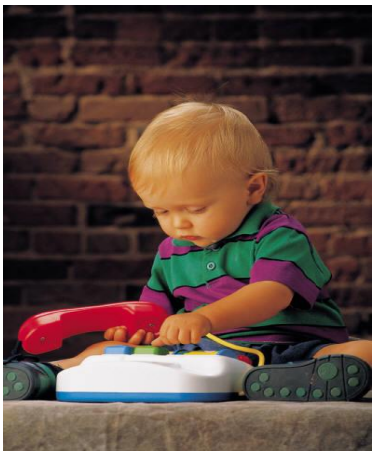
Government of Saskatchewan
Ministry of Health

Infection Control Manual for Child Care Facilities



April 2012

PHNP 49

INFECTION CONTROL MANUAL FOR CHILD CARE FACILITIES

TABLE OF CONTENTS **Page No.**

Table of Contents Con't **Page No.**

PREAMBLE

Many children spend much of their day in a child care setting, whether it be in a large licensed facility or in a private home. Illness and disease spread easily from one child to another in this type of environment. However, by applying simple preventive measures, the severity, type and frequency of illness may be minimized. This manual was developed to help child care facilities reduce the incidence of communicable disease in their facilities.

The manual does not include all the information needed to operate a child care facility. Various acts and regulations may apply to your operation. Before establishing a child care facility, contact the Early Years Branch, Ministry of Education and your health region to determine which legislation applies to your proposed operation.

If you have any public health related questions, contact your public health inspector or public health nurse at your health region office.

While this manual focuses on infection control, professionals in your local health region can offer a wide variety of programs, services and information in relation to child health. Here are some of the areas in which various professionals could provide more information:

- speech development
- behaviour management (eg: toilet training, biting, temper tantrums, fighting, etc.)
- safety (eg: seasonal, farm, playground, sun, burns and scalds, falls)
- self esteem building
- anger management (conflict resolution)
- dental health
- nutrition (eg: menu planning, healthy food policies, body image, exercise)
- handwashing presentation for children
- handling children with medical problems (eg: allergies, asthma, physically challenged, etc.)
- growth and development
- parenting

This is not an all-inclusive list. We encourage you to view health professionals in your local health region as a partner in providing the best care for children.

1. Illness

a) What Causes Illness?

Bacteria, viruses, parasites and other microorganisms (germs) cause a variety of illnesses such as the common cold, chickenpox, and foodborne illness. Appendix A *Chart of Some Communicable Diseases* lists some of them.

Germs are living cells so small they can only be seen through a microscope. Sometimes it takes very few microorganisms to cause illness.

b) Where Do Germs Come From?

Humans and animals are the main source of germs. Other sources include birds, insects, air, soil, water and sewage. Food may become contaminated by any of the above sources and if not handled properly, may cause foodborne illness.

Humans excrete germs in feces and carry bacteria on their bodies (e.g. noses, skin, mouths, eyes, hair, hands, fingernails, cuts, pimples and boils).

Animals and birds also excrete germs in their feces and germs can be found all over their bodies.

Insects carry a variety of germs on their bodies and contaminate food.

c) How Are Infections Spread?

Illnesses that can be passed from one individual to another are said to be contagious, communicable or infectious. Germs may be passed or transmitted through various routes such as:

- fecal-oral
- respiratory
- blood or body fluids containing blood
- direct
- indirect

i) Fecal-Oral Transmission

Infected humans and animals excrete various germs in feces which in turn may contaminate soil, water, food, and objects. If plants grow in contaminated soil, and animals feed on them, then animal and human food is contaminated. Water contaminated with human or animal feces may contaminate food or may cause illness if consumed. Food may become contaminated by animal waste if the carcass is contaminated during slaughter or processing or if infected foodhandlers fail to wash their hands properly after using the toilet, or between duties. People may also contaminate objects such as cutlery or toys if they do not practice good personal hygiene. Anyone placing these contaminated objects in their mouth may become ill.

Salmonellosis, Giardiasis and Hepatitis A are examples of diseases that may be transmitted through the fecal-oral route.

ii) Respiratory Transmission

Illnesses such as the common cold are transmitted through the air when a person coughs, sneezes and/or speaks.

They can also be spread through saliva or a runny nose.

The common cold, influenza (i.e. flu), and chickenpox are examples of diseases that may be transmitted through the respiratory route.

iii) Contact with Blood or Body Fluids Containing Blood

Infections such as Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus (HIV) may be transmitted by contact with blood or body fluids containing blood.

iv) Direct Transmission

Direct transmission occurs when germs are transferred from one person to another person by direct physical contact, through touching, coughing, sneezing, kissing, etc.

v) Indirect Transmission

An intermediate step occurs to transfer the germs from one person or item to another person or item, through contaminated objects, doorknobs, toys, food or equipment. An example of indirect transmission is when a child mouths a toy that is later picked up and mouthed by another child without being washed and sanitized in between.

d) When Do Diseases Spread?

Diseases have an incubation period. This is the time between contact with infectious microorganisms and the first symptom. Incubation periods range from a few hours to several weeks depending on the disease.

It is possible for an infected person to spread a disease during the incubation period, that is before the symptoms start. Some people who are infectious do not look or feel ill, but they can still spread disease.

Diseases have a period of communicability. This is the time the disease is still infectious and can be spread.

It is important to understand and use preventive measures at all times.

e) Why Do Some People Get Sick and Others Do Not?

Not everyone exposed to infectious germs will develop symptoms. Whether a person becomes ill or not depends on:

- how infectious the germ is and how many germs the person was exposed to
- the health of the individual (e.g. someone with a suppressed immune system or chronic illness may not be able to ward off infection as well as someone who is relatively healthy)
- whether an individual has immunity to the particular microorganism from having had the disease in the past or having received immunization for that disease.

f) Symptoms That May Indicate Illness

The following table lists symptoms to watch for in a child that may indicate the child is not well. The table includes what to do if you observe the symptoms. **You should not try to determine the cause of the symptoms, nor try to diagnose the nature of the unwellness.**

If a child has one or more of these symptoms contact the parents immediately. If you cannot reach the parent(s) or designated alternate, and you think the child's condition may be serious you may have to arrange for emergency transportation and medical assessment.

Symptoms (Signs)	What To Do
Child's body is warm to touch, and/or flushed. • A child is considered to have a fever if his/her temperature is 37.8°C (100°F) or more by oral thermometer, or 37.5°C (99.5°F) or more by axilla (i.e. armpit).	A caregiver should take the child's temperature. Take children's temperature by axilla when they are too young to use an oral thermometer without risk of injuring themselves. (See Appendix N: *Caring for Your Child's Fever*)
Fever and any of the symptoms listed below.	Separate the child from other children.
Difficult or rapid breathing. • This should be considered serious especially in a child under 6 months of age.	If necessary, arrange emergency transportation to hospital.
Loose stools. Diarrhea stools may be watery and passed with force. Even if a child has just one loose stool he/she may have diarrhea. • Severe diarrhea can be very serious. It can quickly lead to dehydration, especially in infants and children.	Separate the child from other children. Observe the child for additional loose stools or other symptoms. Be sure the child and his/her caregivers wash their hands.
Severe coughing • Child gets red in the face • Child has persistent cough • Child makes high-pitched croupy or whooping sound after coughing	Separate the child from other children.
Yellowish skin or eyes.	Separate the child from other children if this is unusual for the child.
Pinkeye - Redness of eyelid lining, irritation, swelling, and discharge of pus.	Separate the child from other children.
Skin and scalp • Unusual spots or rashes • Infected skin patches (bright yellow, dry or gummy areas of skin) • Severe itching of body or scalp	Separate the child and watch for other symptoms. Contact the child's parent(s) for information about the child's condition or diagnosis.
Other • Difficulty swallowing ***** • Headache and stiff neck ***** • Severe coughing and child gets blue in the face* • Loss of appetite • Vomiting • A change from usual behaviour (e.g. more cranky, less active, seems unwell or in discomfort) • Unusually dark coloured urine	*** Contact the child's parent(s) immediately. The child may require urgent medical attention. If necessary, arrange for emergency medical assessment.** Contact the child's parent(s) to ask if they were aware of the symptoms and to obtain any information they have about the child's condition or diagnosis. Separate the child and watch for other symptoms.

2. Why Do Children in Child Care Centres Have More Illness?

All children are susceptible to illness as they may not have developed immunity to certain illnesses. Children in child care centres develop more infections than those cared for in a home setting primarily because they are likely exposed to more people than those in a home care setting. Reasons include: different staff and children throughout the day, the size of the facility, amount of time spent in the centre and turnover of children and staff.

3. Prevention of Illness

a) Introduction

A child care setting provides an excellent environment to spread germs, as children put their fingers and other items into their mouths and other children's mouths. Child care centre staff should help protect the health of the children by:

- maintaining good health practices that are a model for children to copy.
- adhering to procedures that limit the spread of infection and promote safety.
- promoting up to date immunization
- staying off work and away from the worksite if they are sick.

Policies and procedures need to be in place and adhered to in order to prevent and control outbreaks. An outbreak is an incident in which two or more persons have the same disease, have similar symptoms, or excrete the same pathogens; and there is a time, place, and person association between these persons.

Policies and procedures on prevention and control of illness will vary in each facility. The implementation of policies and procedures will depend on:

- the physical facilities
- staff capabilities and attitudes
- resources
- the availability of parents

Your health region's public health unit is a valuable resource to your facility. Its professionals can assist you in a number of ways including:

- developing policies and procedures that help prevent outbreaks and control the spread of illness.
- offer instruction if specimens need to be collected for submission to a laboratory.

It is often difficult to identify specific pathogens and their toxins, especially if there is a time lapse between the onset of symptoms and the submission of specimens. Some pathogens are excreted very quickly as the body naturally responds by getting rid of the poison or organism. Quick notification of illness to public health will help to reduce the risk of spreading the illness to others.

b) Routine Practices (Also Known as Standard Precautions)

Routine practices are steps that help stop the spread of blood borne and other diseases. They assume blood and body fluids of **all** individuals may carry diseases.

The goal of using routine practices is to:

- reduce the transfer of blood borne diseases from one person to another
- decrease the spread of infectious diseases
- prevent illness in both the caregiver and the client

Routine Practices apply to:

- blood
- all body fluids, urine, feces, saliva, nose discharges regardless of whether they contain visible blood
- non-intact skin
- mucous membranes

Routine Practices <u>do not</u> apply to:

- sweat

If you have contact with blood or other body fluids you should:

- Wear gloves. Hands should be washed with liquid soap and water as soon as possible after touching blood or body fluids or after taking off your gloves. See Appendix B *Removal of Soiled Gloves.*

- For spills:

    - put on disposable single use vinyl gloves
    - wipe up the blood or body fluid with a paper towel
    - wash the area with liquid soap and water; rinse
    - wipe the area with a freshly made solution of 1 part chlorine bleach to 9 parts water
    - allow the area to dry for 10 minutes
    - rinse the area with water
    - place soiled gloves, towels, etc. in a plastic bag, then place it in the garbage
    - wash hands with liquid soap and water

c) Immunization

Children: It is particularly important that children in child care are fully immunized for their age. See Appendix C *Saskatchewan Immunization Schedule for Infants and Children.* The child's record must include the parent's report of the child's immunization status as complete (yes or no).

Having a current copy of the immunization record on hand is helpful to public health if you have a communicable disease outbreak.

d) Staff Health

The Saskatchewan Ministry of Education's *Child Care Licensee Manual* outlines the staff health requirements.

