Staying Healthy in Child Care

Preventing infectious diseases in child care

Fourth Edition

Australian Government
National Health and Medical Research Council
Foreword

This publication provides simple and effective strategies for the prevention of infectious diseases in child care.

It is designed to be used by anyone caring for children, in home day care situations or within child care organisations, and is a useful resource in Child Care Accreditation courses in Australia.

There has been strong demand for earlier versions of the publication, both in Australia and overseas, and it is expected that the latest version will also prove popular.

It is important that health advice is based on the best available evidence and sits within current policy. For these reasons, this guide should be reviewed in 2010.
Preface

PREVENTING ILLNESS

Infections are common in children and often lead to illness.

At home, children are reasonably well protected from infectious diseases because they don’t come in contact with many people. The adults they meet are generally immune to many childhood illnesses because they had them as children or they have been vaccinated. Because of this immunity, adults cannot transmit those infections to children.

Spending time in child care centres or other facilities and being exposed to a large number of children for some time, provides an opportunity for infectious diseases to be spread. It is not possible to prevent the spread of all infections and illnesses within child care centres. However, a lot of illnesses from infectious disease can be prevented.

You can reduce illness. There is good evidence that the infection control methods given in this publication reduce illness in children in child care. The methods may initially seem to be time consuming, but they quickly become part of acceptable daily routine.

I commend Staying Healthy in Child Care to you, as it will assist in reducing illness in children, and in preventing infectious disease.

Mr John Tanton
Chair
National Childcare Accreditation Council
Australia
Contents

PART 1  PREVENTING INFECTIONOUS DISEASE

How infections are spread  1
Hand washing  3
Exclusion of sick children and staff  5
Recommended minimum exclusion periods  7
Immunisation  10
Australian Standard Vaccination Schedule  14
Comparison of effects of vaccines and diseases  15
Parent Advice Sheet  17
Watching for and recording infections in children  18
A child with a fever  21
Administration of medication  21
Medication permission form  23
Nappy changing and toileting  24
Cleaning the centre  26
Dealing with spills of blood, faeces, vomit, urine and nasal discharge  29
Sandpits  31
Animals  31
Food safety  32
Infectious disease issues for child care staff  35

PART 2  FACT SHEETS

Respiratory complaints

Asthma  39
Bronchiolitis  41
 Bronchitis  42
Common cold  43
Croup  44
Ear infections  45
Influenza  46
Pneumococcal disease  47
Runny noses (with green or yellow discharge)  49
Sore throats and streptococcal sore throat (strep throat)  50
Tuberculosis  52
Whooping cough  53
### Gastrointestinal complaints

- Campylobacter 55
- Cryptosporidiosis 57
- Diarrhoea and vomiting 58
- Giardiasis 60
- Norovirus 61
- Rotavirus 63
- Salmonella 64
- Shigellosis 66
- Worms 67
  - Hydatid disease 67
  - Pinworm 68
  - Roundworm, hookworm and tapeworm 69

### Skin complaints

- General notes on rashes 71
- Chickenpox 72
- Cold sores 74
- Parvovirus B19 (Erythema infectiosum, slapped cheek syndrome, fifth disease) 75
- Hand, foot and mouth disease 76
- Head lice 77
- Impetigo (school sores) 80
- Measles 81
- Molluscum contagiosum 83
- Fungal infections of the scalp, skin or nails (ringworm, tinea, athlete’s foot) 84
- Roseola 86
- Rubella 87
- Scabies and other mites causing skin disease 88
- Scarlet fever 90
- Thrush 91
- Warts 92

### Other complaints

- Conjunctivitis 93
- Cytomegalovirus (CMV) 95
- Haemophilus influenzae type B (Hib) 97
- Glandular fever 96
Hepatitis A 98
Hepatitis B 99
Hepatitis C 100
HIV 101
Meningococcal infection 103
Mumps 104
Toxoplasmosis 105
Viral meningitis 106

PART 3  GLOSSARY AND RESOURCES
Glossary of terms 107
Useful Contacts 110
List of Forms 111
Useful Websites 116

APPENDIX A  WORKING COMMITTEE MEMBERSHIP AND TERMS OF REFERENCE

APPENDIX B  PROCESS REPORT
B.1 Submitters February 2005 119
B.2 Submitters August-September 2005 120

APPENDIX C  REFERENCES
Part 1

Preventing Infectious Disease
How infections spread

There are four essential steps to the spread of infections. Infection control is aimed at breaking this chain of infection. The steps are:

1. The person with the infection spreads the germ into their environment,
2. The germ must survive in the appropriate environment e.g. air, food, water, on objects and surfaces,
3. Another person then comes in contact with the germ,
4. This person then becomes infected.

1. THE PERSON WHO HAS THE INFECTION SPREADS THE GERM INTO THEIR ENVIRONMENT

This child or adult may or may not show any signs of illness. They may be infectious before they become unwell, during their illness, after they have recovered, or without any signs of illness at all.

For example, in cases of diarrhoea due to *Giardia*, children and staff who no longer have diarrhoea may still have infectious *Giardia* in their bowel motions. For this reason, the infection control process must always be followed by all people in the child care centre.

2. THE GERM MUST SURVIVE IN THE APPROPRIATE ENVIRONMENT

Infectious illnesses may be due to viruses, bacteria, protozoa or fungi. All of these organisms are too small to see with the naked eye. These germs can survive on hands and objects, for example toys, door handles and bench tops. The length of time a germ may survive on a surface depends on the germ itself, the type of surface it has contaminated and how often the surface is cleaned. It is also dependent upon environmental conditions such as temperature and humidity. Washing with detergent and water is a very effective way of removing germs.

3. ANOTHER PERSON THEN COMES IN CONTACT WITH THE GERM

Germs can be transmitted in a number of ways, including through the air by droplets; through contact with faeces and then contact with mouths; through direct contact with skin; and through contact with other body secretions (such as urine, saliva, discharges or blood).

Nose and throat

Some infections are spread when an infected person sneezes or coughs out tiny airborne droplets. The droplets in the air may be breathed in directly by another person, or indirectly enter another person through contact with surfaces and hands contaminated with the droplets. Some droplets are very fine and can be carried long distances by air currents. This is known as airborne spread, and includes:

- Chickenpox
- Measles
- Tuberculosis

Other droplets are larger and travel less than one metre in the air. Examples are:

- Common cold
- Mumps
- Diphtheria
- Haemophilus influenzae type b (Hib)
- Influenza
- Streptococcal sore throat
- Whooping cough (Pertussis)
- Pneumococcal disease
- Rubella
- Meningitis (bacterial) including meningococcal infection
- Parvovirus infection (human parvovirus infection, parvovirus B19 infection, slapped cheek, slapped face, erythema infectiosum, fifth disease)
**Faecal-oral**

Some infections are spread when microscopic amounts of faeces from an infected person are passed directly from soiled hands to mouth or indirectly by way of objects, surfaces, food or water soiled with faeces, to another. An infected person doesn’t necessarily have symptoms of their illness.

Examples:
- Campylobacter infection
- Rotavirus infection
- Cryptosporidiosis
- Salmonella infection
- Giardiasis
- Thrush
- Hand, foot and mouth disease
- Shigella infection
- Hepatitis A
- Viral gastroenteritis
- Worms

**Skin or mucous membrane (lining of nose and mouth) contact**

Some infections are spread directly when secretions come into contact with mucous membranes, broken skin or, less commonly, healthy intact skin. Infections can also be spread indirectly after contact with contaminated objects.

Examples:
- Chicken pox
- Cold sores (herpes simplex)
- Conjunctivitis
- Hand, foot and mouth disease
- Molluscum contagiosum
- Ringworm
- School sores (Impetigo)
- Staphylococcus aureus
- Thrush
- Warts (common, flat and plantar)

**Saliva**

Some infections are spread by direct contact with saliva (such as kissing) or indirect contact with contaminated objects (children sucking and sharing toys).

Examples:
- Glandular fever (Mononucleosis)
- Cytomegalovirus infection (CMV)

**Urine**

Some infections are spread when urine is transferred from soiled hands or objects to the mouth.

Examples:
- Cytomegalovirus (CMV)

**Blood**

Some infections are spread when blood from an infected person comes into direct contact through broken or abraded skin or with the mucous membranes of another person. The transmission of these infections is extremely unlikely in the child care setting.

Examples:
- Hepatitis B
- Hepatitis C
- Human Immunodeficiency Virus (HIV)

4. **THIS PERSON THEN BECOMES INFECTED**

When the germ has reached the next person it must find a way to enter the body. It can enter through the mouth, intestinal tract, nose, lungs, mucosa of eyes, genitals or through a sore or broken and abraded skin. We can prevent illness at this stage by preventing entry to the body (for example, by making sure all toys that children put in their mouths are clean, having children, parents and staff wash and dry their hands, covering wounds) and by immunisation. Whether a person develops illness after this germ has entered the body depends on both the germ and the person’s immunity.
The three most important ways of preventing the spread of infectious disease

The three most important ways of preventing the spread of infectious disease are:

• Effective hand washing;
• Exclusion of sick children and staff; and
• Immunisation.

If these are not done properly, the many other processes that support infection control, such as cleaning and food safety procedures, will not work well.

HOW EASILY ARE DISEASES SPREAD IN A CHILD CARE CENTRE

Some viruses such as measles and norovirus are very infectious and will very easily infect non-immune people. Measles virus can remain airborne for up to 2 hours after a person has left a room so that further people are exposed. Norovirus is a very common cause of diarrhoea and can infect 50% or more of people in a group.

At the other extreme, Hepatitis B, Hepatitis C and HIV are very difficult to spread in a child care setting.

Hand washing

Infections can be spread by a person who shows no signs of illness. Hand washing is one of the most effective ways of preventing the spread of infection.

The best way to prevent the transmission of disease is to wash and dry your hands thoroughly. Educating staff to wash and dry their hands effectively decreases the amount of disease in infants and toddlers. Hand washing is effective because it loosens, dilutes and flushes off germs and contaminated matter.

To promote and enable effective hand washing requires:

• hand basins to be readily accessible and located where they will be needed (including nappy changing areas, toilets, food preparation areas and outdoors); and
• hand basins to be at an appropriate size and height, for staff and children.

Hands-free taps and liquid soap dispensers will reduce the opportunities for cross-contamination.

HOW TO WASH HANDS

Use the following method to make sure your hands and the children's hands are as germ-free as possible. The process of thoroughly washing and rinsing your hands should take 10 – 15 seconds. This can be achieved by slowly counting to 10 when you wash and then slowly counting to 10 when you rinse. This is about as long as it takes to sing 'Happy Birthday' twice.

• Wet hands with running water.
• Use liquid soap and spread over hands.
• Rub your hands vigorously as you wash them.
• Wash your hands all over. Pay particular attention to wash the palms and backs of hands, in between fingers, under finger nails and around wrists.
• Rinse your hands thoroughly to remove all suds and germs. Thorough rinsing will help prevent dermatitis from suds.
• Turn off the tap using paper towel.
• Pat dry your hands with a new paper towel.
Teach the children under your care to wash and dry their hands in this way. Staff need to supervise and observe children so that they develop hand washing as a good habit and do it properly. Encourage the children not to touch the tap after they have washed and dried their hands. The tap will have lots of germs on it.

**Babies need to have their hands washed as well**

Babies need their hands washed as often and as thoroughly as older children. If the baby is able to stand at an appropriate sized hand basin, you need to wash and dry their hands just as you would for yourself. If the baby is unable to stand at a hand basin, wash their hands with either premoistened towelettes or wet disposable cloths, then pat dry with paper towel.

**Soaps, towels and lotion**

Liquid soap dispensers and disposable paper towels are the preferred option for hand washing. Liquid soap is advocated rather than solid bar soap because it is less likely to become contaminated and is more likely to be used. If reusable containers are used for liquid soap, they must be cleaned and dried before refilling with fresh soap. Antibacterial hand washes should not be used routinely in child care centres as they are unnecessary and may encourage the development of resistant bacteria. Alcohol-based hand cleaners can have a role if proper hand washing facilities are not available (eg on excursions). After several uses of an alcohol-based hand cleaner, you will need to wash your hands properly with liquid soap and water.

Effective **hand drying** is just as important as thorough hand washing because wet surfaces transfer germs more effectively than dry ones. Disposable paper towel is the preferred option. Cloth towels should not be used as they allow re-contamination of the hands. Warm air dryers are also not recommended as they take longer to dry hands than with paper towel, can only serve one person at a time and often people do not spend long enough using the dryer.

**Hand care**

Some infections are spread when blood from an infected person comes into direct contact through broken or abraded skin, therefore healthy intact skin can be a very effective barrier to disease and infection.

Wash hands with mild soap and water and make sure that they are thoroughly dry. Soaps and detergents remove oils from the skin causing dryness and possible cracking. Some staff and children may find that frequent hand washing may lead to dry skin, which may be prone to cracking and dermatitis. Cracked or inflamed skin is harder to clean properly and may become infected. Application of a hand cream may help to prevent skin cracking and dermatitis.

Prolonged contact with water softens the skin and makes it more susceptible to irritation. Reducing the dryness and irritation of the skin is very important. Application of a hand cream and powder-free gloves may be used to reduce drying of skin.

Sorbolene cream and water may be used instead of soap and water, and hands patted dry, rather than rubbed vigorously. Apply more sorbolene cream as a hand cream if needed.

Use barrier cream to protect skin that will be wet for long periods. Do not use barrier cream on damaged skin. Treat minor cuts and abrasions promptly.

Children with eczema have a type of skin that is dry, itchy and sensitive. Their skin is easily inflamed, gets itchy and is made worse by rubbing and scratching. Reducing the dryness and irritation of the skin is very important. These children may find that frequent use of soap and water may irritate their skin. They can use sorbolene cream instead of soap. They can put the cream on and then gently rub off under running water.
They should pat their hands dry rather than rub and apply more sorbolene cream if needed.

**Hand washing takes time**

In the steps for good hand washing you need to slowly count to 10 while soaping and rubbing your hands and then slowly count to 10 while rinsing your hands. This may seem like a long time. It is a challenge to allow enough time in your daily program for children to wash and dry their hands well. But it can be done. Wearing jewellery will make it harder to clean your hands effectively and will require extra attention.

**When to wash your own hands**

- When you arrive at the centre. This reduces the introduction of germs;
- Before handling food, including babies' bottles;
- Before eating;
- After changing a nappy;
- After removing gloves;
- After going to the toilet;
- After cleaning up blood, faeces or vomit;
- After wiping a nose, either a child's or your own;
- Before giving medication;
- After handling garbage;
- After coming in from outside play; and
- Before going home. This prevents taking germs home.

**GLOVES**

Wearing gloves does not replace the need for hand washing as gloves may have very small holes or be torn during use. Hands may also become contaminated during removal of gloves. New gloves should be used for each child.

**Exclusion of sick children and staff**

Excluding sick children and staff is one of the three most important ways of limiting the spread of infection in the child care centre (see page 3). The spread of certain infectious diseases can be reduced by excluding a person who is known to be infectious, from contact with others who are at risk of catching the infection.

Parents may find an exclusion ruling difficult and some parents may place great pressure on the director to vary from the centre's exclusion rules. Often these parents are under great pressure themselves to fulfil work, study or other family commitments. This may lead to stress and conflict between parents and centre staff.
The best way to avoid conflict is to have a written policy that clearly states the centre’s exclusion criteria. This policy should state the National Health and Medical Research Council’s Recommended minimum exclusions periods (see page 7) as well as any additional conditions or exclusion periods your centre may have. Give the policy to all parents and staff when they first join the centre.

Directors should not be influenced by letters from doctors which allow the child back into care, unless the child’s condition fulfills the criteria for return to care. Sometimes doctors make different diagnoses for children in the same centre with illnesses that appear similar. Your public health unit should be able to help you with these situations or when you are in doubt about exclusion.

Whenever you exclude a child, take the opportunity to review your infection control techniques with all child carers. In particular, check hand washing is being done as recommended in this book.

**Involvement of parents**

Provide parents with a copy of the centre’s policies on immunisation, medication, infection control (hygiene) and exclusion when the child is enrolled. Encourage parents to return and discuss these policies with you. The exclusion policy is the policy most likely to cause concern. Make sure that parents understand why the centre has an exclusion policy.

Most parents will appreciate your attempts to prevent illness in their children. In particular, it is important that parents support the centre’s policies on cleanliness. Ask parents to encourage their children to **wash and dry their hands** on arrival at the centre and when leaving.

**THE NEED FOR EXCLUSION DEPENDS UPON:**

- The ease with which the infection can be spread;
- The ability of the infected person to follow hygiene precautions; and
- The severity of the disease

**THE EXCLUSION PROCEDURE**

- Identify when symptoms or a medical diagnosis fit a condition with an exclusion period;
- Refer to the table on page 7 for the recommended minimum periods of exclusion; and
- Advise the parents or staff member when they may return to the centre.

Recommended exclusion periods are based on the time that a person with a specific disease or condition is likely to be infectious.

Recommended ‘Not excluded’ means there is no significant risk of transmitting infection to others.

The following are recommended minimum periods of exclusion based on risk of infection but a child or staff member may need to stay at home longer than the exclusion period to recover from an illness.
Recommended minimum exclusion periods for infectious conditions for schools, pre-schools and child care centres

Children who are unwell should stay home from schools, pre-schools and child care centres.

Definition of ‘Contacts’ will vary according to disease. Please refer to specific Fact Sheets for definition of ‘Contacts’. (Fact sheets are listed in the contents pages of the manual).

Different exclusion periods will apply to people whose work involves food handling: if they have vomiting and/or diarrhoea they should not return to work until they have been symptom-free for 48 hours and do not have loose bowel actions. For some conditions such as Campylobacter and Giardia, even though the organism may still be found in the bowel actions, children may be able to return to the child care centre 24 hours after the diarrhoea has ceased. This is because the number of organisms will be less and it will be possible for good hygiene to be effectively maintained.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Exclusion of Case</th>
<th>Exclusion of Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoebiasis (Entamoeba histolytica)</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Campylobacter</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>See ‘Thrush’</td>
<td></td>
</tr>
<tr>
<td>Chickenpox (Varicella)</td>
<td>Exclude until all blisters have dried. This is usually at least 5 days after the rash first appeared in unimmunised children and less in immunised children.</td>
<td>Any child with an immune deficiency (for example, leukaemia) or receiving chemotherapy should be excluded for their own protection. Otherwise, not excluded.</td>
</tr>
<tr>
<td>CMV (Cytomegalovirus infection)</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Cryptosporidium infection</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Diarrhoea (No organism identified)</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>Exclude medical certificate of recovery is received following at least 2 negative throat swabs, the first swab not less than 24 hours after finishing a course of antibiotics followed by another swab 48 hours later.</td>
<td>Exclude contacts that live in the same house until cleared to return by an appropriate health authority.</td>
</tr>
<tr>
<td>German measles</td>
<td>See ‘Rubella’</td>
<td></td>
</tr>
<tr>
<td>Giardiasis</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Glandular fever (Mononucleosis, EBV infection)</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Hand, foot and mouth disease</td>
<td>Exclude until all blisters have dried.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Condition</td>
<td>Exclusion of Case</td>
<td>Exclusion of Contacts</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>Exclude until the person has received appropriate antibiotic treatment for at least 4 days.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Head lice (Pediculosis)</td>
<td>Exclusion is NOT necessary if effective treatment is commenced prior to the next day at child care (ie the child doesn’t need to be sent home immediately if head lice are detected).</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>Exclude until a medical certificate of recovery is received, but not before seven days after the onset of jaundice.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Herpes simplex (cold sores, fever blisters)</td>
<td>Exclusion is not necessary if the person is developmentally capable of maintaining hygiene practices to minimise the risk of transmission. If the person is unable to comply with these practices they should be excluded until the sores are dry. Sores should be covered by a dressing where possible.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Human Immunodeficiency Virus (HIV/AIDS)</td>
<td>Exclusion is NOT necessary if the person is severely immunocompromised, they will be vulnerable to other people’s illnesses.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Hydatid disease</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Impetigo (school sores)</td>
<td>Exclude until appropriate antibiotic treatment has commenced. Any sores on exposed skin should be covered with a watertight dressing.</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Influenza and influenza-like illnesses</td>
<td>Exclude until well</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Legionnaires’ disease</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Leprosy</td>
<td>Exclude until approval to return has been given by an appropriate health authority</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Measles</td>
<td>Exclude for 4 days after the onset of the rash</td>
<td>Immunised and immune contacts are not excluded. Non-immunised contacts of a case are to be excluded from child care until 14 days after the first day of appearance of rash in the last case, unless immunised within 72 hours of first contact during the infectious period with the first case. All immunocompromised children should be excluded until 14 days after the first day of appearance of rash in the last case.</td>
</tr>
<tr>
<td>Meningitis (bacterial)</td>
<td>Exclude until well and has received appropriate antibiotics</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Meningitis (viral)</td>
<td>Exclude until well</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Meningococcal infection</td>
<td>Exclude until appropriate antibiotic treatment has been completed</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Molluscum contagiosum</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Mumps</td>
<td>Exclude for nine days or until swelling goes down (whichever is sooner)</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Norovirus</td>
<td>Exclude until there has not been a loose bowel motion or vomiting for 48 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Parvovirus infection (fifth disease, erythema infectious, slapped cheek syndrome)</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Condition</td>
<td>Exclusion of Case</td>
<td>Exclusion of Contacts</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pertussis</td>
<td>See ‘Whooping Cough’</td>
<td></td>
</tr>
<tr>
<td>Respiratory Syncytial virus</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Ringworm/tinea</td>
<td>Exclude until the day after appropriate antifungal treatment has commenced</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Roseola</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Ross River virus</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Rotavirus infection</td>
<td>Children are to be excluded from the centre until there has not been a loose bowel motion or vomiting for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Rubella (German measles)</td>
<td>Exclude until fully recovered or for at least four days after the onset of the rash</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Salmonella infection</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Scabies</td>
<td>Exclude until the day after appropriate treatment has commenced</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Scarlet fever</td>
<td>See ‘Streptococcal sore throat’</td>
<td></td>
</tr>
<tr>
<td>School sores</td>
<td>See ‘Impetigo’</td>
<td></td>
</tr>
<tr>
<td>Shigella infection</td>
<td>Exclude until there has not been a loose bowel motion for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Streptococcal sore throat (including scarlet fever)</td>
<td>Exclude until the person has received antibiotic treatment for at least 24 hours and feels well</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Thrush (candidiasis)</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Toxoplasmosis</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Tuberculosis (TB)</td>
<td>Exclude until medical certificate is produced from an appropriate health authority</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Typhoid, Paratyphoid</td>
<td>Exclude until medical certificate is produced from appropriate health authority</td>
<td>Not excluded unless considered necessary by public health authorities</td>
</tr>
<tr>
<td>Varicella</td>
<td>See ‘Chickenpox’</td>
<td></td>
</tr>
<tr>
<td>Viral gastroenteritis (viral diarrhoea)</td>
<td>Children are to be excluded from the centre until there has not been a loose bowel motion or vomiting for 24 hours</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Warts</td>
<td>Exclusion is NOT necessary</td>
<td>Not excluded</td>
</tr>
<tr>
<td>Whooping cough (pertussis)</td>
<td>Exclude until five days after starting appropriate antibiotic treatment or for 21 days from the onset of coughing&lt;sup&gt;12&lt;/sup&gt;</td>
<td>Contacts that live in the same house as the case and have received less than three doses of pertussis vaccine are to be excluded from the centre until they have had 5 days of an appropriate course of antibiotics, if antibiotics have not been taken, these contacts must be excluded for 21 days after their last exposure to the case while the person was infectious.</td>
</tr>
<tr>
<td>Worms</td>
<td>Exclude if loose bowel motions present</td>
<td>Not excluded</td>
</tr>
</tbody>
</table>
Immunisation

CHILDHOOD IMMUNISATION

The most effective method of preventing certain infections is immunisation. Immunisation protects the person who has been immunised, children who are too young to be vaccinated, and other people who have been vaccinated but did not respond to the vaccine.

The principle of immunisation is simple: it gives the body a memory of infection without the risk of natural infection.

Ask all parents to provide a copy of their child’s immunisation records. If the child has not been immunised, tell the parents that their child may, depending upon advice from the public health unit, be excluded from care during outbreaks of some infectious diseases (such as measles and whooping cough), even if their child is well.

If the child is vaccinated, make sure that the child has received all the vaccinations recommended for their age group.

Ways that you can encourage parents to vaccinate their children include:

- put up wall charts in rooms;
- send home first birthday immunisation reminder cards;
- send home fourth birthday immunisation reminder cards;
- each month review which children are behind in their vaccinations, update the child’s records kept in the centre and send home a reminder card;
- put a computerised message at the bottom of receipts; and
- when enrolling children, make a note in the director’s diary of when updates will be needed.

THE IMMUNISATIONS AND THE DISEASES THEY PREVENT

Diphtheria, Tetanus and Pertussis immunisation

Immunisation with DTPa vaccine is the best way to prevent diphtheria, tetanus and pertussis (whooping cough). DTPa vaccine is three vaccines combined into one injection which is safe and effective, and several injections are needed to provide good protection. DTPa is similar to the previous DTP (Triple Antigen) vaccine (DTPw) but contains only small parts of the pertussis bacteria instead of whole bacteria. The possible general side effects of DTPa are much less frequent than seen with the previous DTPw. Severe side effects are very rare.

Diphtheria

Diphtheria is caused by bacteria which are found in the mouth, throat and nose of an infected person. Diphtheria can cause a membrane to grow around the inside of the throat, which can lead to difficulty in swallowing, breathlessness and suffocation. A powerful poison (toxin) is produced by the diphtheria bacteria and may cause serious complications.

Tetanus

Tetanus is an often-fatal disease caused by a toxin made by bacteria present in soil and manure. You don’t catch tetanus from other people. Rather, the bacteria enter the body through a wound, which may be as small and insignificant as a pinprick. Tetanus attacks the nervous system, causing severe muscle spasms, first felt in the neck and jaw muscles (lockjaw).

Pertussis (whooping cough)

Pertussis, or whooping cough, is a highly contagious disease caused by bacteria and is spread by coughing or sneezing. Whooping cough affects the air passages and can cause difficulty in breathing. Severe
coughing spasms occur and between these spasms, the child gasps for breath causing the characteristic ‘whoop’ sound. Not all children get the ‘whoop’. Vomiting often follows a coughing spasm. The cough may persist for up to 3 months.  

**Polio immunisation**

*Inactivated polio vaccine* (IPV) and IPV-containing combination vaccines are now available in Australia. These vaccines contain small amounts of three types of polio viruses, which have been inactivated. A course of 3 injections with a booster dose at 4 years produces long-lasting protection to these poliovirus types. IPV replaced *Oral polio vaccine* (OPV or Sabin) from 1st November 2005.

**Polio**

Following the introduction of polio vaccines there has been a dramatic decrease in polio infection. Since 1995, no cases of polio have been reported in Australia. Australian children still need to be immunised against polio, even though cases do not occur here. There is an ongoing risk of polio being imported from other countries and re-established here if our children and adults are not immunised. Polio may cause mild symptoms or very severe illness including permanent crippling.

