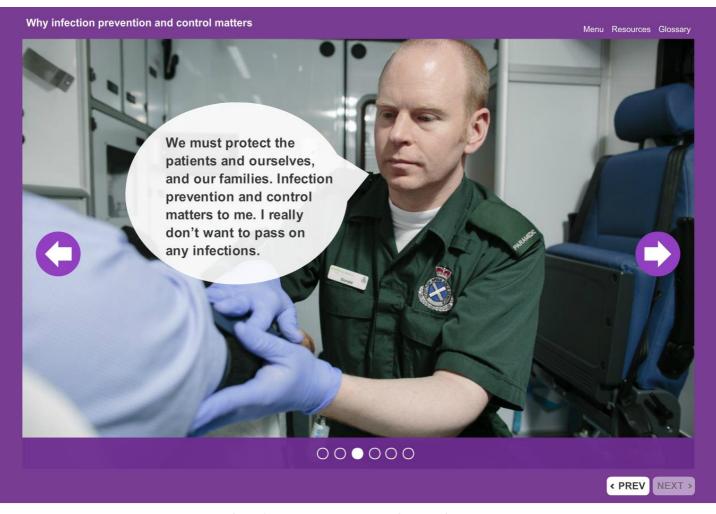
## Why infection prevention and control matters

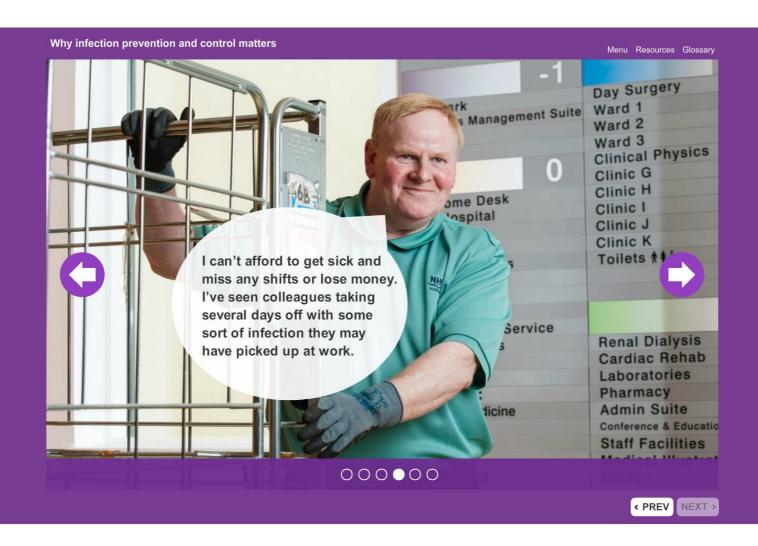


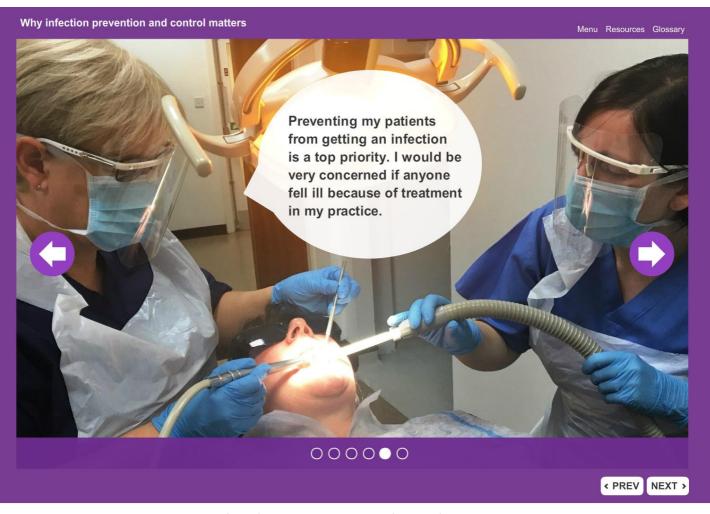








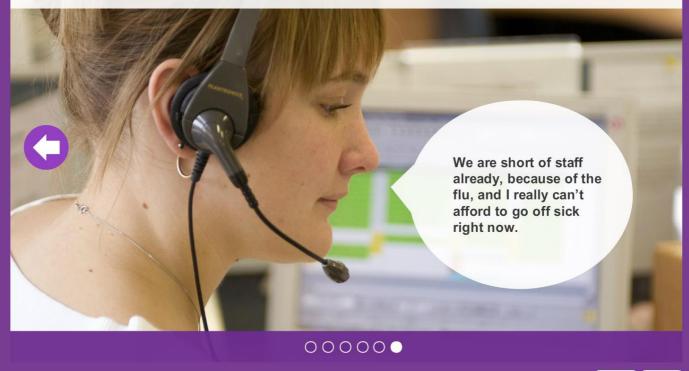






#### Remember

Infection prevention and control **should** matter to you. Consider for a moment, how an infection would impact on the person receiving care, on you, your family, your colleagues and others. What could you do to help prevent infections and stop them from spreading?