Some infectious diseases that a pregnant staff member might catch may be able to affect her unborn child. The risk to the baby depends on the stage of the pregnancy and many other factors. Some of the common diseases are: Fifth Disease, Pertussis, Rubella, and Toxoplasmosis. If an employee is planning a pregnancy or becomes pregnant, she should discuss her employment situation with her doctor for specific information and advice.

e) Personal Hygiene

The best way to prevent illness is to use proper personal hygiene.

Handwashing, using liquid soap and paper towels, is the most effective way to prevent contamination of food that may cause a foodborne illness and will help prevent and control the spread of communicable disease.

Children need to learn good hygiene practices. These can be taught by using stories, songs, and games. See Appendix D *Songs, Games and Stories.*

Because children imitate people and what they see, it is important you set a good example by washing your hands often and correctly. See Appendices E and F *Handwashing Procedure*.

You should wash your hands:

- when you arrive at work
- before preparing/serving food
- before and after handling toothbrushes
- before and after any first aid treatment
- after diapering each child

- after using the washroom
- after wiping noses (yours or a child's), coughing, sneezing
- after taking a child to the toilet
- after cleaning any messes
- after handling any pets, animals, or chemicals
- any time your hands become soiled

Make sure children wash their hands:

- when they arrive
- after diaper change
- after using the toilet
- after sneezing, coughing, blowing their nose
- after handling any pets, animals or plants
- before eating
- whenever their hands become soiled during play or other activities
- before and after brushing teeth

To protect children from scalds and burns, the hot water temperature should be no higher than 43^{o}C (110^{o}F) in all washrooms. This can be achieved by installing a thermostatic mixing valve on the lines to the sinks.

Use a liquid soap dispenser instead of bar soap. It is not necessary to use a disinfectant or antibacterial soap. Provide paper or single service towels to dry hands. Towels shared by more than one person are not acceptable as they can spread germs to others.

Alcohol based hand rubs (liquid, gel, or foam) can only be used in areas where children cannot reach them, and **where liquid soap and water are not available**. These hand rubs are not effective if hands are dirty.

Artificial nails and nail extenders, chipped nail polish and hand jewellery including rings have been shown to harbour germs. They should not be worn when working in child care. Keep natural nail tips less than ¼ inch (0.6 cm) long. Pay attention to cleaning fingernails when washing hands. Remove chipped nail polish. Limit rings to a single smooth band.

Do not use handwashing sinks for rinsing dirty clothes or for cleaning potties. Keep sinks free of objects so they can be used for handwashing purposes only.

If you wear gloves, they become contaminated just like your hands. Remember to wash your utility gloves using the handwashing procedure or change disposable gloves after each duty.

See Appendices E and F *Handwashing Procedure* and Appendix B *Removal of Soiled Gloves.*

f) Oral Hygiene

The mouth is home to millions of disease-causing germs. Caregivers should be aware that germs can be transferred by kissing children on the mouth, testing food for temperature off a spoon, blowing on food, cleaning a dropped soother using the mouth, or allowing baby to stick its fingers in your mouth.

Toothbrushing programs in child care facilities must follow proper procedures in order to prevent the spread of communicable diseases (See Appendix M).

g) Cleaning and Sanitizing

i) Cleaning Guidelines

Four steps are needed to clean and sanitize items. They are wash, rinse, sanitize and air dry.

Wash: Cleaning is done to remove dirt. Soap bubbles surround dirt particles to lift them from the surface to be cleaned. Friction, from the physical scrubbing, along with warm water will decrease the amount of time needed for the soap to lift the dirt.

Rinse: Rinsing in warm water removes soap, excess oil and any leftover soil, leaving the item clean and clear. This step is necessary to prepare the surface for the sanitizer.

Sanitize: Sanitizing greatly reduces the number of germs on an object's surface. Contact time between the sanitizing solution and the item being sanitized is important. The sanitizer needs time to kill the germs. To be effective, sanitizers must remain in contact with the surface for at least 10 minutes. See Sanitizer Chart below.

Air Dry: Air drying is important for 2 reasons. First, it extends the sanitizing time between the sanitizer and the item. Second, drying cloths may not always be clean (i.e. sometimes they are used to wipe up spills) and this can spread germs back to the items.

See Appendix G *Cleaning Guidelines*.

ii) Sanitizers

Presently there are three sanitizers generally used in Saskatchewan. They are Chlorine, Quaternary Ammonia and Iodine. Choose the right one for your facility.

Sanitizer Chart

Chlorine	Quaternary Ammonia	Iodine
100 parts per million required	200 parts per million required	25 parts per million required
works well in any temperature of water	works well in cooler water	works well in cold water
easy to buy	easy to buy from supplier; some products can also be purchased through retail stores	buy from supplier
Effective	effective	effective
Inexpensive	moderate to expensive	expensive
quick kill time	quick kill time	quick kill time
does not need rinsing	may leave residue	may leave residue or yellow tinge
Corrosive	mild to skin	corrosive
will evaporate - change often	heat stable – change often	usually stable

See Appendix H *Sanitizer Chart*. For use as a wall chart if desired.

How to make a simple, effective sanitizing solution.:

For mouthed items and food contact surfaces/materials, mix two teaspoons of 5.25% unscented bleach per 4 litres of water. This will produce a 100 parts per million (ppm) solution.

For environmental sanitation (eg. Bathrooms, door knobs, etc.) mix 15 ml. regular 5.25% unscented household bleach in 1 litre of water or 60 ml. in 4 litres of water (or ¼ cup in 1 gallon). This produces a 750ppm disinfecting solution.

These solutions can be poured into a clearly labelled spray bottle or kept in a labelled small pail or bowl to keep wiping cloths sanitized between uses. Solution will have to be changed regularly to maintain effectiveness i.e. daily if in spray bottle; every 3 to 4 hours if in a pail.

**** Remember to keep all chemical solutions out of children's reach.****

iii) Toys

Generally children aged 6 - 30 months put something in their mouth every 1 - 2 minutes. Toys are usually shared by children. Some germs from saliva can last for several hours or days on an object.

Toys should be:

- washed, rinsed, soaked in 100ppm sanitizer for 2 minutes, and air dried once a day Ensure toys are completely dry before children put them in their mouth.
- made of materials that allow for easy cleaning
- machine washed and dried on **hot** setting of dryer once a week if they are made of fabric
- washed and disinfected when used by sick children before they are put back for use by other children
- placed in an empty basin that is out of the children's reach if they are heavily soiled; wash, rinse and sanitize these toys when time permits

iv) Potty Chairs

Potty chairs should be:

- made of smooth non-absorbent, easy to clean materials
- made with a removable waste container
- kept and used in the washroom
  When in use, make sure the child cannot reach toilets or other potentially contaminated surfaces.

Once the child has used the potty, staff should:

- wash the child's hands with liquid soap and warm water
- put on gloves
- empty the contents of the potty into the toilet
- wipe off any remaining feces with toilet paper
- put toilet paper into toilet
- rinse the potty in a utility sink used only for this purpose
- wash the potty with hot soapy water and rinse
- disinfect by spraying with a disinfecting solution
- wash and spray the utility sink with disinfectant
- wash your hands with liquid soap and warm water
- dry hands with paper towel

Note: Aerosol droplets of disinfectant may be harmful to children. The stream or heavy setting of a spray bottle will reduce the risk of dispersing aerosols into the air. Do not spray near children.

v) Diapering

Proper diapering procedures are imperative to help prevent and control the spread of diseases by fecal-oral transmission. To be sure you are diapering correctly, see Appendix I *Diapering Procedure*.

The diapering area must be separate from the food preparation area. The area should be made of smooth, impervious to moisture, easy to clean material.

Anyone having contact with cooking or preparing food should not do diapering.

If a child soils his/her cot or crib:

- clean the child
- remove linen
- clean the cot/crib with hot soapy water
- disinfect the crib/cot with disinfecting solution and allow it to air dry
- put on clean linen
- **wash** your hands with liquid soap and warm water

Use this same method to clean and disinfect the diapering area between children.

Place a plastic lined waste container with foot operated lid within easy reach of the diapering area.

To allow for proper handwashing, a sink, liquid soap, and paper towels must be located near and in the same room as the diapering area. Do not wash hands after diaper changing in same sink as food preparation. See Appendices E and F *Handwashing Procedure*.

Diapering and cleaning supplies:

- Store clean diapers, wash cloths and towels away from dirty diapers.
- Use unscented, premoistened towelettes and wet paper towels only once, then dispose of them.
- Keep cleaning supplies out of children's reach.

vi) Washrooms

Washrooms need to be kept clean and sanitary to avoid the spread of germs. Anyone having contact with cooking or preparing food should not clean washrooms.

Clean and disinfect immediately:

- any soiled surfaces
- any surface contaminated with body fluids:
  - saliva
  - mucus
  - vomitus
  - urine
  - stool
  - blood

Clean and disinfect after each use:

- utility sinks
- change tables

vii) Food Contact Surfaces

Foodborne illness which is often called food poisoning, is caused by eating food contaminated with germs or their toxins. Because food is so easily contaminated, all equipment, utensils, and food contact surfaces **must** be cleaned and sanitized with a 100ppm sanitizing solution regularly.

The kitchen should be made of materials that are easily cleaned. This includes walls, floors and ceiling. The facility should adhere to a cleaning schedule that includes:

- **what** to clean
- **when** and **how** to clean
- **what to use** to clean
- **who** is to clean

Clean and sanitize all food preparation areas, equipment and utensils after each use.

- Store wiping cloths in a sanitizing solution.
- Change sanitizing solution throughout the day (see Sanitizer Chart, p.11).
- Cloths used in food preparation areas should be kept separate from other wiping cloths.
- Launder wiping cloths daily.

Dishes and utensils used for food need to be cleaned and sanitized using one of the following:

- commercial chemical or high temperature dishwasher.
- 3-compartment sink.
- an NSF approved domestic mechanical dishwasher with sani-cycle approved by your Public Health Inspector.

Dishes should be:

- air dried after sanitizing
- checked for damage, such as chips and cracks.
  Damaged dishes should be discarded as they can provide a home for germs.
- stored in a covered or closed cabinet or cupboard

See Appendix J *Dishwashing Procedures*.

h) Food Safety

i) What Causes Foodborne Illness?

Foodborne illness can result from three causes: biological, chemical and physical.

- Biological causes are from microoganisms which include bacteria, viruses, parasites and fungi (yeasts and molds).
- Chemical poisonings can occur from eating poisonous foods (e.g. mushrooms), or accidentally ingesting chemicals, (e.g. cleaning fluids), or from dissolved metal contamination from food containers. The metal may dissolve and enter food such as juices, fruits or sauerkraut if they are stored in containers made of tin, copper, zinc, cast iron or lead.
- Physical causes result in food being contaminated by objects such as hair, glass, insects etc.

ii) Where Do Germs Come From?

Germs are everywhere! They can be carried by the air or water; they come from our hands, bodies, animals, soil, insects, and rodents. They need to "hitch" a ride on living and non-living things. They can be easily transferred by dirty equipment that is improperly washed and sanitized; dust and dirt floating through the air; a person coughing or sneezing on any surface that food could touch, or by not washing your hands after using the toilet and then preparing food for others.

iii) How Do Germs Contaminate Food?

Not all germs cause illness. Some are beneficial while others cause food to spoil. Beneficial germs are used in the production of some foods such as cheese and yogurt. Germs are not the only cause of foodborne illness. Food may be contaminated at any stage of harvesting, slaughtering, processing, transporting, storing, preparing or serving.

iv) Prevention of Foodborne Illness

Because bacteria are most commonly implicated in a foodborne illness, this term will be used throughout this section when referring to microbial contaminants.

Bacteria need certain conditions to grow and multiply. They need nourishment, warmth, moisture, and time. By controlling these conditions, foodborne illness may be prevented.

