



Preschool and Childcare Facility Subcommittee
**Management of Infectious Disease in Childcare
Facilities and Other Childcare Settings**

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Foreword

Given the extent to which we depend upon formal childcare arrangements in Ireland and the infectiousness of many childhood illnesses, there has never been a greater need for a simple, clear set of guidelines to assist those charged with minding our children in minimising the risk of infectious disease transmission in childcare facilities.

This guidance document is based upon latest best evidence and drawn together by experts in the fields of Public Health Medicine, Infection Prevention and Control, Environmental Health and Occupational Medicine. Important information regarding relevant legislation is laid out in Appendix A. The Terms of Reference of the Working Group are laid out in Appendix C.

It is important to bear in mind that this document is a series of guidelines and a ready source of advice and is based on best available evidence and consensus recommendations; it is not designed to be a series of standards against which performance is to be audited. It is intended that this guidance would be adhered to as far as is reasonably practicable.

In addition, there is a wealth of legislation governing the safe management of childcare facilities. It is the duty of managers of such facilities to ensure they are familiar, and compliant with all relevant legislation. It is hoped that this document will provide a useful resource for accessing legislation as it applies to managing the threat of infectious disease in childcare facilities.

The opinion of the Subcommittee was that, where possible, childcare staff should be managed, from an occupational health viewpoint, in the same manner as healthcare staff. This, however, may not always be feasible, and so, at a minimum, childcare staff should be managed in a similar manner to staff in any other small-firm occupational setting. The Subcommittee was strongly of the opinion that childcare staff should ensure that they are adequately and appropriately immunised prior to commencement of employment. Likewise, as immunisation is such a powerful public health preventive measure, all children attending a childcare facility should be appropriately immunised.

I am extremely grateful for excellent and painstaking hard work and dedication of the Committee members who have produced this guidance. The Committee has produced an excellent and straightforward document, clear and accessible, and based on the best available evidence with a simple message: disease prevention in childcare settings is most likely to be successful if the following are ensured:

1. Effective **handwashing** is used at every opportunity
2. All children and staff are appropriately **immunised**
3. Any unwell staff member or child is **excluded**.

The aim of this document is to ensure that the basic principles of disease transmission and control are laid out in a clear and unambiguous way to assist in minimising the risk posed by infectious diseases in childcare settings. This document is laid out on the lines of, and based upon a previous draft document produced by the HSE South (Cork and Kerry) Childcare Guidelines Working Group in September 2007. I am deeply indebted to this Group for the work they have done and extremely grateful that they have allowed us to use their draft document as the basis for this document.

From time to time, there will be additions and links to other resources that relate to the management of infectious diseases in childcare. This material will be made available on the HPSC website at <http://www.hpsc.ie/hpsc/A-Z/LifeStages/Childcare/>.

Dr Paul McKeown (Chair)
Preschool and Childcare Facility Subcommittee

Chapter 1. Introduction

In a country such as Ireland, with a young population, and many households with two working parents, childcare has a pivotal role in helping to maintain our economy. It is in the interests of everyone to ensure that facilities providing childcare *in loco parentis* are operated in the safest and most effective manner possible.

Infections are common in children and can occasionally result in illness in a child or outbreaks of illness in groups of children. When living at home, children will have contact with a limited number of people from whom they may contract an infection. When children are placed in a childcare¹ setting they come into contact with far greater numbers of other children than might otherwise be possible, providing greater opportunity to be exposed to a range of infections. It will never be possible to prevent all infectious disease in children in childcare settings, but we know how to reduce appreciably the risk; strict observance of simple hygiene measures known as standard precautions, vaccination against certain diseases, and exclusion of symptomatic children and staff.²

This guidance is intended to provide simple and effective strategies for prevention of infectious diseases in childcare and to be a reference source regarding the prevention and control of infection in pre-school childcare settings. It is intended to be used by anyone operating childcare facilities in Ireland. Those who operate such facilities have a duty of care and the strategies outlined in this document will assist in protecting children and staff from infection and preventing onward transmission to families of children and staff.

This guidance document builds on important guidance produced in the past. Guidance and information is available online on the management of a range of conditions and diseases including childhood vaccine preventable diseases, from the website of Health Protection Surveillance Centre at <http://www.hpsc.ie/hpsc/TopicsA-Z/>.

National guidance on the management of infectious disease in school children has been published by the Department of Health and Children.³ There is a considerable body of legislation in this area. Legislation relevant to childcare and infectious diseases can be found in Appendix A. To facilitate accessing this legislation, it has been hyperlinked, largely to the relevant sections in the electronic Irish Statute Book, available at <http://www.irishstatutebook.ie/home.html>.

1 A childcare facility is any childcare establishment that is covered by the Childcare (Pre School Services) (No.2) Regulations 2006.

2 In a childcare setting standard precautions include adequate hand hygiene, use of protective clothing, proper laundry management, a clean environment, management of exposure to blood and body fluids and adequate washing and food storage and preparation equipment.

3 Department of Health and Children. Infection in School: A Manual for School Personnel. Health Promotion Unit, Dublin: 2006

Chapter 2: Infection

Children can spend long periods of time in childcare settings. The longer a child spends in such settings and the more children s/he comes into contact with, the greater is the risk of her/him becoming infected. As a result, it is never practicably possible to fully prevent all infection, but it is possible to reduce the risk substantially. Fortunately, there are a few simple strategies and activities that can go a long way towards preventing infection in childcare settings.

What is an infection?

An infection occurs when a pathogen (or germ)⁴ enters the body and begins to multiply (reproduce). The germs may multiply to such an extent that they can cause illness. Infections can be apparent (i.e. the person will have an immunological reaction to the germ and/or will develop signs and symptoms of disease) or it may be inapparent (mild with no symptoms of disease). A term often used by professionals (and the media) is “colonisation”. Infection is not the same as colonisation. Colonisation refers to the situation when a person is carrying a germ somewhere on their body, but does not become ill as a result. People who are infected or colonised can pass on infection but transmission is much more likely in the case of someone who has symptoms. People who are colonised generally do not have as high numbers of germs in their system and so passing on infection is less likely. One important idea regarding infectious disease is the *infectious dose* or the amount of germs needed to make a person ill. The infectious dose varies from germ to germ and from person to person. It takes between 1000 and 10,000 salmonella germs to make a healthy person ill but as little as a few hundred to make a small child or a frail elderly person ill. However, it takes less than five of the serious VTEC germs to make healthy adults ill, so it will come as no surprise to know that cases of renal failure and deaths (which are not uncommon in cases of VTEC) are much, much more likely in small children and frail elderly people.⁵

How do infections spread?

Different infectious diseases are spread (transmitted) in different ways. If an infectious disease can be spread directly from one person to another, that disease is said to be contagious. Diseases are transmitted in the following ways:

1. **Direct contact** spread includes
 - Skin contact (cold sore, ring worm, molluscum contagiosum, impetigo, conjunctivitis, Chickenpox, warts, boils),
 - Transplacental spread (congenital rubella syndrome),
 - By breast milk (HIV),
 - Through blood or
 - By other types of fluid found in the human body (HIV/AIDS, hepatitis B and C) and by sneezing/coughing (influenza, measles).
2. **Indirect contact** can occur through:
 - Ingestion of contaminated food (e.g. salmonella)
 - Ingestion of contaminated water (e.g. hepatitis A, cryptosporidiosis),
 - A bite from an infected insect/animal (e.g. malaria, rabies)
 - Inhalation of germs (e.g. Chickenpox, measles, TB and the common cold)
 - Transmission via inanimate objects such as work surfaces or shared toys
3. **Faeco-oral** transmission (or spread from the back passage to the mouth). Infections such as gastroenteritis (caused by salmonella, VTEC, winter vomiting disease or norovirus and cryptosporidium) are passed by this method but it is an important route of spread for other, non bowel infections such as influenza, polio and hand, foot and mouth disease.

⁴ A pathogen is a germ that causes disease and can be a bacterium (plural, bacteria) a virus, a parasite or a fungus (plural, fungi). Salmonellae that cause food poisoning and meningococci (one of the causes of meningitis) are bacteria, influenza is caused by a virus, intestinal worms such as tape worms are examples of parasites, and athlete's foot and thrush are caused by types of fungi.

⁵ VTEC (Verocytogenic E. coli) is a type of diarrhoeal bacterium caught from eating contaminated food or water or contact with animal faeces which can lead to blood disorders and renal failure especially in young children and elderly people – see Chapter 9 for full information on VTEC.

CHAIN OF INFECTION

All infections get from their source to an individual along a small number of stages often called links in a chain of infection. The more links in this chain that can be broken, the smaller the chance that the germs will make it to infect a child. There are four necessary stages in the transmission of any infection. They are:

1. The infected person has to spread the germ in their environment (e.g. sneezing)
2. The germ has to survive in the environment (this includes the air, food, water, on toys, door handles, surfaces)
3. Another person has to come in contact with the waiting germ (e.g. pen in mouth)
4. This person then has to become infected (e.g. signs of flu)

1. THE INFECTED PERSON HAS TO SPREAD THE GERM

Most children who are ill will display some symptoms but a large percentage will not. Such children are referred to as being “asymptomatic”. This happens quite often in the case of verocytotoxigenic *Escherichia coli* or VTEC (a cause of serious gastroenteritis). When a child with VTEC does not display any symptoms it becomes impossible to tell if they present an infectious risk to other children or staff. They are infectious, passing the germ out of their body in their bowel motions but without symptoms such as diarrhoea or fever, it is not possible to tell whether or not they are sick. Because of the possibility of asymptomatic infections, all children and staff in a childcare facility should be assumed to have an infection and be spreading germs and it is for this reason that Standard Precautions for infection control should be used universally in all childcare settings (standard precautions concentrate on ensuring hand hygiene, using protective equipment where necessary and disposing of waste in appropriate ways – for further information see Chapter 3). And if any child or staff member displays symptoms they should be assessed and excluded from the childcare facility if necessary.

2. THE GERM HAS TO SURVIVE IN THE ENVIRONMENT

Some of the germs being considered here are very hardy and can survive for a long time in the environment. VTEC can survive for at least a week on work surfaces, and norovirus are able to survive for more than three weeks in carpets and furnishings. In the case of VTEC, as the infectious dose of VTEC is so small⁶ it will take only a tiny amount of contamination on a door handle, or a toilet flush handle or a fridge handle or a light switch to transfer the small number of germs necessary to make someone very ill. Bacteria like VTEC and salmonella if contaminating food, can multiply on the food (unless it is stored in a fridge and kept at the proper temperature) and this is why it is crucial to store food appropriately. Viruses (such as norovirus and hepatitis A) do not multiply on food. Bacteria and viruses are generally quite good at surviving on surfaces and can often survive many days on metal surfaces. For this reason it is important to keep surfaces touched by hands and used to prepare food constantly clean. Some viruses will require bleach for proper cleaning, but washing with detergent and hot water is very effective in controlling germs on surfaces.

3. ANOTHER PERSON HAS TO COME IN CONTACT WITH THE GERM

Transmission (see above) by different routes is the method used by germs to increase their chances of being picked up by another child or staff member. Ensuring standard precautions and hygiene are used properly and on a constant basis is the best way to ensure that spread does not take place. For this reason, it is important to ensure that cuts and wounds are covered and that no fluids are allowed to seep from dressings, that hands are washed after use of the toilet and before preparation of food.

4. THIS PERSON THEN HAS TO BECOME INFECTED

In general, adults who have a mature and fully functioning immune system are best at fighting off infection. But even they can become infected and develop illness. In a childcare setting, small children will be at the greatest risk of picking up an infectious disease. However, one group of adults, pregnant women, have a higher risk of becoming infected than the general population. One of the most effective ways to protect children and pregnant women from infectious disease is to be fully immunised against the disease in question. Once immunised, a person is generally fully protected against the disease. Immunisation is covered in Chapter 4.

Preventing the spread of infection

Three basic principles, therefore, underlie all infectious disease prevention in childcare settings. These are:

1. **Handwashing** should be used at every opportunity
2. **Immunisation:** ALL children and staff should be appropriately immunised
3. **Exclusion** - Any unwell staff member or child should be excluded

The following chapters outline the most effective ways to prevent infection and can be summarised thus:

- To protect staff and children from the spread of infections, childcare staff need to **understand how diseases are spread and which measures interrupt their spread.**
- The spread of germs can be greatly reduced if **standard precautions** (see Chapter 3) are used consistently and regularly.
- It is vital that childcare staff receive **training** in the use of Standard Precautions. This is particularly important because some

⁶ The INFECTIOUS DOSE is the number of bacteria or viruses required to be ingested or breathed in to infect a person.

diseases are contagious before symptoms appear and because the disease status of a child may not be known.

- The single most important way to prevent the spread of germs is by **handwashing**.
- Maintaining a **good standard of environmental hygiene**, coupled with appropriate cleaning of toys, personal care items, utensils and bed linen as well as appropriate disposal of items soiled with body fluids are other important precautions.

When should you contact your local Department of Public Health?

Contact your local Department of Public Health:

- If you have a concern about a communicable disease or infection, or if you need advice on controlling them
- If you are concerned that the number of children who have developed similar symptoms is higher than normal
- If you think that you may have an outbreak of infectious disease in your facility
- If you are not sure whether to exclude a child or member of staff: and
- Before sending letters to parents about a infectious disease.

Although the child's doctor is legally responsible for reporting serious illness, you should phone your local Department of Public Health if you become aware that a child or member of staff has a serious or unusual illness, (for example meningitis), or if a number of children or staff have the same symptoms suggesting an outbreak.

Chapter 3: Infection Control

Children who spend time in group childcare settings such as the pre-school setting generally are open to contracting a wide range of illnesses (particularly gastrointestinal and respiratory illnesses). Infants and toddlers are at particular risk of infection - they explore the environment with their mouths, have poor control of their secretions and excretions, have little immunity to common illnesses and require a lot of hands-on care from adults. In order to minimise the risk of infection, Standard Infection Control Precautions should be used routinely in all childcare settings.

Standard precautions

WHAT ARE STANDARD PRECAUTIONS?

Standard precautions are **basic good hygiene measures** (e.g. handwashing, appropriate use of protective clothing, environmental cleaning etc) that should be **practiced by all caregivers at all times and with all children**. It is not always possible to tell who has an infectious disease, infection can be spread by a person who has no signs and symptoms of illness or is incubating an infection e.g. flu, Chickenpox. For this reason, it is essential that good hygiene practices are applied routinely in all childcare settings.