< PREV NEXT >

#### Why infection prevention and control matters

#### Aim

This e-learning module will help you understand the important role you play in infection prevention and control and the support available to you.

Infection prevention and control is everybody's business, whether you work as an administrator, porter or cleaner, or whether you provide more hands on care.



### Learning outcomes

By the end of this module, you will be able to:

- · define a Healthcare Associated Infection
- describe the consequences of infections to the person receiving care and the person providing care
- describe the important part you play in preventing and controlling infections
- contact the right person and access the correct resources to get the support you need to prevent and control



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Why infection prevention and control matters

#### Overview

There are two topics in this module.

Once you have visited all of the screens in this module, you will be able to access the separate assessment.

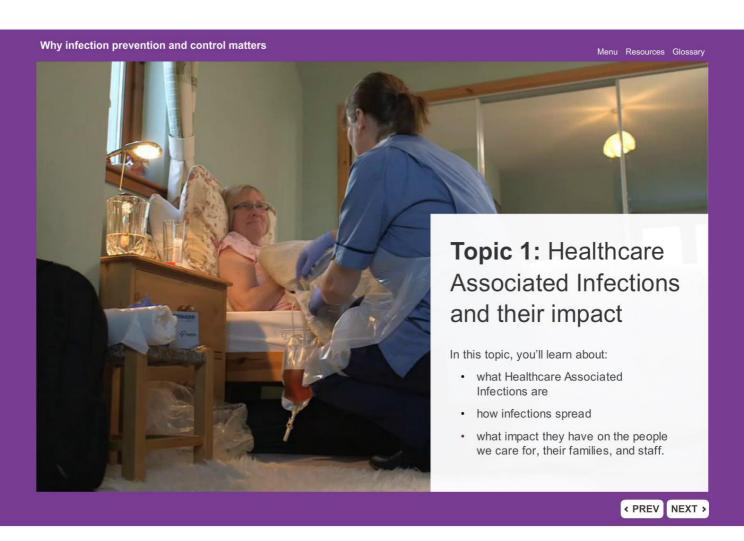
You'll need to pass this assessment with an 80% pass mark in order to get a certificate of completion.

Topic 1: and their impact

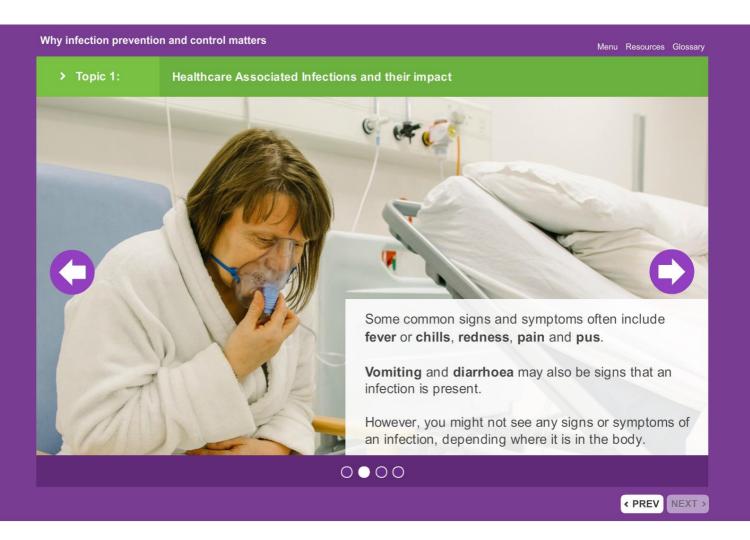
Topic 2: What can you do about it?

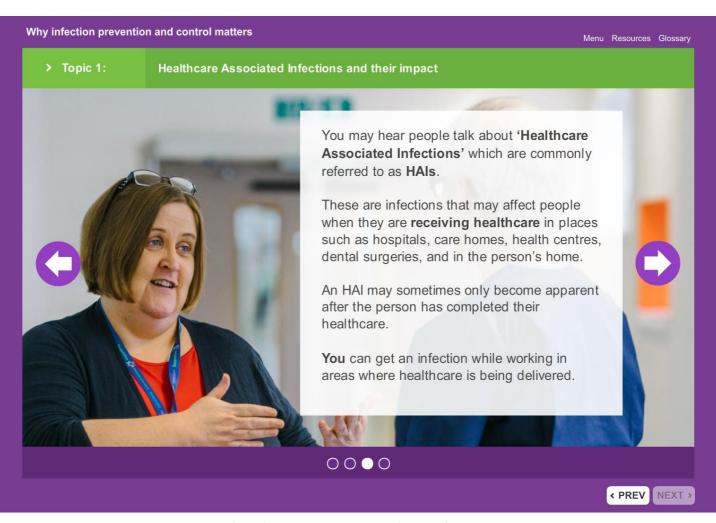


Each topic should only take you about 15 minutes to complete.