Nourishment - Bacteria, like humans, need food to survive and often prefer the same foods humans do. Foods such as dairy products, meat and poultry, eggs, fish, seafood, sauces and gravies are often implicated in a foodborne illness. The use of clean food and safe water reduces the risk of a foodborne illness.

Temperature - Most disease causing bacteria grow best at room temperature. Temperatures between 4^{o} C and 60^{o} C are known as the **Danger Zone**. This is why it is important to **keep hot food hot (above 60^{o} C) and keep cold food cold (below 4^{o} C).** The internal temperature of cooked and reheated food should be at least 74^{o} C. Reheat food to 74^{o} C if it has been stored in your refrigerator as a left over.

Moisture - Bacteria need moisture to grow and reproduce. Adequate amounts of moisture for bacterial growth are present in foods such as meat, poultry, eggs, fish, seafood and dairy products making them potentially hazardous.

Time - Bacteria reproduce by dividing in two, a process that takes about 20 minutes. The longer food is left out at room temperature, the more bacteria are produced.

Foodborne illness may be prevented by handling food safely by limiting the time food is held at temperatures in the Danger Zone and by ensuring cross contamination does not occur. **Cross contamination occurs when ready-to-eat food is contaminated by bacteria from raw foods** (e.g. if a knife is used to cut up raw chicken and is then used to slice bread, bacteria from the chicken are transferred to the bread by the knife).

In addition to the above safe food handling practices, the following should also be adhered to:

- Ensure the water quality is safe for human consumption.
- Ensure staff wash their hands properly before preparing or serving food.
- If possible, staff that change diapers should not prepare food.
- Ensure foodhandlers do not work while ill.
- Wash all fruits and vegetables thoroughly.
- All foods must come from an approved source.
- Never use unpasteurized dairy products.
- Use only meat from a government inspected carcass.
- Use only thoroughly cooked or pasteurized eggs or egg products.
- Thaw food in the refrigerator, under cold running water (food must be in plastic bags or in a container not used for other purposes and submerged under cold running water), or in the microwave oven if it is to be used right away. **Do not thaw food at room temperature.**
- Cook food in one continuous process. Do not partially cook it, cool it and then reheat it to complete the cooking process.
- Food served to children and left uneaten must be discarded.
- Ensure dishes are washed, rinsed, sanitized and air dried.
- Store grain based foods such as pasta, flour or cereals in food grade containers with tight fitting lids to avoid insect and rodent infestations.
- Ensure garbage is not allowed to accumulate in the facility as it will attract insects and rodents.
- Maintain all areas of the childcare facility in a clean and sanitary manner.

It is recommended that staff involved in food preparation attend a food safety course offered by your public health inspectors.

Contact your local public health office in your health region for more information.

i) Other Precautions

i) Sandboxes

Children's sandboxes, if outdoors, offer an attractive place for cats and dogs to defecate and urinate. The animal feces can contain germs such as toxocariasis and/or toxoplasmosis. Children who use sand contaminated with these germs will usually swallow them as a result of putting their hands and sand in their mouths. Children infected with these diseases may not have signs of infection or may have very mild illness.

Outdoor sandboxes should be:

- covered when not in use with covers that allow air circulation to allow for natural cleansing of sand
- checked regularly for animal droppings or garbage and cleaned accordingly
- wear gloves during cleaning and wash hands after glove removal
- raked every morning
- properly drained

If sand is on playground or area that can not be covered it should be fenced. Ensure that toddlers wash their hands thoroughly after handling sand. Pregnant women should not clean sandboxes due to the risk of toxoplasmosis. See Appendix K *Sandbox Maintenance* for outdoor and indoor sandboxes.

ii) Water Tables

Water tables can spread germs as children introduce germs to the water with their hands and take germs away with them. Children must wash their hands prior to and after water play.

Water Tables should be:

- changed regularly - fill table with clean water in the morning - drain at noon and refill just prior to afternoon play
- drained at the end of the day, then disinfect the table and toys

iii) Animals

Children can learn by observing and playing with animals. However, many things need to be considered when having pets in child care facilities. Have a pet policy in your facility which includes care, vaccinations and clean up after the pet. It should also state that visiting pets brought to the facility must be on a leash and vaccinated.

Children should be supervised when playing with animals. **They should wash their hands after touching them** as diseases such as Salmonella can be spread by some pets. See Appendix L for information on specific pets and those to avoid for health reasons.

Generally, animals should:

- have all the necessary immunizations – e.g. rabies, distemper
- be bought from a reputable dealer
- be kept out of play area when soiling, and children not allowed to play near droppings
- be kept out of food preparation areas
- not be handled roughly, teased or kissed

iv) Personal Belongings

Personal belongings should not be shared. They should be:

- hung on individual hooks that are labelled, and hung far apart so belongings do not touch each other
- labelled to decrease mix up
- brought for some situations (e.g. second set of clothing in case one set becomes soiled or wet, a comb)
- toothbrushes for daily toothbrushing programs should be cleaned and stored so they do not touch (see Appendix M)

v) Insect Precautions

Ticks:

Ticks are most active from March until late June. Use an insect repellent according to the directions on the label. To prevent ticks from gaining access to the legs, wear high boots into which you have tucked the pant legs. At the end of an outing, examine your body and your clothing, as well as those of the children, for ticks. Pay special attention to the hairline, nape of the neck, pubic area and the breasts.

How to remove ticks:

- Remove ticks as soon as possible.
- Do not apply mineral oil, vaseline or anything else to remove the tick as this may cause it to inject germs into the wound.
- Use fine-tipped tweezers and grasp the mouth of the tick as close as possible to the skin and pull upward and out with a firm and steady pressure. Do not jerk or twist the tick.
- Do not handle the tick with bare hands.
- Be careful not to squeeze, crush or puncture the body of the tick, which may contain infectious fluids.
- After removing the tick, apply an antiseptic such as rubbing alcohol to the site. Wash your hands.
- Have the parents contact their doctor if you are unable to remove the whole tick. Infection can occur if the tick's mouth parts remain in the skin when attempting to remove it.
- Watch for signs of infection, such as redness and swelling. The child should be seen by the doctor if these occur.

Bed bugs:

The risk of a bed bug infestation in a child care setting is very low because bed bugs are typically only active at night and when people are sleeping. Short napping periods are not likely to be sufficient for bed bugs to become active and produce successful feeding attempts. Children who arrive from an infested residence may bring insect(s) into the facility in their clothing or on other belongings. The following activities can help to prevent the spread of bed bugs within your facility:

- Children's personal items such as bags, clothing, etc. should be stored individually in lockers or cubby holes.
- If you notice bed bug bites on a child, notify the parent/guardian.
- If you find a bed bug in clothing or belongings, place the item(s) in a sealed plastic bag and notify the parent/guardian.
- Launderable items can be placed in the washing machine then run for one cycle in the dryer on the regular temperature setting to kill all stages of the insect and their eggs.
- If you are uncertain what bed bugs or their bites look like (See Appendix O *Bedbugs Fact Sheet*), contact your local public health office or a reputable pest control professional.

West Nile Virus:

Reduce your risk of being bitten by mosquitoes by:

- Wearing loose fitting, light coloured long-sleeved shirts and long pants when you are outside.
- Putting mosquito netting over baby strollers, carriages and playpens.
- Making sure that door and window screens fit tightly and have no holes that may allow mosquitoes inside.
- Using a mosquito repellent when you are outside. If you plan to stay outdoors for only a short time, choose a product with a lower concentration of the repellent.
- Important ways to reduce yard mosquitoes are:
  - Drain plastic pools when not in use.
  - Screen and empty rain barrels weekly.
  - Change water in birdbaths at least weekly.
  - Clean roof gutters at least once a year to remove debris and allow drainage.
  - Mow the lawn at least every 2 weeks.

Insect Repellents

Using DEET products following these safety tips:

- Age 0 – 6 Months:
  DO NOT use DEET products on this age group; use protective clothing and mosquito nets instead.
- Age 6 Months to 2 Years:
  Choose a product with 10% DEET or less.
  Apply only once a day.
  Do not apply to the hands and face. Apply to exposed skin, especially the neck, wrists and ankles.
  Apply to clothing rather than directly onto the skin.
- Age 2 – 12 Years:
  Choose a product with 10% DEET or less.
  Do not apply more than 3 times a day.
  Do not apply to the hands and face of younger children.
- Remember that DEET products may decrease the effectiveness of sunscreen when used together. Apply sunscreen first, wait 15 to 30 minutes then apply the insect repellent. Using a sunscreen with an SPF of at least 30 may help to make up for this decrease in effectiveness.

• Adults should apply all insect repellent. It should be stored out of reach of children.

vi) Bites in the Playroom

Young children often bite each other during play or while fighting. The risk of infection with a blood borne pathogen is extremely small as most bites do not result in blood exposure. There have not been any reports of HIV or Hepatitis C transmission in child care. Hepatitis B transmission has been rarely reported and only in situations where bites may have been involved. This is only possible if there is blood exposure from the bite. See First Aid Management of a Bite below for appropriate management. The Canadian Pediatric Society (2008) has developed the following recommendations in response to concerns of bites in child care settings:

The facility should have policies that incorporate the following elements:

- managing bites (and other potential exposures to blood and body fluids)
- training of staff in the proper care of wounds that result from bites
- How and when to inform parents and what the follow-up will be
- Testing for blood borne pathogens (Hepatitis B, Hepatitis C and HIV) cannot be a prerequisite for admission into the Child Care

Prevention of Bites

- avoid stressful situations, frustrations and conflicts,
- provide age-appropriate small group activities,
- pay attention to first the victim, not the biter,
- observe the circumstances of how, when and why a child bites to help guide management,
- firm statements to the biter that this behaviour is not acceptable

For continued frequent aggressive biting, an individualized approach is necessary and may involve specialist advice in behaviour modification and therapy

First Aid for Managing a Bite

- if the skin is NOT broken – clean with soap and water and apply a cold compress and provide emotional support to the child who was bitten
- if the skin is broken:
    - allow the wound to bleed (do not squeeze the wound)
    - clean the wound with soap and water and apply a mild antiseptic
    - parents of both the biter and the victim to be notified as soon as possible (preferably within 2 hours of the incident)
    - report the bite to public health so that they can assess the risk, provide health education and offer vaccinations as needed. It is helpful to know the immunization history of both children involved.
    - advise the parents to monitor the wound for signs of infection and consult a health professional if redness and swelling increases over the following days.

4. Disease Control: What to do When an Outbreak Occurs

Some infectious diseases are reportable to your local health region and Saskatchewan Ministry of Health. Appendix A identifies diseases that you should notify your public health office about. If someone in your facility has a reportable disease (required by the Public Health Act to be reported to public health), local public health staff may call you as part of routine follow up.

Child care staff also notice trends - lots of children off sick at one time or numbers on the increase. The health department strongly recommends discussing these trends with local public health officials so they can provide advice on ways to deal with this. Early discussion with your local public health staff may help identify and prevent an outbreak.

Control measures for diseases or outbreaks are disease specific. That means that certain things must be done for certain diseases and that not all diseases are treated the same way. Public health specializes in this information and can be a valuable resource to you.

A Special Note about Diarrhea

Clusters of diarrhea cases (two or more) should be reported to the medical health officer in your local health region. Child care staff should observe and be aware of children with two or more episodes of diarrhea or one episode of diarrhea with fever, vomiting or blood in the stool. These children should not remain in child care, and parents must be called to pick them up as soon as possible. They should be separated from other children until they are picked up. Parents should be advised to seek medical attention for the child.

APPENDIX A

CHART OF SOME COMMON COMMUNICABLE DISEASES

Many of these diseases used to be very common in childhood but they largely have been eliminated through immunization.