**Measles-mumps-rubella (MMR) immunisation**

Children should be immunised against measles, mumps and rubella at 12 months of age and at 4 years of age. The vaccine can also be given to older children and adults, and is very effective. The combination measles-mumps-rubella (MMR) vaccine protects children and adults against all three diseases. The MMR vaccine contains small amounts of reduced strength live measles, mumps and rubella viruses, and a small amount of an antibiotic (neomycin). Reactions to MMR immunisation are much less frequent than the complications of natural measles. The most common reaction is feeling unwell and having a low grade fever, possibly with a rash, occurring 5 to 12 days after immunisation. Children who develop the rash during this time are not infectious to others. Occasionally children will develop mild swelling of the facial glands about three weeks after the immunisation because of the mumps component of the vaccine. More serious reactions to the vaccine are rare. Although MMR vaccines are not recommended during pregnancy, there is no risk to pregnant women from contact with recently vaccinated individuals as the vaccine virus is not transferred from person to person.

**Measles**

Measles is a serious, highly contagious viral illness of fever, rash, runny nose, cough and conjunctivitis. Complications following measles can be very dangerous, and pneumonia occurs in 4% of cases. For every 10 children who contract measles encephalitis, one will die and up to four will have permanent brain damage. Measles has caused more deaths in Australia in the past 15 years than diphtheria, pertussis and rubella combined.

**Mumps**

Mumps is a viral disease, which causes fever, headache and inflammation of the salivary glands. Occasionally it causes an infection of the membranes covering the brain (meningitis) but permanent effects are rare. In as many as five per 1,000 patients it can cause inflammation of the brain (encephalitis). Mumps can also cause permanent deafness.

**Rubella**

Rubella, which used to be called German measles, is usually a mild disease of childhood but it can also affect teenagers and adults. The usual symptoms of rubella are
and complete. The most dangerous form is congenital rubella, where infection during the first 20 weeks of pregnancy can result in devastating abnormalities in the newborn baby. The best way to protect expectant mothers and their babies from rubella is to make sure that all women have been immunised before they become pregnant, and to immunise all children to stop the spread of infection.

Haemophilus influenzae type B (HIB) immunisation
Several doses of Hib vaccine are required to protect a child against Hib. The first dose is normally given at two months of age. However, children up to the age of five years who were not immunised as babies can be given Hib vaccine.

Haemophilus influenzae type b (Hib)
Hib was the most frequent cause of life threatening infection in children under five years of age before the introduction of Hib vaccines. Despite its name, it is not related in any way to influenza (‘the flu’). It may cause infection of the membranes covering the brain (meningitis), swelling in the throat (epiglottitis) which can block breathing, pneumonia, joint infection or infection of the tissue under the skin, usually on the face (cellulitis).

Pneumococcal immunisation
Routine pneumococcal immunisation is given at 2, 4 and 6 months of age. It is recommended that the pneumococcal vaccine be given at the same time as other scheduled vaccines. Some children may need another dose or two depending upon where in Australia they live, and if they have any risk factors which identify them as being at greater risk of pneumococcal disease.

Pneumococcal disease
Pneumococcal disease is caused by bacteria and can lead to severe brain infection (meningitis), blood infection (bacteraemia), pneumonia, and middle ear infections (otitis media). The bacteria are spread in droplets shed from the mouth or nose through kissing or contact with articles that have been contaminated with the infected droplets. Pneumococcal bacteria are commonly carried in the back of the throat and nose of healthy children and adults. Pneumococcal disease is most common in children under the age of 2 years.

Chickenpox immunisation (Varicella)
From 1st November 2005, a single dose of the live vaccine is available to all children when they turn 18 months of age or 13 years of age. One dose of the chickenpox vaccine protects up to 90% of vaccinated children. If a vaccinated child becomes infected despite vaccination, the infection is usually very mild.

Chickenpox
Chickenpox is a highly contagious disease caused by the varicella-zoster virus. Chickenpox starts with cold-like symptoms such as a runny nose, mild fever, cough and fatigue followed by a rash. The rash usually starts on the trunk of the body and spreads over the whole body. The rash starts as small red spots which rapidly turn into blisters. Chickenpox is spread through coughs and sneezes and through direct contact with the fluid in the blisters of the rash.

In healthy children, chickenpox is usually a mild disease which lasts about 5-10 days. The chickenpox rash can be very itchy and scratching can lead to bacterial infections of the spots. Children with other medical conditions are at risk of developing other life-threatening complications such as pneumonia or inflammation of the brain (encephalitis). If a woman develops...
chickenpox during pregnancy, there is a small risk (less than 2%) of damage to the unborn baby. It tends to be more severe in adults.

Meningococcal C immunisation

A single dose vaccine is available to all children when they turn 12 months of age. The vaccine provides over 90% protection against meningococcal C disease. This vaccine can be given at the same time as the other vaccines that are due at 12 months of age. The vaccine is very safe and does not contain live bacteria so cannot cause meningitis in the child. There are other strains of meningococcal infection (eg type B) that are not covered by this vaccine.

Meningococcal C disease

Meningococcal C disease is an uncommon life-threatening infection caused by bacteria that live at the back of the throat or in the nose in about 10% of people at any one time. Although most people who carry these bacteria remain well, they can spread the meningococcal C bacteria to others. The onset of meningococcal C disease may be very quick and can rapidly cause brain infection (meningitis) or blood poisoning (septicaemia) or a combination of both. In Australia, 15% of people who develop meningococcal C disease die. The highest rate of meningococcal C disease occurs in children under 5 years of age.

Hepatitis B immunisation

Hepatitis B immunisation is recommended for all babies and teenagers. All babies in Australia are offered one dose of hepatitis B vaccine at birth to provide early protection against the disease. A further three doses of hepatitis B vaccine are required to provide optimal protection. These are 2 months, 4 months of age and either 6 or 12 months of age depending on where in Australia the child lives. Most side effects of hepatitis B vaccine are minor and disappear quickly. Soreness at the injection site may occur, as may low grade fever, nausea, feeling unwell and joint pain. More serious side effects are extremely rare.

Hepatitis B

Hepatitis B virus affects the liver and can cause fever, nausea, tiredness, dark urine and yellow skin (jaundice). About 5% of people infected as adults, and most of those infected as children, become carriers of the infection and can continue to spread it to other people. These carriers are also at increased risk of developing liver disease and cancer later in life.
National Immunisation Program Schedule, Australia
(EFFECTIVE FROM 1 NOVEMBER 2005)

EXTRA VACCINATIONS:

Pneumococcal Vaccination
- Aboriginal and Torres Strait Islander children are offered additional pneumococcal vaccination (23vPPV), between 18 and 24 months in high risk areas (Queensland, Northern Territory, Western Australia and South Australia).
- Medical at-risk children are offered additional pneumococcal vaccination at 12 months (7vPCV) and between 4 and 5 years of age (23vPPV); and
- Aboriginal and Torres Strait Islander people are offered pneumococcal (23vPPV) and influenza vaccination at 50 years of age.

Hepatitis A Vaccination
- Aboriginal and Torres Strait Islander children in high risk areas (Queensland, Northern Territory, Western Australia and South Australia) are offered two doses of hepatitis A vaccination 6 months apart starting at either 12 months or 18 months of age, depending on where they live.

### Disease Effects of vaccines and diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Effects of disease</th>
<th>Side effects of vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria - contagious bacteria</td>
<td>About 1 in 15 patients dies. The bacteria release a toxin, which can produce nerve</td>
<td>DTPa vaccine: About 1 in 10 has local inflammation or fever. Serious adverse events are very</td>
</tr>
<tr>
<td>spread by droplets; causes severe</td>
<td>paralysis and heart failure.</td>
<td>rare, and much less common with DTPa.</td>
</tr>
<tr>
<td>throat and breathing difficulties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B - virus spread mainly</td>
<td>About 1 in 4 chronic carriers will develop cirrhosis or liver cancer.</td>
<td>About 1 in 15 to 1 in 100 will have pain and fever. Anaphylaxis occurs in about 1 in 600,000.</td>
</tr>
<tr>
<td>by blood, sexual contact or from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mother to newborn baby, causes acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hepatitis or chronic carriage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hib - contagious bacteria spread</td>
<td>About 1 in 20 meningitis patients dies and about 1 in 4 survivors has permanent</td>
<td>About 1 in 20 has discomfort or local inflammation. About 1 in 50 has fever.</td>
</tr>
<tr>
<td>by droplets; causes meningitis,</td>
<td>brain damage. About 1 in 100 epiglottitis patients dies.</td>
<td></td>
</tr>
<tr>
<td>epiglottitis (respiratory obstruction), septicemia, osteomyelitis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza - contagious virus spread</td>
<td>Caused increased hospitalisation in the elderly. High-risk groups include the elderly, diabetics, and alcoholics.</td>
<td>About 1 in 10 has local reactions. Guillain-Barré syndrome occurs in about 1 in 1 million.</td>
</tr>
<tr>
<td>by droplets; causes fever; muscle and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>joint pains, pneumonia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles - highly infectious virus</td>
<td>1 in 25 children with measles develops pneumonia and 1 in 2000 develops encephalitis (brain inflammation).</td>
<td></td>
</tr>
<tr>
<td>spread by droplets; causes fever;</td>
<td>For every 10 children who develop measles encephalitis, 1 dies and 4 have permanent brain damage. About 1 in 100 000 develops SSPE (brain degeneration) which is always fatal.</td>
<td></td>
</tr>
<tr>
<td>cough; rash.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal infections - bacteria</td>
<td>About 1 in 10 patients dies. Of those that survive, 1 in 30 has severe skin scarring or loss of limbs, and 1 in 30 has severe brain damage.</td>
<td>Polysaccharide vaccine: Local reactions common. Mild fever, headache, malaise in 1 in 30. Conjugate vaccine: About 1 in 10 has local inflammation, fever, irritability, anorexia or headaches.</td>
</tr>
<tr>
<td>spread by respiratory droplets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause sepsis (infection of the blood stream) and meningitis (infection of the tissues surrounding the brain).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mumps - contagious virus spread by</td>
<td>1 in 200 children develops encephalitis. 1 in 5 males past puberty develop inflammation of the testes. Occasionally mumps causes infertility or deafness. About 1 in 100 vaccine recipients may develop swelling of the salivary glands.</td>
<td></td>
</tr>
<tr>
<td>saliva; causes swollen neck and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>salivary glands, fever.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pertussis - contagious bacteria</td>
<td>About 1 in 200 whooping cough patients under the age of 6 months dies from pneumonia or brain damage.</td>
<td>As for DTPa vaccine (see diphtheria).</td>
</tr>
<tr>
<td>spread by droplets; causes whooping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cough and vomiting, lasting up to 3 months.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal infections - bacteria</td>
<td>About 1 in 10 meningitis patients dies</td>
<td>Polysaccharide vaccine: Less than 1 in 20 has pain or local reaction. Conjugate vaccine: About 1 in 10 has local reaction or fever.</td>
</tr>
<tr>
<td>spread by droplets; causes fever;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pneumonia, septicemia, meningitis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio - contagious virus spread by</td>
<td>While many infections cause no symptoms, about 1 in 20 hospitalised patients dies and 1 in 2 patients who survive is permanently paralysed.</td>
<td>OPV: Less than 1 in 100 recipients develops diarrhoea, headache and/or muscle pains. 1 in 2.5 million recipients or close contacts develops paralysis. IPV: Local redness (1 in 3), pain (1 in 7) and swelling (1 in 10) common. Up to 1 in 10 has fever, crying, and decreased appetite.</td>
</tr>
<tr>
<td>faeces and saliva; causes fever,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>headache, vomiting and may progress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to paralysis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubella - contagious virus spread</td>
<td>About 5 in 10 patients develop a rash and painful swollen glands; 5 in 10 adolescents and adults have painful joints; 1 in 3000 develops thrombocytopenia (bruising or bleeding); 1 in 6000 develops inflammation of the brain; 9 in 10 babies infected during the first 10 weeks after conception will have a major congenital abnormality (such as deafness, blindness or heart defects). About 1 in 10 has discomfort, local inflammation, or fever. About 1 in 20 has swollen glands, stiff neck, or joint pains. About 1 in 100 has a rash, which is non-infectious. Thrombocytopenia (bruising or bleeding) occurs after a first dose of MMR at a rate of about 1 in 30 500.</td>
<td></td>
</tr>
<tr>
<td>by droplets; causes fever; rash;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>swollen glands, but causes severe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>malformations in babies of infected pregnant women.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disease</td>
<td>Effects of disease</td>
<td>Side effects of vaccination</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Tetanus - caused by toxin of bacteria in soil; causes painful muscle spasms, convulsions, lockjaw.</td>
<td>About 1 in 10 patients dies. The risk is greatest for the very young or old.</td>
<td>As for DTPa vaccine (see diphtheria).</td>
</tr>
<tr>
<td>Varicella (chickenpox) - caused by highly contagious virus; causes low-grade fever and vesicular rash. Reactivation of the virus later in life causes herpes zoster (shingles).</td>
<td>1 in 5000 patients develop encephalitis (brain inflammation). About 3 in 100,000 patients die. Infection during pregnancy can result in congenital malformations in the baby. Onset of infection in the mother from 5 days before to 2 days after delivery results in severe infection in the newborn baby in up to one-third of cases.</td>
<td>About 1 in 5 has a local reaction or fever. A mild varicella-like rash may develop in 3-5 per hundred recipients.</td>
</tr>
</tbody>
</table>
**Commonly observed adverse events following immunisation and what to do about them**

All the common adverse events following immunisation are usually mild and transient and treatment is not usually required. If the adverse event following immunisation is severe or persistent, or if you are worried about yourself or your child’s condition, see your doctor or immunisation clinic nurse as soon as possible or go to a hospital.

**Commonly observed adverse events (conditions) following specific vaccines used in the National Immunisation Program Schedule (NIPS)**

<table>
<thead>
<tr>
<th>Varicella</th>
<th>Measles, Mumps, Rubella</th>
<th>Meningococcal</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Localised pain, redness &amp; swelling at injection site</td>
<td>- Occasionally injection site nodule – may last many weeks (no treatment needed)</td>
<td>- Irritable, crying, unsettled and generally unhappy</td>
</tr>
<tr>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
<td></td>
<td>- Loss of appetite</td>
</tr>
<tr>
<td>- Low grade temperature (fever)</td>
<td></td>
<td>- Headache (usually observed in adolescent/adults)</td>
</tr>
<tr>
<td>Seen 5-26 days after vaccination:</td>
<td></td>
<td>- Localised pain, redness &amp; swelling at injection site</td>
</tr>
<tr>
<td>- Pustular rash (2-5 lesions) usually at injection site which occasional covers other parts of the body</td>
<td></td>
<td>- Occasionally injection site nodule – may last many weeks (no treatment needed)</td>
</tr>
</tbody>
</table>

**Vaccines containing diptheria, tetanus, pertussis**

<table>
<thead>
<tr>
<th></th>
<th>Influenza</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Irritable, crying, unsettled and generally unhappy</td>
<td>- Drowsiness or tiredness</td>
<td></td>
</tr>
<tr>
<td>- Drowsiness or tiredness</td>
<td>- Muscle aches</td>
<td></td>
</tr>
<tr>
<td>- Localised pain, redness &amp; swelling at injection site</td>
<td>- Localised pain, redness &amp; swelling at injection site</td>
<td></td>
</tr>
<tr>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Low grade temperature (fever)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hepatitis B**

<table>
<thead>
<tr>
<th>Haemophilus influenzae type B (Hib)</th>
<th>Pneumococcal 23vPPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Localised pain, redness &amp; swelling at injection site</td>
<td>- Localised pain, redness &amp; swelling at injection site</td>
</tr>
<tr>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
</tr>
<tr>
<td>- Low grade temperature (fever)</td>
<td>- Low grade temperature (fever)</td>
</tr>
</tbody>
</table>

**Pneumococcal 7vPCV**

<table>
<thead>
<tr>
<th>Hepatitis A</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Localised pain, redness &amp; swelling at injection site</td>
</tr>
<tr>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
</tr>
<tr>
<td>- Localised pain, redness &amp; swelling at injection site</td>
</tr>
<tr>
<td>- Occasionally, injection site nodule – may last many weeks (no treatment needed)</td>
</tr>
<tr>
<td>- Low grade temperature (fever)</td>
</tr>
</tbody>
</table>
What to do to manage injection site discomfort

Many vaccine injections may result in soreness, redness, itching, swelling or burning at the injection site for 1 to 2 days. Paracetamol might be needed to ease the discomfort. Sometimes a small, hard lump may persist for some weeks or months. This should not be of concern and requires no treatment.

Managing fever after immunisation

Give extra fluids to drink. Do not overdress the baby if hot. Although the routine use of paracetamol at the time of vaccination is no longer necessary, it may be needed if, for example, an infant or child appears to be in discomfort.

Watching for and recording infections in children

CHECKING FOR SYMPTOMS OF ILLNESS

Because you care for the children in your group every day, you are probably used to the way each of them looks and behaves when they are healthy. This will help you to notice quickly when one of them is sick.

Symptoms

Be aware of symptoms of illness throughout the day. These are some of the things to look for to help you answer the question, ‘Is this child sick?’:

• unusual behaviour (child is cranky or less active than usual, cries more than usual, seems uncomfortable or just seems unwell);

• feverish appearance (see ‘A child with a fever’, page 21);

• diarrhoea (an increase in the frequency, runniness or volume of the faeces);

• vomiting;

• loss of appetite;

• conjunctivitis (tears, eyelid lining is red, irritated eyes, followed by swelling and discharge of pus from eyes);

• unusual spots or rashes;

• patch of infected skin (crusty skin or discharging yellow area of skin);

• grey or very pale faeces;

• unusually dark, tea-coloured urine;

• yellowish skin or eyes;

• sore throat or difficulty in swallowing;

• headache, stiff neck;

• severe, persistent or prolonged coughing (child goes red or blue in the face, and makes a high-pitched croupy or whooping sound after coughing);

• frequent scratching of the scalp or skin; and

• breathing trouble (particularly in babies under 6 months old).

What to do if a child seems unwell

• Tell the director and inform the parents that the child needs to go home as soon as practicable.

• Separate the child from other children. The child can still remain in the room, as long as interaction and sharing objects with other children does not occur. If they have vomiting, diarrhoea or suspected measles, the need for separation becomes particularly important.
• Remind a child who is coughing or sneezing to cough into their elbow. This reduces the risk of the child then contaminating other children and their surroundings. If the child covers their mouth with their hands, ask the child to wash and dry their hands afterwards.
• If you wipe a child’s nose, dispose of the tissue in a plastic-lined rubbish bin, and then wash and dry your hands;
• If you touch a child who might be sick, avoid touching other children until after you have washed your hands;
• Keep moist skin conditions and abrasions covered;
• Encourage parents to tell you when anyone in the family is ill. If someone in the family is sick, watch for signs of illness in the child; and
• If a child vomits or has diarrhoea, ensure spills are cleaned up promptly.

**Reporting to the parent and doctor**

It may be useful for the parents and the child’s doctor to have written information on the child’s illness. A sample report form is given on page 20. A photocopy of this form should be kept in the child’s file.

**SAMPLE RECORD OF ILLNESS IN THE CENTRE**

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Symptoms</th>
<th>Room or Group</th>
<th>Date</th>
<th>Time of Onset</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Smith</td>
<td>2</td>
<td>Rash on head and neck</td>
<td>Toddlers</td>
<td>16/1/06</td>
<td>2 p.m.</td>
<td></td>
</tr>
<tr>
<td>Amy Johnson</td>
<td>6 months</td>
<td>Fever, runny nose</td>
<td>Babies</td>
<td>17/1/06</td>
<td>1.30 p.m.</td>
<td></td>
</tr>
<tr>
<td>Jason Brown</td>
<td>4</td>
<td>Weeping eye</td>
<td>Pre-school</td>
<td>17/1/06</td>
<td>4 p.m.</td>
<td></td>
</tr>
<tr>
<td>June Jones</td>
<td>Staff</td>
<td>Weeping eye</td>
<td>Pre-school</td>
<td>17/1/06</td>
<td>5 p.m.</td>
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**Remember**

A record of illness in the centre must be kept as a confidential document.

**Symptoms** Record what you see as best you can.

**When** Record when you first noticed the illness. You may wish to include further information, for example, the action taken (exclusion for four days, review of nappy changing practices etc.) and the doctor’s diagnosis.
SAMPLE REPORT FORM FOR PARENT/DOCTOR

Make copies of this letter for easy use

Child Care Centre: ________________________________________________________________

Address: _______________________________________________________________________

Contact person: __________________________________________________________________

Phone: __________________________________________________________________________

Dear Parent/Doctor,

Re: (child’s name) ___________________________ Date of birth: _____ / _____ / ______

Child has: (comments, including time observed, number of times, severity)

• Vomiting
• Diarrhoea
• Rash (description of rash and where rash started)
• Other

There has/is not been recent similar illness in other children in the centre.

The diagnosis in the other children was:

The public health unit is/is not involved.

The child appears to have a fever. Yes/ No

The child has eaten ______________________________________________________________

The child has drunk ______________________________________________________________

The child last passed urine at _____________ (time).

Parent contacted by ___________________________ at ______________ (time).

Signed: _________________________________________

Date: _____ / _____ / _____ Time ___________
A child with a fever

All children will occasionally have an elevated temperature (fever). Having a fever is one of the most common reasons for children to see a doctor and it is one of the symptoms that cause most worries for parents. The definition of a fever is an oral (mouth) temperature greater than 37.5°C or an axillary (armpit) temperature greater than 37°C. Normal body temperature may vary quite considerably according to the age of the child and the time of day.

Bringing a temperature down

Fever is one of the mechanisms the body uses to get rid of germs. There is no doubt that fever can make a child (or an adult) feel miserable, quite apart from the symptoms of the condition causing the fever. Many people worry as soon as a child gets a fever and think they must immediately try to bring it down. This is usually unnecessary as fever in itself is not harmful. Fever is a sign that suggests there is an infection, and is a sign that the body is fighting the infection.

If a child has a fever, ensure the child drinks plenty of water and excessive clothing is removed. Avoid cold-water sponging that makes the child shiver. If sponging will make the child feel more comfortable, use lukewarm water.

There is some evidence that giving medications to reduce the fever can slow the body’s immune response to infection. In most instances we should not be worrying about treating the fever itself - we should be focusing our attention of the way the child looks, behaves, the level of alertness and whether there are any other symptoms such as vomiting or cough.

Paracetamol is often given to ‘bring a fever down’. Many paediatricians would argue that we are giving young children too much paracetamol. Paracetamol is safe when given in recommended doses, but an overdose can cause liver failure.

It is very important to read the label carefully as paracetamol for children comes in different strengths and formulations. It is essential that the dosage is appropriate for the weight of the child. Follow the instructions on the bottle or box.

Ibuprofen is another over-the-counter medication that is sometimes used as an alternative to paracetamol. This is also relatively safe, although it is to be avoided in a child allergic to aspirin or other anti-inflammatory medication or if the child has gastrointestinal disease or asthma.

Medication including paracetamol and ibuprofen should only be given according to the centre’s medication policy.

Aspirin should never be given to children because of its side effects. It can cause stomach upset, gastric bleeding and is associated with a rare but potentially fatal condition called Reye’s Syndrome.

Keeping records

A record should be kept of any illness at the centre. Remember to record illness in both staff and children. It is important to record which part of the centre the child or adult was in for most of the day. A sample record is shown on page 20.

Keeping records can be a factor in preventing the spread of infection. Records can demonstrate when your approach to infection control is working. They are invaluable in helping you and public health workers identify the cause of any outbreak and how to control it.

Administration of medication

Administering medication to children at the request of their parents is a task that requires attention to detail, meticulous record keeping, team work and common sense.
It is a responsibility that must be taken seriously, due to the potential health risks, and litigation issues that may arise as a result of incorrect administration.

In the interest of children’s safety and well-being, the centre should only administer medication if the medication is in its original container with the dispensing label attached listing the child as the prescribed person and the dosage to be given. This applies to all medications; regardless of whether they are non-prescribed (such as teething gels, nappy creams, cough medicines etc) or prescribed (antibiotics etc). Pharmacies can provide dispensing labels for non-prescribed medication.

An example of a Medication Permission Form is provided on page 23.

**RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF**

- During orientation clearly explain to parents the centre’s policy for administering medication, including paracetamol. It is important that parents understand both the centre’s expectations and the parents’ responsibilities prior to the child becoming ill.

- Explain to all parents the centre is unable to administer medication unless it is in its original container with the dispensing label attached listing the child as the prescribed person and the dosage to be given.

- Ensure parents fully complete the medication record form.

- Ensure parents deliver medication to a staff member, so that it can be stored securely (out of children’s access) and at the recommended temperature (eg in the fridge, cupboard etc). It is vital that medication is not left in the children’s bags where children may gain access.

- Ensure medication is administered promptly at the prescribed intervals.

- All medication must be checked by two staff members before being administered to children. The medication record form is to be signed by the staff member administering the medication and the staff member who has cross-checked that the correct medication and dose has been given to the correct person at the right time according to the Medication Permission Form.

- Advise parents that the centre is unable to administer a medication at a different dosage or frequency other than that recommended on the medication label, unless alternative written advice is received from a medical practitioner.

- Advise parents that the centre will not administer medication that is labelled for another person or that is past the recommended ‘use by’ date.

- Use of nebulisers is permitted providing parents demonstrate their use to staff to ensure correct administration.

- The centre’s medication policy should address the management of unused medication or medication that needs to be returned for use at home.

**RESPONSIBILITIES OF PARENTS**

- Complete/review a medication permission form at least weekly when the child attends and medication is required. These forms should include details such as the name of the child, the name of the medication, dosage, storage requirements, how it is to be administered (eg ear drops, oral medicine, nebuliser etc) and how often it is to be administered.

- Hand the medication and the medication record form to the child carer upon arrival at the centre. Parents must not leave medication in the child’s bag.

- Collect medication on departure from the centre.

- Confirm the child was given the required medication by speaking with appropriate staff on collection of the child.
MEDICATION PERMISSION FORM

In the interest of children’s safety and well-being, the centre shall only administer medication if it is in its original container with the dispensing label attached listing the child as the prescribed person, strength of drug and the frequency it is to be given. This applies to all medications, regardless of whether they are non-prescribed (such as teething gels, nappy creams, cough medicines, etc.) or prescribed (antibiotics etc.).

Child’s full name: ________________________________________________

Medical Practitioner/Chemist etc: ____________________________________

Medication:

Name of medication ________________________________________________

Date prescribed ____________________________________________________

Expiry date of medication ____________________________________________

Reason for medication ______________________________________________

Storage requirements ________________________________________________

Time and date of last dose given _____________________________________

I request that the above medication be given in accordance with the instruction below:

Please complete table and list any detailed instructions in the box eg route (eg. oral, inhaler), dose (eg thin layer, no. of drops/mls/tablets), before or after food.

Instructions:

Parent’s full name__________________________________________________ Date: ___/___/____

Signature________________________________________________________________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Dosage</th>
<th>Time to be given</th>
<th>Time medication actually given</th>
<th>Signature of staff administering medication</th>
<th>Signature of staff cross-checking medication</th>
<th>Comments</th>
</tr>
</thead>
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* Details should be reviewed at least 3-monthly.
Cover your cough to control the spread of germs

Some infections such as measles, whooping cough and influenza, are spread when an infected person sneezes or coughs out tiny airborne droplets. The droplets in the air may be breathed in directly by another person, or indirectly, enter another person through contact with surfaces and hands with the droplets on them.

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Birthday cakes and blowing out candles

When it is a child’s birthday, many children like to bring a cake to share with their friends. One of the ways of minimising the spread of droplet infection, is to encourage parents to provide individual cupcakes with a single candle on the birthday child’s cake.

