INFECTION PREVENTION AND CONTROL

What you need to know

WHAT IS THIS FACTSHEET ABOUT?

Infection prevention and control is a key element of health and social care and is vital to the health and wellbeing of those people who need care and support.

It is essential to ensure that people who use health and social care services receive safe and effective care, and it is important that everyone has a clear understanding of their responsibilities in preventing the spread of infection.

This factsheet will help you understand the different types of pathogenic organisms and how they get into the body. You'll also discover agreed ways of working that stop the spread of pathogens, helping you prevent and control infection where you work.

WHO SHOULD READ THIS

This factsheet is for anyone who works in health and social care.

KEY INSIGHTS

Pathogenic Organisms - Explore the five different types of pathogenic organisms.
Vulnerable People - It's important to remember that some groups of people may be more vulnerable to infection.
Chain of Infection - Did you know that in order for the spread of infectious diseases to take place the chain of infection must be completed?
Prevent Infection - Preventing Infection means breaking the links in the chain, and you can do this by using standard precautions.
Personal Health and Hygiene - As an H&SC employee, you have an important role to play in preventing the spread of infections. Learn how you can keep on top of health and hygiene as well as the measures you should take to reduce the risk of transferring pathogens to other people.
Personal Protective Equipment - The required level of PPE will vary depending on your role and the task you are doing.
How to Handle Waste - Your employer should have waste handling policy in place, which details how you can deal with these different types of waste.
Safe Management of Laundry - Linen that comes into contact with workers or other individuals can become contaminated with harmful micro-organisms and body fluids.
Sharps - Some roles may require the handling and disposal of sharps. It is your employer's responsibility to provide the correct equipment and training for this task.

PATHOGENIC ORGANISMS

Pathogenic organisms can be broken down into five categories, let's explore each one and find out a bit more about them.

BACTERIA

Bacteria are tiny living beings, known as micro-organisms. They are neither plants nor animals, as they belong to a group all by themselves.

Bacteria can multiply incredibly quickly at body temperature, and can reach harmful levels in very little time at all.

Examples of harmful bacteria include Methicillin-resistant Staphylococcus Aureus, commonly known as MRSA, and Clostridium Difficile.

The great news is the Office for National Statistics figures show deaths from MRSA fell by 20% from 364 in 2011 to 292 in 2012.

Continuing the downward trend, there were 1,646 deaths from Clostridium difficile in 2012, reduced from 2,053 in the previous year.

Both infections have shown large declines over the past five years, after being repeatedly targeted by government policies such as effective hand washing and cleaning, less inappropriate use of antibiotics, as well as better vigilance.

But the fight is not yet won, and everybody in health care has a responsibility to uphold standards.

VIRUSES

A virus, derived from the Latin word for toxin or poison, is a microscopic organism consisting of genetic material, like DNA, surrounded by protein, fat or glycoprotein.

Viruses are unique, because they can survive on surfaces and in food, but can only multiply in living cells (also known as host cells).

Diseases like smallpox, the common cold, hepatitis and Ebola, are all caused by viruses, and it takes very few virus organisms to cause illness.

Some viruses can spread by simple contact, exchanges of saliva, coughing, or sneezing. Some require sexual contact, while others go through the fecal-oral route via contaminated food or water.

Still other viruses require an insect like a mosquito to carry the virus from person to person.

Examples of viruses include Norovirus or the flu virus, Influenza. Unfortunately the battle against viruses is very much still being fought and, arguably, lost. Worryingly, virus-related deaths are on the rise, with a staggering 151% rise in excess winter deaths in England and Wales. This represents the biggest yearly increase since records began.

The majority of deaths, 36,300 of them, occurred among people aged 75 and over.

There were an estimated 43,900 excess winter deaths in England and Wales in 2014–15, a 15-year high attributed partly to the lack of effectiveness of the 2015 flu vaccine.

FUNGI

Fungi are similar to plants. They get food by absorbing nutrients from their surroundings.

Many fungi play a crucial role in decomposition (breaking things down) and returning nutrients to the soil. They are also used in medicine, one example being the antibiotic, penicillin.

Mycosis is a disease caused by a fungus, and fungi that cause diseases are called pathogenic fungi.

Some live on the surface of the skin or in the patient's hair, this includes ringworm and athlete's foot.

Systemic mycosis is a fungal infection that reaches any part of the body, like the brain and heart. The fungi usually enter via the lungs, gastrointestinal tract or intravenously. This can cause serious illnesses like meningitis or lung infections.

PARASITES

A parasite is an organism that lives in another organism, called the host, to which it often does harm.

There are over 1,000 known parasite species that can infect humans.

It's totally dependent on its host for survival as it has to be in the host to live, grow and multiply. It can't live independently.

The parasite benefits at the expense of the host. The parasite uses the host to gain strength, and the host loses some strength as a result.

Symptoms include weight loss, abdominal pain and allergies.

An example illness is scabies.

Human scabies is caused by an infestation of the skin by the human itch mite. The microscopic scabies mite burrows into the upper layer of the skin, where it lives and lays its eggs.