Prevention and control of communicable disease in child care setting requires ongoing effort of child care personnel, public health personnel and other health care professionals.

The chart enclosed lists some communicable diseases that may be found in a child care setting. It is by no means comprehensive and further information may be needed from your local public health office.

Diseases which are reportable to your local public health office are identified by a ♦ after their name.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
BACTERIAL CONJUNCTIVITIS (Pink Eye) Inflammation of the conjunctiva i.e. the membrane that covers the eyeball and inside of eyelid.	Highly contagious. Spread by direct contact with eye drainage or indirect contact with contaminated articles (towels) (i.e. contaminated fingers & articles).	During the course of active infection (when drainage present). It is no longer contagious 24 hours after antibiotics have been started	1 to 3 days	- if there is discharge, should see doctor. - keep at home until 24 hours after treatment started. - discourage rubbing of eyes. - good handwashing. - disinfect soiled objects. - observe other children for signs x 5 days following (SK MoH). - don't let children share towels, facial tissues, etc.
CAMPYLOBACTER ENTERITIS ♦ Infection of the intestine caused by bacteria.	Eating contaminated foods such as undercooked chicken & pork; drinking contaminated water, raw milk; contact with infected pets (esp. puppies & kittens), farm animals or infected infants. Person to person transmission is rare.	Throughout course of infection; usually several days to several weeks.	1-10 days Generally 2-5 days.	- proper handwashing. Wash children's hands after handling any pets or animals. - thorough cooking of foods. Avoid recontamination after cooking. Pasteurize milk and chlorinate water supplies. - children and Child Care workers should not return until diarrhea has stopped.
CHICKEN POX (Varicella zoster) ♦ Caused by a virus but is not usually dangerous unless the individual has suppressed immunity. Usually provides immunity with one infection.	Highly contagious, transmitted through the air. Through direct contact with the sores or saliva of someone with chickenpox. Through indirect contact with articles soiled with vesicle fluid or respiratory secretions.	Usually 1 - 2 days (up to 5 days) before rash and until all sores are crusted.	10-21 days Usually 14-16 days.	- children do not need to be excluded, but should be kept at home until the child is feeling well enough to participate in normal activities. - keep at home for 5 days after appearance of rash if child severely ill or is going into a new setting where the classmates have not already been exposed. - notify parents of children who are taking cancer drugs or steroids as virus may be dangerous for these children. - good handwashing. - disinfect articles & toys soiled by nose or throat secretions.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
COMMON COLD/INFLUENZA An infection caused by a virus that effects the nose, throat and sinuses. There is no cure for the common cold. Influenza vaccine is available for those individuals at risk.	Spread by direct contact (touching, kissing, holding hands); indirect contact (touching something, like a toy or door knob, that has been touched by someone with a cold; or through the air when someone coughs or sneezes. air droplet or soiled articles from discharge from nose or throat.	1 day before symptoms begin until 7 days after symptoms.	Onset varies with each virus. Usually within 12 hours to 5 days	- keep at home until well enough to return. - good handwashing. - discourage touching nose and encourage covering of nose/mouth when coughing or sneezing. - encourage rest times & lots of fluids.
CROUP Infection of throat & vocal cords caused by a virus.	Begins usually as cold, so transmission by air droplet or soiled articles.	1 day before symptoms occur and for the duration of illness.	Onset varies depending on the virus.	- keep at home until well enough to return. - good handwashing. - teach children to cover nose/mouth when sneezing or coughing.
DIARRHEA caused by E.coli O157:H7 ♦ Food poisoning caused by bacteria. Can be fatal, especially in children.	Eating food contaminated with feces from cattle, sheep (lettuce, spinach, melons,); eating raw or undercooked beef (esp. ground beef); drinking raw milk, or contaminated water supplies.	As long as the body is excreting the organism. Can be as long as 3 weeks in children	2-10 days Generally 3-4 days.	- proper handwashing & handling of soiled diapers and human waste. - cooking foods thoroughly. - wash fruit and vegetables carefully, especially if eating raw - child and workers should not return until diarrhea has stopped and 2 stool cultures in a row are negative. - close centre to new admissions. (American Academy of Pediatrics, 2009)
FIFTH DISEASE ♦ Mild disease caused by a virus (parvovirus B19) which occurs most commonly in school age children.	Spread by air droplet or contact with contaminated articles. Can be transferred from mom to fetus.	Greatest before onset of rash and probably not contagious after onset of rash.	4 to 21 days to development of rash. Usually 4-14 days	- good handwashing and proper disposal of facial tissues. - disinfect contaminated articles. - pregnant workers should contact their physicians. (American Academy of Pediatrics, 2009)

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
GASTROENTERITIS caused by NORWALK-like VIRUSES Self-limited, mild to moderate viral gastro-enteritis. (Stomach flu). Very hardy virus that is resistant to some common disinfectants.	Spread by fecal-oral route or through contaminated food and water. Airborne or contact transmission from fomites is possible. The virus can survive on surfaces for several days.	During acute stage of disease and up to 48 hours to 7 days after diarrhea stops.	12-48 hours	- practice excellent personal hygiene. - sanitize multi-use articles such as toys and dishes/utensils. - cook foods thoroughly. - child should not return until diarrhea has stopped for 48 hours. - workers who prepare and handle food should not return to work until 72 hours after diarrhea has stopped.
GIARDIASIS ♦ Food poisoning caused by the cyst of protozoa.	Hand to mouth transfer of cysts from feces of infected individual. Ingestion of cysts from fecally contaminated water/food.	Entire period of infection. Can last for months.	3-25 days Generally 7-10 days.	- practice excellent personal hygiene. - Stress handwashing of staff and children before handling food, after toilet use and handling soiled diapers. - dispose of feces in sanitary manner. - child should not return until diarrhea has stopped.
HAND FOOT & MOUTH DISEASE Mild viral illness common in children under 10 years of age.	Direct, indirect and air. Transmitted by air droplet, fecal transmission or articles soiled by infected person.	During the acute stage of illness (while sores are present.) Virus can be found in stools for several weeks after. Illness lasts 7-10 days.	3 to 5 days.	- keep at home until well enough to return. - good handwashing. - disinfect soiled articles. - wash, sanitize diaper change areas. (ensure handwashing after diaper changes)
HEPATITIS A ♦ (Infectious hepatitis) A viral infection with different degrees of illness. Some infected people have no symptoms.	Eating foods contaminated by infected food handlers, including sandwiches and salads that are not cooked or that are handled after cooking. Raw or undercooked shellfish, oysters, clams from contaminated water. Highest risk of spread in child care is attributed to those who diaper & toilet children	For 2 weeks before the onset of jaundice. Most children do not turn yellow (jaundiced).	15-50 days Average is 28-30 days.	- practice excellent sanitation & personal hygiene especially handwashing. - chlorinate water supplies. - proper sewage treatment. - temporarily exclude child. - Public health may recommend hepatitis A vaccine. - children and workers should be excluded for 1 week following onset of illness.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
HEPATITIS B ♦ Serious viral infection which can lead to disease of the liver.	Transmitted by exposure to infected blood, saliva, semen & vaginal fluids. Needs to enter uninfected person's body through a break in the skin.	Anyone with hepatitis B has the potential to transmit to others.	Usually 45 – 180 days. Average is 60 – 90 days.	- use Routine Practices (See Page 7) - Public Health may recommend immunization for those at risk.
HEPATITIS C ♦ Serious viral infection which can lead to disease of the liver.	Transmitted by exposure to infected blood, semen & vaginal fluids. Needs to enter uninfected person's body through a break in the skin.	Anyone with hepatitis C has the potential to transmit to others	Ranges from 2 weeks to 6 months Average 6 – 9 weeks	- use Routine Practices (See Page 7) - no immunization.
HIV INFECTION ♦ Infection with human immunodeficiency virus alters body's ability to defend against other illnesses. May progress to AIDS. (Acquired Immune Deficiency Syndrome)	Spreads by exposure to infected blood, semen, vaginal secretions, breast milk and other body fluids with traces of blood. Needs to enter uninfected person's body through a break in the skin.	From time person is infected. With adequate treatment, the risk of transmitting the virus can be very low.	1 to 3 months for HIV test to become positive. Can take less than one to more than fifteen years to develop into AIDS.	- use Routine Practices. - contact Public Health if questions or concerns. - not necessary to exclude child. Discussion should occur between the program director and the physician and public health if the child has risk factors for transmitting the virus (biting, frequent scratching, bleeding problems) (American Academy of Pediatrics, 2009)
IMPETIGO Skin infection usually caused by staphylococcal or streptococcal bacteria.	Direct contact – with the impetigo sores Indirect contact – with materials (towels, clothes) that have been in contact with the impetigo sores.	When pus in sores or for 24 – 48 hours after antibiotic treatment begins.	Variable. Commonly 7-10 days.	- keep at home until antibiotic treatment taken for 24 hours. - good handwashing. - disinfect soiled articles.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
Influenza A highly contagious viral infection of the respiratory tract.	Direct contact – kissing, touching, holding hands Indirect contact – touching something (toy, doorknob) that an infected person has touched Through the air when someone coughs or sneezes (Caring for Kids, 2010)	From 1 day before the person feels sick until their symptoms have ended	1-3 days	- keep at home until well enough to return. - good handwashing. - discourage touching nose and encourage covering of nose/mouth when coughing or sneezing. - encourage rest times & lots of fluids.
MEASLES (Red measles, rubeola) ♦ Is a serious viral infection that used to be a common childhood infection but the measles vaccine has virtually stopped outbreaks.	* Extremely Infectious – just being in the same room that someone who has measles has been in up to 2 hours earlier Direct contact with discharge from the nose or throat Indirect - through contact with materials soiled with nose throat secretions	From 3 to 5 days before to 4 days after appearance of the rash.	About 10 days (Varies from 7-18 days).	- keep at home at least 4 days from appearance of rash. - check immunization status of staff and children; exclude accordingly. - good handwashing. - disinfect soiled equipment. - Public health should be involved in the management of measles cases
MENINGOCOCCAL INVASIVE DISEASE ♦ A bacterial infection of the lining of the brain (meningitis), the blood stream (bacteremia) or both.	Close direct contact – living in the same household Sharing toys, eating/drinking utensils; Through the air when the infected person coughs or sneezes	Up to 7 days before and up to 24 hours after antibiotics are started.	2 to 10 days. Commonly 2-4 days	- keep at home until 24 hours on antibiotics or until well enough to take part in activities. - contacts may need an antibiotic or immunization. - good handwashing (disinfect soiled equipment as outlined). - contact all parents of children in child care. Provide them the written information Public Health will provide about preventative measures. It will include symptoms to look for and when to contact their doctor. - children who develop symptoms require prompt medical attention.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
MUMPS ♦ Acute viral disease. Most children have been vaccinated for mumps.	Spread by air droplets or direct contact with saliva of infected persons.	A person can spread disease for a week before symptoms and as long as 9-14 days after the symptoms appear.	12 to 25 days.	- keep at home for at least 5 days after onset of swelling. This should be extended to 9 days if symptoms persist - those not vaccinated should be excluded from 12 to 25 days after exposure to mumps virus (SK MoH). - good handwashing. - disinfect soiled equipment.
PEDICULOSIS (Head Lice) Adult head louse is a tiny grey-white or brown insect that attaches itself to hair shaft and sucks blood from scalp and lays eggs (called nits) on hair shaft.	Direct head-to-head contact with person who has lice. Sharing personal items (hats, scarves, hoods, jackets) is not thought to be a significant risk for spreading.	As long as live lice are present.	Can take days or weeks until symptoms appear.	- exclusion is not required because individuals have likely had lice for a month before it has been detected. Cases should be treated. - try to limit head to head contact among children - instruct exposed caregivers and infected or exposed children regarding measures to be taken. Contact Public Health for recommendations. - Additional cleaning beyond routine cleaning is not necessary.
PERTUSSIS ♦ (Whooping Cough) Acute bacterial disease that involves the respiratory tract. Whooping sound at end of the cough gives it its name. However, the whooping sound is often not present.	Highly contagious and is spread by air droplets (e.g. by coughing/sneezing).	From beginning of runny nose to 3 weeks after coughing attacks begin if no treament. Contagiousness stops 5 days after antibiotics are started.	6 to 20 days. Commonly 9-10 days Initial onset may seem like a cold.	- keep at home for 5 days from the beginning of a course of treatment if there are children less than 1 year of age attending the Child Care or there is a pregnant woman in her last 3 months of pregnancy. - Public Health may recommend preventive measures e.g. other children may need antibiotics to prevent infection. - watch others for development of cough x 2 weeks. - handwashing and good disinfection of soiled articles.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
PINWORM Tiny thread like worm that may be seen around the anus when child is sleeping. (Caring for Kids, 2008)	Spread from person to person by direct transfer of eggs by hand from rectum to mouth or articles contaminated with eggs. Can survive up to 2 weeks in environment.	Until 2 weeks after treatment begins.	1-2 months.	- ensure good cleaning practises with diaper changing areas. - good handwashing. - ensure parents aware of sign so treatment can be done. - bed linen and underclothing of infected kids should be handled carefully.
RINGWORM A group of fungal diseases which cause lesions of the beard, scalp, body, groin, and nails.	Spreads from person to person by touch. Can be spread by infected animals like cats and dogs. Scalp ringworm can be spread by sharing combs, brushes, hats. Can be spread by bed linens and towels.	When rash is present live spores stay on contaminated objects.	4-10 days.	- good handwashing. - discourage sharing of combs, brushes, hats. - keep infected children from swimming pools, gyms and activities that expose others. - keep at home until treatment with prescribed oral or topical creams begins (SK MoH).
ROTAVIRAL ENTERITIS Severe gastro-enteritis. Can be fatal Very hardy virus that is resistant to some common disinfectants.	Spread by fecal-oral route. Possible respiratory spread. May be present in contaminated water. Survives for long periods on hard surfaces, hands and in contaminated water.	During acute stage of disease and while shedding of virus continues (not common after the 8th day)	Approximately 24-72 hours	- virus is inactivated by chlorine (Heymann, 2008). - maintain high level of sanitary practices. - person should not return until diarrhea has stopped. - dress child to cover diaper.
RUBELLA ♦ Mild viral infection but can cause serious problems for a non-immune pregnant woman because infection during pregnancy can lead to birth defects in unborn babe.	Spread by air droplets or touching articles soiled with nasopharyngeal secretions (i.e. saliva, nasal discharge).	Up to one week before to 4-5 days after the onset of rash (Heymann, 2008).	14 to 23 days. Usually 16-18 days (American Academy of Pediatrics, 2009)	- keep at home for 7 days after appearance of rash. - children or workers suspected of being infected must be excluded - Public health should be involved in the management of rubella cases, immunizations may be offered to those who are not immune. - good handwashing, isolation procedures. - disinfect soiled equipment as outlined.