Play dough

Play dough can be great fun. Play dough has a high salt content which discourages germs from living and multiplying. The following simple steps will reduce the risk of spread of disease when using play dough:

- Hand washing before and after using play dough;
- Store the play dough in a sealed container in the refrigerator between uses;
- Make a new batch of play dough each week;
- If there is an outbreak of vomiting and/or diarrhoea, discard play dough at the end of the day and make a new batch each day during the outbreak.

Nappy changing and toileting

Have an area specifically set aside for changing nappies. Do not share the same nappy change mat with children from another room unless it has been effectively cleaned.

Check to make sure that all the supplies you need are ready.

Get a walking child to walk to the change area.

Carrying a child away from your body is only necessary if there are faeces on the child and/or their clothing.

Disposable nappies may reduce the risk of infections as disposable nappies do not ‘leak’ as easily as cloth nappies and are able to be disposed of immediately.

Use the following method to stop disease spreading through contact with faeces:
• Place paper on the change table.
• Always wear gloves when changing nappies.
• Remove the child’s nappy and any clothes with urine and/or faeces on them.
• Clean the child’s bottom.
• Remove the paper and put it in a ‘hands-free’ lidded bin.
• Remove your gloves now, before you touch the child’s clean clothes. Remove gloves by peeling them back from your wrists, turning them inside out as you go. Do not let your skin touch the outer contaminated surface of the glove. Put the gloves in the bin.
• Dress the child. Wash and dry the child’s hands. Now you can hold the child close to you.
• Take the child away from the change table.
• Clean the change table with detergent and warm water, paying particular attention to the mat, at the completion of each nappy change.
• Wash your hands.

CLOTH NAPPIES
If a parent provides cloth nappies for their child’s use, ensure the parent also provides ‘plastic pants’ to help prevent faeces, and therefore germs, from leaking. Wearing clothing over plastic pants also reduces the number of germs from the bowel being transferred to surfaces in the centre. It is a good idea for the nappy and the plastic pants to be covered with clothing at all times. Parents need to be aware that cloth nappies with urine and/or faeces will not be rinsed or washed at the centre. They are to be placed into a plastic bag and laundered at home.

PAPER ON THE CHANGE TABLE
Every time a child has their nappy changed, germs are put on the change table. By placing a piece of paper on the change table many of the germs from the child are kept on the paper and do not contaminated the table at all. The paper is removed in the middle of the nappy change, before the child’s clean clothes are put on, the paper and the germs are then put in the bin. Any paper can be used for this; paper towel is easy to use but can be expensive, greaseproof paper is another alternative.

GLOVES
Gloves should be worn when changing nappies because there are always billions of germs in faeces.

CLEANING THE CHILD
Damp paper towels, premoistened towelettes or disposable cloths may be used to clean the child. However, each towel must be removed immediately after use and put in the bin. Wet the towels with water from the tap or poured from bottles. Don’t reuse water from a bowl.

CLEANING THE NAPPY CHANGE TABLE
Use this method to help keep the nappy change table clean.
• After each change and at the end of the day, thoroughly wash the table (mat) well with detergent and warm water. Use paper towel for cleaning and drying the surface.
• If faecal matter spills onto the change table (mat) clean with detergent and warm water, dry with paper towel.
• Wash and dry your hands.

Mattresses and covers used on the nappy change table need to be smooth and in good condition because germs can survive in cracks, holes, creases, pleats, folds or seams.
TOILET-TRAINING

- Ask parents to supply several changes of clothing.
- Place soiled clothes in a plastic bag, tying the top firmly, for parents to take home at the end of the day. Soiled clothes will not be rinsed or washed at the centre. (Explain to parents that washing soiled clothes at the centre can spread germs.)
- Help the child use the toilet.
- Help the child wash and dry their hands. Ask older children if they washed and rinsed their hands, counting slowly to 10 or singing for this length of time. Explain to the child that washing their hands and drying them properly will stop germs that might make them sick.
- Using a potty chair increases the risk of spreading disease. If the child can use a toilet this is preferable. If the child must use a potty chair the contents into the toilet and wash the chair. Do not wash it in a sink used for washing hands.
- Wash your own hands.

Cleaning the centre

WASHING GERMS AWAY

Washing germs down the drain is better than trying to kill germs with disinfectant. Ordinary detergents help to loosen the germs so that they can be washed away.

Use colour-coded sponges in each area (for example blue in the bathroom, yellow in the kitchen) and keep them separate.

To protect your hands, wear general purpose rubber gloves when cleaning and hang them outside to dry when finished. Wash and dry your hands after removing the gloves.

DISINFECTANTS

Disinfectants are usually unnecessary. Most germs do not survive for long on clean surfaces when exposed to air and light. Even in hospitals, the emphasis is on the use of detergent and effective cleaning and drying procedures rather than disinfectants.

In an outbreak situation, public health units may specify the use of a particular disinfectant. In this situation, for the disinfectant to work effectively, there still needs to be thorough cleaning using a detergent beforehand.

There is no ideal disinfectant.

Disinfectants cannot kill germs if the surface is not clean. It is more important to make sure that all surfaces have been cleaned with detergent and warm water than to use a disinfectant.

To kill germs, any disinfectant needs:

- a clean surface to be able to get to the germ.
- to be able to act against those particular germs.
- to be of the right concentration.
- enough time to kill the germs. This is at least 10 minutes.

Even when all of these conditions are met a disinfectant will not kill all the germs present. For example in one teaspoon of faeces there may be 1,000,000,000,000 particles of a virus. After 10 minutes a disinfectant may kill 99.99% of them. This sounds like many of them were killed, but because there were so many present, the disinfectant may have left around 100,000,000 still alive. Less than 100 of these virus particles can be enough to make another child sick.
**DETERGENTS**

Effective cleaning with detergent and warm water, followed by rinsing and drying removes the bulk of germs from surfaces. Germs are unable to multiply on clean, dry surfaces. Ensure that cleaning equipment is cleaned and stored so it can dry between uses. It should be well maintained, and designed to reduce dust during use. Appropriate equipment includes mops with detachable heads (to allow for laundering in washing machine using hot water) or cloths that are disposable or can be laundered.

<table>
<thead>
<tr>
<th></th>
<th>Wash daily plus when visibly soiled</th>
<th>Wash weekly plus when visibly soiled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bathrooms.</strong></td>
<td>✑</td>
<td>✑</td>
</tr>
<tr>
<td>✗</td>
<td>✑</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Toys and objects put in the mouth.</strong></td>
<td>✑</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Surfaces</strong> the children have frequent contact with, for example, bench tops, taps, cots and tables.</td>
<td>✗</td>
<td>✑</td>
</tr>
<tr>
<td><strong>Mattress covers and linen,</strong> if each child does not use the same mattress cover every day.</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Door knobs.</strong></td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Floors.</strong></td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Low shelves.</strong></td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Other surfaces</strong> often touched by children.</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

**SPECIAL AREAS FOR CLEANING**

**Nappy change area**

Clean the nappy change area (table or mat) thoroughly after each nappy change with detergent and warm water. If faecal matter spills onto the change table or mat, clean with detergent and warm water and leave to dry. At the end of the morning and at the end of the day, remove the mat; wash with warm water and detergent and leave to dry, preferably in the sun.

**Clothing**

Staff clothing, or over-clothing, should be washed daily. Staff may wear overclothes, such as aprons to cover clothing that cannot be washed daily. Another option is for staff to have a change of clothing available for ‘accidents’ or after dealing with potentially infectious situations. These measures also help to protect the families of child care staff when they return home.

The children’s dress-up clothes should also be washed regularly. We recommend washing them once a week in hot water and detergent.
Linen
Wash linen in hot water. Do not carry used linen against your own clothing or overalls. Instead, take it to the laundry in a basket or plastic bag. Treat soiled linen as you would a dirty nappy. If washed at the centre, soiled linen should be:

- soaked to remove the bulk of the contamination;
- washed separately in hot water; and
- dried in the sun or on a hot cycle in the clothes dryer.

Wear gloves when handling soiled linen.

Dummies
Dummies must never be shared by children. When not in use, dummy should be stored in individual plastic containers. Each container should have the child’s name on it. Do not store dummies where they may come in contact with another dummy or toy. Store dummies out of children’s reach.

Toothbrushes
Toothbrushes must never be shared by children. Toothbrushes should be labelled with the child’s name. Store them out of the reach of children. Do not let them drip on one another. The bristles should be exposed to the air and allowed to dry. Do not store toothbrushes in individual containers because this stops them from drying. Bacteria grow on wet toothbrushes.

Cots
If a child soils a crib or cot:

- Put on gloves.
- Clean the child.
- Remove your gloves.
- Dress the child.
- Wash and dry the child’s hands.
- Wash and dry your hands.
- Put on gloves.
- Clean the cot.
- Place soiled linen in a lined, lidded laundry bin.

- Remove bulk of soiling/spill with absorbent paper towels.
- Remove any visible soiling by cleaning thoroughly with detergent and water.
- Remove gloves.
- Wash and dry your hands.
- Provide clean linen.

Toys
Washing toys effectively is very important to reduce spread of disease. Toys, especially those in rooms with younger children, need to be washed at the end of each day. Warm water and detergent help to loosen the germs so that they can be washed away.

Remove toys for washing during the day. Start a ‘Toys to Wash’ box and place toys in it during the day if you see a child sneeze on a toy, if it has been mouthing or if the toy has been discarded after play by a child who is unwell.

In the nappy change area have a box of clean and a box of ‘to-be-washed’ toys. Give a child a clean toy if they need one while being changed and after the nappy change place it immediately in the ‘Toys to Wash’ box.

- Buy only washable toys. Avoid non-washable toys. Individual non-washable toys may be assigned to a child and kept in the child’s cot for the use of that child only.
- Wash toys daily in warm water and detergent, rinse them well and dry them. Many toys can be cleaned in the dishwasher.
- All toys, including cloth toys and books, can be dried by sunlight.
- It is useful to separate toys into baskets. The toys in each basket can then be rotated between washing one day and in use the next.
- Books should be inspected for visible dirt and soiling. Books can be cleaned by wiping them with a moist cloth with detergent on it, and then drying them. Leave damp or wet books out of circulation until dry.
Wading pools

Wading or paddling pools should be emptied after use, cleaned and dried prior to storage. Children should go to the toilet before using the pool. If a child passes a bowel motion while in the pool, remove all children from the pool immediately. Empty the pool, clean it thoroughly and refill.

Centres should be aware of their state’s or territory’s legislation regarding pools and pool fencing. For further advice regarding water quality, contact your local public health unit.

Dealing with spills of blood, faeces, vomit, urine and nasal discharge

PREVENTION IS BETTER THAN CURE.

Accidental spills and secretions of body fluids are a fact of life within a child care centre. Managing these spills includes:

- Avoiding direct contact with blood or other fluids.
- When cleaning or treating a child’s face which has blood on it, ensure you are not at eye level with the child. If you are at eye level and the child is upset, there is a chance, through their crying or coughing for their blood to enter your eyes or mouth. If blood does enter the eye, rinse the eyes, while they are open, gently but thoroughly for at least 30 seconds. If blood does enter the mouth, spit it out and then rinse the mouth with water several times.24
- Wear gloves if possible.
- Cover any cuts and abrasions on your hands with a waterproof dressing. Healthy, intact skin is an effective barrier against you becoming infected from spilled blood and other body fluids.
- Supervise children at all times, ensuring safety and safe play is a priority at all times. When a child is injured, there are several things you will need to do. These include looking after the child, sending for the first aid officer, checking that no-one else has come in contact with the injured child’s blood, and cleaning up the blood.
- Regularly toilet children.
- Use disposable nappies rather than cloth.
- Exclude children with diarrhoea and/or vomiting.
- It is suggested that the centre stores equipment to be used for body fluid spills together to enable rapid ease of access.

DISCARDED NEEDLES AND SYRINGES

Another potential source of exposure to blood is from discarded needles. If your centre is at risk check the grounds at the beginning of each day.

If you find a discarded syringe:25

- Do not attempt to recap the needle;
- Find a rigid-walled, puncture resistant, sealable container;
- Put on gloves;
- Bring the container to the needle/syringe;
- Pick up the needle/syringe by the middle;
- Keep the sharp end of the needle away from you at all times;
- Place the needle/syringe in the container, sharp end first;
- Securely place lid on the container;
- Place the sealed container into the rubbish bin; and
- Remove gloves and wash and dry hands.
If a needlestick injury occurs:

- Stay calm;
- Staff should wear gloves and encourage the wound to bleed (gently squeeze);
- Wash the area with cold running water and soap (if available);
- Apply an antiseptic and bandaid; and
- As soon as possible contact the director and the child’s family. Advice should be sought from a doctor, hospital, sexual health clinic or community health centre for advice about the need for HIV and hepatitis B/C testing, counselling and possible hepatitis B immunisation.

THE CHILD

- When attending an injured child who is bleeding, take care to avoid contact with the blood.
- Comfort the child and move them to safety.
- Apply pressure to the bleeding area. Use gloves if available. (If gloves are not available, take the first opportunity to get someone wearing gloves to take over from you. Then wash and dry your hands.)
- Raise the injured part above the level of the heart, unless you suspect a broken bone.
- Send for the person with first aid training.
- When the wound is covered and no longer bleeding, remove gloves. Put them in a plastic bag and place the bag in the rubbish bin.
- Wash your hands thoroughly with soap and water.

THE FIRST AID OFFICER:

- Wear gloves if there is time.
- Dress the child’s wound with a bandage or suitable substitute and seek medical assistance.
- Remove gloves. Put them in a plastic bag and place the bag in the rubbish bin.
- Wash hands thoroughly with soap and warm water.

BLOOD EXPOSURE

Because of the risk of infection, it is important for everyone to avoid contact with an injured child’s blood. But if it does spill onto another adult or child, take the following precautions:

- Wash the area of contact thoroughly with soap and warm water.
- If contact has been with an open wound, broken skin, mucous membrane (mouths, eyes, genitals) or a penetrating injury:
  - if the blood contacted your mouth or your eyes, rinse the area very well with water.
  - if the blood contacted a wound or broken skin, wash the area thoroughly with soap and water.
  - seek medical advice.

DEALING WITH BLOOD SPILLS

- Wear gloves.
- Place paper towel over the spill. Carefully remove the paper towel and contents. Place the paper towel and gloves in a plastic bag, seal the bag and put it in the rubbish bin. If there is a large spill in a ‘wet area’, such as a bathroom or toilet area, you may be able to carefully wash the spill into the sewerage system instead of using paper towels.
• Put on new gloves and clean the surface with warm water and detergent, and allow to dry.
• Remove and discard gloves.
• Wash hands thoroughly with soap and warm water.

**DEALING WITH Faeces, Vomit and Urine**

• Wear gloves.
• Place paper towel over the spill. Carefully remove the paper towel and contents. Place the paper towel and gloves in a plastic bag, seal the bag and put it in the rubbish bin.
• Put on new gloves and clean the surface with warm water and detergent, and allow to dry.
• Remove and discard gloves.
• Wash hands thoroughly with soap and warm water.

**DEALING WITH NASAL DISCHARGE**

Washing your hands every time after you wipe a child’s nose will reduce the spread of colds. If you cannot wash your hands after every nose wipe, use gloves and clean tissues which must be disposed of safely and appropriately. Remove the glove by pulling over the hand covering the tissue at the same time.

### Sandpits

Sandpits can be great fun. They are also a potential source of infection. They need to be well maintained and kept clean.

Sandpits must be closely covered when the child care centre is unattended to prevent contamination from animal faeces or inappropriately discarded sharp or dangerous objects such as broken glass.

The sand should be raked over before each use to help screen for foreign objects. Sandpits should be dug over to a depth of about 25cm at least monthly to reduce moisture in the sand, which can turn the sand ‘sour’.

Sand that is contaminated by animal or human faeces, blood or other body fluids should be removed. Use a shovel and dispose of the sand in a plastic bag. The remaining sand should be raked over at intervals during the day and left exposed to the sun. Where extensive contamination has occurred, all sand should be replaced.

Children must wash and dry their hands with soap and water after playing in the sandpit.

### Animals

In child care settings, animals should generally be kept separate from children. While animals can be a great source of joy and stimulation for children they can also be a source of infectious disease. If children do have contact with animals, they should be closely supervised.

Bacteria and viruses can be present on the skin, hair, feathers and scales of animals and in their faeces and urine. Even fish can carry bacteria. The mouths and claws of animals can carry bacteria which can cause infections in flesh around bites and scratches, and eventually, if untreated, may spread into the bloodstream.

Some simple preventative measures will minimise risks to health from supervised contact with animals.

- Children should be discouraged from playing with animals while animals are eating.
- Don’t let children put their faces close to animals.
- Make sure that children wash and dry their hands after touching animals.
• Ensure that animals are treated, wormed and immunised as recommended by a vet.
• Clean fish tanks regularly.
• Animals that are ill should be treated promptly by a vet. An animal that is irritable because of pain or illness is more likely to bite or scratch.
• Do not allow animals to contaminate sandpits, soil, pot plants and vegetable gardens.
• Always wear gloves when handling animal faeces, emptying litter trays and cleaning cages.
• Dispose of animal faeces and litter daily and more often if necessary. Place faeces and litter in a plastic bag and put it out with the garbage.
• Pregnant women in particular should avoid contact with cat faeces.
• If you have a bird cage, wet the floor of the cage before cleaning it to avoid inhalation of powdered, dry bird faeces.
• Avoid bringing in or keeping ferrets, turtles, iguanas, lizards or other reptiles, pittacine birds (birds of the parrot family) or any wild or dangerous animals.
• Children should not assist in the cleaning of bird cages, fish tanks or other animal cages or pens.

Fish and other marine organisms
Scratches from fish and other marine organisms such as coral can cause unusual infections. If an injury caused by a fish, or a wound contaminated by sea, pond, or aquarium water, becomes infected, it is important to see your doctor and explain how the injury occurred.

Fleas
Fleas infect both animals and humans causing irritation and inflammation of the skin. Treat animals, their bedding and their immediate environment (that is, where they usually rest) to destroy adult and immature fleas.

Food safety
The prevention of food borne illness involves attention to hygiene, proper handling and preparation of food and care during food storage and distribution.

Food handlers should not prepare food if they have a disease likely to be transmitted through food, eg gastroenteritis, hepatitis A, norovirus and they should advise the director.

You should be aware of your responsibilities under your state or territory food safety legislation.

GETTING READY FOR MEALS AND SNACKS
• Before meals, clean tables that are to be used for the meal.
• Wash and dry your hands before preparing or serving food. If you are interrupted to care for another child while preparing food or spoon-feeding an infant, be sure to wash and dry your hands again before you continue.
• Check that all the children’s hands are washed before they eat or drink.

Bat bites
Australian bats harbour a Lyssavirus which is very similar to the rabies virus. Only people who are immunised with rabies vaccine should approach or handle bats. If you are scratched or bitten by a bat, immediately clean the wound by washing gently but thoroughly with soap and water for at least 5 minutes, apply a povidone-iodine or alcohol-based antiseptic and contact your doctor or a public health unit as soon as possible.
• Teach children to turn away from food when they cough or sneeze, and then to wash and dry their hands.

• If children are serving themselves from the same container, they must be supervised and utensils used to prevent children from touching food that other children will eat. This will assist to maintain food safety while also encouraging children to develop independence and self-help skills.

• Use a separate spoon for each baby you feed.

PREPARING FOOD

Food is an excellent place for bacteria to grow. Germs, such as viruses, do not grow in foods but can still be passed from one person to another in food. Bacteria that are common on our skin and in the environment can cause food poisoning if allowed to grow to large numbers in food.

Child care centres where staff members change nappies and prepare or serve food on a daily basis have over three times as much diarrhoea as centres where staff do not do both these jobs. For this reason, the person who prepares and serves food should not be the person who changes nappies or helps children go to the toilet on that day.

The child care centre should have a hand basin with hot and cold water, soap and disposable towels in the kitchen so that staff who are preparing food can easily wash and dry their hands. Staff should tie back long hair and wear a clean apron when working in the kitchen. The kitchen should be fly and pest proof.

If you are involved in handling, preparing or serving food (including giving a baby a bottle), remember these basic points:

• Wash and dry your hands. Wearing jewellery will make it harder to clean your hands effectively and will require extra attention.

• If you have cuts or wounds on your hands make sure they are completely covered by a waterproof dressing. The use of disposable gloves over the dressing will provide an extra level of protection.

• To prevent cross-contamination between raw and cooked foods:
  - keep raw and cooked foods separate (even in the fridge),
  - do not keep uncooked food above cooked food in the fridge, and
  - use separate utensils (including cutting boards, knives, etc) for raw and cooked food.

• Keep food hot (over 60°C) or keep food cold (5°C or less); otherwise don’t keep it at all.

• While the legal requirement for reheating food is 60°C, it is recommended that food should be reheated to 70°C for 2 minutes. Heating to this temperature will destroy germs that may have grown in the food. The reheating to 70°C is recommended as the centre does not know if the food has been cooked, stored and transported to the centre correctly. The best way of checking food temperatures is with a probe thermometer.

• Ensure the food is allowed to cool before it is given to the child to eat. Remove a small piece of food with a spoon to another plate and test the temperature of the food with your hand. Throw this piece of food away and wash the spoon.

• Keep a non-mercury thermometer in your fridge so that you can check that the temperature is 5°C or less.

• Throw out left-overs. Tell parents what their child left, but do not return the left-over food.

• Heat food once only.

• Heat milk for bottles once only.
THE '4-HOUR/2-HOUR RULE'
The 4-hour/2-hour rule provides guidelines regarding the safety of food when it has not been stored under 5°C or over 60°C. Ready-to-eat food that has been at temperatures between 5°C and 60°C:

- for a total of less than 2 hours, must be refrigerated or used immediately (do not reheat milk/formula)
- for a total of longer than 2 hours but less than 4 hours, must be used immediately
- for a total of 4 hours or longer, must be thrown out.

BREAST MILK
While breast milk is best for babies, containing immunological properties that are very important in preventing illness in babies, staff must be aware that it is a mother’s individual decision to breast feed/provide expressed breast milk. Mothers of breast-fed babies should be encouraged to provide expressed breast milk or to visit the centre to feed their babies. Encouraging words from child care staff go a long way to helping a mother who is trying to work and breast feed. Whilst encouragement and supportive practice to allow mothers to either feed their babies or provide expressed breast milk is important, mother who choose not to do so, or who are unable to do so, should not be made to feel they are experiencing any negative judgement from staff.

Breast milk can be stored in the refrigerator for 48 hours or in a deep freezer for 6 - 12 months, depending upon the deep freeze. Frozen breast milk should be thawed quickly—but don’t put it in boiling water or it will curdle. Place the container under cold running water. Gradually allow the water to get warmer until the milk becomes liquid. It is not recommended to use a microwave to thaw or warm expressed breast milk. Do not shake the thawed breast milk – roll gently to mix. Ensure the temperature is not excessive and there is no danger that the baby could be scalded.

Ensure breast milk is clearly labelled with the child’s name and the time and date the milk was expressed. Two staff members should check the label of the breast milk before it is given. Throw away any milk that is left over. Do not re-freeze or re-heat left-over milk. Ask mothers to supply breast milk in multiple small quantities to prevent wastage.

FORMULA
It is recommended that formula is prepared as required. When preparing formula, follow the manufacturer’s instructions carefully. Throw away any formula that is left over. Do not freeze or re-heat left-over formula. Ensure the bottles are clearly labelled with the child’s name and date the formula was made up.

WARMING BOTTLES
Do not warm bottles in the microwave. Microwave ovens distribute heat unevenly. Also, water in the milk turns to steam and collects at the top of the bottle. There is a danger that the baby could be scalded. There are special bottle warmers available.

CHILDREN AND COOKING
Children love to cook. Cooking is a safe and enjoyable activity for children in child care centres provided that a few simple precautions are taken.

- Always be aware of the dangers of heat.
- If they have had vomiting or diarrhoea they should not participate until they have not had any symptoms for 48 hours.
- Make sure children wash and dry their hands before starting.
- Tie up any long hair.
- Limit the type of food that children prepare to food that will be cooked. Gems in the food will be destroyed when the food is cooked.
• Foods suitable for children’s cooking include: cooked biscuits, fresh pasta, soups and pizza.

• Foods not suitable for children’s cooking include fruit salad and refrigerator biscuits.

• Risk will be minimised if food is consumed immediately after cooking.

Infectious disease issues for child care staff

Employers have a duty to take reasonable care of their own safety and health at work and to provide and maintain a work environment where their employees are not exposed to hazards. Employers must also ensure, as far as practicable, that the health of other people who are not employees is not harmed by their work.

Employees should take reasonable care for their own safety and health at work. They should also avoid adversely affecting the safety and health of children, staff members and other people.

KEY ACTIONS TO PREVENT INFECTIOUS DISEASES:

EXCLUSION OF SICK CHILDREN AND STAFF

Excluding sick children and staff is one of the most important ways, together with good hygiene and immunisation, of limiting the spread of infection in the child care centre. The spread of certain infectious diseases can be reduced by excluding a person who is known to be infectious from contact with others who are at risk of catching the infection. Staff, as well as children, need to adhere to the centre’s exclusion policy for infectious conditions (see page 5).

IMMUNISATION

Child care staff may be exposed to diseases that are preventable by immunisation including hepatitis A, measles, mumps, rubella, varicella and pertussis. Staff that have not previously been infected with or immunised against these diseases are at risk of infection. All of these diseases can cause serious illness in adults. Some of these diseases, such as rubella and chickenpox, can cause serious damage to an unborn baby if a woman is infected during her pregnancy. Child care staff will normally be at minimal risk of hepatitis B. If advice on risk is needed, ask the local public health unit.

Employers have an obligation to prevent or minimise the risk to childcare staff from exposure to diseases that are preventable by vaccination. Immunisation of staff is one effective way to manage the risk in childcare settings, as these diseases are usually infectious before the onset of symptoms.

The National Health and Medical Research Council (NHMRC) recommend that childcare staff should be immunised against:

- Hepatitis A.
- Measles-Mumps-Rubella (MMR). Childcare staff born during or since 1966 who do not have vaccination records of two doses of MMR, or do not have antibodies for rubella, require vaccination.
- Varicella, if they have not previously been infected with chickenpox.
- Pertussis. An adult booster dose is especially important for those staff caring for the youngest children who are not fully vaccinated.
- Although the risk is low, staff who care for children with intellectual disabilities should seek advice about hepatitis B immunisation if the children are unimmunised.
Employers should:

- develop a staff immunisation policy; this would state the immunisation requirements for childcare staff at the centre;
- develop a staff immunisation record; this should document previous infection or immunisation for the relevant diseases (as listed above). A sample staff immunisation record is provided below;
- require all new and current staff to complete the staff immunisation record;
- regularly update staff immunisation records as staff become vaccinated;
- provide staff with information about diseases that are preventable by immunisation; for example through in-service training and written material such as fact sheets; and
- take all reasonable steps to encourage non-immune staff to be vaccinated.

**SAMPLE STAFF IMMUNISATION RECORD FOR CHILD CARE STAFF**

Name: 

Date of Birth: ____/____/____

Address: 

The National Health and Medical Research Council (NHMRC) recommend that childcare staff should be immunised against:

<table>
<thead>
<tr>
<th>Disease/Vaccine</th>
<th>Disease</th>
<th>Vaccine</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, Mumps and Rubella*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pertussis (Whooping cough)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Childcare workers born during or since 1966 who do not have vaccination records of two doses of MMR, or do not have antibodies for rubella, require vaccination.
HAND WASHING
The principles of hand washing are detailed on page 3.