PROTOZOA

Protozoa are single-celled organisms. They live in a wide variety of moist habitats including fresh water, marine environments and the soil.

Some are parasitic, which means they live in other plants and animals including humans, where they cause disease. Plasmodium, for example, causes malaria.

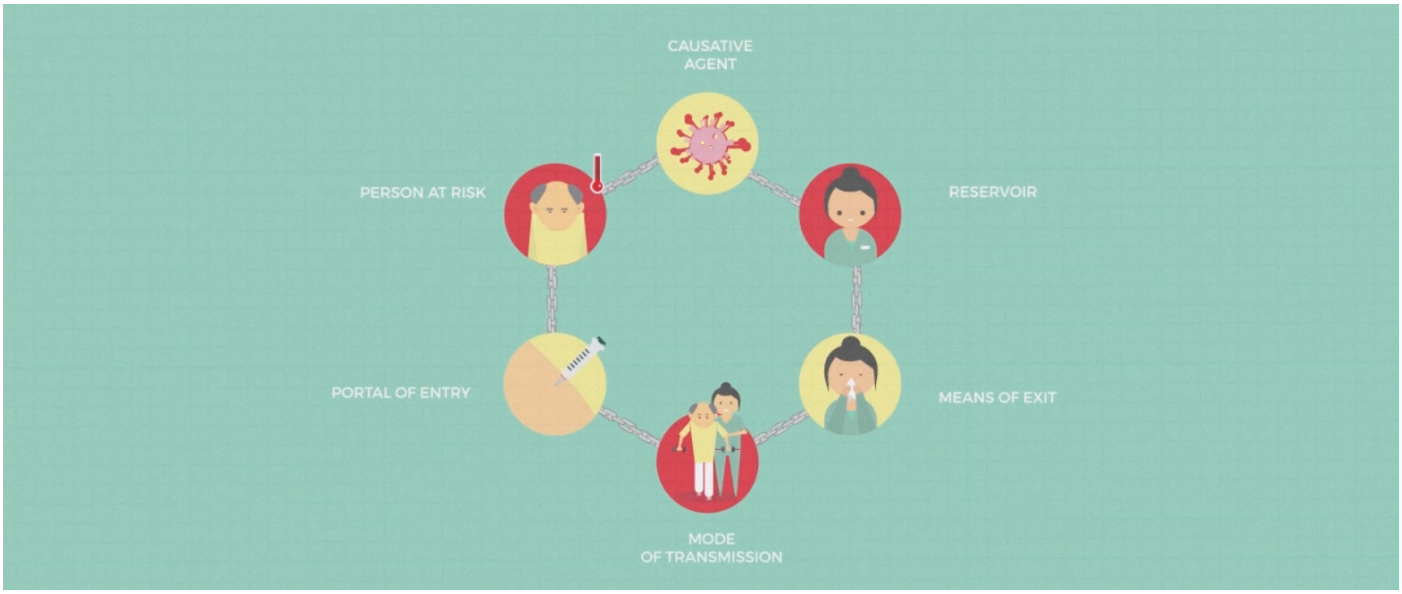
VULNERABLE PEOPLE

It's important to remember that some groups of people may be more vulnerable to infection, for example because of age, general health or some particular illness (even people who are convalescing or recovering from a particular illness).

If these groups become infected, the symptoms may be serious and life-threatening. If the micro-organisms which cause illness are resistant to antibiotics, the condition can be very difficult to treat.

CHAIN OF INFECTION

Did you know that in order for the spread of infectious diseases to take place the chain of infection must be completed? Let's look at how the chain of infection works.



The first link in the chain is the causative agent. This is the harmful germ or pathogen that can cause infection, illness and disease. Things like bacteria and viruses.

The second link is the reservoir or source. This is where the pathogens live and multiply. Remember, this could be in or on a person or animal (known as the host), or in soil and water.

The third link is the means of exit. For example, pathogens that live in the respiratory tract can leave the body through the mouth or nose.

Other means of exit include broken skin, the eyes, or via the stomach and intestines through the anus.

The mode of transmission is the fourth link, which refers to how the pathogen is passed on.

Contact transmission is the most common route in the health and social care workplace, and can happen by direct (hands) or indirect (equipment) contact.

The fifth link is the portal of entry – this is how the pathogen enters the body of the potential host.

Pathogens can enter the body by coming into contact with broken skin, being inhaled or eaten, contacting the eyes, nose and mouth, or, for example, via catheters or needles. This is crucial information to remember.

The sixth link is the person at risk. A person at risk is the individual the pathogen moves to.

The risk of the person becoming infected depends on factors such as their general health and the strength of their immune system.

Takeaway
The transmission of infection can be considered as part of a cycle or chain, which will continue as long as the chain is not broken.

PREVENT INFECTION

Preventing Infection means breaking the links in the chain, and you can do this by using standard precautions.

Standard precautions are the basic principles of infection control that should underpin safe practice, in order to protect both staff and patients from infection:

These include:
- Effective hand washing
- Correct use of personal protective equipment (known as PPE).
- Good hygiene
- Safe disposal of waste
- Safe management of laundry
- Sharps Safety

Let's take a closer look at each one.