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
SALMONELLOSIS ♦ Food poisoning caused by bacteria.	Eating foods contaminated with Salmonella - this includes raw or undercooked eggs, raw milk, meat, poultry, contaminated water. Foods may also be contaminated by food handlers with poor hygienic practices. Pet turtles, iguanas or chicks can be a potential source.	Throughout the course of the infection (extremely variable).	6-72 Hours Generally 12-36 hours.	- Ensure safe food handling (preparation, storing etc) - Ensure proper handwashing before, during & after food preparation. - Thoroughly cooking all foodstuffs. - Cleaning & sanitizing equipment/utensils before preparing next food item. - public health will investigate and may request stool specimens from symptomatic staff members. - All infected persons should not return until diarrhea has stopped
SCABIES Caused by tiny insects called mites that burrow just under the skin's surface. Those mites cause the rash.	Spread by touch or contact with clothing or other personal items used by the infected person. Can live for up to 3 days off of human skin (in clothing, bedding, linens etc).	Until treated.	2 to 6 weeks.	- keep at home until 24 hours after treatment. - wash linens, dress up clothing in hot water. - dry articles in dryer on hottest setting. - good handwashing. - contact Public Health re: treatment of Scabies.
SHIGELLA ♦ Potentially severe diarrhea caused by a bacteria.	Spread by fecal-oral route. Can be transmitted between people or by ingestion of contaminated food or water.	From onset of acute infection and up to 4 weeks after illness.	1 to 7 days typically 1 to 3 days	- good handwashing hygiene. - individuals with diarrhea should be excluded. - Public Health should be involved in the management of shigella cases.
STAPHYLOCOCCAL FOOD INTOXICATION ♦ Food poisoning caused by preformed toxins present in food.	Eating foods contaminated by food handlers without subsequent cooking or with inadequate heating/ refrigeration. Organisms may be from discharges of infected fingers, eyes, facial eruptions, boils, coughing or sneezing. Contaminated milk or milk products (esp. cheese)	Not Applicable	30 minutes-8 hours Generally 2-4 hours.	- Strict food hygiene sanitation in kitchen. - Proper temperature control for cooking and refrigeration. - use excellent personal hygiene. - exclude food handlers with boils, abscesses or other purulent lesions of the hands, face or nose from food preparation (American Academy of Pediatrics, 2009).

DISEASE/WHAT IS IT?	HOW IS IT SPREAD?	WHEN IS IT CONTAGIOUS?	TIME FROM EXPOSURE TO SYMPTOMS	WHAT TO DO AT CHILD CARE
STREP THROAT Throat becomes very red & sore. If no treatment, can lead to disease that can permanently damage a child's heart or kidneys Bacterial disease Scarlet fever is strep throat with a red rash all over the body.	Transmitted by droplets made by talking, coughing or sneezing.	Duration of illness or for 24 hours after start of antibiotics.	1 to 3 days.	- keep at home until treatment taken for 24 hours and child is well enough to return. - good handwashing. - teach children to cover mouth and nose when coughing and sneezing.
THRUSH (Candidiasis) Fungus that can cause infection of mouth or skin.	Spread by person to person contact with lesions or soiled articles. By contact with secretions or excretions of mouth, skin, vagina, and feces.	While lesions present.	Variable. 2 - 5 days for thrush in infants.	- good handwashing. - disinfect contaminated articles. - use prescriptions as directed. - sanitize soothers, bottle nipples by boiling 10 minutes.
WARTS Viral disease which can show up in variety of skin and mucous membrane lesions.	Direct contact with person or infected articles.	Unknown, but probably at least as long as visible lesion persists.	2 to 3 months. Range is 1 to 20 mos.	- good handwashing. - encourage infected person to have warts covered.

References:

American Academy of Pediatrics (2009). Red Book 28th edition. American Academy of Pediatrics, Elk Grove Village, IL, USA

Caring For Kids (2008) and (2010). www.caringforkids.ca

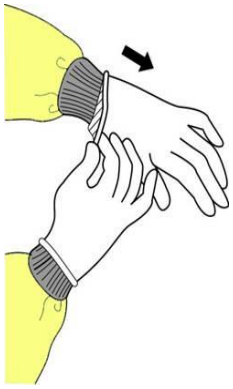
Heymann, David ((2008). Control of Communicable Diseases Manual, 19th edition. APHA Press, Washington, DC, USA

Saskatchewan Communicable Disease Manual (2012). http://www.ehealthsask.ca/services/manuals/Pages/CDCManual.aspx

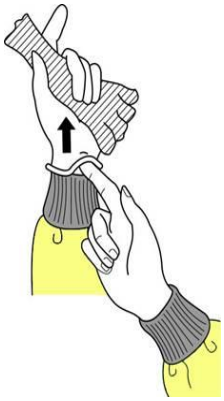
Saskatchewan Ministry of Health, Chief and Deputy Medical Health Officers (2012).

APPENDIX B

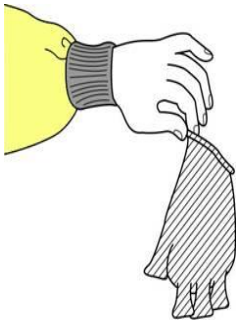
REMOVAL OF SOILED GLOVES



Grasp outside edge near wrist
Peel away from hand, turning glove inside-out



Hold in opposite gloved hand
Slide ungloved finger under the wrist of the remaining glove



Peel off from inside, creating a bag for both gloves
Discard gloves in garbage
Wash hands with soap and warm water

APPENDIX C

Saskatchewan Health Routine Immunization Schedule
Infant, Preschool and School Age Children

Immunization Schedule
Routine immunization schedule for infant, preschool and school-age children

Age or Grade	2 mos.	4 mos.	6 mos.	12 mos.	18 mos.	4-6 yrs.	Gr. 6	Gr. 8	Gr. 12
DTaP-IPV-Hib: Diphtheria, Tetanus, acellular Pertussis (Whooping Cough), Inactivated Poliovirus, *Haemophilus Influenzae type b*	X	X	X		X				
Pneumococcal Conjugate 13	X	X		X					
MMRV: Measles, Mumps, Rubella, Varicella (Chickenpox)				X	X[1]				
MMR: Measles, Mumps, Rubella					X[2]			X[3]	X[3]
Meningococcal Conjugate C				X					
Meningococcal Conjugate ACYW-135							X		
DTaP-IPV: Diphtheria, Tetanus, acellular Pertussis (Whooping Cough), Inactivated Poliovirus						X			
Varicella (Chickenpox)							X[4]		
Hepatitis B (series)							X		
HPV: Human Papillomavirus (girls only)							X[5]		
Tdap: Tetanus, Diphtheria, acellular Pertussis (Whooping Cough)								X	
Seasonal Influenza			X[6]						

Immunization against diseases is an important step in maintaining good health.

X[1] For those born since October 1, 2009.

X[2] For those born before October 1, 2009.

X[3] Second dose mumps catch-up program until 2012-13.

X[4] Varicella catch-up program for non-immune Grade 6 students until 2015.

X[5] Grade 6 or beyond with a date of birth no earlier than January 1, 1996.

X[6] Seasonal influenza vaccine for infants and children 6 months - 4 years of age; one or two doses, depending if child has received one or more doses of vaccine in previous season.

Hepatitis A vaccine series is available for children 1 - 15 years living on reserve or in northern health regions (excluding Creighton, Air Ronge and La Ronge).

Please refer to the Saskatchewan Ministry of Health website for the most up to date schedule.
http://www.health.gov.sk.ca/immunization-schedule

APPENDIX D

SONGS, GAMES AND STORIES

1. Clap Your Hands

Tune: Row, Row, Row your Boat.

Clap, clap, clap your hands
As slowly as can be.
Clap, clap, clap your hands
As quickly as you can.

Continue with: Wash your hands...
Rinse your hands...
Dry your hands...
Raise your hands...

Source: Healthy Habits for Healthy Happy Kids: Canadian Institute of Child Health

2. Scrub, Scrub, Scrub Your Hands

Tune: Row, Row, Row Your Boat

Scrub, scrub, scrub your hands
Put the soap between
Wash the germs right down the drain
Make them nice and clean.

Source: City of Toronto Department of Public Health, Infection Control Program for Day Nurseries

3. What to Do When You Have a Cold

Tune: Here We Go 'Round The Mulberry Bush.

This is the way we blow our nose, blow our nose, blow our nose
This is the way we blow our nose
When we have a cold.

(After singing the verse, use a tissue and pretend to blow your nose. Have children imitate the action).