Standard Precautions are primarily used in healthcare settings e.g. hospitals, but they are equally applicable everywhere in the community, including group childcare settings such as pre-schools.

WHEN SHOULD STANDARD PRECAUTIONS BE USED?

Childcare staff should apply standard precautions when they have contact with;

- Blood
- All body fluids, secretions (nasal secretions) and excretions (urine, faeces, vomit) except sweat, regardless of whether or not they contain visible blood
- Non-intact skin (broken skin, sores)
- Mucous membranes (eyes and mouth)

WHAT ARE STANDARD PRECAUTIONS IN A CHILDCARE SETTING?

The key elements of standard precautions in a childcare setting include:

- Handwashing and skin care
- Use of protective clothing, e.g. gloves and plastic apron
- Management of spillages, i.e. blood or other body fluids
- Management of cuts, bites and needle-stick injuries
- Coughing and sneezing etiquette
- Environmental hygiene (Chapter 6)
- Safe handling of laundry (Chapter 6)
- Safe handling and disposal of waste including sharps (Chapter 6)

Handwashing

Handwashing is the single most effective way of preventing the spread of infection; its purpose is to remove or destroy germs that are picked up on the hands. Germs can be picked up in lots of ways. They can be transferred onto our hands when we touch other people, animals, contaminated surfaces, food and body fluids. These germs can then enter our body and make us ill or they can be passed to other people or to the things that we touch. Germs picked up onto the hands can be effectively removed by thorough handwashing with soap and running water. Handwashing protects both children and staff.

THE DOs AND DON'Ts OF HANDWASHING

DO

- Keep nails short, clean and free of nail varnish, nail extensions, and false nails
- Care for your hands. Moisturise hands regularly to keep the skin in good condition
- Use warm running water and liquid soap and pat hands dry with disposable paper towels rather than rubbing them, to prevent skin irritation
- Cover any cuts or abrasions with a waterproof dressing and change as necessary
- Supervise children's handwashing and assist where necessary

DON'T

- Wear jewellery - one ring e.g. a plain gold or silver band is permitted
- Use nailbrushes as germs multiply on wet nailbrushes.
- Carry out direct care if you have moist lesions on your hands e.g. weeping dermatitis - seek medical/ occupational advice.
- Assume children know how to wash their hands – show them
- Use a single cloth or a bowl of water to clean a group of children's hands
- Allow children to eat without washing their hands

Handwashing is the single most effective way of preventing the spread of infection

WHEN SHOULD CHILDCARE STAFF WASH THEIR HANDS?

Handwashing is recommended when childcare staff arrive at work, when moving from one childcare group to another and whenever the hands are visibly dirty. In addition handwashing must also be carried out:

Before

- The start of the work shift
- Eating, smoking, handling/preparing food or assisting/feeding a child
- Preparing meals, snacks and drinks (including babies' bottles)

After

- Using the toilet or helping a child to use the toilet
- Nappy changing/ handling potties
- Playing with or handling items in the playground – e.g. toys, sand, water
- Handling secretions e.g. from a child's nose or mouth, from sores or cuts
- Cleaning up vomit or faeces
- Handling or dealing with waste
- Removing disposable gloves and/or aprons
- Handling pets/pet litter, animals/cages/animal soil, etc.

HOW TO WASH HANDS

Handwashing should be performed as follows:

- Wet hands under warm running water to wrist level
- Apply liquid soap. Lather it evenly covering all areas of the hands for at least 10 seconds. Include the thumbs, finger tips, palms and in between the fingers, rubbing backwards and forwards at every stroke (**see Posters on handwashing technique in the Resources section**)
- Rinse hands off thoroughly under warm running water
- Dry with paper towel using a patting motion to reduce friction, taking special care between the fingers
- Use the disposable paper towel that has been used to dry the hands to turn off taps
- Dispose of the disposable paper towel in a waste bin using the foot pedal to avoid contaminating hands that have just been washed

Wearing gloves is not a substitute for handwashing

FACILITIES FOR HANDWASHING

Provide liquid soap and wall mounted disposable paper towel dispensers, and wash hand basins with hot and cold mixer taps in:

- Nappy changing areas
- Playrooms and baby rooms (especially for adults)
- Food preparation areas
- Toilets (staff and children)
- Laundry

Ensure wash hand basins have hot and cold mixer taps that are thermostatically controlled to deliver hot water at a maximum temperature of 43°C, to avoid scalding.

Wash hand basins should be readily accessible at all times. One toilet and one wash hand basin should be provided for every 10 toilet trained children, preferably en suite to the play area (for further information see Appendix H)

Basins should be at an appropriate height for staff and children.

A waste bin should be located next to each basin for paper towel disposal. Waste bins should be foot pedal operated.

HANDWASHING PRODUCTS

1. SOAPS

Handwashing with liquid soap and warm running water is recommended. Anti-bacterial soap is not necessary or recommended. An anti-bacterial soap may be required in food preparation areas.

Ideally, liquid soap dispensers should be wall mounted and have individual replacement cartridges that are discarded when empty.

Bar soap is not recommended due to the increased risk of contamination.

Refillable soap dispensers are not recommended.

A mild unscented liquid soap is recommended for staff/children with sensitive skin.

Drying

Good quality disposable paper towels are recommended for drying hands.

Hot air driers, **cloth towels and cloth roller towels are not recommended**. Childminders looking after children in their own home may use kitchen towel/roll or a designated hand towel which should be washed every day or more often if physically dirty.

2. ALCOHOL –BASED HAND RUBS/GELS

- When soap and running water are not readily available, for example on a field trip or excursion, an alcohol based hand rub/gel may be used (the alcohol content should be at least 60%). The alcohol based hand rub must be applied vigorously over all hand surfaces.
- Alcohol based hand rubs are only effective if hands are not visibly dirty, if hands are visibly dirty then liquid soap and water should be used.
- It is safe to let children use alcohol based hand rubs/gels but it is important to let children know that it should not be swallowed. Supervision is vital. It is also important to store it safely so children cannot get access to it without an adult.
- The alcohol content of the product generally evaporates in 15 seconds so after the alcohol evaporates it is safe for children to touch their mouth or eyes.
- Water is not required when using an alcohol rub/gel.

Method

- Apply the required volume of the product to the palm of one hand and rub the hands together. The amount of gel used should be sufficient to keep the hands wet for at least 15 seconds.
- Ensure all surfaces of the hands and fingers are covered with the gel and keep rubbing until the hands are dry. As with any other household product or chemical, care should be taken to ensure that children do not accidentally ingest handwashing products. Children should not have independent use of containers of alcohol gel. Avoid touching the area around a child's eyes just after using an alcohol gel as the child may experience a stinging sensation.

Alcohol based hand rubs/gels are not a substitute for handwashing with soap and running water

SKIN CARE

Childcare staff must care for their hands to prevent dry, cracked skin. Prolonged contact with water softens the skin of the hands and may lead to skin irritation. Damaged skin is more likely to allow germs to grow.

Hand creams should be applied regularly. Water based hand creams (non-oily) are suitable for use during the day as these do not interfere with the protective properties of latex gloves. Hand cream should only be available in tubes or a pump dispenser – communal pots are not recommended as these are likely to get contaminated with germs.

Children with eczema may need to use special skincare products to prevent skin irritation – discuss this with the child's parents.

HANDWASHING AND YOUNG CHILDREN

Good handwashing habits should be taught to children as early as possible. This can be done by;

- Showing children a good handwashing technique (**See Posters on handwashing in Resources section**)
- Supervising and assisting children to wash their hands
- Always leading by good example

Remember, babies also need their hands washed as often and as thoroughly as older children.

Protective clothing

Basic protective clothing (i.e. gloves and aprons) are required for incidents where contact with blood or body fluid is anticipated. This includes dealing with non intact (broken) skin. Gowns and masks are not required in childcare settings.

GLOVES

Wear disposable gloves when dealing with blood, body fluids, broken/grazed skin and mucous membranes (e.g. eyes, nose, mouth). This includes activities such as:

- Nappy changing
- Cleaning potties
- Cleaning up blood – e.g. after a fall or a nose bleed
- General cleaning
- Handling waste

Gloves should be single use and well fitting.

Change gloves;

- after caring for each child
- after doing different care activities on the same child

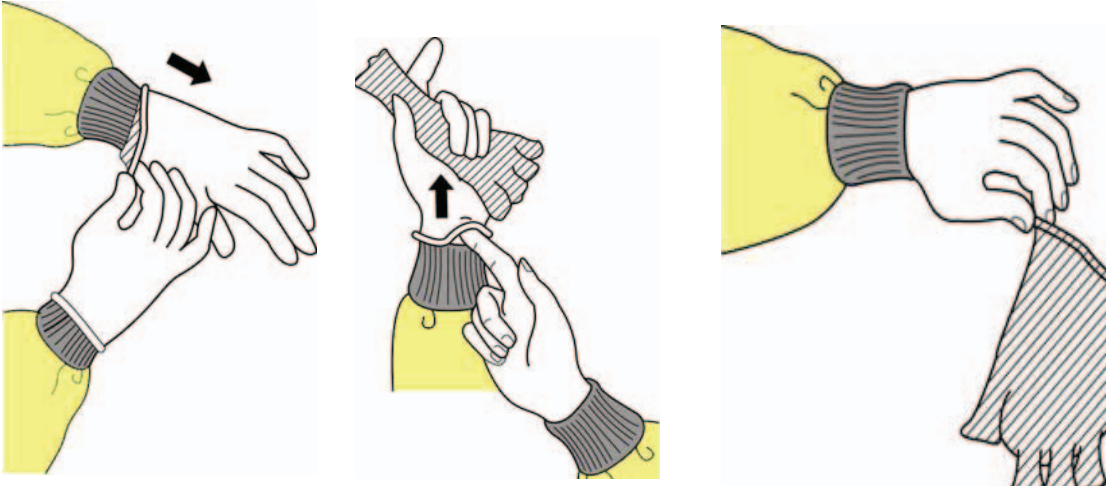
Wash hands after gloves are removed.

Remember gloves are **not** a substitute for handwashing.

Types of gloves

- Disposable non powdered latex or nitrile gloves are recommended. Synthetic vinyl gloves may also be used but users should be aware that gloves made of natural rubber latex or nitrile have better barrier properties and are more suitable for dealing with spillages of blood or body fluids.
- Gloves should conform with the European Community Standard (CE marked)
- Polythene gloves are not recommended as these gloves tear easily and do not have good barrier properties
- Latex free gloves should be provided for staff or children who have latex allergy

How to remove Gloves



Source: US Centers for Disease Control and Prevention

1. Peel the first glove back from the wrist
2. Turn the glove inside out as it is being removed. Remove the glove completely and hold in the opposite hand
3. Remove the second glove by placing a finger inside the glove and peeling it back. Pull the glove off over the first glove
4. The outside surface of the glove should not be touched
5. Handwashing should be performed following glove removal

Tips

- Keep hands away from face
- Limit surfaces and items touched
- Remove gloves if punctured, torn or heavily contaminated
- Perform handwashing before putting on new gloves

APRONS

Wear a disposable apron if there is a risk of blood or body fluids splashing onto your skin or clothing, for example during activities such as cleaning up spillages of body fluids (e.g. blood, vomit, urine) or dealing with nose bleeds. Change aprons after caring for individual children.

Wash hands after removing the apron.

Type of apron

Aprons should be disposable, single use and water repellent. The apron should cover the front of the body from below the neckline to the knees. Cloth aprons or gowns are not recommended.

Apron removal

Remove the apron by breaking the neck ties first, then break the ties at the back and roll up the apron without touching the outer (contaminated) surface.

If gloves and an apron are worn remove the gloves first followed by handwashing.

Management of spillages of blood or other body fluids

GENERAL POINTS

- Blood and body fluid spillages should be dealt with immediately.
- Children should be kept away from any spillage until the area has been cleaned and disinfected (if required), e.g. a spill occurring on a floor where infants are crawling.
- Spills should be removed using absorbent material e.g. disposable paper towels or kitchen roll before the area is cleaned and then disinfected.

- A chlorine based disinfectant is recommended when disinfection is required (see Appendix F).
- The area should be well ventilated if a chlorine based disinfectant is used.
- Liquids should not be added directly to spills as it increases the size of the spill.
- Supplies of gloves, aprons, disposable paper towels/kitchen paper and a plastic waste bag should be readily available for managing spills. Ideally each care room should have a spillage kit readily available.
- Disposable cleaning cloths/mop heads should be used to clean up spillages. If non-disposable cloths/mops are used to clean a spillage area, they should be heat disinfected in a washing machine after use (See Laundry section, Chapter 6).
- Chlorine based disinfectants should not be used on soft furnishings, carpets, or other surfaces that are likely to be damaged by bleach.

SPILLAGES OF BODY FLUIDS (e.g. urine, faeces or vomit)

1. Put on disposable plastic apron and gloves.
2. Use absorbent disposable paper towels or kitchen towel roll to soak up the spillage.
3. Clean the area using warm water and a general purpose neutral detergent, use a disposable cloth.
4. Apply a chlorine based disinfectant (diluted to a concentration of 1000 ppm⁷ available chlorine) to the affected surface, (see Appendix F).
5. Dry the surface thoroughly using disposable paper towels.
6. Dispose of soiled/sodden paper towels, gloves, apron and cloths in a manner that prevents any other person coming in contact with these items e.g. bag separately prior to disposal into a general domestic waste bag.
7. Wash and dry hands thoroughly.
8. Change clothing that is soiled immediately.

BLOOD SPILLAGES

1. Put on disposable plastic apron and gloves.
2. Use absorbent disposable paper towels or kitchen towel roll to soak up the spillage
3. Apply a chlorine based disinfectant (at a concentration of 10,000 ppm available chlorine) (see Appendix F) to the affected surface. It should be left in contact with the surface for at least two minutes (check the manufacturer's instructions). Alternatively, chlorine granules which are supplied in commercial spillage kits may be used as directed by the manufacturers.
4. Wash the area thoroughly with warm water and a general purpose neutral detergent and dry using disposable paper towels.
5. Dispose of soiled/sodden paper towels, gloves, apron and cloth in a manner that prevents any other person coming in contact with these items e.g. bag separately prior to disposal into a general domestic waste bag.
6. Wash and dry hands thoroughly.
7. Change clothing that is soiled immediately.