PREGNANCY AND INFECTIONOUS DISEASES
Child care staff who are pregnant need to be aware of how some infections can affect the unborn child. This is a good time for the centre to make sure that all workers are following good infection control practices.

Rubella (German measles)
Rubella is a vaccine-preventable disease. It is especially important for women of childbearing age to be protected against rubella. If a pregnant woman contracts rubella, her baby may be born deaf, blind or with heart and lung damage. If non-immune mothers catch rubella in the first 8-10 weeks of pregnancy, up to 90% of babies will have some rubella-associated problems. The risk decreases but continues until week 20 of pregnancy.35

Because rubella is difficult to diagnose, a past history of the disease is unreliable as a guide to immunity. A blood test will show whether or not you have had rubella. All child care staff born during or since 1966, either without vaccination records, or who have a negative blood test, should be vaccinated both for their own protection and to avoid the risk of transmitting rubella to pregnant colleagues.36 (Rubella vaccine should not be given to a woman known to be pregnant, and pregnancy should be avoided for 28 days after vaccination.)

Cytomegalovirus (CMV)
CMV infection in early pregnancy may affect the unborn child. The infant may be unaffected, deaf or have multiple abnormalities. Whether the baby is affected depends on many factors. The two main factors are previous CMV infection and the stage of pregnancy. The risk is very low if the mother has had CMV infection before. The risk of severe effects may be higher if the mother catches the disease in early pregnancy. People who have contact with young children and are exposed to children’s urine and saliva are at risk of CMV infection. Studies show that workers in child care centres are at a higher risk of contracting CMV than the general community, especially when caring for children younger than two years of age.37

Child care staff may wish to have a blood test for CMV immunity before becoming pregnant. This would allow them to make an informed decision about work practices and to discuss these with their doctor.

Toxoplasmosis
Child care staff are not at greater risk of contracting toxoplasmosis than other people. Toxoplasma infection in pregnancy may lead to congenital abnormalities. There is no risk if the mother has had the disease before, but this is often unknown. Toxoplasmosis is acquired from contact with cat faeces (e.g. in soil or sandpits) or eating poorly cooked meat.

If you are considering pregnancy, then a blood test will tell you if you have already had toxoplasmosis.

Parvovirus B19 (Erythema infectiosum, slapped cheek syndrome, fifth disease)
Parvovirus causes miscarriage or still-births in a small percentage of women infected during pregnancy. Malformations do not appear to occur in babies who survive this infection in the mother. The symptoms of this disease may include a ‘slapped cheek’ rash (red cheeks that look as though they have been slapped) or arthritis.

If there is a case in the centre, or a pregnant woman develops these symptoms, she should consult with her medical practitioner.
Varicella (Chickenpox)

Most child care staff will probably have had chickenpox as a child and will be immune. A blood test will tell if a person is immune to varicella. If they are not immune, vaccination is recommended for child care staff. \(^{38}\) (Chickenpox vaccine should not be given to a woman known to be pregnant, and pregnancy should be avoided for 28 days after vaccination.) Infection with chickenpox in the first three months of pregnancy may damage the unborn child.

Pregnant women who are exposed to chickenpox at any stage of the pregnancy should see their doctor as soon as possible after exposure. The doctor may give varicella zoster immunoglobulin (VZIG) following varicella infection exposure if the pregnant woman does not have antibodies to varicella. VZIG must be given within 96 hours of exposure. VZIG is an injection of antibodies against chickenpox.

By informing the public health unit, the centre benefits because public health staff may be able to help:

- identify the cause of the illness.
- explain the consequences to children and staff of an infection.
- trace the source of the infection (for example, contaminated food).
- advise on appropriate control measures (for example, vaccines, antibiotics, exclusion, education, infection control practices).

Public health staff can provide valuable advice and support and have access to resources that may be necessary to manage outbreaks.

The role of public health workers

The health department in each state or territory has public health staff. These people are available to advise and assist individuals and institutions in the community about infectious diseases, infection control practices and other public health matters.

Each state or territory has laws stating that doctors must notify certain infectious diseases.

Child care centres should inform the local public health unit of the following conditions:

- Diarrhoea (if several children in one group are ill);
- Haemophilus influenzae type B (Hib);
- Hepatitis A;
- Hepatitis B (recent illness only);
- Measles;
- Meningococcal infection;
- Parvovirus B19 (if 2 or more cases);
- Pertussis;
- Roseola (if two or more children in one group are ill);
- Scarlet fever; and
- TB.
Asthma

DESCRIPTION

One in five Australian children has asthma, making it the most common chronic medical condition in childhood. Apart from the normal coughs and colds of childhood, it is the condition most likely to be encountered in early childhood settings. Not all of these children will have symptoms all of the time. There is a range of severity of asthma, from those children who have only one or two attacks in their lifetime through to those who need to take medication every day. Most children with asthma are able to lead essentially normal lives, provided they receive the correct medical management.

In asthma, the smaller airways in the lungs become narrow due to inflammation and then swelling of their walls; in addition there is a lot of mucus production and tightening and spasm of the smooth muscle in the walls. This results in further narrowing of the airways, which reduces the flow of air in and out of the lungs, and is also responsible for the wheeze, cough, and difficulty in breathing that are the hallmarks of acute asthma. Severe attacks can be life threatening.

INCUBATION PERIOD

Nil.

INFECTIOUS PERIOD

Nil.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Ensure staff are aware of which children are known asthmatics and are aware of the centre’s ‘Asthma First Aid Plan’.
RESPONSIBILITIES OF THE PARENTS
Ensure staff of centre is aware of child’s asthma. Every child with asthma should have a written action plan so it is clear exactly what needs to be done during an acute attack. This should be obtained by the parent from the child’s doctor and given to the centre when the child is enrolled, or diagnosed as asthmatic.

CONTROLLING THE SPREAD OF INFECTION
Asthma is not an infection, and is not a disease that other children can ‘catch’ from being near an asthmatic child.

TREATMENT
The first principle of treatment is to try and prevent attacks from occurring at all. If acute attacks do occur, or symptoms are present, then the aim is to limit both their severity and duration. For many children, the most effective treatment of asthma is to take medications every day to prevent attacks - these are children who would otherwise have attacks relatively frequently. Most children have only occasional attacks and do not need to take preventative medication - they only take medication when they have symptoms. More children with asthma get into trouble because they are under-treated than because they use medications too much.

Medications used in asthma can be divided into relievers and preventers. Relievers are quick acting and are used to treat the symptoms of an attack, so they are given when the child begins to cough and wheeze. They act on the smooth muscle surrounding the airways to make them wider and so relieve the symptoms. They are usually given by inhalation every three to four hours though, if the symptoms are severe, can be given safely more frequently. Relievers are also used before exercise or sport in those children who get symptoms such as cough, wheeze or shortness of breath when they exert themselves. The child takes a dose of medication just before the activity begins and again during it if needed.

Preventers are used to prevent attacks or daily symptoms. Some children take both relievers and preventers.

Asthma medications are generally given by inhalation. Children from about the age of 7-8 years of age are able to use puffers. Younger children are able to use the puffers in conjunction with a ‘spacer’, which is a plastic cylinder. The puffer fits into one end and the child then puts their lips over these devices which deliver the medication directly into the lungs. Sometimes a nebuliser is used - this is an electrical pump and the medication is turned into a fine mist via an air pump. This is especially useful in an acute attack, though for most children medication delivered by a spacer device is likely to be just as effective.

Asthma First Aid Plan

1. Sit the person upright and remain calm. Don’t leave them alone.
2. Give 4 puffs of a blue reliever (Airomir, Asmol, Bricanyl**, Epaq or Ventolin) one puff at a time, through a spacer*. (*Use a blue puffer on its own if there is no spacer. **Bricanyl is not used with a spacer)
3. Wait for 4 minutes.
4. If there is little or no improvement, repeat steps 2 and 3.

If there is still little or no improvement, call an ambulance immediately (Dial 000). Continue to repeat steps 2 and 3 while waiting for the ambulance.
Bronchiolitis

DESCRIPTION

Bronchiolitis is a chest condition caused by an infection with a virus. This potentially serious infection is common in infants under 12 months of age and usually happens in winter. The infection begins like any common cold, but soon develops into a cough, rapid breathing and wheezing to the extent that feeding becomes difficult. Wheezing when breathing out is characteristic of bronchiolitis. This happens when inflammation causes the small airways (called the bronchioles) to become obstructed. Seek medical advice if the child develops these symptoms. The respiratory syncytial virus (RSV) is most often responsible for bronchiolitis, although other viruses may cause outbreaks.

Most children with bronchiolitis get better within a week to ten days. The wheezing sound usually lasts for two to three days. As the wheezing settles, the child gradually improves. However, the cough may last up to a month.

The disease is transmitted directly by oral contact or airborne droplets, or indirectly by hands, tissues, eating utensils, toys or other articles freshly soiled by the nose and throat discharges of an infected person.

INCUBATION PERIOD

Usually 48 hours.

INFECTIOUS PERIOD

Shortly before the onset of symptoms and during the active stage of the disease.

EXCLUSION PERIOD

The child should stay at home until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Advise the parent to keep the child away from other children until they are feeling well.

RESPONSIBILITIES OF THE PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

Because this is a viral infection there is no medicine that will cure the infection and antibiotics will not help.

A child with mild bronchiolitis may be treated at home. The child may benefit from a warm, humid atmosphere (a humidifier or steam). Increase the child’s fluid intake. Paracetamol may be used to relieve a sore throat. Decongestant medication may help relieve symptoms.

A child with acute bronchiolitis will need medical assessment. Some children with bronchiolitis may need to stay in hospital for a short time to receive specialised medical treatment.
Bronchitis

DESCRIPTION

Many children, when they get a cold, also develop a cough. This can be due to bronchitis, which is when the lining of the trachea and bronchi (the tubes leading from the throat to the lungs) becomes reddened and swollen, and there is more mucus than normal.

It is caused by viruses (especially influenza virus), bacteria (especially Streptococcus pneumoniae, see ‘strep throat’, page 50), and several other organisms.

A child with bronchitis may have the usual signs of a cold including a runny nose, sore throat and mild fever, and then develop a cough. The cough is often dry at first, then moist after a couple of days. There may be a slight wheeze and a feeling of shortness of breath.

Children usually recover from an acute episode of bronchitis in 5 to 10 days. Some children keep getting attacks of bronchitis or can get chronic bronchitis. This can be due to allergies, someone smoking around them or, to other problems in the lungs.

Note that asthma is often misdiagnosed as bronchitis. Therefore, bronchitis should only be diagnosed by a doctor.

The disease is transmitted directly by oral contact or airborne droplets, or indirectly by hands, tissues, eating utensils, toys or other articles freshly soiled by the nose and throat discharges of an infected person.

INCUBATION PERIOD

1–3 days if caused by influenza virus or Streptococcus pneumoniae.

INFECTIOUS PERIOD

Shortly before the onset of symptoms and during the active stage of the disease.

EXCLUSION PERIOD

The child should stay at home until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director. Advise the parent to keep the child home until they are feeling well.

RESPONSIBILITIES OF THE PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

Bronchitis in children is nearly always due to a virus and antibiotics are not effective.

In mild cases, bed rest in a warm environment for a few days, with a light diet and nourishing drinks, may be all that is needed. Cough medicines may help relieve symptoms. From the onset of the attack, warmth to the chest may give relief. This can be in the form of a rubber hot water bottle filled with warm (not hot) water or a medicinal chest rub.

In more serious cases where bronchitis may be due to a bacteria, the doctor may prescribe antibiotics.
Common cold

DESCRIPTION

The common cold is caused by many different viruses that affect the nose and throat. It is the most common infectious illness, especially for young children. Young children may have 8 to 10 colds each year, with the highest number usually being during the first two years in child care, kindergarten or school. A cold in itself is not serious but colds can sometimes lead to other infections such as ear infections and tonsillitis.

Symptoms include a runny, stuffed up nose, sneezing, coughing and a mild sore throat, with little or no fever. Nasal discharge is usually clear to start with, and then within a day can become thicker, yellow and sometimes green. Up to a quarter of young children with a cold go on to have an ear infection as well, but this happens less often as the child grows older.

Colds are spread directly by contact with airborne droplets (coughing and sneezing), or indirectly by contaminated hands, tissues, eating utensils, toys or other articles freshly soiled by the nose and throat discharges of an infected person.

INCUBATION PERIOD

About 1–3 days.

INFECTIOUS PERIOD

2–4 days after the cold starts.

EXCLUSION PERIOD

There is no need to exclude a child with a common cold, unless the child is unwell.

RESPONSIBILITIES OF THE PARENT

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

No specific treatment. Rest, extra drinks and comforting are important. Decongestants and other cold remedies are widely promoted for the relief of symptoms of colds and flu. However there is little evidence that any of these help. In fact, there may be evidence that they can be harmful and may cause unpleasant side effects such as irritability, confusion and sleepiness. Oral decongestants are not recommended for children under the age of 2 years. Cough medicines are not effective in reducing the frequency, intensity or duration of cough. Like fever, the cough is there for a reason - it serves a useful function in clearing mucus from the child’s airways and preventing secondary infection. If concerned, take children to the doctor. Do not give aspirin to any child with a fever.

COMMENTS

Watch for new or more severe symptoms. They may indicate other more serious infections.
Croup

DESCRIPTION

Croup is caused by a virus infection. It is any kind of inflammation of the larynx or voice box that occurs in children. It is not a single disorder in itself. A young child (usually under 5 years of age) becomes mildly unwell with what seems to be a normal 'cold'. The virus infection causes the lining of the airway in the child’s neck to swell, causing the airway to get narrower and making it harder to breathe.

The characteristic features of croup are a harsh, barking cough and a noisy, harsh sound when breathing in. This noise is caused by air vibrating as it passes through the narrowed, inflamed larynx. This will usually happen during the night. During the day the child is usually well apart from the cold. Seek medical advice if the child develops these symptoms.

Several viruses may cause croup. These include parainfluenza, respiratory syncytial virus (RSV) and various influenza viruses.

INCUBATION PERIOD

Difficult to define, but about 2–4 days.

INFECTIOUS PERIOD

Shortly before the onset of symptoms and during the active stage of the disease.

EXCLUSION PERIOD

The child should stay at home until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Advise the parent to keep the child home until they are feeling well.

RESPONSIBILITIES OF PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly, or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

A child with croup will need medical assessment.

The doctor may recommend that a child with mild croup be treated at home. Having a croupy cough and noisy breathing frightens children, and being scared makes the situation worse. Comforting is very important. Cuddling, sitting the child up (in their parent's arms or on pillows) and giving something to drink (which helps with the sore throat) can all be important. The child may benefit from a warm, humid atmosphere (e.g. a humidifier). Increase their fluid intake. Paracetamol may be considered to relieve a sore throat.

It is likely that a child with severe croup will need to stay in hospital for a short time to receive specialised medical treatment.
Ear infections (otitis)

DESCRIPTION

An ear infection is one of the most common health problems for young children. It causes pain and distress to children and is one of the reasons why they may wake at night. Up to 80% of children will have an ear infection at least once and many have them several times. Ear infections can affect children’s hearing.

They may be middle ear infections (otitis media) or outer ear infections (otitis externa).

Middle ear infections occur on the inside of the ear drum. Because this is a small space, infection leads to an increase in pressure on the eardrum and pain. A young child will not be able to tell you they have a sore ear. However, they may be pulling or rubbing their ear, have a fever or vomit. The child may be distressed. Crying that stops suddenly may mean that the ear drum has burst. Middle ear infections can be caused by bacteria or viruses and often occurs a few days after a child gets a cold. The most common age for middle ear infections is between 6 months and 2 years.

Outer ear infections occur on the outside of the ear drum or ear canal and are often associated with swimming.

INCUBATION PERIOD

A few days.

INFECTIOUS PERIOD

Ear infections are not contagious, but the cold or other infection which caused them is. Organisms can only be passed from one child to another if there is infectious fluid draining out of the ear.

EXCLUSION PERIOD

A child should not attend the centre while there is any fluid coming out of the ear. The child should stay at home until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Advise the parent to keep the child home until they are feeling well.

RESPONSIBILITIES OF PARENTS

The child should stay at home until they are well.

CONTROL OF SPREAD

Any discharge from an ear should be treated as infectious. Wash and dry hands thoroughly. The child will often still need to be taking antibiotics after returning to care.

TREATMENT

Middle ear infection - Most children will have healthy ears by about 2 weeks from when the middle ear infection started, even if they do not take antibiotics. Antibiotics are usually prescribed when a child has a middle ear infection. Antibiotics probably help the infection to get better more quickly and they prevent some of the severe infections which can develop from a middle ear infection. The use of paracetamol may be considered to relieve pain.

Outer ear infection - Usually treated with antibiotics, given as drops in the ear or placed in the ear canal with a wick.

COMMENTS

As ear infections are hard to detect in young children, suspect an ear infection with all fevers and vomiting. Watch the child for any signs of pulling or rubbing of ears. Rarely, a middle ear infection may spread and the child may develop mastoiditis. The area behind the ear will be red and the earlobe will stick out and down. A child with these symptoms should see a doctor as soon as possible.
Influenza

DESCRIPTION

Influenza is an acute viral disease of the respiratory tract characterised by fever, chills, headache, muscle pain, a head cold and a mild sore throat. The cough is often severe. Usually the person will recover naturally within 2–7 days.

INCUBATION PERIOD

Usually 1–3 days.

INFECTION PERIOD

Probably 3–5 days from onset of symptoms in adults and up to 7 days in young children.

EXCLUSION PERIOD

The child should stay at home until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Advise the parent the child should stay at home until they are feeling well.

RESPONSIBILITIES OF PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

A definite diagnosis of influenza requires a blood test or throat swab. Generally this test is not considered necessary by the general practitioner.

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

No specific treatment. Antibiotics should be given for bacterial complications only. Decongestants and other cold remedies are widely promoted for the relief of symptoms of colds and flu. However, there is little evidence that any of these help. In fact, there may be evidence that they can be harmful and may cause unpleasant side effects such as irritability, confusion and sleepiness. Oral decongestants are not recommended for children under the age of 2 years. Cough medicines are not effective in reducing the frequency, intensity or duration of cough. Like fever, the cough is there for a reason - it serves a useful function in clearing mucus from the child’s airways and preventing secondary infection. If concerned, take children to the doctor. Do not give aspirin to any child with a fever.

COMMENTS

Watch for new or more severe symptoms. They may indicate other, more serious infections.

Influenza vaccine is available and may protect staff against influenza. Staff wishing to have the influenza vaccine should consult their own doctor.

Influenza vaccine is not given routinely to children unless the child has a chronic, debilitating disease, for example, a chronic cardiac (heart) disorder, a pulmonary (lung) disorder, a renal (kidney) disorder or a metabolic disorder.
Pneumococcal disease

DESCRIPTION

Pneumococcal disease refers to a number of different types of infection due to the bacteria called ‘the pneumococcus’ (also called Streptococcus pneumoniae). The bacteria are commonly found in the nose and throat of healthy people and usually live there harmlessly, especially in young children (up to 1 in 4 children in winter).52 It is not known why the bacteria cause disease in some people and not in others. The bacteria spread in droplets shed from the mouth or nose through coughing and sneezing or contact with articles that have been contaminated with the infected droplets.

Pneumococcal disease occurs most commonly in children under the age of 2 years53. In children less than 5 years of age, Pneumococcal bacteria is the most common bacterial cause of otitis media (middle ear infection), pneumonia (lung infection), bacteraemia (infection of the blood stream) and meningitis (a life threatening infection of the lining of the brain)54. In children, severe pneumococcal disease (meningitis, septicaemia) peaks at around 12 months of age but cases of meningitis may occur from about 2 months of age55.

The symptoms of pneumococcal disease depend upon the site of the infection. The symptoms are not exactly the same as meningococcal disease and a skin rash is not common with pneumococcal disease. When the bacteria invade the blood stream the disease can become a life-threatening condition.

INCUBATION PERIOD

Not well determined. It may be as short as 1-3 days56.

INFECTIOUS PERIOD

The person is infectious whilst nasal and mouth secretions still contain the pneumococcal bacteria. People are no longer infectious 24-48 hours after commencing an appropriate antibiotic.

EXCLUSION PERIOD

The child needs to be excluded until 48 hours after the commencement of an appropriate antibiotic.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director. Advise the parent the child needs to be excluded until 48 hours after the commencement of an appropriate antibiotic. Even after this period of time, the child should stay at home until they are feeling well.

RESPONSIBILITIES OF PARENTS

The child needs to be excluded until 48 hours after the commencement of an appropriate antibiotic. Even after this period of time, the child should stay at home until they are feeling well.

CONTROLLING THE SPREAD

To control the spread of germs, children should be encouraged to either: a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.
Routine pneumococcal immunisation is given at 2, 4 and 6 months of age. Some children may need another dose or two depending upon where in Australia they live, and if they have any risk factors which identify them as being at greater risk of pneumococcal disease.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

**TREATMENT**

Invasive pneumococcal disease can usually be treated with antibiotics if detected early enough; however the disease can develop very quickly.
Runny noses (with green or yellow discharge)

DESCRIPTION

When germs that cause colds (cold viruses) first infect the nose and sinuses, the nose makes clear mucus. This helps wash the germs from the nose and sinuses. After two or three days, the body’s immune cells fight back, changing the mucus to a white or yellow colour. As the bacteria that live in the nose grow back, they may also be found in the mucus, which changes to a greenish colour. This colour change is normal and does not mean the child needs antibiotics or that they need to be excluded.

INCUBATION PERIOD

2-3 days.

INFECTIOUS PERIOD

Nil.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the discharge to the director.

If the child is unwell, the child should stay at home until they are feeling better (this is out of concern and consideration of the child – it is not an infection control issue for the centre).

RESPONSIBILITIES OF PARENTS

If the child is unwell, the parent should keep the child at home until the child is feeling better (this is out of concern and consideration of the child – not an infection control issue for the centre).

CONTROLLING THE SPREAD OF INFECTION

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

No specific treatment. Antibiotics are not needed to treat a runny nose.
Sore throats and streptococcal sore throat (strep throat)

DESCRIPTION

Sore throats are caused by viruses or bacteria. Children do not commonly complain of a sore throat. However, they may have a fever or be reluctant to eat or drink. Children with a sore throat should see a doctor to assess any need for antibiotics.

A ‘strep sore throat’ is a bacterial infection of the throat caused by *Streptococcus pyogenes*. Possible complications of a strep throat include:

- **Scarlet fever**
  The child shall have all the symptoms of throat infection plus a fine red rash on the limbs and trunk and reddening of the tongue (‘strawberry tongue’). During the recovery from the infection, the skin may peel off the fingers and toes.

- **Quinsy**
  An abscess (collection of pus) next to a tonsil.

- **Rheumatic fever**
  A rare complication. Fever, joint pain and a skin rash develop soon after a sore throat. Later, inflammation of the heart (rheumatic carditis) or shaking and unsteadiness (Sydenham’s chorea or St Vitus’ dance) may occur.

- **Inflammation and reduced function of the kidney**
  A rare complication.

Viral and bacterial throat infections are spread directly by contact with airborne droplets (coughing and sneezing), or indirectly by contaminated hands, tissues, eating utensils, toys or other articles freshly soiled by the nose and throat discharges of an infected person.

INCUBATION PERIOD

Usually 1–3 days.

INFECTION PERIOD

**Bacterial sore throats**: Untreated people remain infectious for 2 to 3 weeks after becoming ill. Treated people are not infectious about 24 hours after appropriate antibiotic treatment begins.

**Viral sore throats**: As long as organisms are being spread by coughing, sneezing, etc. Viral tonsillitis and sore throats may last several days.

EXCLUSION PERIOD

Exclude a child with a strep sore throat until the child has received antibiotic treatment for at least 24 hours and they feel well.

Exclude a child with a viral sore throat until the child is feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.
Advertise the parent to seek medical assessment and treatment. Parents must keep the child home for the exclusion period.

RESPONSIBILITIES OF THE PARENTS

Keep the child home for the exclusion period and until the child is feeling well.

CONTROLLING THE SPREAD OF INFECTION

Exclude the person until they have received antibiotic treatment for at least 24 hours and they feel well.

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or
b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

Do not share eating utensils, food or drinking cups. Thoroughly wash toys that infants and toddlers put in their mouths.

**TREATMENT**

A bacterial sore throat is treated with penicillin or other antibiotics as prescribed by a doctor. To prevent potential complications such as rheumatic fever, the full course of antibiotics should be completed.

Antibiotics are not appropriate for viral sore throats.
Tuberculosis (TB)

DESCRIPTION

Tuberculosis is a bacterial infection that can affect almost any part of the body but is most common in the lungs.

TB is spread by inhaling TB germ-containing droplets expelled directly from the lungs of infectious persons during coughing, sneezing, laughing and speaking. It is not hereditary.

The symptoms of TB include a cough that lasts longer than 3 weeks and doesn’t go away with normal treatment, fever, cough, loss of energy and being tired. There may also be sweats, particularly at night, and weight loss can also occur. The cough may produce phlegm and sometimes blood. TB can be suspected when there are changes seen on a chest x-ray.

INCUBATION PERIOD

About 2-10 weeks from infection to positive tuberculin skin test. The risk of active disease is greatest within the first year or two after initial infection, although the germs may lie inactive for many years.

INFECTION PERIOD

Young children with their initial infection rarely spread the disease. Adults who develop active TB are most infectious when they are coughing and have not received treatment or are in the first few weeks of treatment.

EXCLUSION PERIOD

People are excluded from child care until they have a medical certificate from an appropriate health authority.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Advise the parent to keep the child home until they have proof of clearance from the treating medical practitioner.

RESPONSIBILITIES OF PARENTS

Parents should inform the director if their child has TB or if the child is on TB medications. Keep child home until they have proof of clearance from the treating medical practitioner.

CONTROLLING THE SPREAD OF INFECTION

The most important way to prevent TB is to reduce the source of the germs by diagnosing people with TB and ensuring they are fully treated. By reducing the number of people with infectious TB in the community the chance of exposure to TB is reduced for the general population.

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.

Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

TREATMENT

People with TB require anti-TB drugs for a minimum of 6 months continuous treatment. The exact length of time varies and depends upon many factors. Completing a full course of therapy is essential.
Whooping cough (pertussis)

DESCRIPTION

Whooping cough is a highly contagious bacterial disease which can affect infants, children and adults. It may start with a runny nose, sneezing and then develop into coughing bouts. These coughing bouts can be very severe and frightening. They may end with a ‘crowing’ noise (the whoop) as air is drawn back into the chest. Vomiting or gagging may follow the coughing bouts.

In babies, breathing may be obstructed due to the coughing and as a consequence, they may lack oxygen and turn blue. Adolescents and adults may just have a persistent cough. Young children are especially at risk of severe illness, which may result in hospitalisation. Some have fits (convulsions) and some may develop inflammation of the brain (encephalitis). Whooping cough is particularly serious in children under 2 years of age and hospitalisation is usually necessary.

Whooping cough is transmitted by direct contact with droplets from the nose and throat of an infected person.

INCUBATION PERIOD

Commonly 7–10 days and not more than 21 days.

INFECTIOUS PERIOD

A person is infectious from the beginning of the illness and may remain infectious for up to three weeks. This time frame can be shortened to 5 days when the person is treated with an appropriate antibiotic.

EXCLUSION PERIOD

Exclude for 21 days from the onset of coughing or until the person has taken 5 days of an appropriate antibiotic.\textsuperscript{63}

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Inform the director. The director should inform parents immediately if their child exhibits symptoms. Parents should then consult their doctor or clinic immediately.