This is the way we throw it away....
When we're done with our tissue.

(Have the garbage in the middle of the circle. Throw your tissue in the garbage when you're finished with it. Have children do the same).

This is the way we cover our mouth....
when we have to cough.

(After this verse pretend to cough while covering your mouth. Have children imitate the action).

This is the way we use a tissue....
When we have to sneeze.

(*Use your tissue to block the (pretend) sneeze while turning your head away from the rest of the group. Have children do the same).*

Repeat verse #2

This is the way we wash our hands...
When we blow, cough or sneeze.

(Take children to the sink and have them wash their hands when the song is finished).

Source: Adapted from: Kingston, Frontenac and Lennox & Addington Health Unit

4. Stories

Children are very eager to learn and love to have story time. To promote good health care practices, use story time to read books that promote good health. Some books you might find interesting and fun are:

Barrett, Judy, I Hate to Take a Bath, N.Y. Four Winds Press, 1975
Berenstein, Stan and Jan, The Berenstein Bear's Bath Book
Bianchi, John, Mortimer Mooner Stopped Taking a Bath
Nault, Marilyn, William! Won't You Wash Your Hands, Canadian Institute of Child Health, 1990
Preschool Press and Time Life Books, The Sesame Street Book of People and Things,
Wilkin, Eloise, My Good Morning Book

APPENDIX E

HANDWASHING PROCEDURE

LIQUID SOAP AND WATER

This procedure should take a minimum of 20 seconds to complete correctly.

- Use liquid SOAP and warm RUNNING WATER.
- Rub your hands vigorously away from water as you wash them.
- Wash ALL surfaces, including
  - backs of hands
  - wrists
  - between fingers, thumbs
  - under fingernails
- Rinse your hands well. Leave the water running.
- Dry your hands with a single use towel.
- Turn off the water using the towel instead of bare hands.
- Dispose of single use (paper) towel in garbage.

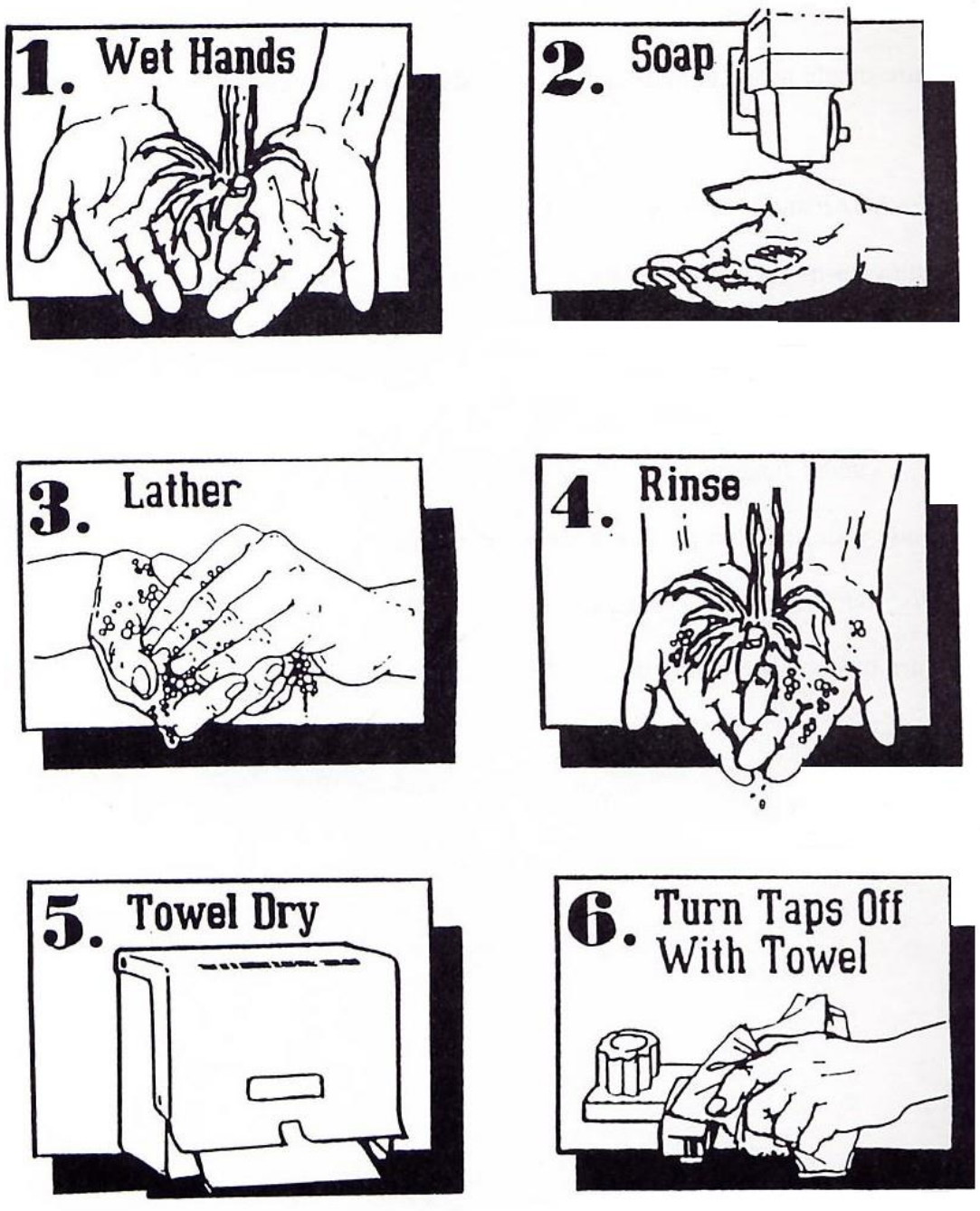
Note: A paper towel dispenser is best. If paper towels are dispensed by lever or push bar, you should run a length of paper towel before you wash your hands to avoid contaminating clean hands from the dispenser.

ALCOHOL HAND RUB PROCEDURE (only when liquid soap and running water not available)

- Apply product to palm of one hand (about ½ tsp, enough to take 25-30 seconds to dry)
- Rub hands together.
- Cover all surfaces including:
  - backs of hands
  - between all fingers and thumb
  - under finger nails
  - under ring (if worn)
- Rub until hands are dry.

APPENDIX F

CORRECT HANDWASHING



APPENDIX G

CLEANING GUIDELINES

A clean, healthy environment in your facility will help prevent the spread of infectious disease. Cleaning should be an on-going part of your everyday operation. Clean as needed in conjunction with a cleaning schedule.

The following cleaning schedule may be used as a guideline.

MORE THAN ONCE A DAY:

- Clean and disinfect potty-chairs and diapering areas after every use.

ONCE A DAY

- Clean and disinfect bathroom surfaces such as faucet and toilet handles and toilet seats after every use or as needed.
- Wash with liquid soap and water, all surfaces that infants and toddlers are likely to touch.
- Wash and sanitize:
    - crib rails
    - hard-surfaced toys
    - any objects a child touches with his/her mouth
    - door knobs/handles/light switches.
- Wash mattress covers and bed linens if children do not use the same cot every day.
- Wash face cloths.
- Place any soiled clothing in sealed plastic bags and return to parents. **Do not wash or rinse clothes soiled with feces in your facility.**
- Wash and sanitize the water play equipment.
- Wash and disinfect floors.

ONCE A WEEK

- Clean and sanitize low shelves, doorknobs, and other surfaces likely to be touched by infants and toddlers.
- Sanitize toothbrush storage units (cups or rack).
- Wash mattress covers, blankets, and bed linen if child uses same ones every day.
- Wash stuffed toys in automatic washing machine and dry on "HOT" setting of dryer.

ONCE A YEAR

- Wash walls, ceiling, ceiling fans, and light fixtures.

APPENDIX H

Sanitizer Chart

Chlorine	Quaternary Ammonia	Iodine
100 parts per million required	200 parts per million required	25 parts per million required
works well in any temperature of water	works well in cooler water	works well in cold water
easy to buy	easy to buy from supplier; some products can also be purchased through retail stores	buy from supplier
effective	effective	effective
inexpensive	moderate to expensive	expensive
quick kill time	quick kill time	quick kill time
does not need rinsing	may leave residue	may leave residue or yellow tinge
corrosive	mild to skin	corrosive
will evaporate- change often	heat stable – change often	usually stable

APPENDIX I

DIAPERING PROCEDURE

1. **WASH** your hands.

2. Assemble supplies (fresh diaper, freshly dampened paper towels or unscented, pre-moistened wipes). Place paper liner or disposable towel on change table where child's bottom will be.

3. Hold the child away from your body as you place the child on a clean change pad.

4. Remove soiled clothes and diaper, folding soiled surface inward, and put it out of baby's reach. Close all safety pins if used, and place out of children's reach. If disposable diapers are used place soiled diaper in plastic lined waste receptacle.

5. Clean the child's bottom with pre-moistened towelette from front to back. Remove all soil. Do not forget skin creases. Skin care products should only be used at parent's request. Use clean tissue or Q-tip to take out and apply cream to baby's skin. Discard soiled wipes in plastic bag or lined receptacle.

6. If the child needs to be washed completely, bathe child in plastic baby bathtub. Wash, rinse and disinfect baby bathtub immediately after diapering the child.

7. Remove the paper towel from beneath the child and dispose of it into the plastic bag or lined receptacle.

8. Wipe hands on a moist, clean disposable cloth and place it in the waste container. If gloves are worn, dispose of them now.

9. Diaper & dress child to cover the diaper.

10. Wash the child's hands and return her/him to play or sleep area.

11. Put on gloves. Dump soil from cloth diaper in toilet, (diaper liners are to be placed in the waste container). Avoid splashing. Flush. Place any soiled clothing and diaper in plastic bag for parents to take home to launder. Do not launder these items in your facility.

12. Remove gloves and dispose in waste container. Wash hands with soap and warm water.

13. Clean and disinfect the diapering change area, equipment, or supplies touched.

14. **WASH** your hands with liquid soap and warm water. See Appendices E and F *Handwashing Procedure.*

**** Remember - NEVER leave a child unattended ****

APPENDIX J

DISHWASHING PROCEDURES

1. Commercial Dishwashers

a) High temperature dishwasher - Wash temperature is 60 - 70°C (140 -160°F). The rinse temperature **MUST** reach 82°C (180°F). A chemical sanitizer does not need to be added to this machine because the high temperature of the rinse water sanitizes the dishes/utensils.

b) Low temperature dishwasher - Wash temperature is 70°C (160°F). A chemical sanitizer **MUST** be added to the rinse cycle because the rinse temperature is not hot enough to sanitize dishes/utensils

2. 3-Compartment Sink

1st Compartment-
Wash dishes in warm, 44°C (110°F) soapy water

2nd Compartment-
Rinse in clear warm water

3rd Compartment-
Sanitize at 82°C (180°F)
or
Add chemical sanitizer:
* chlorine - 100 ppm
* quaternary ammonium compound - 200 ppm
* Iodine -12 to 25 ppm

Immerse dishes/utensils for 2 minutes minimum.

Air Dry

3. Domestic Dishwasher

Consult with your local Public Health Inspector for approval.

APPENDIX K

SANDBOX MAINTENANCE

Whether you use an outdoor sandbox or an indoor sand tray, keeping the sand area sanitized and clean is important for preventing the spread of germs. Both indoor and outdoor play sand should be discarded and replaced every two years. If the sand becomes contaminated sooner, dispose of the sand and purchase new natural sand for use. You should not attempt to sterilize sand; simply replace it as recommended.

If you replace sand and cover sandboxes from insects and animals as recommended, the risk of spreading diseases (such as ringworm) via sand is low. To prevent the spread of germs, children should wash their hands immediately before and after sand play. If a child has a diaper accident or diarrhea in a sandbox, replace the sand immediately and sanitize the sandbox before use to prevent potential illness.