Management of cuts, nose bleeds, bites or needle-stick injuries

GENERAL POINTS

- Staff should avoid getting blood on their skin if at all possible. If it happens, they should wash it off immediately with soap and warm water
- Cuts, abrasions or sores should be covered with a waterproof dressing
- Absorbent material should be used to stop a child bleeding
- Disposable latex or vinyl gloves should be worn by care staff when there is a lot of blood or they are dealing with open cuts.
- Hands should be washed immediately with soap and water after gloves are removed

DEALING WITH CUTS AND NOSE BLEEDS

When dealing with cuts and nose bleeds, childcare staff should follow the preschool's first aid procedure. They should:

- Put on disposable gloves and apron.
- Stop the bleeding by applying pressure to the wound with a dry clean absorbent dressing.
- Place a clean dressing on the wound and refer the child for medical treatment if needed, e.g. stitches required or bleeding that cannot be controlled.
- Once bleeding has stopped, dispose of the gloves and apron safely immediately in a manner that prevents another person coming in contact with the blood, i.e. bag separately prior to disposing into general domestic waste bag.
- Wash and dry hands.

⁷ PPM=Parts per Million

Children who are known to be HIV positive or hepatitis B positive should not be treated any differently from those who are not known to be positive. Intact skin provides a good barrier to infection, and staff should always wear waterproof dressings on any fresh cuts or abrasions on their hands. Staff should always wash their hands after dealing with other people's blood even if they have worn gloves or they cannot see any blood on their hands.

HUMAN BITES

Human mouths carry a wide variety of germs, some of which can be transmitted to others by bites. Human bites resulting in puncture or breaking of the skin are potential sources of exposure to certain blood borne viruses (e.g. HIV and Hepatitis B) and other bacterial infections therefore it is essential that they are managed promptly.

If a child is bitten by another child:

- First aid – gently rinse area with warm running water.
- If a bite does not break the skin:
 - o Clean with soap and water.
 - o No further action is needed.

If a bite breaks the skin and bleeds:

- Encourage the wound to bleed if not bleeding freely (apply pressure to the sides of the wound).
- Wash the wound thoroughly with warm running water.
- Cover it with a waterproof dressing.
- Record the incident in the accident book.
- If the bite is on the hand the arm should be elevated.
- If the biter has blood in the mouth they should swill it out with tap water.
- Children who may have been exposed should be medically evaluated either by a GP or in a hospital emergency department.

ANIMAL BITES

Most animal bites do not become infected unlike human bites, but they should still be taken seriously. Bites, which do not break the skin, should be washed with soap and water. If a bite breaks the skin, wash with soap and water then seek medical advice about the possible need for treatment to prevent infection. If someone becomes generally unwell or the bite looks infected they should seek medical advice.

CONFIDENTIALITY

Childcare managers should be aware that if standard precautions are used by childcare staff in every circumstance, there should not be any need to routinely disclose to them confidential information or sensitive diagnoses. If all childcare staff are adequately trained in the use of Standard Precautions on every occasion, with every child, there is no reason for staff to know an individual child's medical history. All children have a right to be treated equally, just as each child has a right to be protected from exposure to germs.

Respiratory hygiene and cough etiquette

Everyone should cover their mouth and nose when coughing and sneezing to prevent germs spreading. In addition:

- A **plentiful supply of disposable paper tissues** should be readily available for nose wiping
- **Foot operated pedal bins** that are lined with a plastic bag should be provided for disposal of used/soiled tissues
- Cloth handkerchiefs should not be used
- A **different tissue should be used on each child**, and staff must wash their hands after nose wiping
- Children and staff should be taught to **cover their mouth when they cough or sneeze** and to wash their hand afterwards
- Everyone (staff and children) should put their used tissues in a bin and **wash their hands** after contact with respiratory secretions
- Outdoor activities should be encouraged when weather permits
- Cots or sleeping mats should be spaced at least a half metre apart.⁸

⁸ See Interim Code Of Practice In Determining Compliance With Child Care (Pre-School Services) (No 2) Regulations 2006 For The Pre-School Inspectorate http://www.hse.ie/eng/services/Find_a_Service/Children_and_Family_Services/Pre-school_Services/Pre-school_inspection_services/Interim_Code_of_Practice_Determining_Compliance_with_Child_Care_Pre-School_Services.pdf

Chapter 4: Immunisation

Childhood Immunisation

Preventing an illness is preferable to treating it once it has developed. There are now many safe and effective vaccines against many serious and deadly illnesses. Some are given routinely to all the population, others only to individuals thought to be at high risk of certain infections. All children attending a childcare facility should be appropriately immunised. The principle of immunisation is simple: it gives the body a memory of infection without the risk of natural infection.

Childcare facilities have a legal requirement to maintain immunisation records on all children attending. Prior to enrolment parents should be asked for a copy of their child's immunisation passport or record card. This is contained in the booklet "Your child's immunisation - A Guide for parents" which parents receive at the first public health nurse visit after their baby's birth. A copy of the immunisation passport can be found in the Appendices. The immunisation passport should continue to be updated in the childcare facility as the child receives his/her immunisations. Parents of children who are not appropriately immunised should be informed of the risk to their children and other children.

Under some very rare circumstances it may be necessary to withhold one or more immunisations. This will usually be on a temporary basis. The decision to deny any child the benefits of immunisation should not be taken lightly. Full information on the schedule of immunisation used in Ireland can be found in Immunisation Guidelines for Ireland which are available on the website of the HPSC at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Vaccination/Guidance> and on the website of the National Immunisation office at <http://www.immunisation.ie/en/HealthcareProfessionals/ImmunisationGuidelines2008>.

On entry to the childcare facility, and at every available opportunity, staff should encourage parents to ensure that their children are fully up to date with their immunisations.

Immunisation Schedule

In 2008 there was a major change to the childhood immunisation schedule for children born on or after 1st July 2008. The main changes were the introduction of two additional vaccines, pneumococcal vaccine and hepatitis B vaccine.

The primary childhood immunisation programme protects children from 12 vaccine preventable diseases. Children need to complete 5 GP visits between 2 and 13 months to be fully protected.

Preschool Immunisation Schedule for Children born SINCE July 2008

Age to Vaccinate	Type of Vaccination
At birth	BCG TB vaccine (given in maternity hospitals or a HSE clinic)
At 2 months (Free from the GP)	6 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (<i>Haemophilus influenzae</i> b) Polio (Inactivated poliomyelitis) Hepatitis B PCV (Pneumococcal Conjugate Vaccine)
At 4 months (Free from the GP)	6 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (<i>Haemophilus influenzae</i> b) Polio (Inactivated poliomyelitis) Hepatitis B Men C (Meningococcal C)
At 6 months (Free from the GP)	6 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (<i>Haemophilus influenzae</i> b) Polio (Inactivated poliomyelitis) Hepatitis B Men C (Meningococcal C) PCV (Pneumococcal Conjugate Vaccine)
At 12 months (Free from the GP)	MMR Measles Mumps Rubella PCV (Pneumococcal Conjugate Vaccine)
At 13 months (Free from the GP)	Men C (Meningococcal C) Hib (<i>Haemophilus influenzae</i> b)

Children born before July 2008 will have been immunised under the previous schedule.

Preschool Immunisation Schedule for Children born BEFORE July 2008

Age to Vaccinate	Type of Vaccination
At birth	BCG TB vaccine (given in maternity hospitals or a HSE clinic)
At 2 months (Free from the GP)	5 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (Haemophilus influenzae b) Polio (Inactivated poliomyelitis)
At 4 months (Free from the GP)	5 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (Haemophilus influenzae b) Polio (Inactivated poliomyelitis)
At 6 months (Free from the GP)	5 in 1 Diphtheria Tetanus Whooping cough (Pertussis) Hib (Haemophilus influenzae b) Polio (Inactivated poliomyelitis)
At 12 -15months (Free from the GP)	MMR Measles Mumps Rubella
	Hib (Haemophilus Influenzae B)

For information on the all vaccine preventable diseases, please see Chapter 9.

The website of the National Immunisation Office, www.immunisation.ie is a very useful online resource with accurate and timely information on all immunisation issues in Ireland.

Chapter 5: Occupational Health

As employers, the owners and managers of childcare and pre-school facilities have a legal duty to protect employees at work as laid out in the Health & Safety Act (2005) found at <http://www.irishstatutebook.ie/2005/en/act/pub/0010/>. The Biological Agents Regulations (1994) available at <http://www.irishstatutebook.ie/1994/en/si/0146.html>, define biological agents and require the prevention of exposure of employees to biological agents in a place of work. The Health and Safety Act includes microorganisms in its definition of 'substances' and thus affords the employee the same protection against microorganisms as against any other occupational hazard (e.g. noise, chemicals). The 1994 Regulations indicate that it is the duty of the employer to provide vaccines, when necessary, for non-immune staff should they be (or are likely to be) exposed to a biological agent. The term "biological agent" will encompass infectious disease including those that are likely to be carried by children in a congregate, childcare setting. Accordingly, an employer employing staff in a childcare facility would have a legal requirement to provide vaccination against certain diseases once their presence is confirmed amongst staff or children in the facility. It is important that that an employer must be aware of and compliant with, health and safety legislation governing the health and welfare of staff.

Equally, employees have a legal duty to cooperate with their employer on matters of safety at work (e.g. to work safely and utilise appropriate personal protective equipment (PPE) and to attend relevant training). The Health and Safety Authority is a useful resource to all employers who require information on the legal aspects of safety at work (www.hsa.ie).

Staff have a responsibility to comply with occupational health advice and should sign a disclaimer if they choose not to protect themselves with vaccinations made available for their protection.

Childcare staff that are appropriately immunised pose a significantly smaller risk to the children in their care and, in turn, protected against the dangers that certain vaccine preventable infectious diseases pose to themselves and to their unborn children. Immunisation is an important public health preventive measure and it is the responsibility of all citizens to ensure they avail of the immunisation services provided by the State. Childcare staff should ensure that they are adequately immunised prior to commencement of employment.

Where possible childcare staff should be managed, from an occupational health viewpoint, in the same manner as healthcare staff. That however may not always be feasible, but as a minimum, childcare staff should be managed as in a similar manner to staff in any other small firm occupational setting.

Pre-Employment Health Assessment

For screening purposes, staff in childcare settings should be managed largely in the same way as healthcare staff. Ideally, all staff should undergo some form of pre-employment health assessment (PEHA) which would, in particular, assess their immunity to childhood viral diseases, e.g. Chickenpox, Hepatitis B, Measles and their need for protection against infections which could be occupationally acquired, e.g. Hepatitis B. How this is undertaken is up to the individual employer.

The purpose of a PEHA is to assess the employee's ability to undertake the duties of the post and to identify any necessary work adjustments which may need to be made. For those working in an environment where transmission of infection may be a risk (e.g. a crèche), the PEHA affords an opportunity to review the employee's immunisation status and to provide vaccines which may be necessary to protect them and their charges. It is unusual for an individual presenting as fit for employment to be deemed 'unfit'. The HSE has developed a Pre-employment Health Assessment tool which can form the basis of any such assessment. This Pre-employment Health Assessment tool is available electronically on the websites of the HSE and HPSC.

The confidential health information obtained in the course of the PEHA should be held by the Occupational Health Service which has carried it out and a 'Fitness Slip' should be submitted to the employer or the HR department to be kept on the employee's file.

Handwashing

All staff should be made aware at induction (and regularly thereafter) of good infection control practice and in particular, the importance of handwashing as a central plank in the prevention of infectious disease (see section on Handwashing in Chapter 3).

Hands which are chapped or dry are more likely to harbour infection. Staff should be aware of the importance of good hand care in the prevention of infection in childcare settings. Frequent handwashing may contribute to occupational dermatitis (contact irritant or contact allergic dermatitis) and those who develop hand dermatitis should be referred to their GP or occupational health provider for assessment and advice. The use of good quality and fragrance free soaps, soft paper towels and emollients can minimise the risk of occupational dermatitis.

Protective gloves should be powder free, as powder contributes to the risk of occupational dermatitis.

Exclusion

All staff should be made aware at induction (and regularly thereafter) of the need for exclusion if they develop symptoms of gastrointestinal illness, fever or skin rashes any one of which may pose a risk of infection to children (and others). Exclusion periods are laid out in Chapter 9 - Management of Specific Infectious Diseases - under the relevant infectious diseases.

Infectious Diseases Relevant to Childcare Staff

The following are diseases relevant to childcare staff. Many are vaccine preventable (i.e. they can be prevented by appropriate immunisation). Staff should be fully immunised, i.e. they should have completed their own childhood immunisation schedules. They should make available to the Occupational Health Service or doctor carrying out their PEHA all details of their immunisation records to date. All staff working with children should have evidence of immunity to mumps, measles & rubella (MMR). Immunisation should be in accordance with National Immunisation Guidelines.⁹

- **Chickenpox (Varicella)**

Chickenpox infection in pregnancy may cause more severe illness and poses a risk to the foetus. All female staff of childbearing age should discuss testing for Chickenpox immunity with their GP (or occupational health provider). Those with negative serology should be offered vaccination. All other non-immune staff should also be offered vaccination.

- **Hepatitis A**

Hepatitis A infection in young children is usually sub-clinical (very mild illness, with little or no symptoms or signs). However, children with sub-clinical illness may still be a source of infection to others. Therefore, those working in day-care centres and other settings with children who are not yet toilet trained may be at increased risk. Under normal circumstances, the risk of transmission to staff and children can be minimised by careful attention to personal hygiene. There is no indication for routine vaccination of childcare staff against hepatitis A. However, if a case of hepatitis A is identified in a childcare facility, staff and children should be offered passive immunoprophylaxis and/or active immunisation in accordance with National Immunisation Guidelines.

- **Hepatitis B**

Hepatitis B has been reported to occur more frequently in institutions for those with intellectual disability, including day care facilities. Childcare staff in these institutions should receive hepatitis B vaccine. There is no indication for childcare staff elsewhere to receive hepatitis B vaccine routinely since good implementation of standard precautions should provide adequate protection against blood and body fluid exposure. Furthermore, now that hepatitis B vaccine has been included in the routine childhood immunisation schedule, infants and young children will not pose a risk in the future.

There is no need for staff with chronic hepatitis B infection to be excluded from working in a childcare setting.