In some states and territories, the director is required to report details to the local public health unit.

Parents of friends and contacts of the infected child should be notified that the child has been diagnosed as having whooping cough and advised to contact their doctor.

Advise the parent to keep the child home for 21 days from the onset of coughing or until they have taken 5 days of an appropriate antibiotic.

RESPONSIBILITIES OF PARENTS

Keep the child home for 21 days from the onset of coughing or until they have taken 5 days of an appropriate antibiotic.

CONTROLLING THE SPREAD OF INFECTION

Whooping cough can be prevented by immunisation. Fully immunised communities offer the best protection against whooping cough. Erythromycin may be given to family and people in close contact with the disease. Adults and teenagers are susceptible to the illness as well and may carry the bacteria while exhibiting only mild symptoms.

To control the spread of germs, children should be encouraged to either:

a) Cover their mouth and nose with a tissue when they sneeze or cough, then dispose of the used tissue appropriately. Wash their hands with soap and water, and dry thoroughly; or

b) Cough or sneeze into their upper sleeve, or elbow, not into their hands. Then wash their hands with soap and water, and dry thoroughly.
Ensure staff wash and dry hands after contact with soiled tissues or contact with nose and throat discharges.

**If there is a case of whooping cough within the centre:**

Check the immunisation records for every child who has contact with the child with whooping cough. Look for evidence of vaccination with the DTP vaccine at 2, 4 and 6 months of age, and at 4 years of age. The ‘P’ in the vaccine is for pertussis which is whooping cough. Children who have received CDT (diphtheria and tetanus for children) at any of these times have not been vaccinated against whooping cough.

Any child or adult who lives in the same house as the case and also attends the centre and has received less than three doses of pertussis vaccine is to be excluded from the centre until they have had 5 days of an appropriate course of antibiotics. If antibiotics have not been taken, these contacts must be excluded for 14 days after their last exposure to a case of whooping cough at home.

**TREATMENT**

Antibiotics may be given in the early stages to shorten the period of contagiousness of a child with whooping cough. However, these do not lessen the severity or duration of the illness.
Campylobacter

DESCRIPTION

Campylobacter infection is a type of gastroenteritis caused by a bacteria known as Campylobacter. Symptoms may include diarrhoea (sometimes bloody), a low-grade fever, abdominal cramping and nausea and vomiting.

Campylobacter bacteria are found in the faeces of many animals, including farm animals and household pets. People are infected when bacteria are taken in by mouth and this can happen by:

- Eating undercooked meat, especially chicken;
- Drinking unpasteurised milk or contaminated drinking water;
- Eating cooked food which has been cross-contaminated with campylobacter bacteria from raw food; or
- Handling infected animals and not washing hands afterwards.

Infection can also be spread from person to person when:

- People with campylobacter bacteria in the faeces do not wash and dry their hands effectively after going to the toilet. Contaminated hands can then contaminate food which may be eaten by others; or
- Hands become infected when changing the nappy of an infected infant. People and animals can carry and spread the infection even if they don’t have symptoms.

INCUBATION PERIOD

Usually 2 - 5 days after coming in contact with the bacteria, but may range from 1-10 days.
INFECTIONOUS PERIOD
For as long as the bacteria are in the person’s faeces. This may be for a few days or weeks after symptoms are gone.

EXCLUSION PERIOD
Exclude until diarrhoea has stopped for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF
Report the infection to the director.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the infectious agent has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS
Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION
Exclude a person with infectious diarrhoea from the centre until diarrhoea has stopped for at least 24 hours.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

Ensure sandpits are raked regularly and remove any animal faeces. Cover the sand pit when it is not in use.

TREATMENT
Antibiotics are usually prescribed only when a child is not recovering from the illness. Recovery usually occurs within a few days of the onset of symptoms. Parents should consult their doctor about treatment. Make sure the child has plenty to drink, see ‘Safe drinks’ on page 59.
Cryptosporidiosis

DESCRIPTION

Cryptosporidiosis is a type of gastroenteritis caused by the parasite Cryptosporidium. The parasite infects the intestine. Often, the infected person has no symptoms at all. The organism is usually identified by laboratory examination of a faecal specimen.

Symptoms include vomiting, loss of appetite, stomach pain and foul-smelling diarrhoea. The faeces are often watery in appearance or may contain mucus.

In healthy young children the illness is self-limiting and lasts only a few days. In people with normal immune systems the symptoms often fluctuate but recovery is expected in less than 30 days.

Cryptosporidium parasites live in the bowels of humans and in wild, pet and farm animals. People with cryptosporidiosis have the parasite in their faeces. The infection spreads when:

- Infected people do not wash and dry their hands effectively after going to the toilet. Contaminated hands can then spread the parasites to food that may be eaten by others and surfaces that may be touched by others;
- Hands become contaminated while handling infected animals or changing the nappy of an infected infant; or
- People who drink contaminated water, unpasteurised milk or swallow contaminated swimming pool water.

INCUBATION PERIOD

Uncertain, probably an average of 7 days, with a range of 1-12 days.

INFECTION PERIOD

For as long as the organism is in the person’s faeces, whether or not the person has symptoms (usually 2-4 weeks).

EXCLUSION PERIOD

Exclude until diarrhoea has stopped for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the infectious agent has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Exclude a person with infectious diarrhoea from the centre until diarrhoea has stopped for at least 24 hours.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

As people with Cryptosporidium infection can continue shedding ‘egg’ cells even after symptoms have settled, people should not go swimming while they have diarrhoea and for 2 weeks after diarrhoea stops.

TREATMENT

No treatment is available but all children with diarrhoea should see a doctor. Make sure that the child has plenty to drink, see ‘Safe drinks’ on page 59.
Diarrhoea and vomiting (gastroenteritis)

DESCRIPTION

Gastroenteritis is an illness triggered by the infection and inflammation of the digestive system. Typical symptoms include abdominal cramps, diarrhoea (an increase in the frequency, runniness or volume of the faeces) and vomiting. In many cases the condition is self-limiting and resolves in a few days. The main complication of gastroenteritis is dehydration, but this can be prevented if the fluid lost in vomit and diarrhoea is replaced. A person suffering from severe gastroenteritis may need fluids intravenously. Some of the causes of gastroenteritis are:

- Viruses - such as Norovirus, Rotavirus and Adenoviruses.
- Bacteria - such as Campylobacter, Salmonella and Shigella.
- Parasites - such as Giardia and Cryptosporidium.
- Bacterial toxins - the bacteria themselves don’t cause illness but their poisonous by-products can contaminate food. For example some strains of staphylococcal bacteria produce toxins that can cause gastroenteritis.
- Chemicals – copper poisoning, for example, can cause gastroenteritis.
- Drugs – certain drugs, such as antibiotics, can cause gastroenteritis in susceptible people.

The exact cause of the diarrhoea can only be diagnosed by laboratory tests of faecal specimens. Sometimes multiple specimens must be tested.

INCUBATION PERIOD

Viral and bacterial infections, usually 1-3 days.
Parasitic infections, 5-15 days.

INFECTIOUS PERIOD

People are infectious for as long as the organisms are present in their faeces, whether or not they have symptoms.

EXCLUSION PERIOD

Children are to be excluded from the centre until there has not been a loose bowel motion or vomiting for 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Inform the director, who can then inform parents that the illness is present in the centre.

When two or more children in one group are ill with diarrhoea, your public health unit should be contacted for advice and help in controlling the outbreak.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

A person with active diarrhoea is more likely to spread the disease than one who is well but has infectious organisms in their faeces. For this reason, children and staff with infectious diarrhoea should not attend the centre until diarrhoea has stopped for at least 24 hours.

Do not exclude children or staff with disease-causing organisms in their faeces but no diarrhoea.

Staff with disease-causing organisms in their faeces but no diarrhoea should not be involved in the preparation of food.
Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

Keep cold food cold (below 5°Celsius) and hot food hot (above 60°Celsius) to discourage the growth of bacteria. Reheat food and hold at 70°Celsius for 2 minutes.

TREATMENT

Preventing dehydration in children with gastroenteritis

Children with diarrhoea need extra fluid to replace what they lose. However, many fluids have too much sugar and the wrong amount of salt. Giving a sick child the wrong kind of fluid can lead to more dehydration and illness.

Breastfed children

Breastfeeding mothers should continue to breastfeed and offer the breast more often.

Safe drinks

The best fluids to give contain a mixture of special salts (electrolytes) and sugars. You can buy oral rehydration solution from the chemist. Mix the sachet of powder with water, not other kinds of fluids. Mix solution according to manufacturer’s instructions.

If children refuse oral rehydration solution they may be given diluted soft drinks or fruit juice.

- Diluted cordial 10ml + 150ml water.
- Diluted soft drink (eg lemonade) 50ml + 150ml water.
- Diluted fruit juices 50ml + 150ml water.

Unsafe drinks

Do not give undiluted fruit juice, fizzy drinks, ‘sports drinks’ or ‘energy drinks’ or cordial to children with diarrhoea. They may increase diarrhoea and dehydration.

Bottle/Formula fed babies

Continue normal strength formula or milk if the child is hungry, and offer oral rehydration solution or safe drinks as recommended above.

Remember that withholding formula for more than 24 hours may result in the baby losing weight.

Re-introducing food

Re-introduce food within 24 hours, even if the diarrhoea has not settled. Suitable foods to start off with include bread, plain biscuits, potatoes, rice, noodles, vegetables, plain meats, fish and eggs. Gradually reintroduce other foods, such as dairy foods and sweet foods such as jelly, honey and jam.

COMMENTS

Children with diarrhoea, who vomit or who refuse extra fluids should see a doctor. In severe cases hospitalisation may be needed.

The parent and doctor will need to know the details of the child’s illness while at the centre. Photocopy the letter on page 20 and fill in the details.
Giardiasis

DESCRIPTION

Giardiasis is a form of gastroenteritis caused by a parasite called *Giardia lamblia* which lives in the bowel. *Giardia* parasites are also found in wild animals, pets and farm animals. Untreated water that comes directly from lakes and rivers may also contain *Giardia* parasites.

Symptoms include diarrhoea, foul-smelling faeces, cramping, excessive gas or bloating, fatigue, nausea, and sometimes vomiting or weight loss. Fever and bloody faeces are not usually symptoms of *Giardia* infections. Many infected people and animals have no symptoms.

In child care centres, children and adults may be well and not have diarrhoea but still be infected with the parasite. This makes their faeces potentially infectious to others. A person with active diarrhoea is more likely to spread the disease than one who doesn’t have diarrhoea but still has infectious organisms in their faeces. *Giardia* infections are spread when:

- Infected people do not wash and dry their hands effectively after going to the toilet. Contaminated hands can then spread the parasites to food that may be eaten by others and surfaces that may be touched by others.
- Hands become contaminated while handling infected animals or changing the nappy of an infected infant.
- People drink contaminated water.

INCUBATION PERIOD

Commonly 6 – 9 days but may range from 5 – 15 days.

INFECTION PERIOD

For as long as the organism is in the person’s faeces, whether or not the person has symptoms.

EXCLUSION PERIOD

Exclude until diarrhoea has stopped for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the infectious agent has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Exclude a person with infectious diarrhoea from the centre until diarrhoea has stopped for at least 24 hours.

Be sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

TREATMENT

The person will not usually be infectious after being treated for several days. Ask parents to check with their doctor about treatment. It is not usually necessary to test or treat children who have no symptoms.

Make sure the child has plenty to drink, see ‘Safe drinks’ on page 59.
Norovirus

DESCRIPTION

Gastroenteritis can be caused by noroviruses. Vomiting is usually the main symptom and can be violent and profuse. Other symptoms may include diarrhoea, nausea, stomach cramps, fever, headache and muscle aches.

The illness is highly infectious and often occurs in outbreaks. It is highly infectious for several reasons. Vomit can contain one million virus particles per millilitre. Faeces are also very infectious. Because violent vomiting can produce aerosolised particles (particles suspended in the air) or can contaminate surfaces, norovirus is easily spread. It only takes a small number of germs to cause an infection and the germs are resistant to disinfectants.

The viruses can spread in many different ways:

- Person-to-person (eg. by germs from vomit or faeces getting onto hands then into someone else’s mouth).
- Aerosols from projectile vomiting.
- Food (for example, an infected person with germs on their hands can contaminate food, as can aerosols from vomiting).
- Surfaces that become contaminated (eg. toilets).
- Contaminated water.

INCUBATION PERIOD

About 15 to 48 hours.

INFECTION PERIOD

For as long as symptoms are present, and usually for 48 hours after symptoms have stopped. Some people are still infectious up to 10 days after symptoms have stopped.

EXCLUSION PERIOD

Children are to be excluded from the centre until there has not been a loose bowel motion or vomiting for 48 hours.

Staff who handle food should be excluded from food preparation, food handling and assisting others with feeding until at least 48 hours after the symptoms have stopped. Large outbreaks have occurred when food handlers have returned to preparing food while still infectious.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the infectious agent has spread through the centre and will provide advice on how to prevent a large scale outbreak occurring.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Do not prepare food for anyone until at least 48 hours after recovery.

Ensure hands are washed thoroughly, especially after going to the toilet, before eating, before preparing or handling food, after changing infants’ nappies and after supervising children at the toilet.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.
Surfaces that could have become contaminated should be scrupulously cleaned, first with detergent and water to ensure no particles remain, followed by disinfectant (eg. bleach diluted 1 in 10). Make sure that all surfaces are kept clean including kitchens and bathrooms.

**TREATMENT**

Plenty of fluids (eg. water, dilute fruit juice or special oral rehydration solutions) should be consumed to prevent dehydration, see ‘Safe Drinks’ on page 59. Food can be eaten as tolerated. Antibiotics will not help as they do not kill viruses.
Rotavirus

DESCRIPTION

Gastroenteritis can be caused by rotavirus. The people most at risk for rotavirus infection are young children especially those under 2 years old. Almost all people worldwide will have a rotavirus infection before they are 5 years old. In Australia 20-40% of all admissions of young children to hospital with diarrhoea are due to rotavirus infections.

Symptoms include vomiting, fever and watery diarrhoea. Onset is usually sudden, and the illness mainly affects infants and young children up to 3 years of age.

Rotaviruses are in the faeces of a person while they have diarrhoea and for several weeks after the diarrhoea stops (sometimes up to 2 months or longer). Rotavirus infections are spread when:

- Infected people do not wash and dry their hands effectively after going to the toilet. Contaminated hands can then spread the virus to other people and surfaces that may be touched by others.
- Hands become contaminated while changing the nappy of an infected infant.

INCUBATION PERIOD

Usually about 48 hours, but may range from 24 - 72 hours.

INFECTIOUS PERIOD

The virus may be excreted in the faeces for 1-2 days before the illness and up to eight days after the illness.

EXCLUSION PERIOD

Children are to be excluded from the centre until there has not been a loose bowel motion or vomiting for 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the infectious agent has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Exclude a person with infectious diarrhoea and vomiting from the centre until vomiting and diarrhoea has stopped for at least 24 hours.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

TREATMENT

Take a child with vomiting and diarrhoea to the doctor. Drugs are usually not prescribed.

Make sure the child has plenty to drink, see ‘Safe drinks’ on page 59.
Salmonellosis

DESCRIPTION

Salmonellosis is a form of gastroenteritis caused by Salmonella bacteria.

Symptoms include diarrhoea, fever, abdominal pain, nausea and vomiting, sometimes with blood or mucus in the faeces. The severity of symptoms depends upon the number of bacteria you swallow, your age and your general health.

Salmonellosis occurs when Salmonella bacteria are taken in by mouth. This may happen in any of the following ways:

- Eating undercooked meat, especially poultry, and raw or undercooked eggs.
- Eating cooked or ready to eat food that has been contaminated with Salmonella bacteria from raw food, such as chicken. This is called cross-infection and can also happen when food comes into contact with contaminated kitchen surfaces, such as chopping boards and utensils that have been used with raw food.
- People with salmonellosis have Salmonella bacteria in their faeces. If these people do not wash and dry their hands properly after going to the toilet, their contaminated hands can spread the bacteria to surfaces and objects that may be touched by others. Hands can also become contaminated when changing the nappy of an infected infant.
- Pets and farm animals may have Salmonella bacteria in their faeces without having any symptoms. People can get salmonellosis from these animals if they do not wash and dry their hands after handling them.

INCUBATION PERIOD

6 hours to 3 days, usually 12–36 hours.

INFECTIOUS PERIOD

You may be infectious for several weeks. Although the symptoms usually only last for a few days, the bacteria may be present in faeces for several weeks.

EXCLUSION PERIOD

Exclude until diarrhoea has stopped for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Staff may resume handling food 48 hours after diarrhoea has ceased.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the germ has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Exclude a person with infectious diarrhoea from the centre until the diarrhoea has stopped for at least 24 hours.

Do not exclude a person with organisms in their faeces but no diarrhoea.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

A person with Salmonella in their faeces must not be involved in food preparation until diarrhoea has ceased for at least 48 hours.
TREATMENT

Treatment with antibiotics is not usually recommended for *Salmonella* infections. Use of antibiotics sometimes results in the person becoming a carrier. The person then appears well but is infectious to others.

Recovery from *Salmonella* infection usually occurs within a few days of the onset of symptoms. Parents should consult a doctor about treatment.

Make sure the child has plenty to drink, see ‘Safe drinks’ on page 59.
Shigellosis

DESCRIPTION
Shigellosis is a severe intestinal infection caused by Shigella bacteria. The germ can be identified by a faecal culture. Symptoms include diarrhoea (sometimes containing blood or mucus), fever, vomiting and cramps. Some infected people have no symptoms. Shigella spreads when hands, objects or food become contaminated with the faeces of infected people, and the bacteria are then taken in by mouth. Very small numbers of the bacteria are sufficient to cause an infection. Stringent control measures are needed.

INCUBATION PERIOD
1–7 days, usually 1–3 days.

INFECTION PERIOD
While ill and until the infectious agent is no longer present in the faeces, which is usually no longer than four weeks. Rarely excretion may persist for months.

EXCLUSION PERIOD
Exclude until diarrhoea has stopped for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF
Report the infection to the director.

Staff may resume handling food 48 hours after diarrhoea has ceased.

Contact your public health unit if two or more children in one group are ill. Public health workers may be able to help identify how the germ has spread through the centre and prevent further infection.

RESPONSIBILITIES OF PARENTS
Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION
Exclude a person with infectious diarrhoea from the centre until the diarrhoea has stopped for at least 24 hours.

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

A person with Shigella in their faeces must not be involved in food preparation until diarrhoea has ceased for at least 48 hours.

TREATMENT
A child with this infection may become seriously ill. The child may need hospitalisation. Seek medical advice on treatment and fluid replacement. The doctor may prescribe antibiotics.
Worms: Hydatid disease

DESCRIPTION

Hydatid disease is caused by a small tapeworm called *Echinococcus granulosus*. This is passed to humans from infected dogs. The disease is transmitted when tapeworm eggs in dog faeces are transferred from hands to mouths. This may happen when a person handles dogs or objects soiled with dog faeces, or ingests contaminated food or water. Hydatid disease is not transmitted directly from person to person.

Hydatid disease causes cysts to grow in different parts of the body. Any organ may be affected. Sometimes these cysts cause no symptoms at all and are found during routine chest X-rays. However, if the cysts grow in vital organs (such as the liver, lungs or brain) they may cause disease. Hydatid disease is essentially a problem of the rural community, especially the sheep farmer.

INCUBATION PERIOD

Variable, from months to years, depending upon the number and location of cysts and how rapidly they grow.

INFECTION PERIOD

Dogs begin to pass eggs of the parasite approximately seven weeks after becoming infected. Most infections in dogs resolve within 6 months, but some adult tapeworms may survive as long as 2–3 years. Dogs can become infected repeatedly.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Ensure routine de-worming of dogs in the community and particularly dogs that frequent the centre.

RESPONSIBILITIES OF PARENTS

Ensure that adults and children wash and dry their hands before eating.

Dispose of dog faeces regularly, wearing gloves.

CONTROLLING THE SPREAD OF INFECTION

Ensure that adults and children wash and dry their hands before eating.

Dispose of dog faeces regularly, wearing gloves.

TREATMENT

Treatment may be drug therapy, or surgery to remove the cysts.
Worms: Pinworms

DESCRIPTION

There are many worms that can infest children. Most, however, need to live for a period in water, soil or animals before they become infectious to humans. In Australia, with its temperate, dry climate and adequate town sewage facilities, very few worms are transmitted.

In child care centres, the most common worm is the pinworm (also called Enterobius vermicularis). Other names for a pinworm infection are 'seatworm infection', 'threadworm infection', 'enterobiasis' or 'oxyuriasis'. People are infected by unknowingly eating microscopic pinworm eggs. The eggs pass into the digestive system and hatch in the small intestine. From the small intestine, pinworm larvae continue their journey to the large intestine, where they live as parasites – their heads attached to the inside wall of the bowel. Pinworms are spread when the person scratches or touches the anal area (where the pinworm lays its eggs) and then puts their hands to their mouth. Occasionally eggs on infected clothing may be breathed in and then enter the gut (where the adult pinworm lives). Pinworms do not infect dogs and cats so domestic pets are not a source of infection.

Symptoms of pinworm infection include itchy bottom, irritability and behavioural changes. Sometimes a thin, adult pinworm, about 1 cm long, is found on freshly passed faeces.

INCUBATION PERIOD

Approximately 2 to 4 weeks after eggs enter the intestines, the female pinworm begins moving from the large intestine to the area around the rectum.

INFECTIOUS PERIOD

Pinworms can spread as long as worms live in the gut. Infection will continue until the person is treated. Immunity does not occur. Both adults and children are susceptible.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Signs of pinworm infection should be reported to the director.

RESPONSIBILITIES OF PARENTS

Seek medical treatment for infected children. The child will be free of pinworm infection within a day if the child receives treatment and clothes and bed linen are washed in hot water.

Make sure that effective hand washing and cleaning procedures are being followed at home.

CONTROLLING THE SPREAD OF INFECTION

Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

TREATMENT

Treatment of pinworm is simple, safe and effective. The family doctor may wish to confirm the infection with a simple laboratory test. In most cases, though, the doctor will prescribe treatment on symptoms alone. A single-dose therapy is given to the child and each family member. This may be repeated after two weeks. Treatment of other children at the centre is not necessary.
Worms: Roundworm, hookworm and tapeworm

DESCRIPTION
Infection with roundworms, hookworms and tapeworms (including hydatid tapeworm page 67) is uncommon. However, it is still important to observe good personal cleanliness, as infections with hydatid tapeworm or roundworms can have serious effects.

INCUBATION PERIOD
Eggs or larvae can begin to be passed in the faeces several weeks after infection, depending on the species of worm involved. Symptoms may not be obvious until months or years after the infection was acquired.

INFECTIOUS PERIOD
Transmission is possible throughout the period of infestation. Infection will continue until the person is treated. Immunity does not occur. Both adults and children are susceptible.

EXCLUSION PERIOD
Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF
Signs of worm infection should be reported to the director.

RESPONSIBILITIES OF PARENTS
Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION
Make sure that effective hand washing and cleaning procedures are being followed in the centre and at home.

Dispose of animal faeces frequently (using gloves) and prevent children from eating dirt.

Ensure that animals are wormed regularly with anti-parasitic preparations specific to the worms present in that area.

Pregnant dogs should be treated for roundworms. Larvae which are dormant in the bitch’s body from a previous infection may infect the unborn puppies. Dogs should be re-treated 3-4 weeks after having the puppies.

TREATMENT
Diagnosing worm infections requires laboratory tests. Seek medical advice. Treatment of worm infections varies according to the type of worm and the person’s symptoms.
General notes on rashes

Rashes are common in children. They can be caused by many different viral infections and may not be infectious. It is important to be able to describe the rash as this may help with diagnosis.

Some features to notice with rashes are:

**Illness**
Does the child look unwell? The rash may not affect the child’s well-being at all.

**Fever**
Does the child look feverish?

**Appearance**
What colour is the rash? (Is it dark red like a blood blister? Red? Pink?)

What does the rash look like?
- small, red, pin-heads
- fine and lacy
- large red blotches
- solid red area all joined together
- blisters

How does the rash feel to the touch?
- raised slightly, with small lumps
- swollen

Is the rash itchy?

Where on the body did the rash start (for example, head, neck)?

Where is the rash now (for example, head, neck, abdomen, arms, legs)?
Chickenpox (varicella)

DESCRIPTION

Chickenpox is a viral illness that comes on suddenly and is highly contagious. The chickenpox virus is also called varicella virus. Chickenpox usually starts with one spot, but more quickly appear, with fever, headache, runny nose, a cough and feeling very tired. The rash starts on the chest and back and spreads to the face, scalp, arms and legs. The rash can develop all over the body, inside the ears, on the eyelids, inside the nose and within the vagina, everywhere. The rash continues to spread for three or four days. It is usually very itchy.

Within a few hours after each spot appears, a blister forms. It may appear full of yellow fluid. After a day or so, the fluid turns cloudy. These spots are easily broken and form a scab. The spots heal at different stages, some faster than others, so it is possible the child may have the rash in several stages at once. Some children appear to ‘breeze’ through chickenpox with just a few spots. Others have a terrible time with hundreds of itchy spots. Chickenpox is more severe in adults and can cause serious and even fatal illness in people who are immunosuppressed.

In families with several children, outbreaks can last for weeks, because of the relatively long incubation period. Congenital varicella syndrome has been reported in the first half of pregnancy and may result in congenital malformations, skin scarring and other abnormalities. Severe varicella infection can occur in a newborn baby if the mother has varicella.

It is spread by coughing and contact with the fluid from the blisters. One infection gives long-lasting immunity. People rarely get chickenpox twice. Herpes zoster (shingles) is caused by the same virus. It is an eruption in someone who has previously had chickenpox. Direct contact with the moist shingles rash can cause chickenpox in a person who has not already had it.

INCUBATION PERIOD

The average incubation period is 14 to 15 days, but may range from 10 to 21 days.

INFECTIOUS PERIOD

From two days before the rash appears (that is, during the coughing, runny nose stage) and until all blisters have formed scales or crusts.

EXCLUSION PERIOD

Exclude until all blisters have dried. This is usually at least 5 days after the rash first appeared in unimmunised children and less in immunised children.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Remind parents that aspirin should not be given. (See below in treatment - Reye’s Syndrome).

Pregnant women should be advised to avoid contact with chickenpox. Immunisation for chickenpox during pregnancy is not recommended and pregnancy should be avoided for one month following chickenpox immunisation. If pregnant women are concerned, they should contact their doctor.

RESPONSIBILITIES OF THE PARENTS

Keep the child home until all blisters have dried. This is usually at least 5 days after the rash first appeared in unimmunised children and less in immunised children.

CONTROLLING THE SPREAD OF INFECTION

Chickenpox can be prevented by immunisation. Fully immunised communities offer the best protection against chickenpox. Chickenpox vaccination is free for all children at 18 months of age from 1st November 2005. Vaccination after exposure is usually successful in preventing
chickenpox when given within 3 days of exposure and may be successful when given up to 5 days after exposure.

Non-immune child care staff should be immunised against chickenpox.\(^8^2\)

Varicella zoster immunoglobulin (VZIG) may be given to some contacts that are at very high risk of complications because of other medical problems. This is not recommended for normal healthy children.

Cover the nose and mouth when coughing or sneezing.

Dispose of soiled tissues after wiping a runny nose or which are soiled with nose or throat discharges. Wash and dry hands carefully. Do not share eating utensils, food or drinking cups.

Thoroughly wash toys that infants and toddlers put in their mouths.