Common HAIs include infections of the blood, lungs, surgical wounds, urine and skin.

Clostridium difficile and Meticillin-Resistant Staphylococcus aureus (MRSA) are HAIs you might have heard of.





What incidents of people acquiring infections have you heard about in work? How common do you think they are?









Why infection prevention and control matters

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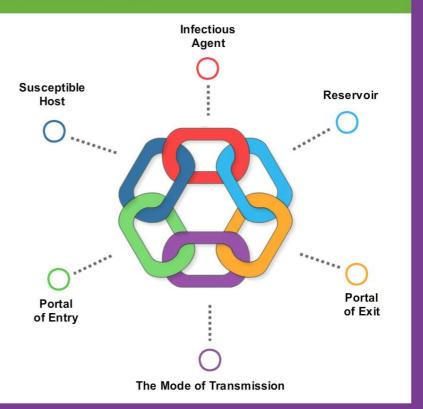
#### Healthcare Associated Infections and their impact

### How infections spread

Germs spread easily but there are critical points at which we can prevent them from spreading.

We use the Chain of Infection as a model to help you understand how infection is spread. It comprises six links in the chain and if we break one of the links we can stop the spread of infection.

This is the chain specific to C. difficile, which can sometimes cause serious bowel problems.



### **Infectious Agent**



A micro-organism capable of causing an infection, commonly:

- · bacteria
- viruses
- fungi

The Infectious Agent is C. difficile, a bacterium.

#### Reservoir



Where the Infectious Agent normally lives and multiplies.

This can be in or on:

- humans
- · equipment
- · environment
- food
- animals

C. difficile lives in the bowel. Some people normally carry C. difficile in their bowel causing no harm to them, but it can be picked up from the environment.

#### **Portal of Exit**



Where the Infectious Agent leaves the Reservoir, commonly through:

- · blood and other body fluids
- skin scales
- · coughing and sneezing

C. difficile leaves the body through faeces (body waste matter from the bowel).

#### The Mode of Transmission



How the **Infectious Agent** spreads from one site to another, including through:

- · direct physical contact
- · contaminated objects
- the air
- · contact with blood or body fluids
- eating or drinking contaminated food or water
- · insects or animals

*C. difficile* spreads by hands touching surfaces contaminated by the Infectious Agent and not performing hand hygiene at the correct times.

### Portal of Entry



How the Infectious Agent enters the body, including through:

- · open or surgical wounds
- · broken skin
- · eyes or mouth
- · respiratory tract
- intestinal tract (ingestion)
- tubes inserted into the body (urinary catheters, drips, feeding tubes)

*C. difficile* enters the body through the mouth and into the bowel.

### Susceptible Host



A person who is at risk of infection because they are unable to fight infection, due to:

- underdeveloped immune systems (the very young)
- decreasing immune systems (elderly)
- · drugs or diseases that lower defences against infections
- · breaks in the skin
- tubes inserted into the body (urinary catheters, drips, feeding tubes)

People, especially the elderly, who have had antibiotic treatments for infection are at risk of developing *C. difficile* infection.

### The impact of HAIs

On the following screens you will hear a few stories about incidents of Healthcare Associated Infections, and what impact they had on the people we care for and the staff caring for them.



Story 1 An outbreak of C. difficile in a



Story 2 Helen's story, a personal account of a surgical wound infection following routine surgery.



Story 3 Elaine's story, a devastating consequence of a caesarean section wound infection.



Story 4 John's story, how a healthcare worker amongst patients and staff at his work.

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Why infection prevention and control matters

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**>** Topic 1:

**Healthcare Associated Infections and their impact** 

### HAI outbreak case study

Between 1 January 2007 and 1 June 2008, there was an outbreak of C. difficile Infection in the Vale of Leven Hospital near Glasgow.

C. difficile is often associated with taking some antibiotics which can kill both good and bad bacteria in the bowel.

It can produce toxins (poisons) causing explosive diarrhoea which if untreated may lead to blood poisoning, or even death.