- **Influenza**

Influenza has a tendency to spread readily through congregate settings such as schools and long stay residential institutions. Outbreaks of influenza also occur in childcare facilities and childcare workers are likely to have a risk of infection similar to healthcare workers in paediatric settings. As a result, childcare workers who are in recognised risk groups for influenza should ensure that they are fully immunised against influenza (risk groups for seasonal influenza can be found on the website of the National Immunisation Office at <http://www.immunisation.ie/en/AdultImmunisation/FluVaccination/>).

- **Measles**

All staff working with children should have evidence of immunity to measles. Infection with measles during pregnancy can result in early delivery or even loss of the baby. Therefore, if a non-immune pregnant woman is

exposed to measles, her GP or antenatal care provider should be informed immediately to ensure appropriate management.

- **Mumps**

All staff working with children should have evidence of immunity to mumps.

- **Rubella (German Measles)**

All staff working with children should have evidence of immunity to rubella. Rubella may have devastating consequences on the developing baby if a non-immune mother is exposed in early pregnancy. If a pregnant woman comes in contact with rubella and is unaware of her immune status, she should contact her GP or antenatal care provider immediately to ensure appropriate investigation.

- **Slapped Cheek Disease (Parvovirus B19)**

Simple hygiene measures including scrupulous handwashing provide the most effective method of prevention and control of this viral disease. There is no vaccine available.

Parvovirus B19 can occasionally affect an unborn child. Therefore, women exposed early in pregnancy (before 20 weeks) should inform their GP or antenatal care provider to ensure appropriate investigation and follow-up.

- **Tuberculosis (TB)**

The pre-employment health assessment (PEHA) should include a risk assessment for tuberculosis (screening questions for active TB, previous history of TB, the possibility of recent exposure to active TB and the individual's BCG immune status). Those undertaking such assessments should be familiar with the national 'Guidelines on the Prevention and Control of Tuberculosis in Ireland 2010' found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/TuberculosisTB/Guidance/>.

Childcare workers can be considered to be high priority (if they come from countries with annual TB notification rates of $\geq 40/100,000$ TB cases per year) or low priority if not. All staff should be aware of the classic symptoms of TB (persistent cough of at least three weeks duration, night sweats, anorexia and weight loss) and should be encouraged to report such symptoms should they arise. They should be made aware (e.g. at induction) of the particular vulnerability of young children to infectious TB.

Further details of the health declaration, the information to be recorded at PEHA and the testing required for TB can be found in Appendix D.

Special circumstances:

- **Pregnant staff**

It is important that staff who are pregnant or planning a pregnancy should ensure that they are appropriately immunised and compliant with infection control precautions, as outlined in Chapter 3.

- **Temporary Staff**

Rapid turnover of part time staff may present a challenge to managers / proprietors who are keen to maintain high hygiene standards and every effort should be made to ensure that all new staff undergo induction training including training in infection prevention and control. It is important to remember that temporary staff are afforded the same legal protection in the workplace as are permanent staff.

- **Disclaimer**

New employees who do not wish to receive vaccines as part of their occupational health requirements should be asked by their employer to sign a disclaimer indicating that they have been fully informed of the risks inherent in this choice of action. Whilst they may choose to incur such risk themselves, they must be made fully aware of their particular responsibility to minimise risk to others (e.g. children in their care and colleagues) and to report exposures to relevant infections should they arise. Work exclusion on a temporary basis may then be necessary.

Compliance with infection control requirements should be considered an essential contractual pre-requisite for all employees.

Chapter 6: Environmental Hygiene

Hygiene and the Environment

Germs are everywhere and are continuously being introduced into childcare facilities in a number of ways e.g. on people, food, and pets. Germs can survive on environmental surfaces, e.g. floors, tables, door handles, and toys. Viruses, in particular, can be excreted in large numbers in respiratory secretions and in faeces and can persist on surfaces for days, or in the case of certain viruses such as norovirus (the virus responsible for winter vomiting illness), for weeks. Environmental hygiene is a vital part of good infection prevention and control.

The purpose of environmental hygiene is to reduce the number of germs to a level that is not harmful to health. If the environment is not cleaned regularly there is a build up of dirt, which supports the growth of germs.

TERMINOLOGY

Cleaning is the removal of food residues, dirt and grease using a detergent.

Disinfection is a process that reduces the numbers of bacteria to a safe level.

Disinfectant A chemical that will reduce the number of germs to a level at which they are not harmful

Detergent Artificial cleansing agent capable of breaking down oils and fats leading to the solubilising of soil.

Sanitisers are a combined detergent and disinfectant

Cleaning

Cleaning is essential in the prevention of infection. Thorough cleaning followed by drying will remove large numbers of germs but does not necessarily destroy germs. Deposits of dust, soil and microbes on environmental surfaces have been implicated in the transmission of infection. Routine cleaning with household detergents and warm water is considered to be sufficient to reduce the number of germs in the environment to a safe level.

A “Clean As You Go” policy should be in place.

HOW TO CLEAN

The effectiveness of cleaning not only depends on the product used but also in the way it is applied, i.e. on the mechanical action of wiping or scrubbing. **Cleaning is best achieved by using a general purpose detergent and warm water, clean cloths, mops and elbow grease.** The area should then be rinsed and dried. Detergents (e.g. soap, washing-up liquid, washing powder) remove grease and dirt but do not kill germs.

Thorough cleaning with detergents should remove all contaminants including dust, dirt, faeces, blood, pus, urine, other body fluids and large numbers of germs.

- Fresh solutions of cleaning agents should be made up daily or as instructed by the manufacturer as some solutions rapidly become inactive.
- Expiry dates should be routinely checked on packaging.
- Staff should ensure that they observe any specified health and safety precautions. Product material safety data sheets should be available.
- All chemicals should be stored in a cool, dry, well-ventilated place. The chemical store should be secured so that children do not have access.

ROUTINE ENVIRONMENTAL CLEANING PRINCIPLES

The following basic principles should be followed:

- All areas should be cleaned regularly as part of a **written cleaning policy and rota** outlining methods and frequency of cleaning. (Refer to Resources section for a sample cleaning programme)
- Staff responsible for environmental cleaning should understand the basic theory underlying each practice and product to achieve a **high standard of cleanliness**.
- Separate **colour coded** cleaning cloths and cleaning equipment should be available for kitchen areas, children's areas and toilets. Cloths should be made from a non-shedding fibre and can either be disposable or reusable.
- Disposable cloths should be disposed of each day.
- Reusable cloths must be laundered daily on a hot wash cycle (at least 60°C) in a washing machine and then tumbled dried.
- Mop heads should be removed and washed in the washing machine at 60°C at the end of each day or in accordance with the manufacturer's instructions.
- If this is not possible, mops should be cleaned with warm water and detergent, rinsed and air dried after use. Store dry and inverted.
- Mop heads/buckets should not be cleaned in a sink that is used for food preparation. Mop heads should not be left soaking in dirty water.
- Buckets should be emptied after use, washed with detergent and warm water and stored dry.
- **All cleaning equipment must be stored clean and dry.** If equipment is stored wet, it allows germs to grow increasing the risk of spreading infection within the premises.
- The cleaning equipment store should be separate from the laundry room.

PROCEDURES FOR ROUTINE CLEANING/CLEANING AGENTS

- Play surfaces should be cleaned, rinsed and dried before use or when visibly soiled.
- Routine cleaning is accomplished using warm water and a general purpose neutral pH detergent.
- Always follow the manufacturer's instructions when using detergents and disinfectants with regard to the use of personal protective clothing and dilution recommendations.
- Do not guess the measurement, always use a measure. Extra measures will not kill more bacteria or clean better – it will damage work surfaces, make floors slippery and give off unpleasant odours.
- Change water frequently as dirty water is ineffective for cleaning.
- After disinfecting surfaces, they should be rinsed.
- Toilets, sinks, wash hand basins and surrounding areas should be cleaned when required at least twice daily.

CLEANING PROGRAMME

A detailed cleaning programme should be in place defining:

- Item/area to be cleaned.
- Frequency and responsibility for cleaning.
- Cleaning agent to be used and the amount.
- Equipment to be used and its method of operation.

An example of a cleaning programme is available in the Resources section.

The environment should be visibly clean and free from dust, dirt and soilage.

Disinfection

Disinfection is a process used to reduce the number of germs to a level where they are unlikely to be a danger to health.

The routine use of disinfectants for environmental hygiene is **not recommended** as thorough regular use of detergent and warm water is sufficient for most situations. In certain circumstances where there is a higher risk of cross-infection (e.g. during outbreaks), the use of a disinfectant is recommended.

Disinfectants are potentially hazardous and must be used with caution and according to the manufacturer's instructions.

Toys and educational/recreational materials and appliances

CLEANING OF TOYS AND RECREATIONAL EQUIPMENT

In a childcare facility toys may become contaminated with germs from unwashed hands, spills of body fluids or by children putting things into their mouths. If toys are shared between children, they may become a source of cross infection.

In order to reduce the risk of cross infection, it is important that all toys are cleaned on a regular basis (i.e. as part of a routine cleaning schedule) and that toys that are shared are cleaned between uses by different children.

Selection and management of toys from an infection prevention viewpoint:

- Choose toys that are easy to clean and disinfect (when necessary) and dry.
- If cloth or soft toys are used; they **must** be machine washable.
- Jigsaws, puzzles and toys that children are inclined to put in their mouths must be capable of being washed and disinfected.
- Discourage children from putting shared toys into their mouths.
- Check all play equipment regularly for signs of damage e.g. breaks or cracks. If these items cannot be repaired or cleaned, they must be discarded.
- Store clean toys/equipment in a clean container or clean cupboard.
- Do not allow toys to be taken into the toilet area.
- Toys must not be stored in the toilet area, nappy changing area or toilet lobby area. A designated toy storage area should be provided.
- Always follow the manufacturer's cleaning instructions.
- Always wash your hands after handling contaminated toys and equipment.

In the case of an outbreak, the use of certain toys (e.g. soft toys, stuffed toys, play dough) may need to be curtailed. Further advice should be sought from the HSE Preschool Inspectorate.

CLEANING OF TOYS

- All toys (including those not currently in use) should be cleaned on a regular basis, i.e. weekly. This will remove dust and dirt that can harbour germs
- Toys that are used by very young children should be washed daily
- Toys that children put in their mouths should be washed after use or before use by another child
- Toys used by older children and larger play equipment (e.g. dolls' house, Wendy car) should be cleaned weekly
- All toys that are visibly dirty or contaminated with blood or body fluids must be taken out of use immediately for cleaning or disposal. Toys waiting to be cleaned must be stored separately
- Soft toys need to be machine washed on a hot cycle taking care to follow manufacturer's instructions prior to use by another child
- Replace soft modelling materials and dough regularly

CLEANING PROCEDURE

- Wash the toy in warm soapy water, using a brush to get into crevices.
- Rinse the toy in clean water
- Thoroughly dry the toy.
 1. Hard plastic toys may be suitable for cleaning in the dishwasher.
 2. Toys that cannot be immersed in water i.e. electronic or wind up should be wiped with a damp cloth and dried.

DISINFECTION PROCEDURE

In some situations toys/equipment may need to be disinfected following cleaning. For example:

- Toys/equipment that children will place in their mouths.
- Toys/equipment that have been soiled with blood or body fluids.
- During an outbreak of infection.

If disinfection is required:

- Use a chlorine based disinfectant at a concentration of 1,000ppm available chlorine (See Appendix F on Chlorine Based Disinfectants).
- Rinse and dry the item thoroughly.
- Note: Always follow the manufacturer's cleaning/disinfecting instructions and use recommended products to ensure effective usage and to ensure equipment is not damaged. (See previous section on cleaning/disinfection).

Refer to the Resources section for a sample cleaning schedule.

SENSORY EQUIPMENT, BALL POOL, WATER/SOFT PLAY AREAS, SAND PITS

Many childcare facilities now use leisure equipment that was initially used for people who have sensory impairment e.g. optical displays, bubble tubes, water beds, ball pools and soft foam wedges/bean bags. If they are used, childcare facilities must have a written cleaning schedule, detailing when and how the equipment is cleaned and the cleaning products used.

- Clean equipment weekly or more frequently if usage is high and when contaminated
- Always follow the manufacturer's cleaning instructions
- Ensure cleaning methods and schedules are documented
- Most equipment can be cleaned using neutral detergent and hot water
- Abrasive-cleaning agents should be avoided as they may damage the material
- All crevices should be cleaned and dried properly
- Ensure children wash their hands before and following water/sand/ball pool play
- The use of communal play areas (e.g. sand or water play) may need to be suspended at certain times, i.e. during an outbreak of infection
- Sandpits should be covered to prevent contamination by animal faeces (particularly birds, cats and rodents) and the sand kept clean by regularly sieving. Sand should be changed regularly (e.g. monthly for indoor sandpits)
- Water play equipment should be drained, cleaned and dried at the end of the session and stored dry until next session
- Outdoor areas should be regularly checked for animal fouling

Outdoor water activities

The greatest risks are associated with water that has been allowed to stagnate, or with faecal contamination of water by the children involved in the activity.

The use of paddling pools is discouraged for health and safety reasons.

- If used, they should be cleaned/disinfected, dried and stored deflated or inverted. They should not be stored outdoors to facilitate collection of rainwater

- Children should be discouraged from playing in obviously contaminated or very muddy waters
- When children participate in activities involving contact with pond water their hands should be washed thoroughly afterwards
- Children should go to the toilet before using the paddling pool. If a child passes a bowel motion while in the pool, remove all children from the pool immediately. Empty the pool, clean and disinfect it thoroughly before refilling

Potty/toilet management

- Toilet areas must be cleaned frequently during the day in accordance with the cleaning schedule and immediately if soiled. Particular attention should be paid to toilet seats, toilet handles, door handles and wash hand basins, especially taps
- Ideally, each child should be assigned their own potty
- Potties should be emptied carefully into the toilet and cleaned with hot water and detergent, wiped over with a disinfectant and dried thoroughly using disposable paper towels
- Separate cloths should be used for cleaning the toilet and wash hand basin to reduce the risk of spreading germs from the toilet to the wash hand basin

Where trainer seats are used they should be thoroughly cleaned and disinfected after each use.