**TREATMENT**

There is no specific treatment, but calamine lotion or phenergan may soothe the itch.

The use of a medicine containing paracetamol may be considered to lower the child’s temperature or relieve discomfort. Never give aspirin to children who develop fever after exposure to chickenpox. Aspirin appears to increase the risk of Reye’s Syndrome, a rare but serious disorder characterised by sleepiness and vomiting. Reye’s Syndrome can lead to coma and death.
Cold sores (herpes simplex)

DESCRIPTION

Cold sores are caused by herpes simplex virus (HSV). Cold sores are very common and most children will have had their first cold sore by the age of five years. After the first infection, the virus that causes them ‘hides’ in the nerves of the skin and can cause new cold sores from time to time.

The most common place for cold sores is on or near to the lips, less often on the nose, chin and other parts of the face but they can occur on any part of the body. In babies, they often come on the chin of a dribbling baby. The virus can (rarely) affect the eye if the virus is carried by the child’s hand from an active cold sore to the eye. Cold sores on the surface of the eye can affect eyesight and any child with a painful red eye should be seen by a doctor.

There is often an irritation or burning feeling first, then one or two blisters form, which break, form a yellow scab and then heal. They usually don’t leave any scars. Cold sores usually last from 3 – 7 days.

Cold sores can be triggered by such things as cold, sunburn, fever, illness or worries and stress.

INCUBATION PERIOD

2 – 12 days.

INFECTIOUS PERIOD

Spread of infection is most likely when there is fluid present in the blister. However, people with a history of cold sores may shed the virus in their saliva (and are capable of infecting others) even without a blister being present.

EXCLUSION PERIOD

Exclusion is not necessary if the person is developmentally capable of maintaining hygiene practices to minimise the risk of transmission. If the person is unable to comply with these practices they should be excluded until the sores are dry. Sores should be covered by a waterproof dressing where possible.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

Staff members with cold sores may need to be given duties involving less direct contact with children.

RESPONSIBILITIES OF PARENTS

If the child is unable to comply with good hygiene practices, (ie not touch cold sores, not kiss other children, wash and dry hands thoroughly, dispose of tissues appropriately, etc), they should be kept at home until the blisters have dried completely.

Cover the lesion with a waterproof dressing if possible.

CONTROLLING THE SPREAD OF INFECTION

Anyone with a cold sore should avoid contact with newborn babies.

Follow good hand washing and cleaning procedures.

Do not allow kissing on or near the infected area or sharing of food or drink containers.

Dispose of used tissues appropriately. Wash toys that children put in their mouths daily and store dummies separately. Do not allow children to drink from another child’s bottle.

TREATMENT

Using antiviral creams or lotions such as idoxuridine or acyclovir at the very early stages may help keep the sore small and help it heal more quickly.

It is important to try to stop any other germs getting into the cold sores, so try not to scratch them, and wash and dry hands thoroughly.
Parvovirus B19 (Erythema infectiosum, slapped cheek syndrome, fifth disease)

DESCRIPTION

This is a mild viral illness. About 20% of infected children will have no symptoms at all. In others, early in the infection there may be mild cold-like symptoms, then two to five days later, the child typically develops a “slapped cheek” rash on the face and a lacy red rash on the trunk and limbs. The child is usually not very ill, though the rash occasionally can be itchy. The rash disappears after 7 to 10 days, although it may come and go for several weeks, often in response to heat. On recovery, the child develops lasting immunity, and is protected against future infection.

Infection with parvovirus B19 generally only causes a mild illness. The illness may be more severe in some people who have uncommon types of red blood cell disorders. If a pregnant woman is infected, the infection may be transmitted to her unborn baby. In less than 5% of cases, parvovirus B19 infection may cause the unborn baby to have severe anaemia (low blood count), and the woman may have a miscarriage. This occurs more commonly if infection occurs during the first half of pregnancy. Malformations do not appear to occur in babies who survive this infection in the mother.

Parvovirus is spread by droplets or by secretions from the nose and throat.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILDCARE PROVIDERS/STAFF

Report the infection to the director. The director should advise pregnant women to consult with their medical practitioner.

Advise the parent the child should stay at home until they are feeling well.

RESPONSIBILITIES OF PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

Follow good hand washing practices.

Clean surfaces contaminated by respiratory secretions.

Dispose of soiled tissues appropriately.

TREATMENT

No specific treatment.

INCUBATION PERIOD

Variable; 4-20 days.

INFECTIOUS PERIOD

Not infectious once the rash appears.
Hand, foot and mouth disease

DESCRIPTION

This is a mild viral illness and has nothing to do with animal diseases with similar names (e.g., foot and mouth disease in livestock).

Symptoms include a slight fever, loss of appetite, blisters in the mouth and on the hands and feet, and a sore mouth for a few days before the ulcers or blisters appear. Affected young children may refuse to eat or drink. Less commonly, blisters may be seen in the nappy area.

Hand, foot and mouth disease is spread through contact with the fluid in the blisters. This is most likely to occur when the virus becomes airborne during coughing, singing, talking, etc. Contact with faeces can also spread the infection.

INCUBATION PERIOD

Usually 3–5 days.

INFECTIOUS PERIOD

As long as there is fluid in the blisters. The faeces can remain infectious for several weeks.

EXCLUSION PERIOD

Exclude until all blisters have dried.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the illness to the director.

RESPONSIBILITIES OF PARENTS

Observe exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Allow blisters to dry naturally. The blisters should not be deliberately pierced because the fluid within the blisters is infectious.

Follow good hand washing and cleaning procedure.

TREATMENT

Usually none is required.
Head lice
(Pediculosis capitis)

DESCRIPTION

Head lice are tiny insects. They do not have wings, so they cannot fly. Head lice have strong claws and swing from hair to hair - they cannot jump. They live on the hair and suck blood from the scalp. Head lice can only be spread from one person to another by direct head-to-head contact.

Anyone can get head lice - they have no preferences for cleanliness, hair colour, hair type, ethnicity or age. Head lice are a nuisance but they do not cause disease or illness. Itching is often the first thing that raises concern about head lice, however it is not a reliable sign of head lice.

Head lice need to spend their entire life on human heads to survive. Head lice will die from dehydration within 6 - 24 hours when removed from the human head, depending upon humidity and when they last fed.

Scientific research has shown:

- Sharing hats presents no risk. It does not increase the chance of getting head lice. Researchers examined hats worn by 1000 school children and found no head lice even when many head lice were found on the children's heads.

- Placing grooming implements in a container of very hot water (60°C) for at least 30 seconds will kill any head lice caught in the comb after grooming. A domestic hot water service usually does not reach 60°C. If you do not have a thermometer, it may be easiest to use water shortly after it has gone off the boil.

- Researchers examined 118 carpeted classroom floors and found no head lice or eggs. When the students from those rooms were examined, they had a total of 14,563 live head lice on their heads.

INCUBATION PERIOD

The head louse starts as a small egg about the size of a grain of salt which the female louse glues to the base of the hair shaft. Most often these eggs (nits) are found in the hair behind the ears, at the back of the neck, or around the crown and under the fringe. The eggs hatch in 7-10 days. They mature into an adult louse, which is a wingless insect 2-3 mm long with a flat body and six legs. The adult louse is capable of laying eggs after 6-10 days.

INFECTIOUS PERIOD

As long as the eggs or lice are alive. Live eggs are glued to the hair shaft, usually within 1.5cm from the scalp. Head lice can only survive on human heads and they must feed every 6 hours or they will die from dehydration. Eggs need to be on the head to hatch.

EXCLUSION PERIOD

Exclusion is NOT necessary if effective treatment (see ‘Treatment’) is commenced prior to the next day at child care (ie the child doesn’t need to be sent home immediately if head lice are detected). An effective treatment is when a treatment is used and all the lice are dead.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Reducing head-to-head contact between all children during activities when the centre is aware that someone in the centre has head lice.

Support parents and children who have head lice by providing factual information, reducing parental anxiety and by not identifying individual children as having head lice.

RESPONSIBILITIES OF PARENTS

Check child’s head once a week for head lice. If head lice are found, begin treatment immediately and check for effectiveness.
(see 'Treatment') and keep checking every 2 days until no lice are found for 10 consecutive days.

You may send your child back to child care as soon as effective treatment has commenced. Your child is not a risk to others as long as treatment has commenced.

**CONTROLLING THE SPREAD OF INFECTION**

Educate staff, children and parents about head lice. Identification of an individual child with head lice is usually a marker of head lice in a much larger group and a group approach rather than an individual approach is needed.

Keep families informed if there is someone within the centre with head lice. Recommend that staff and children tie back long hair to reduce the chance of transmission.

**DETECTION**

Itching is often the first thing that raises concern about head lice; however it is not a reliable sign of head lice. Most children who itch do not have head lice. You can have head lice and not know. Lice move fast in dry hair and are easy to miss. If you find head lice early, they are easier to treat. Everyone (adults and children) in the family needs to be checked.

Check everyone’s head once a week. If a close contact has head lice, keep checking every 2 days until no lice are found for 10 consecutive days. If you find head lice, you need to decide on a treatment option.

Using hair conditioner and combing is the most effective way of finding, and treating, head lice. Conditioner and combing can be used for detection and/or treatment. The conditioner stuces the lice for some minutes so they can be easily removed. Conditioner and combing are reasonably inexpensive. It also avoids the use of head lice chemicals (pesticides).

**CONDITIONER AND COMBING TECHNIQUE**

1. Untangle dry hair with an ordinary comb.
2. Apply hair conditioner to dry hair (use white conditioner as it makes it easier to see the nits). Use enough conditioner to thoroughly cover the whole scalp and all hair from roots to tips.
3. Use the ordinary comb to evenly distribute conditioner and divide the hair into four or more sections using hair clips. A mirror helps if combing yourself.
4. Change to a head lice comb.
5. Start with a section at the back of the head. Place the teeth of the head lice comb against the scalp. Comb the hair from the roots through to the tips.
6. Wipe the comb clean on a tissue after each stroke. In good light, check for head lice. Adult lice are easier to see – young lice are difficult to see. A magnifying glass will help. You may see some eggs.
7. Comb each section twice until you have combed the whole head. If the comb becomes clogged, use an old toothbrush, dental floss or safety pin to remove the head lice or eggs.

**TREATMENT OPTIONS**

The two most important things to think about when choosing and using treatments are safety and effectiveness.

**Conditioner and Combing Treatment**

If you choose the conditioner and combing as a treatment, follow all the steps described in ‘Conditioner and combing technique’. Keep combing the whole head until all the head lice is gone. Repeat the conditioner and combing daily until you
find no more head lice for 10 consecutive days. It is important to continue for 10 days to remove all the adult lice and any young lice that hatch from the eggs before they can reproduce.

**Chemical Treatment**

When choosing a chemical treatment product, ensure you only choose chemical treatments that are designed specifically to treat head lice.

Choose only chemical treatments which have an 'Aust. L' or 'Aust. R' number on the label. These products are licensed or registered with the Therapeutic Goods Administration (TGA) in Australia. This means they are approved for safety. Be wary of chemical treatments which are not officially approved.

Chemical treatments are divided into 4 groups according to the active ingredient. These groups are: Pyrethrins, Synthetic Pyrethroids, Organophosphates and Herbal and Essential Oils.

If you use a chemical treatment and it does not kill the head lice, choose a product with a different active ingredient from a different group. Products from the same group will probably not work as the active ingredient is likely to be the same. Your pharmacist can help you choose a product.

There is no chemical treatment which will kill eggs. The eggs will continue to hatch after the treatment. Therefore it is essential to apply the second treatment one week later to kill any young lice that have hatched. The conditioner and combing treatment can be used in between to help remove the lice that are hatching.

There is no chemical treatment that will work for everyone. Resistance to chemical treatments is a problem in Australia. Research into this problem is continuing. The only way of dealing with resistance is to check for effectiveness every time you use a chemical treatment.

**EFFECTIVENESS OF CHEMICAL TREATMENTS**

It is essential to check for effectiveness after each application of a chemical product (refer to instructions above). Some head lice are resistant to some chemical treatments. This means that this treatment will not be effective in killing head lice.

To check for effectiveness after treating for head lice, use a fine tooth head lice comb (preferably a metal comb) to comb all of the hairs from roots to tips. After each sweep, wipe the combings onto a tissue. Repeat until all the hair has been combed at least twice. Wait for 5 minutes. Observe the lice for movement.

**Effective:** If all the lice are dead the treatment has been effective.

- Apply the same product every 7 days (maximum 3 times) to kill the lice hatching from the eggs. Use conditioner and combing every 2 days in between to improve the effectiveness of the treatment.
- After first application eggs will be present. In 7 days use conditioner and combing to detect lice. If lice are found, apply product again in 7 days.
- After third application, if lice are still present, continue using conditioner and combing only.

**Ineffective:** If some lice run around or wave their legs and antennae, the treatment has not been effective.

- If a treatment has not been effective, select a product with a different active ingredient. Show the pharmacist your current treatment and request advice on choosing an alternative treatment or consider using the conditioner and combing technique.
Impetigo (school sores)

DESCRIPTION

Impetigo is a bacterial skin infection caused by either the Staphylococcus or Streptococcus organism, or both. It is very common in children and is very easily spread, but with care spread can be reduced.

Impetigo appears as a flat, yellow, crusty or moist patch on the skin, usually on exposed parts of the body such as the face, arms and legs. The sores are often greater than 1cm in diameter. It usually starts with a blister or a group of blisters.

Dry, cracked skin is an ideal area for growth of bacteria. This infection spreads easily to other parts of the infected person’s body. It is transferred to other people by direct contact with sores or contaminated clothes.

STAPHYLOCOCCUS

Staphylococcus (or staph) are bacteria that are found on the skin and in the nose of people. Staph are usually harmless, but they can sometimes cause infection and serious illness.

STREPTOCOCCUS

Streptococcus (or strep) are bacteria usually known as either group A or group B. Group A strep is often found in the throat and on the skin and cause no symptoms of illness. Most Group A strep infections are relatively mild illnesses such as ‘strep throat’ or impetigo. On rare occasions, these bacteria can cause other severe and even life-threatening disease.

Group B strep is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining surrounding the brain) in newborns. Group B strep is a frequent cause of newborn pneumonia.

INCUBATION PERIOD

1–3 days.

INFECTION PERIOD

As long as there is fluid weeping from the sores. Usually it has stopped being infectious about 24 hours after treatment with an antibiotic has been started and healing has begun.

EXCLUSION PERIOD

Exclude until the child has received antibiotic treatment for at least 24 hours.

RESPONSIBILITIES OF CHILD CARE PROVIDERS AND PARENTS

Report the infection to the director.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

Any sores on exposed skin should be covered with a waterproof dressing.

CONTROLLING THE SPREAD OF INFECTION

Emphasise the importance of good hand washing procedures for all personnel and children in the centre.

Sores on exposed surfaces should be covered with a waterproof dressing.

TREATMENT

The doctor may recommend the use of antibiotic ointment or antibiotics taken by mouth. Refer the child back to the doctor if the condition does not improve.
Measles

DESCRIPTION

Measles is a highly infectious and serious viral illness. It begins with fever, tiredness, a cough, a runny nose and inflamed eyes. These symptoms usually worsen over 3 days. The cough tends to be worse at night. The child may avoid light because the eyes are inflamed. At this stage, there may be small white spots on a red base present in the mouth on the inside of the cheek. Between days 3 and 7, a rash begins at the hair line. The fever will still be present when the rash begins. In 24–48 hours, this will spread over the entire body. When the rash reaches the legs, the rash on the head and face begins to fade. The rash usually disappears after 6 days. Measles lasts about 10 days. The cough may be the last symptom to disappear. A child with measles usually feels very ill.

In a fairly high number of cases, the measles virus causes serious complications, such as pneumonia or inflammation of the brain. That is why there is so much concern about the disease. Measles is not a simple childhood disease.

The number of cases in Australia has fallen dramatically over the past 10 years as a result of immunisation programmes and other public health measures.

INCUBATION PERIOD

8–14 days, usually 10 days.

INFECTIOUS PERIOD

About 4–5 days before the rash begins until the fourth day after the rash appears.

EXCLUSION PERIOD

Exclude for at least 4 days after the appearance of the rash.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

All children with a fever and a rash should see a doctor. Copy the letter on page 20 and fill in the details. Ensure the parents realise that before taking a child to a doctor they must ring and inform the health staff that they are bringing a child with suspected measles. Measles can spread very easily to other people in a doctor’s waiting room.

Encourage the parents to ask the doctor for a blood test to confirm/exclude measles.

Report the infection to the director.

Inform the public health unit immediately.

(One case of measles is considered an outbreak.)

RESPONSIBILITIES OF PARENTS

Observe the exclusion period. If the child feels unwell, keep them home until they are feeling better.

Advise any friends, family or social contacts that your child has measles. These contacts may need to seek medical advice if they are pregnant, unimmunised or have a medical condition which compromises their immune system (such as cancers, HIV/AIDS, some medication).

CONTROLLING THE SPREAD OF INFECTION IN THE CENTRE

Measles is best prevented through immunisation with the MMR vaccine. Children should be immunised at 12 months of age and again at 4 years of age. The vaccine gives lasting immunity. All child care staff born during or since 1966, either without vaccination records or are negative on blood test should be vaccinated both for their own protection and to avoid the risk of infecting their pregnant colleagues.

If you have a suspected or definite case of measles the first thing you must do is notify the public health unit. Because measles is a
serious disease, every effort is being made to eliminate the infection from Australia. The staff from the public health unit will assist your centre and local doctors to control the disease.

Write down the dates that the child/adult with measles was in the centre over the last 10 days.

Discuss with the public health staff who in the centre might need preventive treatment and who should be excluded from care.

- Exclude a person with measles for at least four days after the rash appears.
- Exclude children over 6 months of age who have not had MMR vaccine, this will be most babies between 6 and 12 months of age and some older children. Exclude these children quickly and give the parents the dates that the case of measles was in the centre. The unimmunised children may return after they have the appropriate preventive treatment. This treatment will depend on their age and when they were exposed to the case of measles. They may require MMR vaccine or Normal Immunoglobulin as advised by the public health unit. MMR vaccine can be used to protect unimmunised contact. To be effective, MMR vaccine must be given within 72 hours of contact with the infected person. If they do not receive MMR vaccine within 72 hours, they may be given Normal Immunoglobulin within 7 days of exposure.
- Babies under 6 months of age probably still have immunity to measles from their mother and do not need immediate exclusion. The baby will only be immune if his/her mother is immune. Inform the parents of babies under 6 months of age of a case of measles in the centre. Ask the mother to contact the public health unit to discuss whether her baby needs treatment.

- Exclude staff who were born after 1966 and who have no evidence of having received 2 doses of the vaccine or having had measles. These staff may return as soon as they are vaccinated or have evidence from a blood test that they are immune. People born before 1966 are considered immune because of the measles virus they would have been exposed to in childhood.
- Exclude children or staff whose immune system is compromised (such as children with some cancers, HIV/AIDS or specific treatments) regardless of their vaccination status. Discuss with the public health staff and local doctors when these people should return.
- Inform any visitors to the centre, part-time staff, and parents of part-time children about a case of measles.

Anyone who is not immune and has not received preventive treatment recommended by the public health unit must be excluded for 14 days after the appearance of the rash in the last case of measles in the centre.

**TREATMENT**

None.
Molluscum contagiosum

DESCRIPTION
A common skin infection caused by the Molluscipox virus.

The virus causes small, usually 2-5mm, painless, pink or pearly white lumps on the skin. The top of the lump is indented and contains a white core.

The infection is not serious, only affects the skin, and will disappear without treatment, although this may take several months. Individual lumps often disappear after about two months, but often there will be more than one lump and they will not all disappear until 6-9 months. There are no long-term ill effects following molluscum contagiosum. People who are immunosuppressed may have more lesions, and these may take longer to clear up.

The virus is spread by direct skin-to-skin contact where there are minor breaks in the skin, and is most common in children.

INCUBATIONPERIOD
2-7 weeks, sometimes longer.

INFECTIOUS PERIOD
As long as the lumps are present. This may be for several months.

EXCLUSION PERIOD
Nil.

RESPONSIBILITIES OF PARENTS
Inform child care provider/staff of infection.

CONTROLLING THE SPREAD OF INFECTION
Direct contact with the lumps should be avoided.

Covering lumps is not necessary.

TREATMENT
Lumps will disappear without treatment, although this may take several months. Various treatments such as laser therapy, freezing and surgery are occasionally used for cosmetic reasons.

Responsibilities of Child Care Providers/Staff
Inform the director of the infection.
Fungal infections of the scalp, skin or nails
(ringworm, tinea, athlete’s foot)

DESCRIPTION
These infections are commonly called ‘ringworm’ but are not caused by worms, but a spreading area of fungal dermatitis. These infections are passed on by direct skin contact or indirectly by touching contaminated articles, clothing and floors. While some of these infections can be caught from animals, humans also have some species of fungal infections that do not occur in animals at all. Different types of animals have different types of fungi that cause ringworm. If a specimen from the infected area is cultured in the laboratory, it is often possible to narrow down the source of infection to humans, cats and dogs, cattle, horses, pigs, etc.

Fungal infections can be found in different areas of the body (scalp, skin and nails). The condition looks different depending where it is located—on the scalp, the nails, the body or the foot.

SKIN (OTHER THAN OF THE SCALP, BEARDED AREAS AND FEET)
This appears as a flat, spreading, ring-shaped lesion. The outer edge is usually reddish. It often contains fluid or pus, but may also be dry and scaly or moist and crusted. The centre of the patch may appear to be healing.

FOOT (COMMONLY KNOWN AS TINEA OR ATHLETE’S FOOT)
The characteristics of this common condition are scaling or cracking of the skin, especially between the toes, or blisters containing a thin watery fluid.

TOENAILS AND FINGERNAILS
This condition tends to be a long-term fungal disease. It is difficult to treat. It usually affects one or more nails of the hands or feet. The nail gradually thickens and becomes discoloured and brittle. Cheesy looking material forms beneath the nail, or the nail becomes chalky and disintegrates.

RINGWORM OF THE SCALP AND BEARD
This condition begins as a small pimple. It spreads outward leaving fine scaly patches of temporary baldness. Infected hairs become brittle and break off easily.

INCUBATION PERIOD
Varies with the site of infection. The incubation period for tinea of feet and nail is unknown. The incubation period for tinea of the skin is usually 4 – 10 days. The incubation period for tinea of the scalp is usually 10 – 14 days.

INFECTIOUS PERIOD
As long as the condition persists.

EXCLUSION PERIOD
Exclude until the day after appropriate treatment has been commenced.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF
Report the infection to the director.

RESPONSIBILITIES OF PARENTS
Observe exclusion period. Commence appropriate treatment. Others in the family should be inspected for signs of infection.

Follow good hand washing techniques.

CONTROLLING THE SPREAD OF INFECTION
Seek appropriate treatment early. Follow good hand washing techniques.
TREATMENT

The condition first needs to be diagnosed correctly. It is treated by applying or taking anti-fungal medications. These may need to be used for a long time if the nails are infected. Parents should seek medical advice.

Ringworm in animals can be treated with anti-fungal preparations and tablets. These can be obtained from vets.
Roseola (exanthum subitum, sixth disease)

DESCRIPTION

This common contagious viral infection is marked by the sudden onset of a high fever which lasts 3 – 5 days and then falls, at which time a rash appears. The rash may look similar to the measles rash, but appears first on the body. The high temperature can last from a few hours up to 3 – 5 days. The rash lasts from a few hours to 1 – 2 days. It usually affects children between the ages of 6 months and 3 years. Although it can lead to febrile convulsions, roseola is usually a mild illness.

Roseola is spread by airborne droplets from the nose and throat, and indirectly by contact with hands, tissues and other articles soiled by nose and throat discharges. The disease is also spread by direct contact with the saliva of an infected person.

INCUBATION PERIOD

Around 10 days.

INFECTIOUS PERIOD

Saliva, nasal discharge and other respiratory secretions are most infectious from a few days before until several days after the rash appears.

EXCLUSION PERIOD

Nil. If the child feels unwell they should not attend the centre until they are feeling better.

RESPONSIBILITIES OF PARENTS

Although there is no exclusion period for roseola, if the child feels unwell they should not attend the centre until they are feeling better.

CONTROL OF SPREAD

Follow good hand washing procedures. Dispose of soiled tissues appropriately.

TREATMENT

None.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.
Rubella (German Measles)

**DESCRIPTION**

Rubella is a mild viral disease. The onset of rubella is rather like a mild cold, with a slight fever, sore throat and enlarged lymph glands in the neck. The characteristic rash appears 2-3 days later. It begins on the face and spreads to the trunk. The spots are at first pale pink in colour and soon merge to form patches. The rash lasts only a few days and then disappears. During this time the child remains mildly unwell with swollen glands in the neck and back of the head.

Rubella is spread through airborne droplets or direct contact with the nose or throat secretions of infected persons.

Rubella usually causes only mild illness in children. However, infants born to mothers who had rubella during the first 20 weeks of pregnancy may have severe birth defects. The risk is highest in early pregnancy.

**INCUBATION PERIOD**

14-21 days, usually 14 - 17 days\(^{102}\).

**INFECTIOUS PERIOD**

Up to 7 days before and at least 4 days after appearance of the rash.

**EXCLUSION PERIOD**

Exclude for at least 4 days after the appearance of the rash and until the child feels well.

**RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF**

Report the infection to the director.

Refer anyone with suspected rubella to a doctor.

All staff members should be aware of their immune status and if not immune, they should be immunised.

If pregnant staff members are concerned, refer them to their doctor. Immunisation during pregnancy should be avoided\(^{103}\). Although immunisation for rubella during pregnancy is not recommended, the inadvertent administration of the vaccine during early pregnancy is not cause for undue concern.

**RESPONSIBILITIES OF PARENTS**

Observe the exclusion period.

Advise any pregnant friends or family who may have been exposed to consult with their doctor.

**CONTROLLING THE SPREAD OF INFECTION**

The affected child should remain away from the centre for at least 4 days after onset of the rash and until fully recovered.

Children should be immunised twice against rubella, at 12 months of age and again at 4 years of age. The rubella vaccine is part of the MMR (measles-mumps-rubella) immunisation.

Anyone who works with children should be immunised or be certain that they have had a blood test which demonstrates that they are immune to rubella. If there is a confirmed outbreak of rubella, non-immune pregnant women should be excluded for 17 days after identification of the last case.

**TREATMENT**

Nil.
Scabies and other mites causing skin disease

DESCRIPTION

Scabies is an infectious disease of the skin caused by a mite. Scabies and other mites causing skin disease are diagnosed by examining a skin scraping under a microscope for mites or eggs. Scabies and other mites usually cause intense itching. Scabies is usually found between the fingers, on the front of the wrists, and in the folds of the elbows, wrists, armpits, buttocks and genitalia. Thread-like ‘tunnels’ (about 10 mm long) may be present in the skin, but are often very difficult to see. When mites have been transmitted from animals to humans, the mites are commonly found on contact areas, such as the arms, chest and neck.

Scabies is usually transmitted by skin-to-skin contact. Very rarely, it is spread on underclothing or bed clothes that have been freshly contaminated by an infested person. The mites only live for a few days off the human or animal body. Although scabies mites from animals can remain alive on humans, they do not reproduce.