An inquiry into the outbreak discovered:

**131 patients** tested positive for **C. difficile infection**.

34 patients died as a result.

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### HAI outbreak case study (cont.)



Clinical staff can read more about the <u>Vale of Leven Hospital Enquiry</u>.



What could have been the reasons for this outbreak of a micro-organism which had such an impact on patient safety? How could it have been avoided?



Select NEXT to learn about the personal impact infections can have on people we care for.



Vale of Leven Hospital Enquiry link:

http://www.valeoflevenhospitalinquiry.org/report.aspx

### Helen's story - just a regular procedure

Meet Helen.

Helen made plans with her son to visit him in New Zealand, and then travel to Indonesia and the USA afterwards to see a bit of the world.

It was an exciting time in her life and she couldn't wait to leave!

She told her son that she had to get her gall bladder removed a couple of months before her trip but not to worry, it would only be a simple procedure.







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Why infection prevention and control matters

Healthcare Associated Infections and their impact

### Helen's story - just a regular procedure

While she was recovering from her procedure, her wound became infected which became resistant to some antibiotics. They just didn't work.



> Topic 1:

Her Doctor readmitted her to hospital, and while there she developed pneumonia, sepsis and C. difficile, and was admitted to the Intensive Care

Not only did Helen feel physically weak, but she was extremely frightened.

She is still trying to understand what happened to her and is worried for the future. She had to postpone all plans to travel.







### Helen's story transcript

Altogether I was in hospital for four weeks and when I came out of course I wasn't going to New Zealand and at that point I felt like my body was not mine anymore, I felt so weak, I don't know how to explain it. I just felt that I didn't know how this had happened. I didn't know how I had gone in for a routine operation and I had nearly died. I felt really angry and I kept asking myself what was it? Where did it happen? I kept going through it because I was looking for answers.



Imagine if Helen was a member of your family. How would you feel about what happened to her?

### Elaine's story - a caesarean section infection

Meet Elaine.

Elaine was expecting her first baby, and she and her husband were very excited. She had a beautiful baby girl delivered by caesarean section and was discharged home 48 hours later.

Within 1 day of being home, Elaine noticed "bruising" from hip to hip. She felt a popping sensation at her wound which then poured with a foul smelling black and yellow fluid.

Elaine was scared to breast feed her daughter in case she passed on an infection. She was upset that she could not bond with her little girl as she wanted to.









Why infection prevention and control matters

Menu Resources Glossary

> Topic 1:

Healthcare Associated Infections and their impact

### Elaine's story - a caesarean section infection

She gradually became more ill and was readmitted to hospital for treatment of an infected wound. which developed into necrotising fasciitis, commonly called the "flesh eating bug" by the media.



This infection can become life-threatening in a very short time.

Elaine was on life support for seven months after which she had difficulty bonding with her daughter.

It took 22 months for the wound to heal. She has lost seven months of watching her daughter develop and missed her first smile.







### Elaine's story transcript

I was on life support for seven months. During the seven months my mum, my dad, my sisters, my husband, everybody brought the baby every day. Put her beside me, lifted my hand to touch her, made her touch me to have the smell and the feeling of each other.

But when I came out of being on the ventilator I didn't believe I was a mum. I didn't believe that I'd had this baby. When I went to a normal ward it was quite restricting, because some nurses agreed with the baby coming in to visit and some disagreed, because of the risk of infection.



### John's story - a norovirus outbreak amongst patients and healthcare workers

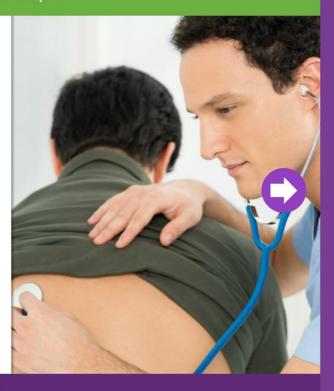
Meet John.

John is a junior doctor working in a ward where patients are being treated for cancer.

Within a few days, four patients fell ill with vomiting and diarrhoea.

After one week, 10 patients and eight staff including cleaners and office staff were affected (including some of their families).

John got ill six days after the outbreak started and was sent home, just like the other affected staff members.







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Why infection prevention and control matters

Healthcare Associated Infections and their impact

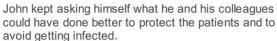
### John's story - a norovirus outbreak amongst patients and healthcare workers

The ward was closed for 10 days.



> Topic 1:

Norovirus - also commonly referred to as the "winter vomiting bug" - was responsible for the outbreak.