Nappy Hygiene

NAPPY CHANGING FACILITIES:

Consider the following when planning nappy changing facilities;

- The nappy changing facilities should not communicate with any occupied room or food room, except by means of a hall, corridor, ventilated lobby or ventilated space
- The facility must be provided with adequate ventilation either naturally via openable windows or by means of mechanical ventilation
- The surfaces of the area (i.e. worktop surfaces, walls, floor and ceiling) should be smooth, durable and easy to clean
- Ideally one nappy changing unit (wash hand basin and changing mat) should be provided for every ten children in nappies¹⁰
- Each wash hand basin should have running cold and hot water, disposable liquid soap (ideally wall mounted) and paper towel dispensers. A pedal bin should be provided for the disposal of paper towels
- Ideally mixer taps should be hands free such as wrist, elbow, knee-operated or automatic sensor taps
- Changing mats should be waterproof, have an easily cleanable cover and be in a good state of repair, i.e. no breaks or tears.
- Single use disposable gloves should be available at the unit i.e. powder free synthetic vinyl or latex gloves.
- Appropriate shelving/safe storage should be provided to accommodate all necessary nappy changing equipment, i.e. gloves, individual children's nappy supplies and creams/lotions.
- Dispose of nappies and gloves by placing in a leak proof, cleanable and sealable/airtight container.

PROCEDURE FOR CHANGING A NAPPY

- Hygienic nappy changing practice is important to prevent germs being transmitted to other children, staff, and to the surrounding environment
- Staff undertaking nappy changes should not be involved in the preparation, cooking or serving of food. If this is unavoidable, staff should wear appropriate disposable gloves and aprons and wash their hands
- Ensure you have all the equipment at hand and that your hands are clean before you start
- Single use disposable gloves must be worn, i.e. powder free synthetic vinyl or latex gloves
- Ensure creams and lotions are not shared between children. Creams and lotions for each child should be individually labelled

¹⁰ Standard taken from *HSE National Standards for Early Year Services* (in print).

- Dispose of nappies and gloves by placing in a leak proof, cleanable and sealable/airtight container
- Non-disposable nappies should be double bagged and placed directly into plastic bags to give to parents. Solid faecal matter may be disposed of into the toilet
- Never rinse or wash non-disposable nappies because the risk of splashing may cause germs to spread to staff or children
- Clean and dry the changing mat after each use. If soiled, clean, then disinfect using a chlorine based disinfectant, (according to manufacturer's instructions), rinse and dry after use. All surfaces must be cleaned and disinfected daily (including nappy changing unit and surrounding surfaces).
- Staff must always wash their hands after every nappy change using warm water and liquid soap. Hands should be dried by means of single use disposable paper towels.
- The changing mats must be checked on a regular basis and discarded if cover is torn or cracked.

See Resources Section for a poster on how to change a nappy.

Waste management

WASTE STORAGE AND DISPOSAL

Waste should be stored in appropriate sealed bins in an area that is not accessible to children and in such a manner as not to cause a nuisance.

Internally:

- Soiled nappies must be stored in a manner that will not give rise to malodours and cause a risk of infection, i.e. sealed airtight containers, not accessible to children and removed from the premises daily.
- Food and hazardous waste should be stored in covered containers.
- Waste must be removed from the building on a daily basis and bins maintained in good repair and a clean condition.
- Waste must be stored in a hygienic manner.

Externally:

- Waste must be stored in rigid containers and fenced off from the external play area.
- There must be sufficient numbers of waste bins to contain all waste.
- Bins and storage area must be regularly cleaned and disinfected.
- Waste must be collected and removed on a frequent basis.

LITTER "PICKING" AND TIDYING UP

Children are often encouraged to collect litter within the pre-school/childcare facility grounds as part of raising awareness about the environment. The following points will reduce risk to the children undertaking 'litter picking' as part of an organised activity within the pre-school/childcare facility.

- Litter should not be handled with a bare hand. A mechanical aid should be used whenever possible, e.g. a 'helping hand'
- Children should be made aware of the possibility that they may come across objects that are potentially hazardous, for example broken glass. The children should not attempt to handle such items, but should mark the spot or preferably, remain with the item until someone of responsibility can be summoned.
- Children should not be allowed to eat whilst on a 'litter picking' activity as there is a risk of hand-to-mouth contamination.
- Children taking part in 'litter picking' should be encouraged to wash their hands thoroughly after each session and especially when food is likely to be consumed.

Laundry

If you use uniforms or cotton pinafores, you should change them every day and wash them using normal washing detergent at the hottest temperature specified.

If the childcare setting uses linen then you must:

- Allocate this e.g. bedding to each child and keep it in a named bag or drawer when not in use
- Wash bedding every week or when visibly dirty
- Wash face flannels after each use
- Keep clean linen in a clean dry area separate from soiled or used linen
- If linen or clothing has been dirtied by faeces carefully dispose of the faeces in the toilet
- Do not rinse dirty or wet clothing by hand. Put in a named, sealed plastic bag for the child's parent or guardian to collect. Tell the parent or guardian the clothing is dirty
- Before washing, put dirty and used linen in an area that children do not have access to
- Wash all laundry at the hottest temperatures specified by the manufacturer

Chapter 7: Food hygiene

Food safety may be defined as protecting food from contamination by foreign objects, poison/chemicals and harmful bacteria and viruses. This is to ensure that food is safe, and wholesome when it is consumed.

Full information, legislation and advice in relation to Hygiene of Foodstuffs in business and catering settings is available on the website of the Food Safety Authority of Ireland available at http://www.fsai.ie/legislation/food_legislation/food_hygiene/hygiene_of_foodstuffs.html. For those who are establishing a childcare facility for the first time, invaluable information relating to food hygiene can be found in the FSAI's web article *Starting a Food Business?* -this is available at http://www.fsai.ie/food_businesses/starting_business.html.

Fuller information on the general legislative food hygiene requirements in childcare settings is available in Appendix I.

Background

Harmful bacteria and viruses can cause food borne illnesses. Bacteria are the most common cause of food poisoning. Food poisoning is an illness that usually occurs between 1 and 36 hours after consuming contaminated or poisonous food. Its symptoms include vomiting, diarrhoea, nausea, and abdominal pain. Babies and young children are among the groups who are most at risk of getting food poisoning because their immune systems are still developing. Food poisoning can result in death in some individuals. Good food hygiene practices are therefore imperative in your kitchen to prevent an outbreak of food poisoning. Full information on the pathogens responsible for gastroenteritis can be found on the website of the HPSC at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/GastroenteritorIID/>.

Childcare facilities preparing or serving food are subject to the provisions of the Food Hygiene Regulations 1950-89, Regulation (EC) No 178/2002 on General Food Law transposed by European Communities (General Food Law) Regulations 2007 (S.I. 747 of 2007) as amended, Regulation (EC) No 852/2004 on the Hygiene of Foodstuffs transposed by European Communities (Hygiene of Foodstuffs) Regulations 2006 as amended S.I 369 of 2006 as amended, Regulation (EC) No 882/2004 as transposed by European Communities (Official Control of Foodstuffs) Regulations 2010 S.I. 117 of 2010 as amended, and the Food Safety Authority Act 1998 as amended with regard to food and drink delivery, storage, preparation and serving. These regulations take precedence with regard to enforcement. The Environmental Health Officers Service enforce these regulations in childcare facilities.

This legislation requires food operators to operate in a hygienic way, to comply with detailed standards of structural and operational hygiene, to train and supervise staff in food safety matters and to develop a food safety management system based on the principles of Hazard Analysis Critical Control Point (HACCP). In relation to developing a food safety management system advice may be sought from the local Health Service Executive Environmental Health Service or from www.fsai.ie.

To support the implementation of this legislation, a number of national sector specific guides to good hygiene practice have been produced to assist food operators to comply with the requirements of the Regulations referred to above. Pre-school service providers should refer to the requirements of I.S. 340 Hygiene in the Catering Sector or I.S. 344 Guide to Good Hygiene Practices in Domestic Premises. A copy of these guidance notes can be purchased on-line at www.nsai.ie. Food safety guidance is available from the local Environmental Health Service of the Health Service Executive or from www.fsai.ie.

If the food is supplied by the childcare facility, it must be prepared on the premises or purchased from a supplier whose premises is registered with the Health Service Executive. Where food is provided for the children the childcare facility must apply to the Health Service Executive for registration of the food business prior to the commencement of the operation. An application form for registration is available from the Environmental Health Service.

Where food is consumed on the premises there should be adequate and suitable facilities for the storage, preparation and serving of food.

If children bring their own lunch boxes these should be stored in a location where there is no risk of contamination.

Infant Formulae

Where a service is preparing infant formula suitable sterilising facilities should be in place. Infant formula should be prepared in accordance with FSAI Guidance 'Recommendations For The Safe Preparation And Feeding Of Powdered Infant Formula (PIF) In Child Day-Care Settings'. This document should be read in conjunction with FSAI Guidance Note 22 Information Relevant to the Development of Guidance Material for the Safe Feeding of Reconstituted Powdered Infant Formula. A copy of this guidance note is available on the FSAI website at www.fsai.ie. It is not recommended that child-care facilities prepare PIF for the infants in their care. Reconstituted milk should be stored under refrigeration. However, if PIF is made up in the child-care setting where possible a separate self-contained area should be provided for the preparation of babies' food/bottles (milk kitchen). Information on hygiene in the milk kitchen can be found in Appendix I.

Environmental Health Officers Service will advise on food safety requirements. Environmental Health Officers enforce the legislation through inspecting facilities in childcare facilities to assess risk and compliance with legislation and to provide advice. Further information on hygienic storage and preparation of food can be obtained from your local Environmental Health Office at http://www.hse.ie/eng/services/Find_a_Service/Environmental_Health/Environmental_Health_Officers/.

Infection control in the kitchen

Germs can be spread in many ways while working with foods in the kitchen. In order to prepare food hygienically, it is important to ensure that a high standard of personal hygiene is maintained in conjunction with effective cleaning of food preparation areas and equipment. This is necessary in addition to careful handling, preparation, cooling etc. of food.

FOOD WORKERS

Unless unavoidable, those staff involved in toileting children or nappy changing should not be involved in food handling. Where this situation is inescapable, care workers should change their outer clothing and wash their hands thoroughly prior to handling food.

WATER SUPPLIES

Provision of safe, potable water is one of the most important measures to have improved public health over the last 200 years. Water that is raw or untreated poses a risk to human health, particularly the most vulnerable in society which includes children under the age of five, the elderly and those living with disease that suppress the immune system such as cancer and chronic heart, lung and kidney disease.

- Food business operators should identify the source of the water supply to the premises, e.g. public supply, group water scheme or private well.
- Where private wells are used the service provider should ensure that the well is protected against entry of surface run-off and access by animals and the disinfection system is properly maintained. Any well water that changes colour or taste, particularly after rainfall should be, as a precaution, boiled before use for drinking, preparing food, making ice or brushing teeth.
- All drinking water supply points must be connected directly to a public or private water supply via the rising main and must comply with the parameters set out in E.C. Drinking Water Regulations 2007. In the case of a private water supply, evidence of potability, i.e. microbiological and chemical analysis, must be supplied to the local Environmental Health Office. A yearly check of water supplied from private wells or group schemes is recommended. Environmental Health Departments may be able to assist in this process.
- It is recommended that all untreated private water supplies be treated by means of an Ultra Violet disinfection system, chlorination or other acceptable chemical treatment system.
- Drinking water taps from the rising main should be clearly identified so that water from storage tanks is not accidentally used for drinking water purposes.
- Ice must be made from potable water.

Chapter 8: Animals and Infection Control

Pet hygiene

Pets can often enhance the experience of children. However, many types of animal kept as pets can be the source of human infection, including exotic species such as reptiles, fish or birds. Infections that are passed from animals to humans are known as zoonoses. Certain individuals are at greater risk of developing more serious infection including pregnant women, infants, the elderly and people with weak immune systems such as those born with inherited immune deficiencies, AIDS/HIV and those receiving chemotherapy. Sensible precautions can reduce infection risk.

Iguanas, snakes, turtles and other reptiles (marine and terrestrial) are not appropriate animals for childcare settings; they can carry pathogens such as salmonella and clostridia (that cause botulism) and can readily pass these on to children. Moreover, reptiles should not be kept as pets in a house where there are children under the age of five.

Further information on reptiles and the risk of infectious diseases can be found on the HPSC's website at <http://www.hpsc.ie/hpsc/A-Z/Zoonotic/ReptilesandRisksofInfectiousDiseases/>.

In addition to reptiles, other exotic pets such as spiders and tropical fish are not good choices. Nor are ferrets and wild or dangerous animals.

The manager of the childcare facility should ensure that a knowledgeable person is responsible for any animals and that there is no risk of contravening the relevant Health & Safety legislation.

Infection from pets is usually acquired by ingestion of contaminated material e.g.

- Sucking fingers that have been contaminated.
- Eating without washing hands
- Eating food/sweets that have fallen to the ground
- Dummies/soothers that become contaminated

Potential hazards include;

- Touching animals
- Animal/fish foodstuffs
- Raw milk
- Animal faeces
- Untreated water

The following principles should underpin the management of pets in any childcare facility:

- Only animals in good health should be allowed into a childcare facility
- Children should be supervised when handling pets
- All animals should have documented inoculations
- They should be registered with a vet and regularly checked
- All animals should be treated for parasitic infections as advised by the vet
- All animals should be regularly groomed and checked for signs of infection, flea infestation, or other illness
- If pets become ill, diagnosis and treatment by a vet should be sought
- Pets should not be allowed to wander freely through the childcare area
- They should be housed in a segregated, enclosed area away from the main areas in which children are cared for

- They should be kept and fed in this dedicated area
- These areas must be kept clean; bedding regularly changed, droppings being removed as soon as possible
- Feeding bowls must be kept out of reach of children
- Once opened, pet food containers should be kept separate from food for human consumption.
- Food must not be prepared or allowed to come in contact with children's food preparation areas
- Hands should be washed following any contact with animals, their food, bedding or litter
- Food not consumed in one hour should be taken away or covered to prevent attracting pests

LITTER BOX CARE

- **Never change a cat's litter box if you are pregnant**
- If you are pregnant, a non-pregnant or male member of staff should change cats' litter boxes.
- Always wear a protective apron and gloves when cleaning the litter box
- Always wash hands immediately after removing protective clothing
- If possible, fit a disposable liner to the box for easy cleaning
- Soiled litter should be changed daily
- Litter should be sealed in a plastic bag and disposed of in household waste
- The litter box should not be sited near food preparation, storage or eating areas
- The litter box should be disinfected whenever the litter is changed by being filled with boiling water, which is allowed to stand for at least five minutes in order to kill toxoplasmosis eggs and other organisms
- Ensure litter boxes are not accessible to children

Farm and zoo visits

Visits to farms and zoos have grown in popularity over recent years; they are considered to be both educational and an enjoyable leisure pastime. Such visits give children the chance to have contact with animals they otherwise might not see and to see where food comes from.