PERSONAL HEALTH AND HYGIENE

As an H&SC employee, you have an important role to play in preventing the spread of infections. If you are carrying pathogens, you can easily transmit them to other people, either directly, or through the handling of equipment.

Let's take a look at how you can keep on top of health and hygiene as well as the measures you should take to reduce the risk of transferring pathogens to other people.

1. ILLNESS

If you have cold or flu symptoms, an upset stomach or skin infections, you should speak to your manager before reporting to work. If you have diarrhoea or vomiting you should not attend work until you have been free from symptoms for 48 hours.

2. CLOTHING

Your clothes can become contaminated with harmful micro-organisms. Disposable aprons and over-sleeves should be used when handling anything contaminated with body fluids to protect clothes from contamination.

Changing your clothes daily reduces the risk of remaining contaminants being spread to other individuals. Uniforms or work clothing should be washed on a hot wash, then tumble-dried or hot ironed to kill any bacteria present.

3. PERSONAL HYGIENE

Personal hygiene is extremely important. Daily washing, showering or bathing will remove most of the micro-organisms on your skin. Hand hygiene is also important and fingernails should be kept short.

4. SKIN HEALTH

Micro-organisms can live on skin. The number of pathogens increases when skin is damaged. All cuts should be covered with a waterproof dressing. Using hand cream, good quality paper towels and soaps can help to protect the skin.

5. GOOD HAND HABITS

Having good hand habits means not touching areas that can be a source of pathogens more than is necessary. These areas include your nose, hair and mouth. Also avoid biting your nails.

Hand hygiene is an important part of preventing infection.

Hands can be cleaned, or decontaminated by:
- Washing with soap and water
- Using alcohol hand rubs and gels

Hands and wrists should also be dried with paper towels or a hand dryer.

Did you know, rubbing and lathering your hands should take around 20 seconds?

PERSONAL PROTECTIVE EQUIPMENT

The required level of PPE will vary depending on your role and the task you are doing. However the most common types found within Health and Social Care are:

UNIFORMS

There should always be enough uniforms for regular changing and washing.

APRONS

Disposable aprons help to protect clothing from contamination from blood and bodily fluids

SKIN PROTECTION

This includes items such as paper towels, soaps and hand cleansing gels or wipes. Remember gels and wipes do not replace regular effective hand washing.

GLOVES

It is important that the correct types of gloves are used to reduce cross contamination between you and the individual you are supporting.

MASKS

Masks and respiratory masks help to protect you from breathing in harmful micro-organisms

EYE PROTECTION

This includes goggles and face shields to protect you from body fluids that could be splashed.

HOW TO HANDLE WASTE

Let's now look at the principles surrounding the handling of different wastes to ensure we are protecting ourselves, our colleagues and the people we care for.

Clinical waste is produced from healthcare and similar activities and is placed in either orange or yellow plastic sacks. It should always be kept separate from other waste and disposed of using specialist facilities.

Clinical waste can either be hazardous (waste that poses a risk of infection) or non-hazardous (which is non-infectious waste).

In some settings, such as an individual's own home, the local authority will dictate how clinical waste is handled in the community. Don't worry your employer will take you through how the procedure works in your area.

Your employer should have waste handling policy in place, which details how you can deal with these different types of waste.

SAFE MANAGEMENT OF LAUNDRY

Linen that comes into contact with workers or other individuals can become contaminated with harmful micro-organisms and body fluids.

Linen refers to anything that is made of cloth including bedding, towels and clothing.

When dealing with soiled linen:

- Always wash separately.
- Wash clothing in a (minimum) 40 degree wash, followed by tumble-drying or hot ironing.
- Bedding and towels should be washed on a hot wash.
- When supporting an individual in the home, always ask permission first.

Once decontaminated, items should always be stored separately to contaminated linen.

You must always follow your agreed ways of working and, as always, speak to your manager if you have questions.

SHARPS

Some roles may require the handling and disposal of sharps. It is your employer's responsibility to provide the correct equipment and training for this task.

There are some good guidelines you can follow if you handle sharps, such as:

- Use an approved container.
- Sharps must be disposed of at the point of use into an appropriate container.
- All sharps bins should have the name of the person who assembled it and the date of assembly on the label.
- Follow the bin's instructions.
- Do not fill bins past the "full" line marked on the bin. Sharps can fall out and cause injury.
- Use the temporary closure mechanism on the top of the bin when it is not in use.
- Store in an appropriate place.
- Always keep the bins above floor level to prevent children from reaching them.
- Store bins securely out of sight and reach of other people who may be present.
- Handle appropriately.
- Do not pass sharps from one hand to the other.
- Do not handle sharps more than is essential.
- Never alter the sharp.
- Do not put protective covering back onto needles.
- Do not bend or break needles.
- Do not separate needles / syringes before disposal.

IF YOU ARE EVER UNSURE, STOP! AND SPEAK TO YOUR LINE MANAGER.