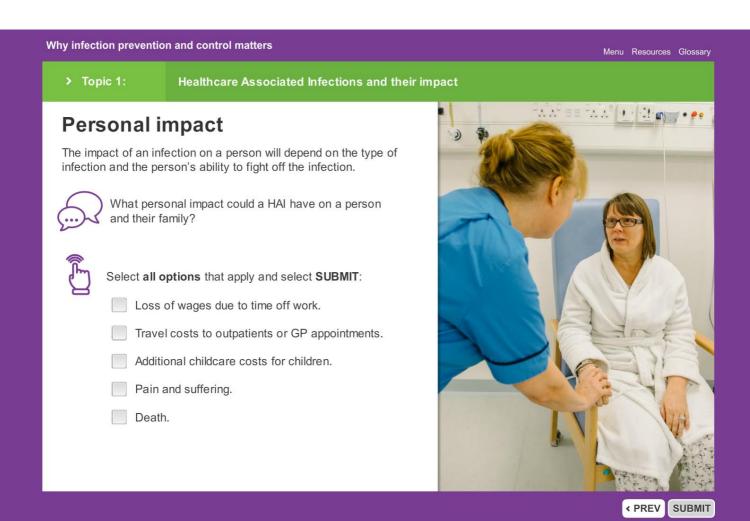




Imagine how this affected the patients, the staff, their families and friends, or anyone who needed to be admitted for care.







Please try to answer the question above and then check the answer and the feedback on the following page.

#### Topic 1:

Healthcare Associated Infections and their impact

### **Personal impact**

The impact of an infection on a person will depend on the type of infection and the person's ability to fight off the infection.



What personal impact could a HAI have on a person and their family?



Select all options that apply and select SUBMIT:

- Loss of wages due to time off work.
- ▼ Travel costs to outpatients or GP appointments.
- Additional childcare costs for children.
- Pain and suffering.
- ✓ Death.



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SUBMIT

Why infection prevention and control matters

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### Correct



That's correct. All of these apply.

It's impossible to put a cost on the personal impact of HAIs but they should not be underestimated.



SUBMIT

#### Topic 1:

Healthcare Associated Infections and their impact

#### The current threat

Some of the people you have heard about in the previous stories have recovered with the help of antibiotics.

Antibiotics are a commonly used type of antimicrobial medicine and are critical for treating infections caused by bacteria. An **antimicrobial** is an agent that kills micro-organisms (germs) or prevents their growth.

Antibiotic resistance happens when the micro-organism no longer responds to antibiotics which could previously been used to treat the infection.

Antimicrobial resistance (AMR) is a major threat to public health and healthcare in the world today.



Why infection prevention and control matters

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Topic 1:

Healthcare Associated Infections and their impact

### The current threat (cont.)

Infections are now becoming more difficult to treat and there is a real risk of infections being more easily spread to others. The UK is now seeing some microorganisms that cannot be treated by antibiotics that are commonly used as a last resort.

The reduced choice of antibiotics seriously weakens our ability to fight infections.

It is **our** responsibility to make sure that **every** person in Scotland receives the **highest** and **safest** level of healthcare, **wherever** it is delivered and to be protected from infections.



Topic 1:

Healthcare Associated Infections and their impact

### What's stopping you from preventing the spread of infections?

So what makes putting infection prevention and control into practice difficult or challenging? Here are a few things staff have said.



Select each comment below to reveal alternative ways of thinking:

"It only applies in hospitals."

"Infections happen all the time - what difference can I make?" "You need all sorts of equipment and cleaning products to keep everything clean and safe. I don't always have access to these things."

"It takes time - some things are just more important. Washing my hands every 5 minutes takes me away from the people I care for."

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Why infection prevention and control matters

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### "It only applies in hospitals."

You are delivering care to someone with vomiting and diarrhoea and you forget to wash your hands properly. You then go home and prepare your family's food and forget to wash your hands first. Both you and your family could develop vomiting and diarrhoea too.



Imagine if you or a family member got ill because of an infection you picked up at work. How would that make you feel?

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#### "Infections happen all the time - what difference can I make?"

There is a lot of talk about improving the culture in healthcare, but we are the culture! If we want to see change, we need to all be that change.

You as an individual can make a difference. Choose your attitude when you come to work and keep those receiving care, staff and the public safe from infections.



Think about some of your own ways of working. What can you start doing, stop doing and continue doing to help prevent and control the spread of infections?



#### Why infection prevention and control matters





"You need all sorts of equipment and cleaning products to keep everything clean and safe. I don't always have access to these things."

This may be the case. You may be attending someone in their own home and don't have access to liquid soap. Think about what you might do to be better prepared. Maybe you can discuss this with someone. You can also check when it is appropriate to use alcohol based hand rub.