There are many potential hazards (as with domestic pets) on open farms, including pet- and animal-farms and zoos. It is important to remember that diseases affecting animals can sometimes be passed on to humans. A number of germs can cause diarrhoea and/or vomiting - usually a mild or temporary illness. Some infections, such as verocytotoxin producing *E. coli* (VTEC) can cause severe illness, especially in young children. There is no way of knowing which animals may be carrying VTEC, so one must act at all times on the basis that an animal might be infected. Only a very small number of germs are needed to cause illness. Serious outbreaks of infections (e.g. cryptosporidium and VTEC) have been reported amongst children following outings to zoos and farm parks.

The potential hazards at farms and zoos include animal foodstuffs, raw milk, animal faeces, untreated water, and putting fingers in animal's mouths. Infection is mainly acquired by eating contaminated material, sucking fingers that have been contaminated, or by eating without washing hands.

The following recommendations should be followed in relation to open farm visits (fuller information can be found in the Report of the HPSC Sub-Committee on Verocytotoxigenic *E. Coli*, available on the Health Protection Surveillance Centre's website at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/VTEC/Guidance/ReportoftheHPSCSub-CommitteeonVerotoxigenicEcoli/>. Additional guidance to minimise the risk of VTEC during pet farm visits can be found on the Health Protection Surveillance Centre's website at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/VTEC/Guidance/File,3973,en.pdf> and <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/VTEC/Guidance/File,3976,en.pdf>.

BEFORE THE VISIT

Before the visit, the organiser should make contact with the farm or zoo being visited to discuss visit arrangements and to ensure that adequate infection control measures are in place. The organiser should be satisfied that the pet farm/zoo is well managed and precautions taken to reduce the risk of infection to visitors.

The organiser should ensure that handwashing facilities are adequate, accessible to small children, with running hot and cold water, liquid soap, disposable paper towels, clean towels, or air dryers and waste containers. Ensure that all supervisors understand the need to make sure the children wash, or are helped to, wash their hands after contact with animals.

DURING THE VISIT

- Children must be well supervised at all times
- Check that cuts and grazes are covered with a waterproof plaster
- Hands should be washed with warm running water and dried thoroughly after contact with animals/animal's feed, before eating and drinking, using the toilet and leaving the farm. Children will require supervised handwashing.
- Children should not eat or drink anything while touring the farm
- Children should only eat in the designated areas
- Children should not put fingers in their mouths or the mouths of animals
- Children should wear appropriate clothing, including sturdy shoes or Wellingtons but not sandals
- Visitors should not drink from taps unless specifically labelled as drinking water
- Visitors should not touch compost, animal waste and after any accidental contact should wash their hands thoroughly
- Since boots and clothes can become contaminated during the visit it is important to remember to get children to wash their hands after removing the clothes and boots and before doing anything else (e.g. eating). Dirty boots should be cleaned with hot water and detergent. Footwear should be changed or cleaned before leaving and then hands washed
- Pregnant women should not handle sheep or newborn lambs

AFTER THE VISIT

- If a member of the group shows signs of illness (e.g. vomiting and/or diarrhoea) after a farm/zoo visit, they must be advised to visit their GP and explain that they have had recent contact with farm animals.
- If two or more members are ill please follow the above action. The childcare manager should also contact their local Department of Public Health as further action may be necessary.

Chapter 9: Management of specific infectious diseases

This section is intended as a brief guide to common infectious diseases in childhood. It is not intended as a diagnostic guide or as a substitute for consulting a doctor.

INTRODUCTION

A child who has contracted an infectious disease usually shows general signs of illness before development of a rash or other typical symptoms. Consequently, the child may complain of shivering attacks or feeling cold, headache, vomiting, sore throat or just vaguely feeling unwell. Such symptoms, when a particular infectious disease is prevalent, should make the childcare worker suspicious.

In these circumstances, parents should be contacted so that they can collect the child with a view to consulting their GP if necessary. In the meantime, the child should be kept warm and comfortable, and away from the main group of children. If symptoms appear to be serious or distressing, an ambulance and/or doctor should be called to ensure immediate treatment for the child. A member of the staff should normally accompany any child taken to hospital by ambulance. If a school, nursery or child minder suspects an outbreak of infectious disease (two or more cases of what appears to be the same illness or condition) they should inform the local Department of Public Health. See Resources section for contact details of local Departments of Public Health.

It is crucial that any children or staff members who are unwell should not attend the childcare facility.

Ill children and staff should only return once they are recovered (see exclusion notes for the different diseases).

VULNERABLE CHILDREN

Some children suffer from long-term medical conditions that can make them vulnerable to infections that would rarely cause problems in most children. These include children:

- undergoing treatment for leukaemia or other cancers,
- on high doses of steroids by mouth and with conditions, which seriously reduce immunity.

Schools, nurseries and childminders will normally have been made aware of such children. They are particularly vulnerable to Chickenpox or measles and if exposed to either of these infections, their parent/carer should be informed promptly and further medical advice sought. It may be advisable for these children to have additional immunisations e.g. pneumococcal and influenza. The chickenpox virus causes shingles, so anyone who has not had chickenpox is potentially vulnerable to infection if they have close contact with a case of shingles.

The signs and symptoms of more common communicable diseases are set out in the following pages.

Chickenpox/Shingles

Chickenpox is a viral illness, which causes fever, general malaise and a characteristic blistering rash. The rash appears as small red "pimples" usually starting on the back, chest and stomach and spreading to the face, scalp, arms and elsewhere. Within a few hours the "pimples" become blisters, which begin to dry and crust within about 24 hours. Blisters may develop in the mouth and throat that can be painful and may give rise to difficulty in swallowing. The rash appears as a succession of crops over 3 to 5 days.

Chickenpox is not usually severe in children but can cause more serious symptoms in adults. The virus lies dormant in the body after chickenpox and may cause an attack of shingles in later life. A person with shingles is infectious and can give others chickenpox. It is not possible to get shingles from a case of chickenpox. The disease spreads easily from person-to-person. The greatest risk of transmission is just before the onset of the rash.

Precautions: Pregnant women or individuals with impaired immunity who have not had the disease and are in contact with a case should seek medical advice promptly.

Exclusion: Those with chickenpox should be excluded from school/nursery until scabs are dry; this is usually 5-7 days after the appearance of the rash.

Those with shingles, whose lesions cannot be covered, should be excluded from school/nursery until scabs are dry.

Resources: Useful information on Chickenpox can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/VaricellaChickenpox/>.

Conjunctivitis

Conjunctivitis is an inflammation of the outer lining of the eye and eyelid, and causes a sore or itchy red eye with a watery or sticky discharge. It may be caused by organisms such as bacteria, viruses, or may be due to an allergy (as in hay fever). Treatment depends on the cause but is often by eye drops or ointment. Conjunctivitis caused by bacteria and viruses may be spread by contact with the eye discharge, which gets onto the hands when the child rubs its sore eye.

Precautions: Regular hand washing will prevent person to person transmission.

Exclusion: Exclusion is not generally indicated but in circumstances where spread within the nursery is evident or likely to occur (e.g. in the baby room), it may be necessary to recommend exclusion of affected children until they recover, or until they have had antibiotics for 48 hours.

Diphtheria

Diphtheria now rarely occurs in this country but it is necessary to maintain a high rate of immunisation to prevent its return. It is a bacterial infection that can cause a thick coating in the nose, throat and airway. Complications include heart failure, paralysis, severe breathing problems or difficulty in swallowing.

Precautions: Children should be appropriately immunised.

Exclusion: Very specific exclusion criteria apply and will be advised on by the Department of Public Health.

Resources: Useful information on diphtheria can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Diphtheria/>.

Gastroenteritis/Food poisoning

This takes many forms, but the main symptoms are nausea, vomiting, diarrhoea and abdominal pain, which occur singly or in combination. The illness usually lasts only a short time. The common route of spread is by hand-to-mouth and the ingestion of infected foods or liquids. A variety of microorganisms cause illness in children, viruses (e.g. Rotavirus, Norovirus), parasites (e.g. cryptosporidium, giardia) and bacteria (e.g. campylobacter, *E. coli* 0157, salmonella, shigella). While the causes are varied, strict attention to personal hygiene is important to reduce the spread of disease. Advice regarding exclusion will be given by the Department of Public Health where necessary. Discontinue sand, water, play dough and cooking activities during an outbreak. The common gastrointestinal germs are very infectious and for that reason children who have had diarrhoea should be excluded until 48 hours have elapsed since their last episode of diarrhoea.

Resources: Useful information on gastroenteritis can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/GastroenteritisorIID/>.

The following are the common germs responsible for gastroenteritis seen in children in Ireland:

Campylobacter

This bacterial infection causes diarrhoea and abdominal pain that may be severe; it is usually spread from meat, especially poultry, but can be picked up from animals including pets.

Precautions: Preventive measures include care in the way food is stored, prepared, cooked, and by attention to basic hygiene in food handlers, affected people and those in contact with them.

Exclusion: Children who have had campylobacteriosis should be excluded until 48 hours after their first formed stool.

Resources: Useful information on campylobacter can be found at: <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Campylobacter/>.

Cryptosporidium

This parasite causes watery diarrhoea. It may be passed on by contact with animals and occasionally through the water supply.

Precautions: Preventive measures include careful supervision of children during farm visits and handwashing after touching animals.

Cases should avoid using swimming pool for two weeks after first normal stool.

Exclusion: Children who have had cryptosporidiosis should be excluded until 48 hours after their first formed stool.

Resources: Useful information on cryptosporidium can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Cryptosporidiosis/>.

Salmonella

Salmonella is a bacterial infection; it is usually caught from contaminated food, especially chicken, other meats and raw eggs, but increasingly cases among children are being linked to more unusual sources such as overseas travel and owning or being exposed to reptiles and snakes. Most cases are relatively mild but a significant proportion of cases will require admission to hospital, and very occasionally it can be fatal, especially in elderly patients.

Precautions: Preventive measures include care in the way food is stored and prepared, cooked, and by attention to basic hygiene in food handlers, affected people and those in contact with them.

Exclusion: Children who have had salmonellosis should be excluded until 48 hours after their first formed stool.

Resources: Useful information on salmonella can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Salmonellosis/>.

Shigella (Dysentery)

Shigellosis (or Bacillary Dysentery) is a bacterial infection; it is usually spread from person-to-person. Most cases are mild, especially those picked up in Ireland. The shigella bacteria picked up in tropical countries tend to be more severe with bloody diarrhoea and a greater likelihood of hospital admission.

Precautions: Strict attention to personal hygiene is important to reduce spread.

Exclusion: Children who have had shigellosis should be excluded until 48 hours after their first formed stool. For certain more severe types of shigella infection, it is recommended that the case should be excluded until two consecutive negative faecal specimens, taken after the first normal stool at least 48 hours apart, have been obtained. Your local Department of Public Health can advise you on the type of shigella.

Resources: Useful information on shigella can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Shigellosis/>.

Verocytotoxigenic *E. coli* (VTEC)

VTEC is a particular strain of the *E. coli* bacterium, which produces a toxin that results in gastroenteritis, which ranges from watery diarrhoea, to bloody diarrhoea, to serious illness. A significant proportion of cases have no symptoms. The most severe complication, haemolytic uraemic syndrome (HUS) produces kidney failure and up to 10% of Irish cases of VTEC will develop HUS. Of those who develop HUS as many as 2.5% to 5% of cases will be fatal, making this a particularly serious disease. In addition, one quarter of children who develop VTEC – associated HUS will have lasting kidney damage.

In Ireland, the infection is most commonly associated with untreated water sources and with person to person spread. Spread may be foodborne, spread from undercooked beef being a common method of spread. A significant risk for small children is contact with the faeces of farm animals and visiting petting farms. Since VTEC is very infectious and can cause serious illness, any cases of VTEC (whether or not they have symptoms) in children attending childcare facilities will be fully investigated by your local Department of Public Health.

Precautions: Preventive measures include care in the way food is stored and prepared, cooked, and by attention to basic hygiene in food handlers, affected people and those in contact with them.

Other preventive measures include avoid sharing towels, supervision of handwashing after toilet use and before meals and a regime for the regular cleaning of toilets and equipment, including children's toys during outbreaks.

Exclusion: In general, if a child under 5 or a staff member develops VTEC, they should be excluded until they provide two consecutive negative faecal specimens taken after the first normal stool at least 48 hours apart. Close contacts of these risk groups also require screening. If two cases of VTEC develop in a childcare facility, this is considered an outbreak and because of the high mortality rate from VTEC, the local Department of Public Health may advise closure of the facility to allow thorough investigation. They will also give advice on exclusion for staff and children.

Resources: Useful information on how cases of VTEC will be managed by your local Department of Public Health and advice on visiting petting/open farms can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/VTEC/Guidance/>.

NB: *some children can continue to pass the VTEC bacteria for long periods of time after their symptoms stop (this can, on very rare occasions, last for months). Such children will have to remain excluded from the childcare facility until they stop passing VTEC, as there is a real danger that they can reintroduce infection.*

Norovirus

Norovirus causes short lasting outbreaks of vomiting and diarrhoea. The virus is very contagious and extremely common. It is present in the infected person's vomit and stool. Fortunately, most cases recover fully without complication.

Precautions: Strict attention to personal hygiene is important to reduce spread.

Exclusion: Children who have been vomiting or have had diarrhoea should be excluded for 48 hours after resolution of their symptoms.

Resources: Useful information on how to manage episodes of vomiting and diarrhoea caused by norovirus can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Norovirus/Factsheets/InformationforEmployers/MainBody,2693,en.html> and

<http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Norovirus/Publications/File,2541,en.pdf>.