Some forms of skin disease in animals caused by mites (such as mange) can also be spread to humans. If an animal has mange, it is important to have a veterinarian diagnose which mite is causing the mange. Some mange mites on animals can spread to humans (for example, scabies and Cheyletiella), while others do not spread to humans (for example, Demodex). Sarcopes (which causes scabies) can infest a wide variety of animals (including cats and dogs), while Cheyletiella usually infests rabbits but can also infest cats and dogs. Sarcopes and other animal mites can live on humans, but do not reproduce on them.¹⁰⁴

Scabies is not an indication of poor cleanliness.

INCUBATION PERIOD

Itching begins 2–6 weeks after infestation in people not previously exposed to scabies and within 1–4 days for people previously exposed. Itching due to Cheyletiella can develop within hours of handling the animal.

INFECTION PERIOD

Until the mites and eggs are destroyed by treatment.

EXCLUSION PERIOD

The child is to be excluded and may return to the centre the day following treatment.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report mite infestations to the director.

Any animals in the child care centre with skin disease caused by mites (mange) should be treated. A vet should examine a skin scraping to confirm the presence of mites and identify whether the mite can spread to humans.

RESPONSIBILITIES OF PARENTS

Observe exclusion period.

See ‘controlling the spread of infection’ for further responsibilities.

CONTROLLING THE SPREAD OF INFECTION

All close (skin-to-skin) contacts and other people in the same household should be treated at the same time, even if no itching or other symptoms are present. By the time scabies is diagnosed in one person, many other people may have been infested. If everyone is not treated at the same time, treatment is likely to be unsuccessful.

Contaminated underwear, bed linen and other clothing worn by infested people in the 48 hours prior to treatment should be washed
in hot water and detergent. All items such as toys which cannot be washed or dry-cleaned should be placed in a plastic bag for 4 days to kill any mites or eggs.

It is not likely that scabies will be spread by furniture, carpets, mattresses, etc but they could be vacuumed or gently ironed.

**TREATMENT**

Skin disease caused by mites can easily be confused with other skin diseases. Treatment should not begin until a doctor has confirmed the diagnosis following examination of a skin scraping for mites. This is particularly important for babies, pregnant women or people who already have other forms of skin disease.

Treatment involves application of insecticidal cream, lotion or solution as prescribed by a doctor. If the mite has spread within the centre, all staff and children will need to be treated at the same time.

Animals with skin disease caused by mites (mange) should be treated. A vet should examine a skin scraping to confirm the presence of mites and identify whether the mite can spread to humans. Animals and their bedding should then be treated with insecticidal washes, according to the vet’s instructions.
Scarlet fever

DESCRIPTION

Scarlet fever begins suddenly, sometimes causing a convulsion in a very young child. It begins with a sore throat, high temperature and frequent vomiting. This is followed within 12-36 hours by a fine red rash on the limbs and trunk and reddening of the tongue (strawberry tongue). This appears first on the neck and chest, rapidly spreading over the body, finally reaching the legs. During the recovery from the infection, the skin may peel off the fingers and toes.

Scarlet fever is caused by a streptococcal infection (see “Sore throats and strep throat” on page 50).

It is spread directly by contact with airborne droplets (coughing and sneezing), or indirectly by contaminated hands, tissues, eating utensils, toys or other articles freshly soiled by the nose and throat discharges of an infected person.

INCUBATION PERIOD

Usually 1-3 days.

INFECTIOUS PERIOD

For about 24 hours after appropriate treatment begins. Untreated people remain infectious as long as they are sick. This is usually 3-7 days.

EXCLUSION PERIOD

Exclude until the child has received antibiotic treatment for at least 24 hours and they feel well.

RESPONSIBILITIES OF PARENTS

Advise the parent to seek medical assessment and treatment as untreated scarlet fever may result in serious illness. Parents must keep the child home for the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Follow good personal cleanliness practices. Cover the nose and mouth when coughing or sneezing. Dispose of soiled tissues appropriately. Always follow this with proper hand washing. Do not share eating utensils, food or drinking cups. Wash toys that infants and toddlers put in their mouths.

TREATMENT

Penicillin or other effective antibiotics as prescribed by a doctor. Take the full course of antibiotics.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.
Thrush (candida)

DESCRIPTION

Thrush is a common infection in the mouth of babies, on rashes (especially nappy rashes and rashes in moist places such as under the chin of a dribbling baby), on the nipples of breastfeeding mothers and in the vagina of women. It can be very irritating but it is treatable.

Thrush is caused by a yeast (a very small living cell) called candida. Most people have candida on their skin, in their mouths and in their gut most of the time without having any problems with it. Sometimes the candida can start growing fast and can cause an infection (thrush).

Thrush is common in very young babies and infants. They are susceptible at this time because their immune systems are still immature. Thush is often found inside the mouth as white spots or flakes that cannot be removed by cleaning the mouth. Another site of infection is the vulva and vagina. Frequently thrush is a secondary infection to nappy rash. Thrush is spread by direct contact with fungi living in the mouth, vagina and faeces and on the skin. A mother can infect her newborn baby during the birth.

INCUBATION PERIOD

Variable, but 2-5 days in infants.

INFECTIOUS PERIOD

As long as the white spots or flakes are present.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

RESPONSIBILITIES OF PARENTS

If bottle feeding, clean and sterilise teats and dummies (or replace them) to prevent re-infection.

Any nappy rash that is not clearing after 3 days, or not responding to your usual cream, may involve thrush and needs treatment.

CONTROLLING THE SPREAD OF INFECTION

Make sure effective hand washing and cleaning procedures are being practised.

TREATMENT

For moderate to severe infection of the mouth or the vulva/vagina the parent should take the child to a doctor. The doctor may prescribe anti-fungal medications. Wash the affected area with water, apply the prescribed cream, and expose the nappy area to air as much as possible.
Warts (common, plane and plantar)

DESCRIPTION
Warts are thickenings of the skin, usually round or oval shaped, and clearly different from the surrounding skin. Warts are caused by a virus infection of the skin (Human papillomavirus). The virus enters the skin through scratches or other damage to the skin. People cannot get warts from animals. There are many types of warts.

Common warts develop on the skin of children and adolescents. They mainly occur on the knuckles, backs of hands and knees. Occasionally, common warts come out in a crop. They are usually raised and separate from each other. They are spread by skin-to-skin contact such as holding hands.

Plane warts are flat-topped. They are most commonly found on the face and on the back of the hands. They occur in lines where the virus has infected a scratch.

Plantar warts occur on the soles of the feet. They are found mostly in older children and adolescents. Infection can come from walking with bare feet on wet floors such as in school or swimming pool change rooms. Plantar warts can be quite painful, unlike other warts.

INCUBATION PERIOD
2-3 months, but ranges from 1-20 months.

INFECTION PERIOD
Unknown, but if untreated probably as long as warts can be seen.

EXCLUSION PERIOD
Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF
Report the infection to the director.

RESPONSIBILITIES OF PARENTS
Advise children not to pick or scratch at warts. Wash and dry hands after any contact with warts.

CONTROLLING THE SPREAD OF INFECTION
Avoid direct contact with warts.

Make sure that effective hand washing and cleaning procedures are being practised.

Treat warts if the affected area is exposed (for example, on the hands or legs). After treatment the warts are not contagious.

The wart virus may enter via moist skin surfaces, such as abrasions and cuts. Therefore it is important to get children to:

- dry hands well after washing them;
- cover abrasions and cuts with a clean dressing; and
- wear shoes to protect the feet.

TREATMENT
Warts will usually go away naturally, but this may take a long time. If treatment is necessary the following may be used:

- Liquid nitrogen;
- Chemical paste applications; or
- Laser therapy.
Conjunctivitis

DESCRIPTION

Conjunctivitis is an inflammation of the conjunctiva, the clear membrane that covers the white part of the eye and lines the inner surface of the eyelids. The inflammation can have many causes, the commonest of which are infection, allergy and irritation.

**Infectious conjunctivitis** is usually caused by either bacteria or viruses. If it is caused by a bacteria both eyes are almost always infected, although it may start in one eye. There is likely to be a gritty feeling and pus. Conjunctivitis from a virus may involve one or both eyes, causing red, itchy eyes and watering of the eyes.

**Allergic conjunctivitis** occurs more frequently among children with allergic conditions such as hay fever. If it comes from an allergy, there are often other signs of allergy such as itchy nose and sneezing, the eyes feel itchy and are watery. Allergic conjunctivitis typically affects both eyes at the same time.

**Irritant conjunctivitis** can be caused by chemicals such as those in chlorine and soaps or air pollutants such as smoke and fumes.

Allergic and irritant conjunctivitis is not infectious.

The different types of conjunctivitis can have different symptoms. In addition, symptoms can vary from child to child. One of the most common symptoms is discomfort or pain in the eye, which may feel like having sand in the eye. Many children have redness of the eye. They may also have swollen eyelids and be sensitive to bright lights.

Discharge from the eye may accompany the other symptoms. In infectious conjunctivitis caused by bacteria, the discharge will be somewhat thick and coloured white, yellow or green. Sometimes the discharge will cause the eyelids to stick together when
the child awakens in the morning. In allergic conjunctivitis or infectious conjunctivitis caused by a virus, the discharge may be thinner and may be clear.

Viral and bacterial conjunctivitis can be spread by direct contact with eye secretions or indirectly by contact with towels, washcloths, and tissues etc that have been contaminated with eye secretions. In some cases it can be spread by insects such as flies.

**TREATMENT**

Antibiotic eye drops or ointment may be prescribed by a doctor. Regular cleaning of the eyes may make the child feel better. It is important to use a separate cotton wool ball or tissue for each eye to avoid cross-infection and use warm but not hot water. Wipe the closed eye gently but firmly to remove the excess pus - do not clean inside the eyelids as this may cause damage to the conjunctiva or the cornea (the clear front of the eye).

**INCUBATION PERIOD**

24–72 hours.

**INFECTION PERIOD**

Viral and bacterial conjunctivitis are infectious while there is discharge from the eye. Conjunctivitis caused by chemicals or allergies is not infectious.

**EXCLUSION PERIOD**

Exclude until the discharge from the eyes has stopped unless doctor has diagnosed a non-infectious conjunctivitis.

**RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF**

Inform the director and the parents of the child.

The child should see a doctor for proper diagnosis and treatment.

**RESPONSIBILITIES OF PARENTS**

Observe the exclusion period. The child should see a doctor for proper diagnosis and treatment.

**CONTROLLING THE SPREAD OF INFECTION**

Effective hand washing is essential, especially before and after touching the eyes or face.

Dispose of soiled tissues appropriately.

Do not share towel, washcloths, etc.


**Cytomegalovirus (CMV)**

**DESCRIPTION**

Cytomegalovirus (CMV) is a common virus worldwide. CMV is a member of the herpes virus group but it cannot cause other herpes infections. Most CMV infections cause either no symptoms or only mild symptoms. Occasionally, symptoms similar to glandular fever can occur (see page 96). These include fever, sore throat and swollen glands.

Once people are infected with CMV they are thought to remain infected for the rest of their lives, even when they do not become ill. Sometimes the virus can be reactivated such as at times of other illnesses or stress, and may then cause symptoms. During an infection the virus can be spread in many ways, for example through coughing, through contact with blood, faeces or saliva. Infection can also occur before birth, at birth, or early in life.

Most women (50-60%) have been infected with CMV in the past and if they are infected a second time the risk to the unborn baby is very small. However, women who are infected with CMV for the first time while pregnant may infect the unborn baby. Infection of the unborn baby occasionally leads to eye disease, deafness, developmental delay or death. Therefore pregnant women who are caring for young children need to be particularly careful and it is a good idea for childcare workers who are considering pregnancy to find out if they are immune to CMV.

**INCUBATION PERIOD**

Not accurately known. Probably 3-12 weeks.

**INFECTIOUS PERIOD**

The virus is often shed for months in urine or saliva. Infants can shed the virus for months to years following infection or reactivation of the virus.

**EXCLUSION PERIOD**

Nil.

**RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF**

Report the infection to the director. The director may then need to review with staff the need for good personal cleanliness. If a pregnant woman is known to be non-immune, consider relocating her to care for children older than 2 years of age as these children are less likely to be infectious.

**RESPONSIBILITIES OF PARENTS**

Good hand washing after handling articles contaminated with urine or saliva, particularly after changing nappies.

**CONTROLLING THE SPREAD OF INFECTION**

Good hand washing, and washing of shared toys etc; should be done all the time, not only when a child is known to be unwell.

Women of child bearing age working with young children should always practise good personal cleanliness, especially:

- good hand washing after contact with body secretions, and especially after changing nappies or assisting in toilet care;
- not kissing infants on the mouth (hugging is acceptable).

**TREATMENT**

Usually none is required.
Glandular fever (Epstein Barr virus, Infectious Mononucleosis)

**DESCRIPTION**

An infection caused by the Epstein Barr virus (EBV). Once a person catches Epstein Barr virus, it is believed that the virus remains in their body for life, though it usually does not cause further illness. By adulthood, 90 – 95% of people have EBV.[115]

Symptoms of acute glandular fever include fever, sore throat and swollen glands. Stomach pain and jaundice (yellowing of skin and eyes) occur less frequently.

Symptomatic infection most often occurs in older children and young adults. When the infection occurs in young children, symptoms are mild or absent. Fifty percent of people infected have no symptoms of infection at all. The illness can last between one and several weeks.

The disease is spread from person-to-person through contact with saliva. Young children may be infected by saliva on the hands of care givers or by sucking and sharing toys, but the virus doesn’t survive very well in the environment.

**INCUBATION PERIOD**

4 – 6 weeks.

**INFECTIOUS PERIOD**

Not accurately known. The virus is shed in the saliva for up to one year after illness and intermittently after that.

**EXCLUSION PERIOD**

Nil.

**RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF**

Report the infection to the director.

If the child is unwell, advise the parent that the child should stay at home until they are feeling better (this is out of concern and consideration of the child – it is not an infection control issue for the centre).

**RESPONSIBILITIES OF PARENTS**

If the child is unwell, the child should stay at home until they are feeling better.

**CONTROLLING THE SPREAD OF INFECTION**

Follow good hand washing techniques. Minimise contact with saliva where possible. Avoid sharing cups.

**TREATMENT**

There is no effective antiviral medication available. Most people with glandular fever recover eventually.
Haemophilus influenzae type b (Hib)

DESCRIPTION

Before the introduction of Hib immunisation in 1993, the bacterial infection Haemophilus influenzae type b was one of the most common causes of meningitis in young children (usually under the age of 2 years), and the most common cause of epiglottitis, which causes breathing difficulties. It can also cause pneumonia, joint infection or cellulitis (infection of the tissue under the skin). It is not related to the virus that causes influenza.

 Symptoms of meningitis include severe headache, stiff neck, fits, severe drowsiness, difficulty waking up, and loss of consciousness.

The disease is spread directly from person-to-person, by contact with airborne droplets from the nose or throat; or indirectly, by contact with articles contaminated with discharges from nose or throat.

INCUBATION PERIOD

2–4 days.

INFECTIOUS PERIOD

Hib is infectious as long as there are organisms present in the nose and throat. Hib is not able to be spread after receiving 1–2 days of an appropriate antibiotic.

EXCLUSION PERIOD

Exclude until the person has received appropriate antibiotic treatment for at least 4 days.

RESPONSIBILITIES OF PARENTS

Report the infection to the director. Any child with the above symptoms should be seen by a doctor immediately. See ‘Controlling the spread of infection’ below.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Hib can be prevented by immunisation. Fully immunised communities offer the best protection against Hib.

Check the immunisation records of all children in contact with a child with Hib. Unimmunised children who have had close contact with the child with Hib will need special antibiotics.

If needed, the public health authorities may help arrange for other children and staff to be given courses of the antibiotic rifampicin by mouth.

Adults may also be given the antibiotic. They are not at risk of disease but may be carrying the germ in their throat.

TREATMENT

A child with Hib will be treated in hospital with antibiotics.
Hepatitis A

DESCRIPTION

Hepatitis A infection is caused by the Hepatitis A virus. The virus grows within the liver, and passes into the intestines. The main way it is spread is through faeces, when the faeces gets onto the hands of other people, and then moved from hands to mouth. It can also be spread through contaminated water or food (when faeces gets into the water supply or onto food).

Children under the age of 3 years rarely have symptoms\textsuperscript{119}. Older children and adults are more likely to have symptoms lasting one to two weeks, or in severe cases, up to several months. Symptoms, when present, may include abdominal discomfort, loss of appetite, nausea, low-grade fever and tiredness, sometimes followed by yellow skin and eyes, dark urine and pale faeces.

INCUBATION PERIOD

15–50 days, usually 28-30 days.

INFECTIOUS PERIOD

A person is most infectious in the two weeks before yellowing (jaundice) occurs, and then slightly infectious during the first week of having jaundice.

EXCLUSION PERIOD

Exclude until a medical certificate of recovery is received, but not before seven days after the onset of jaundice or illness.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

The first sign of a hepatitis A outbreak is likely to be an ill parent or employee, not an ill child. The director should immediately notify and seek help from the local public health unit.

RESPONSIBILITIES OF PARENTS

Observe exclusion period. Follow good personal hygiene practices, especially effective hand washing.

CONTROLLING THE SPREAD OF INFECTION

It is important for the infected person to consult their doctor. The doctor may offer immunoglobulin to all people living in the same house as the infected person. If given within 14 days after exposure, immunoglobulin may prevent hepatitis A or lessen the severity of the symptoms\textsuperscript{120}.

The staff from the local public health unit will advise on the need for immunoglobulin for children and child care staff in the centre.

Make sure that good hand washing and cleaning procedures are being followed in the centre and at home.

Hepatitis A vaccine is recommended for child care staff, particularly those who care for children who are not toilet trained.

Hepatitis A vaccine is recommended for Aboriginal and Torres Strait Islander children living in Queensland, Northern Territory, Western Australia and South Australia, because of the higher burden of disease from hepatitis A these children experience. For all other children, hepatitis A vaccine is not recommended because infection does not usually occur in these children and is usually mild with little or no illness.

TREATMENT

There is no treatment for hepatitis A but symptoms can be eased with medications.
Hepatitis B

DESCRIPTION

Hepatitis B infection is caused by the Hepatitis B virus. The Hepatitis B virus is spread through direct contact with infected blood and blood products, and through saliva, semen and vaginal fluids. It can also be spread from an infectious mother to her baby at the time of birth. Although the virus has been isolated in urine and faeces, it has not been proved to be infectious in these products.

It is not spread through food or water or through ordinary social contact.

Women who have this disease during pregnancy may transmit it to their newborn babies. Many of these babies become long-term carriers of the virus.

Symptoms of hepatitis B may include abdominal discomfort, loss of appetite, nausea, fever, tiredness, joint pain, dark urine, and yellow skin or eyes (jaundice). About 50% of adults and 90% of children do not develop any symptoms at the time of infection121.

INCUBATION PERIOD

2-6 months.

INFECTION PERIOD

From about one month before jaundice occurs to the end of the time when they feel ill, (about 1-3 months after jaundice appears). People with chronic hepatitis B may carry the virus for life and always be able to infect others.

EXCLUSION PERIOD

Exclusion is not necessary.

A child who is unwell may need to stay away until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

RESPONSIBILITIES OF PARENTS

If the child feels unwell, they should remain at home until they feel better.

CONTROLLING THE SPREAD OF INFECTION

Effective vaccines are available, and are now routinely given at birth, 2, 4 and 6 months of age. A course of 3 injections over 6 months can be given at other ages for people who have not previously been vaccinated. Completion of a full course of vaccine will give protection against hepatitis B infection in over 90% of people122.

Hepatitis B immunoglobulin is offered to non-immune people having close contact with a person known to be infected with hepatitis B in the following situations:

- after birth;
- after needle sharing or needlestick injury; and
- after sexual exposure;

Standard infection control principles should be employed in all situations dealing with blood-contaminated items, regardless of whether or not it is known that a child has a blood borne virus. More information on this subject is given on page 30.

Re-emphasise good hand washing and cleaning practices.

Cover any open sores, cuts or abrasions that are weeping or moist.

TREATMENT

There is no specific treatment for acute hepatitis B. Chronic hepatitis B can now be managed with a range of drugs that decrease the amount of virus in the body and improve the liver disease (eg Interferon)123.
Hepatitis C

DESCRIPTION

Hepatitis C infection is caused by the Hepatitis C virus, which is carried in the blood and causes damage to the liver. The virus is found in the blood of an infected person. Transmission of hepatitis C only occurs via blood to blood contact, where the blood of an infected person gets into the bloodstream of another person. People most at risk are those with a history of injecting drug use, tattoos, body piercing, blood transfusion or haemophilia treatment before 1990. About 2-5% of infected mothers will pass hepatitis C to their babies during birth. There is no risk from fathers with hepatitis C at conception or during delivery.

Hepatitis C is not transmitted though air or water, the sharing of plates, cups or cutlery, swimming pools, toilets, kissing, coughing, sneezing or spitting.

Out of 4 people found to be infected with the hepatitis C virus:

• 1 person will eliminate the virus from their bodies spontaneously within the first 6 – 12 months of infection; and

• 3 people will go on to develop chronic hepatitis C infection; and some will develop liver damage.

Symptoms of hepatitis C may include abdominal discomfort, loss of appetite, nausea, fever, tiredness, joint pain, dark urine, and yellow skin or eyes (jaundice). The virus may be carried without symptoms.

EXCLUSION PERIOD

Exclusion is not necessary.

A child who is unwell may need to stay away until they are feeling well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

If the director is informed that a child has hepatitis C, confidentiality must be maintained.

RESPONSIBILITIES OF PARENTS

To protect the liver from further viral infections, it is important that the child be vaccinated against hepatitis A and hepatitis B, if they are not already vaccinated or immune.

CONTROLLING THE SPREAD OF INFECTION

Standard infection control principles should be employed in all situations dealing with blood-contaminated items, regardless of whether or not it is known that a child has a blood borne virus. More information on this subject is given on page 30.

TREATMENT

Treatment aims to clear hepatitis C from the body and minimise damage to the liver. Hepatitis C treatment has advanced rapidly in the past few years and around 80% of people with some strains of hepatitis C, and about 50 to 60% of all people treated with current therapy, clear the virus from their bodies.
HIV (Human Immunodeficiency Virus), AIDS (Acquired Immune Deficiency Syndrome)

DESCRIPTION

HIV is a virus carried in blood and body fluids. It damages the immune system of the person infected to the extent that the person becomes susceptible to a variety of common and rare diseases. HIV infection is called AIDS (Acquired Immune Deficiency Syndrome) when it becomes fully developed in the body. People with AIDS contract repeated infections with unusual organisms and cancers that do not normally affect people with healthy immune systems.

There is no evidence that HIV is spread from child to child in child care, pre-school or school through normal social contact. HIV is not transmitted through air or water, the sharing of plates, cups or cutlery, swimming pools, toilets, kissing, coughing, sneezing or spitting. There is no evidence that HIV can be spread by mosquitoes or other biting insects, as the virus dies rapidly outside the human body.

HIV can be spread by:

- Unprotected sexual intercourse (anal or vaginal) with an infected person.
- Sharing of injecting drug equipment.
- Infection passing from mother to child just before or during birth, or through breast milk. However, in Australia there have been very few cases of children being infected before, during or after birth when born to HIV infected mothers. In Australia, from 2001 - 2004 96 children were exposed to HIV before, during or after birth, and two were subsequently found to be infected.
- Penetration of the skin by infected blood.

INCUBATION PERIOD

Variable. The time from infection to development of detectable antibodies is generally 1 - 3 months. Symptoms of the disease may not be evident for months or even years after HIV infection. In adults, an illness like glandular fever occurs a month or so after infection in about 50% of people. Without treatment, most individuals develop severe immune deficiency within 5 - 10 years.

INFECTION PERIOD

People become infectious about 2 - 4 weeks after being exposed to the HIV virus. A blood test for antibodies to the virus will show whether a person has been in contact with and become infected by the HIV virus. At the moment HIV infection is considered to be lifelong. There have been no reported cases of infection with the virus through ordinary social contact, through involvement with schools, pre-schools or child care centres, or through ordinary nonsexual family contact.

EXCLUSION PERIOD

Exclusion is not necessary.

Children who have developed impairment of immunity should remain away from school during outbreaks of serious contagious diseases such as measles or chickenpox. Children with HIV are more susceptible to such infections.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

If the child care facility director is informed that a child has HIV, confidentiality must be maintained.

RESPONSIBILITIES OF PARENTS

Following medical advice, it can be expected that parents would consult with child care staff if their child has HIV infection.
Such children are more likely to have severe infections than others, and more consideration and care must be given to their immunisation with common vaccines.

CONTROLLING THE SPREAD OF INFECTION

Standard infection control practices should be employed in all situations dealing with blood-contaminated items, regardless of whether or not it is known that a child has a blood borne virus. More information on this subject is given on page 30.

TREATMENT

For patients with HIV and/or AIDS, medical practitioners use specific drugs (for example, antibiotics and antiretroviral drugs) to overcome HIV-related illnesses. Drugs that interfere with the replication of HIV are available. These drugs do not cure HIV or AIDS, but help to limit its progress and its infectivity.
Meningococcal infection

DESCRIPTION

A severe infection caused by Neisseria meningitidis bacteria, also commonly known as the ‘the meningococcus’. There are 13 different groups of meningococcus, but most infections in Australia are caused by groups B and C. The meningococcus is carried harmlessly in the nose and throat of up to 20% of people, where it is generally carried harmlessly. In a small number of people, for uncertain reasons, the meningococcus will spread from the nose and throat into the blood stream, and cause serious illness. Meningococcal diseases can affect all age groups, but is most common in children under 5 years of age, and in the 15-24 years group. In Australia, 5 to 10% of people who have meningococcal disease die within a few hours of becoming unwell despite rapid treatment.

Symptoms in babies and young children include fever, refusing feeds, fretfulness, vomiting, rash of reddish purple spots or bruises, high-pitched or moaning cry, pale or blotchy skin. The child may be difficult to wake.

The bacteria is spread in respiratory secretions by close and prolonged person-to-person contact such as occurs in a household. Meningococcal disease can happen at any time of the year, but is most common in winter and spring.

INCUBATION PERIOD

Usually 3-4 days.

INFECTIONOUS PERIOD

The child is infectious as long as organisms are present in the nose and throat. This will be less than 24 hours after they are treated with effective antibiotics.

EXCLUSION PERIOD

Exclude until a course of an appropriate antibiotic has been completed.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

A child with this infection should see a doctor immediately. The director should immediately inform and seek help from the local public health unit.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

Any very close contacts of someone with meningococcal disease, such as family members, need a short course of antibiotics to kill any of the bacteria they may have in their nose or throat. All very close contacts are usually treated because there is no easy and quick way of finding out who may have the bacteria in their nose or throat.

CONTROLLING THE SPREAD OF INFECTION

If appropriate, public health authorities will arrange for other children and staff of the centre to be given a course of an appropriate antibiotic.

Careful hygiene practices are important to prevent the spread of any infection. These include effective hand washing and appropriate disposal of used tissues. The meningococcus does not survive for long outside the human body.

Meningococcal C infection can be prevented by immunisation. Meningococcal C immunisation is recommended for all children at 12 months of age. Fully immunised communities offer the best protection against meningococcal C infection. Meningococcal C vaccination does not protect against meningococcal B infection.

TREATMENT

A child with meningococcal infection will be treated in hospital with antibiotics.
Mumps

DESCRIPTION

Mumps is an infection caused by a virus. Mumps is now uncommon, since children are immunised against it, but before the days of immunisation, most people had mumps when they were children (most often between 5 and 9 years of age).

Symptoms, when present, include swelling of one or more of the salivary glands, high fever and headache. About 30% of people with mumps will have only mild symptoms or no symptoms at all. In males, tenderness in the testicles may occur. Females may have some lower abdominal pain.