Ideally, an outdoor sandbox should be kept covered when not in use. Uncovered sand may be an inviting litter box for roaming cats and birds, and bees may be attracted to food or beverage particles that children leave behind. If the sandbox did not come with a commercial cover, use a canvas or plastic tarp.

If your childcare program uses sand as a resilient surface around play equipment, covering the entire sand area each night may not be easy. Multiple large plastic or canvas tarps may be necessary to protect the sand from contamination. If this is not possible, and the sand remains uncovered, be sure to check the sand carefully for debris before each use. A window screen can be used as a sifter to remove any debris from the sand. If you find dangerous debris such as glass or animal waste in the sand area, do not allow children to play there.

Spilled sand can lead to falls and injuries. During indoor sand play, keep a broom and dustpan near the indoor sand table so spills can be easily cleaned up. Discard sand that falls on the floor or ground or save it for spreading on steps and walkways during winter; do not place the contaminated sand back in the sandbox or table. After outdoor sand play, use a soft brush to remove any sand particles from children's clothes before they go back inside. Keep a mat by the door to reduce the amount of sand that is tracked indoors.

In addition, for both indoor and outdoor sand play, keep eating and drinking areas separate from the sandbox. If your childcare program has an outdoor picnic area, locate the sandbox far enough away so that spilled beverages or food particles do not become an attraction for bees or other insects.

http://www.healthychild.net/InSicknessandHealth.php?article_id=229

APPENDIX L

ANIMALS AND PETS

1. Cats, dogs and ferrets should not be allowed in centres due to increased risk of communicable disease, scratches, bites and allergies.

2. Small rodents such as gerbils, guinea pigs and hamsters are acceptable. Cages are to be cleaned daily to reduce odour and to prevent possible disease transmission from their wastes.

3. Female rabbits are recommended over males that are more territorial. Males tend to squirt their urine outside the cage and may become a nuisance. The larger breeds of rabbits are usually more docile and have a better temperment.

4. Small birds such as budgies, canaries, finches and lovebirds are fine providing:
   - they are healthy and monitored by veterinarians on a regular basis
   - they are caged and not permitted to fly freely
   - the cages are cleaned daily to reduce odour, bird dust and loose feathers

   Parrots and pigeons are major species that harbour a microoganism that can kill the bird and transmit diseases to humans. Larger birds are not recommended since they may bite and their bites may be serious.

5. Municipal bylaws of some municipalities may prohibit the keeping of live poultry, including chickens, turkeys, ducks and geese. Exceptions may be made for education purposes during Easter for children to observe chicks hatching from eggs. Please check with your municipality.

6. Fish should be in covered aquariums to minimize the risk of transmitting Salmonella.

7. Ant farms must be totally contained and ants should be of the non-biting black species.

8. Reptiles and amphibians that live in damp, humid or semi-humid conditions can harbour bacteria such as Salmonella and fungi. The keeping of reptiles such as garden snakes, anole lizards, native bullfrogs, newts and salamanders are therefore not recommended. Research also identified the presence of Salmonella in other reptiles such as iguanas. Reptiles should be kept in an aquarium type container or covered in cages to keep children from touching them.

9. Turtles and tortoises are not allowed as they are capable of harbouring Salmonella and Campylobacter.

Appendix M
Child Care Centre Toothbrushing Program

Toothbrushing programs are strongly recommended in Child Care Centres where preschool children have been assessed to be at high risk for tooth decay.

Follow these rules for an effective brushing program and to avoid the spread of communicable disease.

An adult leader must be designated and know his or her responsibilities. He or she should know the phone number of the dental health educator who is supervising the program.

Leader's Responsibilities

1. Labeling the equipment
2. Applying the toothpaste
3. Monitoring the brushing
4. Monitoring proper storage of equipment
5. Clean up

Supplies Needed

1. Child-sized toothbrushes
2. Toothpaste
3. Paper cups/wax paper
4. Washable storage unit (e.g. plastic cup, or classroom rack).
5. Toothbrush covers (optional)

1. Labeling the equipment

With a permanent marker, label each toothbrush, cup, toothpaste, toothbrush cover etc with the child's full name.

2. Applying the toothpaste

Wash your hands.

Fluoride toothpaste can be used. Encourage children to spit toothpaste out, not swallow it.

If sharing one tube of toothpaste among several children, the toothpaste must not come in contact with the brush bristles. A rice-sized (0-3 years) or pea-sized (3 years & older) portion of toothpaste can be applied to the lip or bottom of a paper cup or to strips of wax paper for each child.

Individual tubes may also be used, but must be labeled with the child's name and stored in the child's cup.

3. Monitor the brushing procedure

Children should be encouraged to wash their hands with warm water and soap before and after brushing.

Leader should always be the one to take the brushes from the storage units, dispense the toothpaste and pass to child.

Children should be encouraged not to chew the toothbrush as this makes the brush shaggy and ineffective.

Practice the proper technique to ensure brushing is done correctly.

Monitor length of brushing time. A good brushing should take about 2 minutes for preschool children.

If a child drops a toothbrush or it is contaminated by touching another brush, it should be thrown away.

You should always replace a toothbrush after a child returns to class after a communicable illness.

4. Monitor proper storage of equipment

Have child rinse the toothbrush thoroughly after brushing.

Remove as much water as possible. Dry off brush with paper towel.

Toothbrushes should be stored out of the reach of children. The leader should be the one to replace the toothbrush in it's storage unit.

A rack or individual cup may be used. Never store toothbrushes where they can touch or drip on each other. Storage unit should be located in a room that is not shared with a toilet.

It is important that the brush be exposed to air, to dry out between brushings (if in a cup, bristles up). If covers are used be sure they are well vented.

5. Clean up

Storage units (cup or rack) should be cleaned daily. Wash with warm water and detergent.

Storage units should be disinfected a minimum of weekly. A solution of ¼ cup bleach to 1 gallon of water should be used to kill harmful bacteria, viruses and parasites. The bleach solution should be in contact with the surface for 10 – 15 minutes.

Clean and sanitize the sink and wash your hands.

For more information contact your local public health office and ask to speak with a dental health educator.

APPENDIX N

CARING FOR YOUR CHILD'S FEVER

Caring for Your Child's Fever

What is a child's normal body temperature?

A child has the same body temperature range as an adult:

- 36.5°C – 37.5°C (97.7°F - 99.5°F) when taken by mouth.
- 36°C – 37.3°C (96.8°F - 99°F) when taken under an armpit.
- 36.6°C - 37.9°C (97.9°F – 100.2°F) when taken rectally.

What is a fever?

- **A fever is a symptom and not a disease.** It is the body's natural way to fight infections and results in a raised body temperature.
- Causes of fevers may include:
  - Viral infections such as influenza and parvovirus (*'fifth disease'*).
  - Bacterial infections such as urinary tract infections and pneumonia.
  - Immunizations. Fevers may occur 1 to 14 days after a child or adult gets immunized, depending on the types of vaccines they received.

How can I tell if my child has a fever?

- Safe and accurate temperature taking is important especially in young children. Electronic digital thermometers are recommended for use.

By armpit:

- Place the thermometer high up in the centre of the armpit making sure it touches bare skin on all sides.
- Hold the child's arm close to his/her body.
- When the thermometer beeps, remove it gently and read the temperature.

By mouth (can be used for older children):

- Place the thermometer probe under their tongue (remind the child not to bite down on the thermometer).
- When the thermometer beeps, remove it gently and read the temperature.
- Wait 20 minutes after your child has a drink before taking their temperature by mouth.

Rectally:

- Apply a lubricant or petroleum jelly (like Vaseline®) on the thermometer probe so that you can easily insert it.
- Lay the child down and spread their buttocks with one hand and gently insert the thermometer probe into the rectum about 1.25 cm (0.5 in.) to 2.5 cm (1 in.). Don't force it into the rectum.
- Hold the thermometer in place with your fingers and press the child's buttocks together to keep the thermometer in place.
- When the thermometer beeps, remove it gently and read the temperature.
- Wash the thermometer well after rectal use. To prevent spreading bacteria, don't use it to take oral temperatures.

Notes:

- Ear (tympanic) thermometers are quick but the result may not be accurate.
- Forehead strips, pacifier (soother) and disposable thermometers are not accurate and should not be used.
- Glass thermometers can cause mercury poisoning if they break.

How can I treat my child's fever?

Comfort measures include:

- Dressing your child lightly and covering with a sheet.
- Bathing your child in lukewarm (never cold) water for less than 15 minutes (stop the bath if your child starts shivering).
- Encourage your infant to breastfeed or formula feed as often as possible to prevent dehydration (infants do not need to be given additional water or other fluids).
- Encourage your child to drink water or diluted juice or eat popsicles, gelatin and ice chips, and watch for signs of dehydration (e.g., their pee is dark colored or they are thirstier than usual).

Medication to manage fevers:

- **ASA (Aspirin®) should NOT be given to anyone under 20 years of age due to the risk of Reye's syndrome**
- **Do not give ibuprofen (Advil®, Motrin®) to infants less than 6 months old.**

Acetaminophen (Tylenol®, Tempra®) is effective for fever and pain control. It is available in several forms such as drops, syrup, tablets/chews or rectal suppositories. **Read the next page for dosages and more information.**

Dosages for Various Forms of Acetaminophen for Children								
Weight (kg)	Weight (lbs.)	Single dose (mg)	Infant drops 80 mg per 1mL	Children's syrup 160 mg per 5mL (1 tsp.)	Children's meltable or chewable tablets 80 mg per 1mL	Junior meltable or chewable tablets 160 mg per 1mL	Suppository 120 mg each	Suppository 325 mg each
2.5-5.4	6-11	40 mg	0.5 dropper (0.5 mL)	-	-	-	-	-
5.5-7.9	12-17	80 mg	1 dropper (1 mL)	-	-	-	1 suppository	-
8-10.9	18-23	120 mg	1.5 droppers (1.5 mL)	-	1.5 tablets	-	1.5 suppositories	-
11-15.9	24-35	160 mg	2 droppers (2 mL)	1 tsp. (5 mL)	2 tablets	1 tablet	2 suppositories	-
16-21.9	36-47	240 mg	-	1.5 tsp. (7.5 mL)	3 tablets	1.5 tablets	-	1 suppository

- Carefully read and follow all labels on the medicine bottle and package.
- **Always check your child's weight** so that they receive the right dosage of medication.
- Doses may be repeated every 4-6 hours until the fever drops. **Do not give your child more than 5 doses in a 24 hour period.**
- **Acetaminophen may be present in other over-the-counter medications.** Overdoses of acetaminophen have been known to cause permanent liver damage and/or death in children and adults.
- **Do not alternate giving acetaminophen and ibuprofen** as this does not control a fever or pain any better than just giving acetaminophen and may cause accidental drug overdoses.

When should I be concerned about my child's fever?
Take your child to a doctor, nurse practitioner or emergency room immediately if they have any of these symptoms:

- A fever over 38°C (100.4°F) **and** is less than 6 months of age.
- Has had a fever **for more than 3 days**.
- Develops small purple spots on his/her skin that may look like bruises or a rash.
- Has a seizure or convulsion ('a fit' or shaking) whether or not they have a fever.
- Struggles with you, seems confused or delirious, is unresponsive or you have difficulty waking your child.
- Has problems breathing.
- His/her skin colour does not look right or becomes grey, pale or blue.
- Refuses to stand or put weight on his/her legs.
- Cries constantly and you cannot settle him/her.
- Does not use an arm or leg normally.
- Has repeated vomiting and/or diarrhea even if they don't look like they are dehydrated.
- Cries when going to the bathroom, or if his/her pee smells bad.