Outbreaks

An outbreak occurs when two or more children or members of staff have the same illness at the same time. Outbreaks of infectious diseases are not uncommon in childcare facilities. Fortunately it is the common milder conditions that are most likely to be seen while the more severe conditions are much less likely. If you become aware of two or more children with the same symptoms (for example, two children with a rash and a temperature, or diarrhoea or vomiting) even if one or both of the children has been kept home from the childcare facility, it is important to discuss this with the parents and suggest referral to the GP.

Gastroenteritis with diarrhoea and/or vomiting is common in preschool children. Children who have diarrhoea for more than two or three days should be taken to their GP to have a stool test. If a notifiable disease is confirmed or suspected the local Department of Public Health will be informed and will make contact with the childcare facility, if indicated. In addition, if you have concerns about a possible outbreak of illness among children in your childcare facility, you can discuss this with your local Department of Public Health, details of which are available in Appendix E. There are certain steps that can be taken if there is an outbreak of diarrhoea or vomiting in a childcare facility and these are laid out in Appendix G.

Glandular Fever (*Infectious Mononucleosis*)

Glandular fever, otherwise known as Infectious Mononucleosis is an illness caused by the Epstein Barr virus (EBV). It usually affects adolescents and young adults; infection in younger children is often mild, so mild sometimes that no-one recognises the child to be ill. Incubation is usually between 4 and 8 weeks. It may last for six weeks or more with swollen glands, fever and feeling generally unwell. Sometimes there is a rash or jaundice (yellowing of the skin and whites of the eyes). The virus is spread from person-to-person via saliva, usually through kissing or being in close contact with a case or carrier. About a fifth of those who are infected become long-term carriers, being infectious for more than a year.

Precautions: Frequent handwashing and avoiding sharing of utensils will further reduce the risk of transmission

Exclusion: Not necessary.

Haemophilus Influenzae Type b (Hib)

Hib can cause serious illness including meningitis (inflammation of the lining around the brain), septicaemia (blood poisoning), epiglottitis (swelling in the throat that causes choking) and osteomyelitis (infection of the bone). The bacteria that cause Hib live in the nose and throat. A person who carries the bacteria can spread it by coughing, sneezing or even breathing. Hib disease is most common in children under four. Babies under one year of age are especially at risk.

Precautions: A Hib vaccine is available as part of a child's primary vaccination schedule. When a case of Hib disease occurs in a centre, it is most important to promptly inform and discuss with the Department of Public Health. The public health doctors will provide an explanatory letter and leaflet to parents and staff, if appropriate.

Exclusion: Children with the disease will be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on Hib can be found on the HPSC's website at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Haemophilusinfluenzae/Factsheets/HaemophilusinfluenzaeFrequentlyAskedQuestions/>

Hand, Foot and Mouth Disease (Enteroviral infection)

This is generally a mild illness, caused by a type of virus known as enterovirus. The child develops a fever and rash with blisters, which appear especially in the mouth and on the hands and feet. It is spread by direct contact with the secretions of the infected person and by coughing and sneezing. Younger children are more susceptible to infection due to close contact.

Precautions: Frequent handwashing especially after contact with secretions from the nose or throat or contact with faeces reduces the risk of transmission.

Exclusion: While the child is unwell he/she should be kept away from school/nursery. If evidence exists of transmission within the day centre exclusion of children until the spots have gone from their hands may be necessary.

Resources: Useful information on Hib can be found on the HPSC's website at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/EnteroviralInfections/>.

Headlice

Lice are small insects, which may live on the head and hairy parts of the body. The type of louse, which affects the head, is particularly common and anyone can catch them, although they favour clean, mid-length hair. The eggs or nits are glued to the hair and only become easily visible when they have hatched. Nits remain in the hair until it falls out, which may take up to 2 years. The first time lice are acquired it may take four to eight weeks for the allergy to the bites to develop and itching to begin. Lice spread by direct head-to-head contact with an infected person. They cannot jump, swim or fly.

Precautions: Regular combing of the hair with a fine-toothed comb should be encouraged at all times. Treatment is only required if live lice are seen in the hair (not nits).

Exclusion is unnecessary.

Hepatitis

Hepatitis A

(Yellow Jaundice, Infectious Hepatitis)

This is usually a mild illness, particularly in children, caused by a virus, which infects the liver. The incubation period is between two-six weeks. The illness starts with fever, loss of appetite, nausea, stomach ache and after a few days, jaundice (a yellowing of the eyes and skin) may appear. It rarely leads to serious problems including liver failure, which may be fatal. A carrier state does not develop. Often a person may be infected but not show any symptoms and so be a source of infection to others.

A person is infectious for approximately one week before the start of, and for a week or so after the appearance of jaundice. It is spread in day centres usually by hands, which have not been properly washed after using the toilet, or rarely, in contaminated food or drinks.

Precautions: Scrupulous personal hygiene is important to prevent spread and an adequate supply of soap and disposable towels should be provided in the washrooms.

Hepatitis A vaccine may be advised if there is evidence of ongoing transmission in the day care centre. To be effective the vaccine must be given to contacts soon after they have been exposed.

Exclusion is recommended while the child feels unwell, or until 7 days after the onset of jaundice, whichever is the later. The Department of Public Health will give advice on exclusion for staff and children.

Resources: Useful information on hepatitis A can be found at <http://www.hpsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HepatitisA/>

Hepatitis B

(serum hepatitis)

Hepatitis B infection is relatively rare in children in Ireland. People infected with the hepatitis B virus may become unwell with jaundice, fever etc. or, more commonly, may show no signs of the infection. A small percentage remains infectious and is known as a carrier. The infections are blood-borne and are spread most commonly by sexual contact with an infected person, sharing an infected needle, by receiving blood from an infected person or sometimes from an infected mother to her baby. This virus is much more infectious than HIV.

All babies born from 1st July 2008 have been offered hepatitis B vaccine as part of their routine infant immunisations.

Precautions: In the event of a bite or scratch in which blood is drawn, from a child known or likely to be hepatitis B positive, the injured person should seek medical advice from their GP immediately.

Exclusion: Children who develop symptoms will be too ill to be at school/nursery and families will be given specific advice about when their child is well enough to return. There is little evidence to suggest that these infections can be transmitted in day care settings, and therefore carriers without symptoms should not be kept away. Staff with hepatitis b can work as normal; exclusion is not required.

Resources: Useful information on hepatitis B can be found at <http://www.hpsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HepatitisB/>.

HIV/AIDS Infection

HIV is mostly spread by sexual contact with an infected person, by sharing an infected needle or by receiving blood from an infected person. This latter is extremely unlikely to occur now in this country as all blood is carefully screened. If a pregnant woman is infected she may pass the infection to her unborn child. N.B. Normal social contact, kissing, shared cutlery and crockery, or in swimming pools or public toilets do not present a risk of transmission. There is no risk to other children or staff from an HIV infected child attending a day centre provided standard good hygiene practices are in place. Children with the virus should not have their activities restricted, nor be excluded from school/nursery.

Exclusion of children and staff who are living with HIV is not required.

Resources: Useful information on HIV/AIDS can be found at <http://www.hpsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HIVandAIDS/>.

Impetigo

Impetigo is a skin infection causing blisters, which become golden-crusted. It is mainly caused by bacteria known as staphylococci but may also be caused by streptococci. The fluid in the blister is very infectious, and spread occurs by hand-to-hand contact with this fluid as the blister bursts. Good hygiene is essential to prevent spread. Treatment is usually by antibiotic cream and/or oral antibiotic medicine.

Precautions: People with impetigo must not handle food as the infective organism may also cause food poisoning. If there is an outbreak, stop the use of sand, water, play dough and cooking activities and wash all “dressing up” clothes.

Exclusion: Until lesions are crusted and healed, or 24 hours after commencing antibiotics.

Influenza and Influenza-like Illness

(Flu and ILI)

Influenza is an acute infectious respiratory illness caused by the influenza virus. Influenza can occur throughout the year but usually peaks in winter. There are three main types of influenza with influenza A and influenza B causing the majority of human infections. A third type, influenza C, is rarely reported as a cause of human illness. Influenza viruses infect the nose, throat and lungs. They can cause mild to severe illness and, if severe, especially in vulnerable people such as the very young and the elderly can lead to death. The main symptoms are fever (temperature > 38°C (100.4°F), tiredness, chills, dry cough, sore throat, headache, muscle and joint pains. Influenza is diagnosed by the laboratory using swabs from the nose and throat. Often the symptoms are so characteristic that a laboratory test is not necessary. Without a laboratory test to confirm the patient will often be described as having an Influenza-like Illness (ILI). Influenza like illness is described as a sudden onset of symptoms and at least one of the following general symptoms: fever or feverish, tiredness, headache and muscle pains and at least one of the following respiratory symptoms: cough, sore throat and shortness of breath.

Precautions: The best way to prevent flu is by getting the flu vaccine each year. Children do not need to be vaccinated unless they belong to a risk group for influenza. The risk groups for influenza are outlined in chapter 7 of the Immunisation Guidelines for Ireland which is available here. Childcare workers, in general do not need to receive seasonal influenza vaccination each year unless they too are in a risk category for influenza (e.g. people with underlying medical conditions such as chronic lung, heart, liver or kidney disease, diabetes, those whose immune system is impaired due to disease or treatment, persons with a body mass index (BMI) over 40, pregnant women (influenza vaccine can be given at any stage of pregnancy).

Exclusion: Children with suspected or confirmed influenza should remain at home for 7 days from when their symptoms began. In general persons with flu are infectious for 3-5 days after symptoms begin but this may be up to a week or more in children. Children should not re-attend their childcare facility until they are feeling better and their temperature has returned to normal. Contacts do not need to be excluded unless they develop ILI symptoms.

Resources: Useful information on influenza can be found on the HPSC's website at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Vaccination/Guidance/ImmunisationGuidelinesforIreland2008-UpdatedSeptember2011/File,3079,en.pdf>

Measles

Measles starts with what appears at first to be an ordinary cold, sore eyes, sneezing, coughing and a runny nose. These symptoms are accompanied by a fever. They are usually present for about four days before the rash appears and during this period the child is very infectious, so if measles is suspected it is wise to keep the child away. The rash proper breaks out 3-4 days after the onset of symptoms, as pink spots, which appear at first on the face and behind the ears and then spread over the body and limbs. In a day or two these spots merge into larger, raised, blotchy areas and their colour changes to a darker red. The temperature rises again with the rash and continues for several days before subsiding as the spots fade. This can be a very serious disease and may rarely be fatal. Complications such as meningitis or encephalitis can lead to brain damage and other complications can permanently damage the lungs.

Precautions: Children should be appropriately immunised. Vaccine given to unvaccinated children within 72 hours of contact may prevent or lessen the illness. If the case/cases are confirmed as being measles, your local Department of Public Health may recommend that the second dose of MMR (normally given at age 4-5 years) should be given to those attending the childcare facility. Vulnerable children and pregnant women who are not already immune but are in contact with a case should consult their GP.

When a case of measles occurs in a centre, it is important to promptly inform and discuss with the Department of Public Health.

Exclusion: Exclude the child while infectious i.e. up to 4 days after the rash appears. Generally the child will be too ill to attend school/nursery. In addition Public Health may recommend additional actions, such as the temporary exclusion of unvaccinated siblings of a case or other unvaccinated children in the school/nursery who may be incubating measles.

Resources: Useful information on measles can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Measles/>.

Meningitis

Meningitis is a serious illness involving inflammation of the membranes covering the brain and spinal cord. It can be caused by a variety of different microorganisms, mainly bacteria and viruses. Bacterial meningitis is less common but usually more serious than viral meningitis and needs urgent treatment with antibiotics. The bacteria, which may cause meningitis or septicaemia (blood poisoning), include meningococcus and *Haemophilus influenzae*. These live naturally in the nose and throat of normal healthy persons without causing illness. Spread is by droplets from the nose and mouth. The illness occurs most frequently in young children and adolescents, usually as isolated cases. Antibiotics do not help viral meningitis.

The signs and symptoms may include severe headaches, fever, vomiting, drowsiness, discomfort from bright light, neck stiffness and a rash of small red-purple spots or bruises. Children with bacterial meningitis or blood poisoning usually become very unwell very quickly. It is essential that if meningitis or blood poisoning is suspected medical help be sought urgently, as prompt treatment can be lifesaving.

Precautions: At present a vaccine is available as part of a child's primary vaccination schedule for some strains of meningococcal disease as well as for *Haemophilus influenzae* type b (Hib).

When a case of meningitis or blood poisoning occurs in a centre, it is most important to promptly inform and discuss these issues with the Department of Public Health. The public health doctors will provide an explanatory letter and leaflet to parents and staff. Where a case of bacterial meningitis or blood poisoning is confirmed, antibiotics may be given to children and staff in centres. A vaccine may also be given subsequently to those same contacts when more information on the type of the causative organism is known. It is important for staff and parents to realise that neither the antibiotics nor the vaccine are 100% effective in preventing a possible further case and extra caution should be taken if any child becomes ill following a single case.

Leaflets should be kept in childcare facilities and day centres so that staff and parents are aware of the signs and symptoms of this disease.

Exclusion: Children with the disease will be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on Hib meningitis can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Haemophilusinfluenzae/>.

Meningococcal Disease

Meningococcal disease is a serious illness due to the meningococcus bacteria and can cause meningitis (inflammation of the lining around the brain) and septicaemia (blood poisoning). The signs and symptoms may include severe headaches, fever, vomiting, drowsiness, discomfort from bright light, neck stiffness and a non-blanching rash of small red-purple spots or bruises. Children with meningitis or blood poisoning usually become very unwell very quickly. It is essential that if meningococcal disease is suspected medical help be sought urgently, as prompt treatment can be lifesaving.

Precautions: A Meningitis Type C vaccine is available, as part of a child's primary vaccination schedule, for one strain (Group C) of meningococcal disease. When a case of meningococcal disease occurs in a centre, it is most important to promptly inform and discuss with the Department of Public Health. The public health doctors will provide an explanatory letter and leaflet to parents and staff, if appropriate. In certain circumstances antibiotics may also be given to some of the children and staff in the centre. A vaccine may also be given subsequently to those same contacts when more information on the type of the causative organism is known. It is important for staff and parents to realise that neither the antibiotics nor the vaccine are 100% effective in preventing a possible further case and extra caution should be taken if any child becomes ill following a single case.

Leaflets should be kept in childcare facilities and day centres so that staff and parents are aware of the signs and symptoms of this disease.

Exclusion: Children with the disease will be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on meningococcal disease can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/BacterialMeningitis/>.