Infection prevention and control is not just about following procedure, it is about thinking about how you might make small improvements to help reduce the spread of micro-organisms in your everyday working life.



What situations have you found yourself in without access to proper equipment and cleaning products? How might you be better prepared the next time?

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"It takes time - some things are just more important. Washing my hands every 5 minutes takes me away from the people I care for."

You've seen the consequences of the spread of infections. The UK is now seeing some micro-organisms that cannot be treated by antibiotics that are commonly used as a last resort.

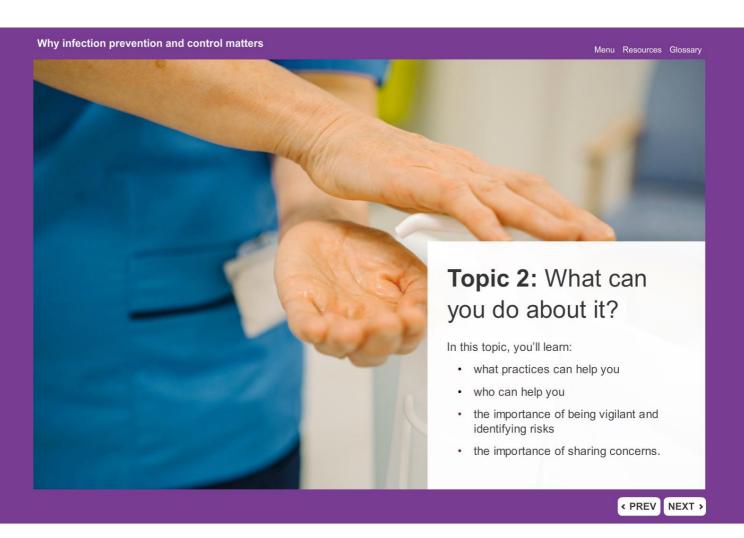
Infection prevention and control is not something you should do only if you have time. It is something you need to **consistently** do in your day-to-day practice and in everyday life, to protect those you care for, your families, and yourself. If you take the time you might save time dealing with infections.



Consider your own practices. What do you tend to not do because you feel you don't have the time? What could happen as a result of you not doing this? What do you need to do to make the time?



### Notes for Topic 1: Healthcare Associated Infections and their impact



Why infection prevention and control mattersTopic 2: What can you do about it?

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#### What bull

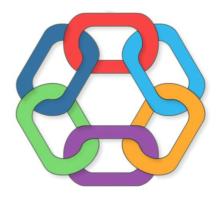
### Preventing the spread of micro-organisms



So how might you control and prevent the spread of micro-organisms? What is the most important thing you must do?

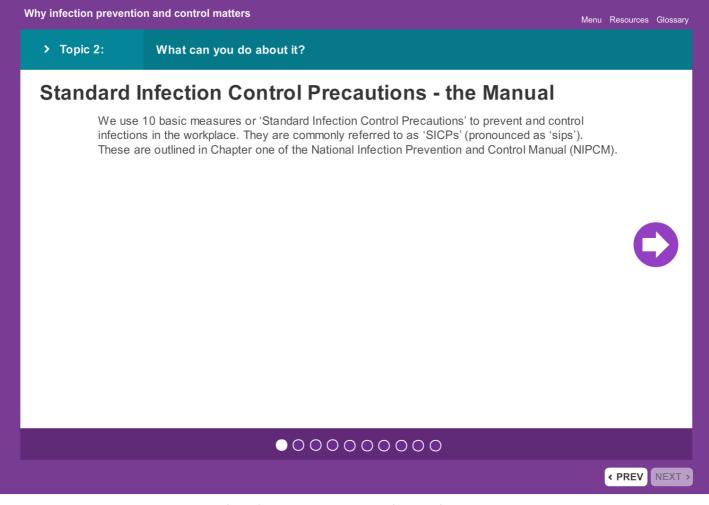


Enter your thoughts in the space provided



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SUBMIT





#### 1. Patient placement/assessment for infection risk

You need to continually assess people receiving care to identify if they have an infection that could be passed on to others or if they are at risk themselves.



#### 2. Hand hygiene

Hand hygiene is considered an important practice in reducing the transmission of infectious agents which cause HAIs. You can carry out hand hygiene by:

- Washing your hands with liquid soap and warm water.
- Using alcohol based hand rub.

People receiving care and the public will watch you to see if you perform hand hygiene and they will become concerned if it is not done correctly and at the right times.



#### 3. Respiratory and cough hygiene

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

Cover your mouth and nose when coughing and sneezing.



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

The use of Personal Protective Equipment (PPE) such as disposable gloves and aprons, eye and face protection, is a requirement of health and safety legislation.