Complications can occur, including inflammation of the spinal cord and brain, hearing loss, sterility (very rare) or death (extremely rare).

Spread is by direct contact with droplets from the sneeze or cough of an infected person.

INCUBATION PERIOD

12–25 days, usually 16–18 days.

INFECTION PERIOD

Up to 6 days before swelling of the glands begins and up to 9 days after the onset of swelling.

EXCLUSION PERIOD

Exclude the child from the centre for 9 days after onset of swelling.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report the infection to the director.

RESPONSIBILITIES OF PARENTS

Observe the exclusion period.

CONTROLLING THE SPREAD OF INFECTION

Mumps can be prevented by immunisation. Fully immunised communities offer the best protection against mumps. Children should be immunised against mumps at 12 months of age and again at 4 years with the measles-mumps-rubella (MMR) vaccine. It is recommended that non-immune staff are immunised. The vaccine provides long-term immunity. Illness provides lifelong immunity.

Careful hygiene practices are important to prevent the spread of any infection. These include effective hand washing and appropriate disposal of used tissues.

TREATMENT

None.
Toxoplasmosis

DESCRIPTION

Toxoplasmosis is a protozoan infection. It is contracted by eating raw or undercooked meat, or through contact with cat faeces. Apart from transmission from mother to unborn child, person-to-person spread does not occur. Toxoplasmosis in pregnant women can affect the unborn child. It may cause rashes, damage to the child’s nervous system, liver or other organs, or rarely, death. Usually, though, the newborn baby is not affected at all. In Australia, very few cases of affected newborn children have occurred.

Toxoplasmosis acquired after birth usually results in either no symptoms or mild illness. When mild illness occurs, common symptoms are enlarged lymph nodes, muscle pain, intermittent fever and generally feeling ill. Toxoplasmosis infection is confirmed by a doctor’s examination and blood tests. No immunisation is available.

INCUBATION PERIOD

Uncertain, but probably from several days to months.

INFECTION PERIOD

Infected meat is not safe until cooked properly. Freezing meat does not necessarily make it safe. Cat faeces containing toxoplasma can become infectious 24 hours after being passed.

EXCLUSION PERIOD

Nil.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Report a diagnosed case to the director.

RESPONSIBILITIES OF PARENTS

See ‘Controlling the spread of infection’.

CONTROLLING THE SPREAD OF INFECTION

Cook meat adequately. Hands, knives and other kitchen utensils should be thoroughly washed after being in contact with raw meat.

Dispose of cat faeces and litter daily (as it can become infectious after 24 hours). Wear gloves when handling cat faeces or litter trays. Disinfect litter trays daily by scalding with boiling water.

Pregnant women without antibodies to toxoplasma should avoid cleaning litter trays and avoid contact with cats of unknown feeding history.

Cover children’s sandpits when not in use and keep stray cats away from the sandpit.

Feed cats dry, canned or boiled food. Discourage them from hunting and scavenging.

TREATMENT

Medication is available for significant infections. In most people, infection passes unnoticed.
Viral meningitis

DESCRIPTION

Viral meningitis is an infection of the covering of the spinal cord or brain caused by a variety of viruses, most commonly those associated with gastroenteritis (inflammation of the stomach and intestines). Other examples of viruses that can cause meningitis are measles, mumps, chickenpox and herpes. Viral meningitis is relatively common, but rarely serious, though symptoms may be severe. Recovery is usually complete.

Symptoms may include headache, fever, vomiting, neck stiffness and joint pain, drowsiness or confusion and photophobia (discomfort when looking at bright lights).

Spread is by direct or indirect contact with droplets from the nose or throat of infected people, or by contact with infected faeces or contaminated surfaces.

INCUBATION PERIOD

Varies according to the specific infectious virus.

INFECTIOUS PERIOD

Varies according to the specific infectious virus.

EXCLUSION PERIOD

Exclude until well.

RESPONSIBILITIES OF CHILD CARE PROVIDERS/STAFF

Child care staff should inform the parents immediately if their child has symptoms. Parents should then seek medical help.

RESPONSIBILITIES OF PARENTS

The child should stay at home until they are feeling well.

CONTROLLING THE SPREAD OF INFECTION

Make sure effective hand washing procedures are being followed.

TREATMENT

Unless it is very clear what the cause is (e.g. obvious mumps) a lumbar puncture may be needed to tell whether or not there is a bacterial infection. A lumbar puncture is when a needle is put into the spine in the lower back to collect some of the fluid from around the brain and spinal cord. Antibiotics may be started ‘just in case’ but these will not treat the virus. Once it is certain that it is a viral infection, no special treatment is needed.

CONTROLING THE SPREAD OF INFECTION

Make sure effective hand washing procedures are being followed.

TREATMENT

Unless it is very clear what the cause is (e.g. obvious mumps) a lumbar puncture may be needed to tell whether or not there is a bacterial infection. A lumbar puncture is when a needle is put into the spine in the lower back to collect some of the fluid from around the brain and spinal cord. Antibiotics may be started ‘just in case’ but these will not treat the virus. Once it is certain that it is a viral infection, no special treatment is needed.
Part 3

Glossary and Resources
### Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bacteria</strong></td>
<td>A group of small micro-organisms (larger than viruses) that live in the soil, plants and animals as well as in the body. Not all bacteria are harmful, although some may cause illness or produce a poison known as a toxin.</td>
</tr>
<tr>
<td><strong>Cleaning</strong></td>
<td>Removing infectious agents and matter from surfaces. Cleaning by washing or scrubbing with warm water and soap or detergent, followed by rinsing and drying removes the bulk of germs from surfaces. Germs are unable to multiply on clean, dry surfaces.</td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td>A person who has had the opportunity to acquire an infection from a specified type of exposure during the infectious period.</td>
</tr>
<tr>
<td><strong>Contagious disease</strong></td>
<td>A disease that can be passed from one person to another. It is the same as an infectious disease.</td>
</tr>
<tr>
<td><strong>Dermatitis</strong></td>
<td>Any condition of the skin where there is inflammation. Inflammation is usually marked by redness and swelling.</td>
</tr>
<tr>
<td><strong>Director</strong></td>
<td>The person in charge.</td>
</tr>
<tr>
<td><strong>Disinfection</strong></td>
<td>Killing infectious agents that are outside the body by chemical or physical means.</td>
</tr>
<tr>
<td><strong>Endemic</strong></td>
<td>A disease or infectious agent present in a community or region at all times.</td>
</tr>
<tr>
<td><strong>Epidemic</strong></td>
<td>An illness or disease which attacks many people in a community or region at the same time. It may spread rapidly over a wide area.</td>
</tr>
<tr>
<td><strong>Febrile convulsion</strong></td>
<td>Convulsion (fit) when a child has a fever or high temperature.</td>
</tr>
<tr>
<td><strong>Germ</strong></td>
<td>A micro-organism, e.g., bacteria, virus or fungus that may cause disease.</td>
</tr>
<tr>
<td><strong>Immune individual</strong></td>
<td>A person who is highly resistant to a disease. A person becomes immune as a result of immunisation or from previous infection.</td>
</tr>
<tr>
<td><strong>Term</strong></td>
<td><strong>Definition</strong></td>
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</tr>
<tr>
<td>Immunisation</td>
<td>The process of making a person immune by use of oral or injected vaccines.</td>
</tr>
<tr>
<td>Immunity</td>
<td>Resistance to an infection. A person acquires immunity after having an infection or by being immunised. The person’s body can then recognise and destroy the micro-organisms that cause that infection before symptoms occur.</td>
</tr>
<tr>
<td>Immunoglobulins</td>
<td>Proteins which protect the body against infectious micro-organisms. They do this by carrying antibodies that can kill the invading organisms. Immunoglobulins can be injected to give immediate protection against diseases such as hepatitis A, hepatitis B, tetanus, measles, etc. This protection is temporary.</td>
</tr>
<tr>
<td>Incubation period</td>
<td>The time between an infectious agent entering a person’s body and the appearance of a symptom of the disease. Incubation periods may range from a few hours to several years depending on the disease.</td>
</tr>
<tr>
<td>Infection</td>
<td>The entry and development or multiplication of an infectious agent in the body of a human being or animal. In many cases, infections can occur without leading to illness or infectious disease.</td>
</tr>
<tr>
<td>Infectious agent</td>
<td>An organism (virus, bacteria, fungus, protozoa or parasitic worm) that is capable of producing infection or infectious disease.</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>A disease that is caused by an infectious agent or that can be passed on (transmitted) by an infectious agent. It may affect humans and/or animals.</td>
</tr>
<tr>
<td>Infectious period</td>
<td>The length of time a person who is infectious can pass the infection on to others.</td>
</tr>
<tr>
<td>Mucous membrane</td>
<td>The thin lining of body passages and cavities such as the mouth, respiratory tract, genito-urinary tract and eye. Its glands produce mucus.</td>
</tr>
<tr>
<td>Oocysts</td>
<td>‘Egg’ cells.</td>
</tr>
<tr>
<td>Phlegm</td>
<td>Thick mucus secreted in the respiratory tract. (Pronounced ‘flem’).</td>
</tr>
<tr>
<td>Protozoa</td>
<td>Microscopic organism. Some are parasites which can cause infections such as giardiasis and toxoplasmosis.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Public health unit</td>
<td>These are part of state or territory health departments and deal with the investigation and advice on communicable diseases including outbreak management, immunisation and other public health matters. They may be located in your area or in a capital city.</td>
</tr>
<tr>
<td>Pustular</td>
<td>Containing pus.</td>
</tr>
<tr>
<td>Replication</td>
<td>Process of duplicating or reproducing an exact copy.</td>
</tr>
<tr>
<td>Soiled</td>
<td>Unclean, dirty.</td>
</tr>
<tr>
<td>Vaccination</td>
<td>See ‘Immunisation’.</td>
</tr>
<tr>
<td>Vaccine</td>
<td>Vaccines cause resistance to specific infections. They may contain live or dead organisms, or parts or products of organisms.</td>
</tr>
<tr>
<td>Virus</td>
<td>A group of infectious agents that is much smaller than bacteria. They can only multiply in living cells. They are responsible for some of the most important diseases affecting human beings, for example, most childhood illnesses with rashes, such as measles, chickenpox and rubella.</td>
</tr>
</tbody>
</table>
Useful Contacts

### OCCUPATIONAL HEALTH AND SAFETY AUTHORITIES

<table>
<thead>
<tr>
<th>ACT</th>
<th>Authority</th>
<th>Tel</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasmania</td>
<td>Workcover Tasmania</td>
<td>(03) 6233 7657 (outside Tasmania), 1300 366 322 (inside Tasmania)</td>
<td><a href="http://www.workcover.tas.gov.au/node/workcover.htm">www.workcover.tas.gov.au/node/workcover.htm</a></td>
</tr>
<tr>
<td>Western Australia</td>
<td>Worksafe Western Australia</td>
<td>(03) 9327 8777</td>
<td><a href="http://www.safetyline.wa.gov.au">www.safetyline.wa.gov.au</a></td>
</tr>
<tr>
<td>South Australia</td>
<td>South Australian Workcover Authority</td>
<td>Customer information Officers: 13 18 55</td>
<td><a href="http://www.workcover.com">www.workcover.com</a></td>
</tr>
</tbody>
</table>

### FOOD SAFETY AUTHORITIES

<table>
<thead>
<tr>
<th>ACT</th>
<th>Authority</th>
<th>Tel</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Australia</td>
<td>Health Department of WA – food unit</td>
<td>(08) 9388 4999</td>
<td><a href="http://www.health.gov.au">www.health.gov.au</a></td>
</tr>
</tbody>
</table>
List of Forms

The following are sample forms that centres may wish to adapt and use. Centres may wish to add a privacy statement or other information to these forms.
## RECORD OF ILLNESS IN THE CENTRE

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Symptoms</th>
<th>Room or Group</th>
<th>Date</th>
<th>Time of onset</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
REPORT FORM FOR PARENT/DOCTOR

Child Care Centre: ________________________________

Address: ______________________________________

Contact person: _________________________________

Phone: _________________________________________

Dear Parent/Doctor,

Re: (child’s name) ______________________________ Date of birth: ___/___/___

Child has: (comments, including time observed, number of times, severity)

• Vomiting
• Diarrhoea
• Rash (description of rash and where rash started)
• Other

There has/has not been recent similar illness in other children in the centre.

The diagnosis in the other children was:

The public health unit is/is not involved. The child appears to have a fever. Yes/No

The child has eaten________________________________________________________

The child has drunk________________________________________________________

The child last passed urine at ____________ (time).

Parent contacted by_______________________________ at ____________ (time).

Signed: __________________________________________

Date: ___/___/___  Time___________
**MEDICATION PERMISSION FORM**

In the interest of children’s safety and well-being, the centre shall only administer medication if it is in an original container with the dispensing label attached listing the child as the prescribed person, strength of drug and the frequency it is to be given. This applies to all medications, regardless of whether they are non-prescribed (such as teething gels, nappy creams, cough medicines, etc) or prescribed (antibiotics etc).

Child’s full name: ________________________________________________________________

Medical Practitioner/Chemist etc: ________________________________________________

**Medication:**

Name of medication ____________________________________________________________

Date prescribed ________________________________________________________________

Expire date of medication ______________________________________________________

Reason for medication __________________________________________________________

Storage requirements __________________________________________________________

Time and date of last dose given ________________________________________________

I request that the above medication be given in accordance with the instruction below:

Please complete table and list any detailed instructions in the box eg route (eg oral, inhaler), dose (eg thin layer, no of drops/mls/tablets), before or after food.

**Instructions:**

Parent’s full name ________________________________________________ Date: ___/___/___

Signature __________________________________________________________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Time to be given</th>
<th>Time of staff administering medication</th>
<th>Signature of staff cross checking medication</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

* Details should be reviewed at least 3-monthly.
STAFF IMMUNISATION RECORD FOR CHILD CARE STAFF

Name: ____________________________________________________________________________________

Date of Birth: ___/___/____

Address: ________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

The National Health and Medical Research Council (NHMRC) recommend that childcare staff should be immunised against:

<table>
<thead>
<tr>
<th>Disease/Vaccine</th>
<th>Disease</th>
<th>Vaccine</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, Mumps and Rubella*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pertussis (Whooping cough)</td>
<td></td>
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</tr>
</tbody>
</table>

* Childcare workers born during or since 1966 who do not have vaccination records of two doses of MMR or do not have antibodies for rubella require vaccination.
Useful Web Sites

(Adapted from Health in Early Childhood Settings by Professor Frank Oberklaid. Published by Pademelon Press (2004), Sydney, Australia).

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD):

http://www.chadd.org/ (This is the web site of an American organization which provides information about ADHD to parents and professionals)


CHILD ABUSE:


CHILD CARE

http://www.ncac.gov.au/ (The official site of the National Childcare Accreditation Council - includes information for parents about quality in child care and choosing a child care centre)

CHILDREN AND TELEVISION:

http://www.racp.edu.au/hpu/paed/media (A comprehensive review of the subject undertaken by the organization representing all paediatricians in Australia - includes recommendations).

DIVORCE AND CHILDREN:

http://divorceandchildren.com/ (A useful American site)

EARLY LITERACY AND READING TO YOUNG CHILDREN:

http://www.rch.org.au/ccch/research/index.cfm?doc_id=5821 (A program of the Centre for Community Child Health at the Royal Children’s Hospital Melbourne)

FAMILY DAY CARE

http://www.familydaycare.com.au/ (Official site of the National Family Day Care Association of Australia)

FIRST AID:

http://www.stjohn.org.au/emergency.htm (St. Johns Ambulance Australia - a comprehensive resource on all aspects of first aid, including training courses)

FOOD SAFETY:

http://www.foodstandards.gov.au/_srcfiles/complete_safefood.pdf Safe Food Australia 2nd Edition (January 2001) (Food Standards Australia New Zealand), Head lice:


IMMUNISATION:

http://immunise.health.gov.au/ (The official Australian Government site that covers all aspects of immunisation - check this to find out the latest and most up to date immunisation schedules)

INFECTION CONTROL:

INJURIES AND INJURY PREVENTION:
http://www.kidsafe.com.au/ (A national organization which also has state branches. Offers useful and easily accessible information on all aspects on injury prevention in children of all ages)

SUDDEN INFANT DEATH SYNDROME (SIDS):
http://www.sidsandkids.org (The Australian organization representing SIDS groups in each state)

PARENT INFORMATION (GENERAL)
www.raisingchildren.net.au (This is funded by the Australian government and is designed to be a comprehensive resource for parents)

http://www.cyh.com (A comprehensive site maintained by the South Australian government – has information on a long list of topics in child health and behaviour)

http://www.dh.sa.gov.au/pehs/You’ve-got-what/ (A comprehensive site maintained by the South Australian government – has information on common conditions during childhood)

http://www.rch.org.au (A comprehensive site maintained by Centre for Community Child Health, Royal Children’s Hospital, Melbourne - has information on a long list of topics in child health and behaviour).

POISONS INFORMATION:
PoisonsInformationCentre/homepage.htm (Queensland Health Poisons Information centre which includes information about bites and stings, poisonous plants, and poisons prevention as well as what to do in an emergency).

The National Poisons Information Centre Tel: 13 1126

SMOKING AND HEALTH:
http://www.quit.org.au/ (Has information on the health hazards of smoking, as well as helpful resources on how to quit)
Appendix A
Working Committee Membership and Terms of Reference

Membership of Working Committee

Dr Andrew Langley (Chair)
Public Health Physician
Central Area Population Services
Sunshine Coast
HAC member

Ms Desolie Lovegrove
Senior Project Officer
Darling Downs Public Health Unit

Ms Debbie Neucom
Public Health Nurse
Central Area Population Services
Sunshine Coast

Professor Frank Oberklaid
Director of Centre for Community and Child Health
Centre for Community Child Health
Royal Children’s Hospital
HAC Member

Mr John Tainton
Chair, National Childcare Accreditation Council

Terms of Reference

1. Update the 3rd edition of Staying Healthy in Childcare, taking into consideration comments from NHMRC Publications Review Working Committee and key stakeholders.

2. Undertake public consultation, in accordance with NHMRC requirements.

3. Report to the NHMRC Health Advisory Committee (NHMRC-HAC).

NHMRC Secretariat

Ms Simone Patton

Ms Lorraine O’Connor

Ms Stephanie Gates

Ms Kate Fiddy
Appendix B Process Report

During 2004, the National Health and Medical Research Council (NHMRC) received a number of requests from various stakeholders for the 2001 Staying healthy in childcare: Preventing infectious diseases in child-care 3rd Edition to be updated.

Although it was not yet due for review of currency, the NHMRC Health Advisory Committee (HAC) agreed to assess the document through the NHMRC Review of Publications process. Fourteen submissions were received from the Review of Publications public consultation in February 2005 [Refer B.1].

In May 2005, HAC established the Working Committee for Staying Healthy in Child Care, to revise the guide. Working Committee representation included expertise from public health, regulatory and child care industry bodies.

The Working Committee considered relevant literature and sought expert opinion during revision of the guide. The non-regulatory nature of the document precluded the need to rank evidence.

Revisions to the guide involved consultation with the Australian community during August-September 2005. Advertisements were placed in the national press, the Commonwealth of Australia Government Notices Gazette and on the NHMRC website. Twenty-nine submissions were received [Refer B.2]. The Working Committee met to consider the submissions and to revise the guide in the light of comments received.

As part of its normal quality assurance process, HAC also commissioned an independent review of the draft guide during October 2005.

The guide was considered by the HAC for approval and endorsed by the NHMRC at its 159th session on 8 December 2005.

Dissemination

Following endorsement of the guide, the HAC secretariat will circulate a letter along with a copy of the publication, to Australian Child Care organisations, key stakeholders and submitters, advising that the publication has been revised, and that the guide is available on NHMRC website for downloading.

B.1 Submitters: February 2005

Submissions received in response to the Review of Publications public consultation were from the following individuals/organisations:

<table>
<thead>
<tr>
<th>Robert G Batey</th>
<th>Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hepatitis C Sub-Committee</td>
</tr>
<tr>
<td></td>
<td>Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis (MACASHH)</td>
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<tr>
<td></td>
<td>Australian Government</td>
</tr>
<tr>
<td></td>
<td>Department of Health and Ageing</td>
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<tr>
<td></td>
<td>Hepatitis Council</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lisa Bryant</th>
<th>Consultant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Community Child Care Co-op NSW</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>George Davey</th>
<th>Director-General</th>
</tr>
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<tr>
<td></td>
<td>NSW Food Authority</td>
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<table>
<thead>
<tr>
<th>Dr David Dumbrell</th>
<th>Director</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>HIV/AIDS and STIs</td>
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<tr>
<td></td>
<td>Population Health Division</td>
</tr>
<tr>
<td></td>
<td>Australian Government</td>
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<tr>
<td></td>
<td>Department of Health and Ageing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rachael Farquharson</th>
<th>Promoting Health in Early Childhood Environments Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brisbane Southside Public Health Unit</td>
</tr>
</tbody>
</table>
B.2 Submitters: August-September 2005

Submissions received in response to the public consultation on the revised draft document were from the following individuals/organisations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geraldine Andrews</td>
<td>Director, Office of Child Care, NSW Department of Community Services</td>
</tr>
<tr>
<td>Rachel Balmanno</td>
<td>A/g Assistant Secretary, Strategic Planning Branch, Population Health Division, Australian Government, Department of Health and Ageing</td>
</tr>
<tr>
<td>Chris Brenton</td>
<td></td>
</tr>
<tr>
<td>Chris Buck</td>
<td>National Secretary, Australian Childcare Centres Association</td>
</tr>
<tr>
<td>Helen Bull</td>
<td>Assistant Secretary, Office of the Australian Safety and Compensation Council, Australian Government, Department of Employment and Workplace Relations</td>
</tr>
<tr>
<td>Anne Clarke</td>
<td>President, Childcare SA</td>
</tr>
<tr>
<td>Joy Copeland</td>
<td>Senior Project Officer, STD Services, Royal Adelaide Hospital</td>
</tr>
<tr>
<td>Megan Counahan</td>
<td></td>
</tr>
<tr>
<td>Patricia Coward</td>
<td>Principal Adviser, Occupational Health Unit, Workplace Health and Safety Queensland</td>
</tr>
<tr>
<td>A/Prof Mark J Ferson</td>
<td>Director &amp; Medical Officer of Health, South Eastern Sydney Public Health Unit, South Eastern Sydney &amp; Illawarra Area Health Service</td>
</tr>
<tr>
<td>John Frith</td>
<td>Convener, NSW Children’s Services Health and Safety Committee</td>
</tr>
<tr>
<td>Dr Rod Givney</td>
<td>Director, Communicable Disease Control Branch, Department of Health, Government of South Australia</td>
</tr>
</tbody>
</table>

Tom Fisher
A/g Chief Executive Officer
Australian Government
National Occupational Health and Safety Commission

Dr John Frith
Convener
NSW Children’s Services Health and Safety Committee

Dr Rod Givney
Director
Communicable Disease Control Branch
Department of Health
Government of South Australia

Dr Robert Hall
Director Public Health and
Chief Health Officer
Department of Human Services
Government of Victoria

Maureen Hickman

Dr Brian Lloyd
Chief Medical Officer
Department of Health
Government of Western Australia

Julianne Quaine
Director
Hepatitis C Section
Targeted Prevention Programs Branch
Population Health Division
Australian Government
Department of Health and Ageing

Letitia Toms
A/g Director
Immunisation Section
Targeted Prevention Programs Branch
Population Health Division
Australian Government
Department of Health and Ageing

Jack Wallace
Executive Officer
Australian Hepatitis Council
<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Heel</td>
<td>Public Health Nurse, Brisbane Southside Public Health Unit</td>
</tr>
<tr>
<td>Stephanie Jackiewicz</td>
<td>Senior Project and Research Officer, Collaboration for Applied Research and Evaluation</td>
</tr>
<tr>
<td>Debra Kay</td>
<td>Manager, Interagency Health Care Department of Education and Children's Services, Government of South Australia</td>
</tr>
<tr>
<td>Helen Kenneally</td>
<td>President, ACT Children's Services Association</td>
</tr>
<tr>
<td>Brenda Kilgore</td>
<td>Senior Project and Research Officer, Collaboration for Applied Research and Evaluation</td>
</tr>
<tr>
<td>Jonathon Kruger</td>
<td>Executive Director, Childcare Associations Australia</td>
</tr>
<tr>
<td>Violette Lazanas</td>
<td>Food Safety Officer, Food Safety Unit, Department of Human Services, Government of Victoria</td>
</tr>
<tr>
<td>Fiona MacIver</td>
<td>Manager, HIV/AIDS and STIs Section, Targeted Prevention Programs Branch, Population Health Division, Australian Government, Department of Health and Ageing</td>
</tr>
<tr>
<td>Brad McCall</td>
<td>Manager, Information Services, Communicable Diseases Section, Department of Human Services, Government of Victoria</td>
</tr>
<tr>
<td>Rodney Moran</td>
<td>Manager, Information Services, Communicable Diseases Section, Department of Human Services, Government of Victoria</td>
</tr>
<tr>
<td>Tim Muirhead</td>
<td>Chairperson, Child Care Advisory Committee, Government of Western Australia</td>
</tr>
<tr>
<td>Pam Price</td>
<td>Coordinator, HIV Women's Project, Womens' Health Statewide, Department of Human Service, Government of South Australia</td>
</tr>
<tr>
<td>Barbara Romeril</td>
<td>Executive Director, Community Child Care, Victoria</td>
</tr>
<tr>
<td>Alanna Stewart</td>
<td>Health Promotion Officer, West Moreton Public Health Unit, Queensland</td>
</tr>
<tr>
<td>John Tainton</td>
<td>Chair, National Childcare Accreditation Council, Australia</td>
</tr>
<tr>
<td>Helen Tyrrell</td>
<td>Medical Coordinator, Australian Hepatitis Council</td>
</tr>
<tr>
<td>Dr Tony Watson</td>
<td>Medical Coordinator, Communicable Disease Control Directorate, Department of Health, Government of Western Australia</td>
</tr>
</tbody>
</table>
Appendix C
References


10 Qheps.health.qld.gov.au/PHS/CDPM/index/H1B.htm


22. Infection Control Guidelines, Queensland Health 2001, p53

23. Infection Control Guidelines, Queensland Health 2001, p54

24. Infection Control Guidelines, Queensland Health 2001, p295


39 Professor Frank Oberklaid. Health in Early Childhood Settings from emergencies to the common cold. Pademelom Press; 2004: 52

40 Professor Frank Oberklaid. Health in Early Childhood Settings from emergencies to the common cold. Pademelom Press; 2004: 53-54

41 First Aid - Asthma Queensland, viewed 19 April 2005, <http://www.asthma.qld.org.au/content/id=10&highlight=first%20aid&highlight2=#plan>


Safe Food Australia: A guide to the food safety standards, Commonwealth of Australia, 2001: 85


Safe Food Australia: A guide to the food safety standards, Commonwealth of Australia, 2001: 85


Australian Infection Control Guidelines, Commonwealth of Australia, 2004:28-3


Qheps.health.qld.gov.au/PHS/CDPM/index/HIB.htm


124 National Hepatitis C Resource Manual, Australian Institute for Primary Care, La Trobe University, 2001:17


127 National Hepatitis C Resource Manual, Australian Institute for Primary Care, La Trobe University, 2001:85

128 National Hepatitis C Resource Manual, Australian Institute for Primary Care, La Trobe University, 2001:71