Molluscum Contagiosum

Molluscum contagiosum is a viral disease that causes small flat circular lesions, which may be flesh coloured, white, translucent or yellow. Lesions will heal with time. This may take 6–24 months.

Precautions: Avoiding direct contact with lesions and covering lesions during communal activities at school/nursery can prevent spread.

Exclusion: Not necessary.

Mumps

Mumps causes fever and swelling of the salivary glands, particularly just in front of and below the ear. It may affect other organs such as the testes. Mumps can be spread by droplets from the nose and throat and by saliva. Prevention is by encouraging parents to ensure their children are vaccinated.

Precautions: Children should be appropriately immunised.

Exclusion: The child should be excluded for 5 days after the onset of swelling.

Resources: Useful information on mumps can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Mumps/>.

MRSA

(Meticillin-Resistant Staphylococcus aureus)

Staphylococcus aureus is a type of bacteria (germ) that is often found on the skin and in the nose of healthy people. Most people who carry *staphylococcus* on their skin or in their nose (about one in three people) will not suffer any ill effects. People who carry these bacteria on their skin or in their nose without showing any signs or symptoms of infection are described as being "colonised".

Meticillin Resistant *Staphylococcus aureus* (MRSA) is a specific type of staphylococcus that no longer responds to many commonly used antibiotics such as penicillin. Occasionally these bacteria cause infections (e.g. impetigo, boils, abscesses or infected wounds) if they enter the body through a break in the skin due to a cut, sore or surgical incision. This is most likely to occur in people who are already ill. A few people however, may develop more serious infections such as septicaemia also known as "bloodstream infections" especially people who are already ill in hospital or have long term health problems.

Staphylococci (including MRSA) are usually spread from person to person on unwashed hands, particularly after having direct contact with a draining wound (e.g. cut or sore) but it can also be spread by touching items used by an infected person e.g. soiled dressings.

Ways to limit spread:

Handwashing with soap and running water is the most effective way to prevent the spread of infection.

Keep cuts and scrapes clean and covered until healed; watch for signs of infection, such as pus, redness, warmth and swelling.

Do not share personal items e.g. towels, facecloths, flannels, bedding and clothes.

Cover infected wounds with clean dressings.

If a dressing needs to be changed in the childcare setting, gloves should be worn by the care giver and hands should be washed before and after changing the dressing.

Discard soiled items (e.g. dressings) in a sealed plastic bag before placing it in a domestic waste bin.

Exclusion: Children/infants known to carry *staphylococcus aureus* (including MRSA) on the skin or in the nose do not need to be excluded from the childcare setting. Children who have draining wounds or skin sores producing pus will only need to be excluded from a childcare setting if the wounds cannot be covered or contained by a dressing and/or the dressing cannot be kept dry and intact.

Resources: Useful information on MRSA can be found at <http://www.hpsc.ie/hpsc/A-Z/MicrobiologyAntimicrobialResistance/EuropeanAntimicrobialResistanceSurveillanceSystemEARSS/ReferenceandEducationalResourceMaterial/SaureusMRSA/>

In some childcare settings there may be children who are highly susceptible to infection such as MRSA (i.e. children who are immune compromised). Complex situations should be assessed on a case-by-case basis in conjunction with the local Department of Public Health and the child's physician.

Pharyngitis/Tonsillitis

This means a sore throat. Usually it is caused by viral infection, for which antibiotics are not effective but occasionally can be caused by a bacterium called *Streptococcus*.

Exclusion: If the disease is known to be caused by a streptococcal (bacterial) infection the child or member of staff should be kept away from school/nursery until 24 hours after the start of treatment. Otherwise a child or member of staff should stay at home while they feel unwell.

Pneumococcus

This is a bacterial disease spread by close contact with an infected person or carrier and causes pneumonia, meningitis and septicaemia (blood poisoning).

Precautions: Children should be appropriately immunised.

Exclusions: Children with the disease will be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on pneumococcal disease can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/PneumococcalDisease/>.

Polio

Polio is a viral illness that affects the nervous system and can cause paralysis. It has not been seen in Ireland for many decades because of the effectiveness of the polio vaccine.

Precautions: Children should be appropriately immunised.

Exclusions: Very specific exclusion criteria apply and will be advised on by the Department of Public Health.

Resources: Useful information on polio can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Polio/>.

Respiratory Syncytial Virus

Respiratory Syncytial Virus (RSV) is a common cause of severe respiratory disease in children under 2 years of age. The clinical features include fever, runny nose, sore throat, cough and sometimes croup (inflammation of the upper airways with a barking cough) and wheezing. Ear infections are common with RSV. However, the most serious complication is infection deep in the lungs (pneumonitis and pneumonia). Such cases will invariably need to be admitted to hospital. Most children recover from illness in 8 to 15 days. Children can catch RSV on repeated occasions. Coughing and sneezing are the main ways in which it is spread, but the virus can be transmitted by toys and eating utensils contaminated by nasal discharge and mucus from infectious children.

Precautions: RSV is most dangerous in children who are under 6 months, in those who have cardiopulmonary disease or who were born prematurely. RSV spreads rapidly in conditions where children are grouped close together such as childcare facilities. Children with weakened immune systems are also at risk from RSV infection. Overcrowding and passive smoking increase the risk from RSV. Antibiotics are not effective against RSV as it is a virus; nor is there an effective vaccine against it. Severe cases can be treated with special antiviral drugs but they are not always effective.

Prevention of RSV is the most effective defence: careful handwashing is the best protection against RSV. In addition, children with RSV should not share utensils such as cups or clothing (including towels).

Exclusion: Children who have RSV should be excluded until they have no symptoms and their temperature has returned to normal. Contacts do not need to be excluded.

Resources: Useful information on RSV is available at <http://www.hpsc.ie/hpsc/A-Z/Respiratory/RespiratorySyncytialVirus/Factsheet>.

Ringworm

(*"Tinea"*)

Ringworm or tinea is caused by a fungal infection. It is most common between the toes (athlete's foot) where the skin becomes white and soft, with sore red skin underneath. On the body it causes a circular rash, which spreads outwards whilst healing in the centre. On the scalp it usually causes hair loss or scaling. It can be spread directly from skin to skin, or indirectly via showers, barbers' clippers, hair brushes/combs or clothing. Treatment is usually by antifungal cream applied to the affected area.

Precautions: Early treatment of affected children is indicated.

Sharing of ribbons, combs and hairbrushes should be avoided.

Spread can be prevented by good personal hygiene, regular handwashing, and use of separate towels and toilet articles. Pets should be checked for infection as they may be the source.

Exclusion: Parents should be encouraged to seek treatment. Children need not be excluded from school/nursery once they commence treatment.

Rubella

(*German measles*)

Rubella is a mild illness with a faint rash, which resolves quickly. Usually the rash is the first indication, although there may be mild catarrh, headache or vomiting at the start. The rash takes the form of small pink spots all over the body. There may be a slight fever and some tenderness in the neck, armpits or groin and there may be joint pains. The rash lasts for only one or two days and the spots remain distinct, unlike measles a child who has not been immunised may have rubella with little or no symptoms.

Rubella occurring in a woman in the early months of pregnancy may cause congenital defects in the unborn child.

Transmission is by droplets from the mouth and nose or direct contact with cases. Patients are infectious for up to a week before and at least 4 days after the onset of the rash.

Precautions: Children should be appropriately immunised.

Mothers of children attending should be told of the occurrence of rubella in a child attending the centre and should be advised to ensure that they themselves are rubella immune.

Exclusion: For 7 days after onset of the rash, and whilst unwell.

Resources: Useful information on rubella can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Rubella/>

Scabies

This is an extremely itchy rash caused by a microscopic mite, which burrows under the skin. By the time itching is obvious mites will usually have been present for some weeks. Scabies is only transmitted by very close and prolonged contact. Usually the affected child and his/her family will need treatment with special lotion. Prevention depends on prompt treatment to prevent spread.

Exclusion: Not necessary once treatment has commenced.

Scarlet Fever (*Scarlatina*)

These illnesses are caused by certain strains of streptococcus bacteria. These bacteria are common (most people will have them at some time in their lives) and cause a number of other diseases including sore throat and skin infections. Although earlier in the century scarlet fever was a dangerous disease, the strains of streptococcus responsible for it at present usually cause only a mild infection.

Exclusion: Once a patient has been on antibiotic treatment for 24 hours they can return to school/nursery provided they feel well enough.

Resources: Useful information on streptococcal disease can be found at <http://www.hpsc.ie/hpsc/A-Z/Other/GroupAStreptococcalDiseaseGAS/>.

Slapped Cheek Syndrome (Fifth Disease - Parvovirus B19)

This viral infection usually occurs in outbreaks every few years and small outbreaks are common in schools/nurseries. It is a mild illness caused by a virus known as parvovirus B19. A red rash appears on the face giving a 'slapped cheek' appearance and may also involve the legs and trunk. Often the child may have a runny nose and cough. Spread is mainly through infected secretions by coughing and sneezing. There is no specific treatment. A few children, but most adults, have mild joint pains. Infection during pregnancy can be harmful to the developing baby.

Precautions: Preventive measures include strict handwashing following contact with secretions.

Pregnant women with sick children at home should wash hands frequently and avoid sharing eating/drinking utensils. Pregnant women, those with specific blood diseases (e.g. sickle cell disease) and those with impaired immunity should seek medical advice if they believe they are in contact with a case.

Exclusion: An affected child need not be excluded because he/she is no longer infectious by the time the rash occurs.

Tetanus (Lockjaw)

Tetanus ('lock-jaw') is a disease that causes painful muscle spasm, convulsions and difficulty in breathing. It is often fatal. The bacteria that cause tetanus are commonly found in the soil.

Precautions: Children should be appropriately immunised.

Exclusion: Children with the disease will be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on tetanus can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Tetanus/>.

Tuberculosis

(TB)

TB is much less common in this country than it used to be but in 2008, there were still almost 500 new TB cases notified in Ireland. The organism may infect any part of the body but is most commonly found in the lungs and lymph glands. Symptoms of TB classically include a persistent cough of at least three weeks duration, night sweats, loss of appetite and weight loss.

Staff members should be encouraged to report such symptoms should they occur.

Most cases of TB are not infectious i.e. not contagious. In those that are, the TB may be spread when that person coughs and someone else in close contact breathes in the TB germ. Spread of the contagious form of TB is most common in closed environments, among close contacts such as the home or residential institutions. Appropriate antibiotic treatment makes the case non-infectious quickly.

If a TB case occurs in a member of staff or child attending, it may be necessary to skin test and possibly X-ray close contacts both in the person's home and at the nursery. This is in order to trace the source of infection, as well as to find out if any others have become infected, and to offer treatment if necessary.

An assessment for use by Occupational Health is laid out in Appendix D.

Precautions: Transmission from young children to adults is extremely rare but adults may infect children. Staff with prolonged cough (more than 3 weeks) should be advised to see their GP.

Exclusion: Recommendations on exclusion depend on the particulars of each case, e.g. whether the case is "infectious" or not. The Department of Public Health will advise on each individual case.

Resources: Useful information on TB can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/TuberculosisTB/>.

Typhoid and Paratyphoid

These diseases are uncommon in Ireland and require specific action by the Department of Public Health in each case.

Exclusion: Very specific exclusion criteria apply; your local Department of Public Health will advise.

Resources: Useful information on typhoid/paratyphoid can be found at <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Typhoid/>.

Verrucae (plantar warts)

These are warts on the sole of the foot and cause discomfort mainly due to their location on the weight-bearing surface. They can be spread by direct contact. They may benefit from medical treatment such as application of medications or freezing. Warts are common, and most people will acquire them at some time in their lives. There is little benefit in covering them for swimming and physical education.

Exclusion: Not necessary.

Viral meningitis

Meningitis is inflammation of the membranes covering the brain and spinal cord. It can be caused by a variety of different microorganisms, mainly bacteria and viruses. Bacterial meningitis is less common but usually more serious than viral meningitis and needs urgent treatment with antibiotics. The bacteria, which may cause meningitis or septicaemia (blood poisoning), include meningococcus and *Haemophilus influenzae*. Viral meningitis is less serious and cannot be helped by antibiotic treatment. The symptoms are similar to bacterial meningitis so hospital tests may be needed to tell the difference between bacterial and viral meningitis.

Precautions: Although the risk of acquiring viral meningitis is small it is sensible to take precautions. The most important protection against the viruses that cause viral meningitis is handwashing.

Exclusions: Children with the disease will usually be too ill to attend the school/nursery. Contacts do not need to be excluded.

Resources: Useful information on viral meningitis can be found at <http://www.hpsc.ie/hpsc/A-Z/Respiratory/ViralMeningitis/Factsheet/>

Whooping Cough

(Pertussis)

The early stages of whooping cough, which may last a week or so, can be very like a heavy cold with a temperature and persistent cough. The cough becomes worse and the characteristic 'whoop' may develop. Coughing spasms are frequently worse at night and may be associated with vomiting. This infection can cause serious complications especially in very young children. Long-term lung damage may occur. The lungs can be so badly affected that oxygen cannot get to the brain resulting in brain damage or death. This is a complication of the infection not the vaccination. The whole illness may last several months. It spreads easily, particularly in the early stages while the illness is still mild. Antibiotics rarely affect the course of the illness but can reduce the period of infectiousness.

Precautions: Children should be appropriately immunised.

Exclusion: The child is likely to be too ill to attend school/nursery and should stay at home until he/she has had 5 days of antibiotic treatment or for 21 days from onset of illness if no antibiotic treatment.

Resources: Useful information on whooping cough can be found at <http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/PertussisWhoopingCough/>.

Worms

In Ireland this almost always refers to threadworms, a common infection of the bowel with a tiny worm. It is not serious or dangerous but causes itching around the bottom, where the eggs are laid. Because of this itching the affected child will scratch his/her bottom, picking up the eggs under the fingernails and pass them on to the next person (or re-infecting himself/herself) usually via food. Treatment is by medication, which may be bought via the chemist or obtained via the doctor - all members of the family require treatment. The child must also pay special attention to basic hygiene. Washing hands before eating and after going to the toilet is essential with supervision by an adult if necessary. A shower (rather than a bath) in the morning will remove any eggs laid around the bottom during the night.

Precautions: Prevention is by strict attention to hygiene as above.

Exclusion: Not necessary

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