PPE protects you (your uniform/personal clothing) from direct contact with any blood or body fluids which may cause infections.



#### 5. Safe management of care equipment

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

Make sure that you maintain, clean and/or dispose of equipment correctly.



#### 6. Safe management of the care environment

A clean environment can help reduce the spread of infection. Ensure the care area is kept clean and dry.

If the area looks unclean, then people will assume that your standards of care are not high and lose confidence in your service.



#### 7. Safe management of linen

Linen includes bed linen, pillow cases, towels, curtains and personal clothing. Linen which has been used contains large numbers of germs that can be passed from one area to another.

You need to safely handle used linen. Follow local policies for the laundering of staff uniforms.



#### 8. Safe management of blood and body fluid spillages

Spillages of blood or body fluids present hazards to others and must be dealt with as soon as possible.

Safely clean up spillages of blood and body fluids wearing Personal Protective Equipment.



#### 9. Safe disposal of waste (including sharps)

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 as a result of healthcare activities.

For care/residential homes waste disposal may differ from the categories described above and guidance from local contractors will apply.



### 10. Occupational safety: prevention and exposure management (including sharps)

You may on occasion be exposed to items or substances that have the potential to be harmful.

Following the SICPs that apply to where you work and the type of work you do will help to protect you from harm. By protecting yourself you also protect your family.

What can you do about it?

#### Standard Infection Control Precautions

Standard Infection Control Precautions (SICPs) are to be used by all staff, in all care settings, at all times, for all patients because it is not always known if patients have infections or not when you are delivering care.

SICPs are sometimes not enough to prevent the spread of some infections. Additional Transmission Based Precautions (TBPs) may be needed. You can also find these in the Manual (Chapter two).

The Manual also outlines the responsibilities of all levels of staff when putting its content into practice. There are sections that allow for local policies to be inserted.

Some SICPs may not apply to your role and workplace and you may need support from specialist teams or senior colleagues to help you understand what they mean for you in your workplace.

Next, we will look at the specialist teams and senior colleagues that can help you.



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Why infection prevention and control matters

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> Topic 2:

What can you do about it?

### Who can help you?



Below are a number of people who can help you prevent and control infections depending on your setting.













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#### Senior Colleague - Line Manager

"If you have any gaps in your knowledge in infection prevention and control, I can support you in your learning.

If you see practices that you feel may increase the risk of infection to others, for example, the placement of patients or how colleagues are washing their hands, then you should discuss this with me or other senior colleagues, particularly if you don't feel confident to deal with the situation yourself."



#### Infection Prevention and Control Team Member

"As a nurse and member of the Infection Prevention and Control Team I, along with other nurses and doctors with specialist qualifications, can provide you with advice on:

- Managing patients with known or suspected infections, including outbreaks.
- · Where best to care for patients to prevent the spread of infections.
- · Job aids and tools to help you carry out your work safely.

I can help you understand and develop policies to minimise infections in your area of work and I can help you raise any concerns that you may have by discussing these concerns with others on your behalf."







#### Cleanliness Champion

"You might see 'Cleanliness Champions' around your place of work. We come from a wide range of healthcare staff and students in medicine, dentistry, nursing and other healthcare related areas. We have undertaken a national programme of learning in infection prevention and control.

We act as role models in the workplace for carrying out day-to-day activities. We can support you in carrying out safe and effective practices to prevent the spread of infection to others by checking your practices and showing you areas for improvements."



### Occupational Health Staff Member

"You can contact a member of our team if you have an infection or have been in contact with an infection, e.g. chickenpox, shingles, or if you want more information on protecting yourself from infections at work. We can offer you advice and support, and everything we discuss is confidential."



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#### Health Protection Team Member

"I belong to a team of nurses and doctors with specialist qualifications, responsible for a range of public health activities including preventing the spread of infections and managing associated outbreaks and incidents to protect public health.

Typically, we support hospitals and wider community settings including Care Homes, GP premises and local councils, and provide policies and public helplines where required. You can contact us if you need support for your area in investigating or preventing incidents that might harm others."



#### Infection Control Doctor

×

"Your Infection Control Doctor is usually a Consultant Microbiologist. I can provide you with clinical advice on patient management, including the use of antimicrobials, if needed, depending on their condition and the results of any samples sent to the laboratory. I also give advice on managing outbreaks, incidents and the fabric of buildings where healthcare is delivered to prevent infections.

I provide support on the appropriate microbiology tests to be carried out to identify and manage infections and I provide explanations of results."



What can you do about it?

### Being vigilant in your workplace

Consider your own work place. How can you reduce the risk of infection?

Below are examples of actual risks for you to look out for in your workplace:

- 1. Used needles lying around which may injure others.
- 2. Staff not carrying out hand hygiene before or after touching the person receiving care.
- 3. Visibly soiled shared equipment such as beds, chairs and commodes.
- 4. Staff wearing disposable aprons and gloves when not providing care.
- 5. Staff wearing watches or stoned rings when delivering care which prevents effective hand hygiene.
- 6. Sharps containers closure device left wide open when not in use where others could put their hands in and injure themselves.



Select **NEXT** for more tips.



NEXT >

Why infection prevention and control matters

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> Topic 2:

What can you do about it?

### Being vigilant in your workplace (cont.)

Consider your own work place. How can you reduce the risk of infection?

Below are examples of actual risks for you to look out for in your workplace:

- 7. Staff coming to work when suffering with infections such as vomiting, diarrhoea or flu.
- 8. Overstocking of healthcare supplies making storage areas difficult to clean.
- 9. Staff not raising concerns when other staff do not follow infection prevention and control policies.
- 10. Staff not reporting skin irritation on their hands which prevents them from carrying out effective hand
- 11. Frequently touched surfaces or equipment like keyboards, desks, telephones etc. not being regularly

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What can you do about it?

### **Sharing concerns**

And finally, let us conclude by stressing the importance of raising any concerns you may have as soon as they arise so that they can be resolved as soon as possible.

Stopping to share any concerns you may have with a colleague or patient should only take a minute.

In one minute, you could share something that could be improved with someone and give them feedback that would make a huge difference to infection prevention and control.

For example, a discussion with a colleague might be:

"The liquid soap and towel dispensers are sometimes empty in the staff toilet and we cannot wash our hands properly after going to the toilet, before we go for meals or go home. Could you help me to discuss with the team how we can keep the dispensers topped up?"





Consider any concerns you have at work with a colleague's practices. What would you like to say to them? What's preventing you from talking with them? Remember, you can always talk to a senior colleague for support.

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#### Notes for Topic 2: What can you do about it?

What can you do about it?

### **Summary**

Here are the key points of this module:

- · Infection prevention and control is everybody's business.
- You have a duty of care to provide safe and consistent practices in a clean environment.
- Hand hygiene is considered an important practice in reducing the transmission of infectious agents which cause HAIs.
- The 10 Standard Infection Control Precautions (SICPs) should be followed by all health and social care staff.
- There is a range of teams and individuals who can support you to help prevent and control infections in your area and resolve any areas of concern.

For further learning, make sure you access the <u>National Infection</u> Prevention and Control Manual.





NEXT >

National Infection Prevention and Control Manual link:

http://www.hps.scot.nhs.uk/haiic/ic/nationalinfectionpreventionandcontrolmanual.aspx#







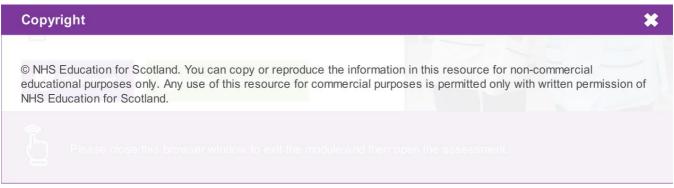


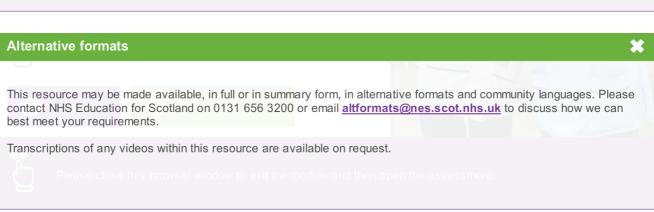
Please close this browser window to exit the module and then open the assessment.



#### Feedback Questionnaire link:

https://response.guestback.com/nhseducationforscotland/sipcep01whyinfectioncontrolmatters







# Why Infection Prevention and Control Matters

Scottish Infection Prevention and Control Education Pathway

### **Printable learning resource - Completion Record**

#### Learning outcomes:

- define a Healthcare Associated Infection
- describe the consequences of infections to the person receiving care and the person providing care
- describe the important part you play in preventing and controlling infections
- contact the right person and access the correct resources to get the support you need to prevent and control infections.

Anticipated learning time: 3	30 minutes
I confirm that I have compl	leted the above module.
Learner name:	
Learner role and location:	
Learner signature	



This resource may be made available, in full or summary form, in alternative formats and community languages. Please contact us on **0131 656 3200** or email **altformats@nes.scot.nhs.uk** to discuss how we can best meet your requirements.



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