For more information, contact HealthLine at 811 (24 hours a day), your local public health office, or your physician or nurse practitioner.

Resources: http://healthlineonline.ca/; Canadian Pediatric Society www.cps.ca; The Hospital for Sick Children (2010) www.sickkids.ca; www.tylenol.ca (2014); http://www.metric-conversions.org/temperature/celsius-to-fahrenheit.htm.

APPENDIX O

BEDBUGS – FACT SHEET

Bedbugsinfo.ca FACT SHEET

BED BUG BITES

WHAT DO BED BUG BITES LOOK LIKE?

Bed bugs usually bite at night, and will bite all over a human body, especially around the face, neck, upper torso, arms and hands.

Individual responses to bed bug bites will vary. Some people do not react to bed bug bites. But for those who do, bite marks may appear within minutes or days, usually where skin is exposed during sleep. They can be small bumps or large itchy welts. Because the bites may resemble mosquito and other insect bites, a bump or welt alone does not mean there are bed bugs.

The most common rash is made up of localized red and itchy flat sores. Often bed bug bites appear as a group of three, which people sometimes call "breakfast, lunch, and dinner." Small raised red swelling bites are also common. In rare cases, some people may develop large raised, often itchy, red welts.

ARE BED BUG BITES A THREAT TO MY HEALTH?

Although bed bugs and their bites are a nuisance, they are not known to spread disease in humans. Bed bug bites can be very itchy and irritating. Most welts heal in a few days but in unusual cases, the welt may persist for several weeks.

The most significant health effects appear to be the psychological, including stress, anxiety, depression, and fatigue caused by the presence of bed bugs in the home. Anxiety about being bitten can lead to sleeplessness, which can affect one's wellbeing. Properly and effectively responding to bed bugs helps to reduce anxiety.

HOW DO I TREAT BED BUG BITES?

Most bed bug bites go away by themselves and don't need treatment. Keep the skin clean and try not to scratch. Usually an anti-itch ointment will help, but if bites become infected, you should see a doctor. If the bites are very itchy, your doctor may prescribe cream or antihistamines to relieve the itchiness. Oral antibiotics may be prescribed for any secondary skin infection from excessive scratching.

FOR MORE INFORMATION VISIT bedbugsinfo.ca

GLOSSARY

Asymptomatic: infection without symptoms. A child may, for instance, be an asymptomatic carrier of the organism that can cause strep throat (group A *beta Hemolytic streptococci*).

Bacteria: microorganisms, some of which are capable of causing disease. These organisms are much larger than viruses and can usually be effectively treated with antibiotics.

Campylobacter: a bacterium that is a common cause of diarrhea. The illness is usually fairly mild and of short duration. Usually requires no treatment. Spread by contaminated foodstuffs, including animals and unpasteurized milk.

Candidiasis: infection by the fungal organism *Candida albicans*. In early infancy may be in the form of white plaques on the inside of the mouth (thrush) or it may affect the skin (monilia) usually as a complication of diaper rash.

Carrier: a person who is infected with a specific organism but has no symptoms of disease. For example, some children may be asymptomatic carriers of the organism *Haemophilus influenzae*, type b or *Streptococcus pyogenes* which causes "strep" throat.

Chickenpox: an acute viral disease, the principle manifestation of which is a characteristic skin rash, which occurs all over the body and also inside the mouth and on the scalp. It is highly contagious. While a minor disease for most children, it may be life threatening to children with cancer or suppressed immune systems.

Communicable Disease: a disease caused by a specific infectious agent that can be passed from an infected person to another person or from an infected animal to another person.

Communicable Period: the period of time a person is capable of spreading infection to another person.

Conjunctivitis: inflammation of the delicate pink tissue that lines the eyelids and covers the eyeball. "Pink eye". Can be caused by several types of bacteria and viruses. Highly contagious.

Contact: a person or animal that has been in association with an infected person or animal or a close environment which might provide an opportunity to acquire the infective agent.

Contagious Disease: another word for communicable disease.

Croup: narrowing of the upper air passages leading to difficulty breathing, most noticeable during inspiration and causing a typical noise. Croup can be caused by a number of different bacteria and viruses.

Diphtheria: an acute bacterial pharyngitis in which a toxin is produced which can cause neurological and cardiac complications. Extremely rare since the introduction of vaccine.

Encephalitis: inflammation of the brain that can be caused by a number of viruses, including mumps, measles and chickenpox.

Epidemic: occurrence of cases of a disease in greater number than would be expected.

Epiglottitis: swelling and inflammation of the epiglottis, the flap of tissue on top of the larynx. It can cause croup, and even complete closure of the airway. *Haemophilus influenzae* type b is the most frequently identified cause of this uncommon disease.

E. coli: *Escherichia coli*, a bacterium that is present in large numbers in normal stools. Certain strains can cause diarrhea, especially in infants and one strain (O157:H7) has recently become important as a cause of severe, bloody diarrhea.

Fifth Disease: a mild skin rash, usually without fever which often occurs in epidemics among children. A "slapped cheek" appearance, together with reddening of the skin which fades and recurs and a lace-like rash which may be exaggerated by exposure to sunlight are characteristic symptoms. Also called Erythema infectiosum.

Food Grade: in the case of packaging, any material that does not violate the provisions of Division 23 of the Food and Drug Regulations. Food should not come in contact with any substance or material that may be injurious to the health of a consumer of the food.

Giardiasis: infection with the parasite *Giardia lamblia*, a common cause of diarrhea in child care facilities. Many children may be asymptomatic.

Hepatitis: inflammation of the liver. There are different types of hepatitis (i.e. A, B, C. D, E). Hepatitis A is transmitted by the fecal oral route, is often asymptomatic in children, and is a cause of hepatitis in child care facilities.

Immunity: protection from, or resistance to, infection. Newborn children have immunity for approximately the first six months, which is acquired from their mothers. Children may acquire immunity later as a result of immunization or natural infection (which may be symptomatic or asymptomatic).

Immunization: the process of administering a vaccine which is antigenically similar to the infective organism (or part of the infective organism or a substance produced by it), but which has been treated so that it is not capable of producing the symptoms of infection.

Impetigo: a skin infection usually caused by the *streptococcal bacterium*. The lesions from this infection have several stages (vesicular, pustular and encrusted). It is usually acquired from other children with impetigo, probably by direct contact.

Incubation Period: the period of time between the entry of an organism into the body and the appearance of symptoms.

Infectious Mononucleosis: "Mono" - a disease caused by the *Epstein-Barr virus*, characterized by fever, sore throat and swollen lymph glands. It is spread through saliva. Young children may be infected by saliva on the hands of caregivers or on toys. Most cases are asymptomatic.
Infestation: the state of having insect, mites, lice etc., on the body, e.g. pediculosis, scabies.

Influenza: an acute disease of the respiratory tract, caused by a specific virus. Symptoms include fever, chills, headache, muscle aches and sore throat. It spreads from person to person by airborne contaminated droplets. The term "influenza" should be reserved for this specific disease (which can only be definitely diagnosed in the laboratory), rather than being used indiscriminately for all upper respiratory infections. A vaccine is available.

Measles: also called "red" measles (to distinguish it from rubella, or German measles). A very highly communicable viral disease which may have serious complications. With the use of measles vaccine, it is possible to virtually eliminate the disease.

Meningitis: inflammation of the tissues covering the brain, usually caused by infection.

Meningococcus: a bacterial organism, more correctly called *Neisseria meningitidis*. It causes meningitis. Vaccine is sometimes recommended.

Microorganisms: small living things that can cause illness and disease. They include bacteria, viruses, parasites, and fungi (yeasts and molds).

Mumps: an acute viral disease characterized by swelling and tenderness of the salivary glands. Rarely, there may be complications, including deafness. Rarely seen since the introduction of the vaccine.

Otitis Media: inflammation of the middle part of the ear. This extremely common infection is characterized by fever, and in older children, pain localized in the ear. The organisms responsible for the infection include *Streptococcus* and *Haemophilus.*

Pathogens: any disease causing agent, usually microorganisms or their toxins.

Pediculosis: another word for lice.

Pertussis: whooping cough. An acute respiratory illness caused by the bacterium *Bordetella pertussis* (although other organisms can cause somewhat similar illnesses). May have serious consequences in young infants.

Pink eye: see conjunctivitis.

Pneumonia: inflammation of the tissues of the lung, usually the result of infection. There are many causes of pneumonia, and the disease has a wide range of severity. It is often a complication of another disease.

Potable Water: water from a supply approved for drinking and for use in food preparation, ice making and dishwashing'

Roseola infantum (also called "baby measles): an acute illness of children up to 4 years of age, and most common at about 1 year. Characterized by a high (up to 41°C/100°F) fever, which suddenly drops when the child breaks out in a rash. The rash may last 3 - 5 days, but is often transient, and is often not seen at all.

Rotavirus: a virus that is a common cause of diarrheal disease in young children.

Rubella: German measles. A mild disease in childhood. Its main importance lies in the ability of the virus to affect the unborn children of infected mothers. Immunization is routine.

Rubeola: another word for (red) measles.

Salmonella: a group of bacteria which is a common cause of diarrheal disease. The organism may spread by the fecal-oral route. Salmonella is frequently found in foodstuffs, particularly poultry.

Sanitize: procedures used to destroy germs on clean surfaces by the application of heat or approved chemicals.

Sanitizer: approved chemical compounds or hot water used to kill disease-causing germs on clean and rinsed surfaces. Common sanitizers used are: chlorine (household bleach), iodine (iodophors) and quaternary ammonium compounds (quats).

Scabies: an infestation of the skin caused by a mite (*Sarcoptes scabiei*) whose penetration is visible as papules or vesicles, or as tiny linear burrows containing the mites and their eggs.

Shigella: bacterial cause of acute diarrheal illness. Spread is by fecal-oral route.

Staphylococcus: a group of bacteria, including the important *Staphylococcus aureus*, which causes a wide variety of diseases, including impetigo, boils, cellulitis and pneumonia. This bacteria can also cause food borne illness when food is contaminated by it.

Streptococccus: a group of bacterial organisms, one of which (group *A beta hemolytic*) causes a variety of diseases, including streptococcal sore throat, scarlet fever and impetigo. The term "strep" throat is often used indiscriminately to refer to sore throats: it should be restricted to those that have been shown by laboratory methods to be due to streptococcal infection. Spread is usually person-to-person, but can occasionally be due to milk or food. Scarlet fever is a form of streptococcal disease in which the infecting strain produces a toxin that produces a characteristic skin rash. It has become less common in recent years.

Tetanus: lockjaw. Caused by *Clostridium tetani*, which enters the body at the site of an injury, multiplies and produces a toxin. The disease is very rare since the introduction of immunization but it can be fatal.

Thrush: see Candidiasis.

Toxocariasis: caused by the larvae of *Toxocara canis*, the common roundworm of dogs and cats. Commonly found in soil. Children who eat dirt are more likely to get this disease. Infection results in respiratory symptoms, enlarged liver, skin rashes and delayed eye lesions.

Toxoplasmosis: disease caused by the parasite *Toxoplasma gondii*. Spread by contact with infected cat feces or by eating raw or partly cooked infected meat. This is a concern for pregnant women, as infants infected before birth can be born with or develop serious mental or physical problems.

Vaccination: the injection of a vaccine for the purpose of inducing immunity. See immunization.

Virus: very small microorganism that cannot grow or survive outside the cells of the host. Unaffected by antibiotics.

Warts: painless bumps of characteristic appearance frequently seen, especially on hands, at all ages. A poorly understood viral disease. No specific measures to prevent spread are feasible. Warts on the soles of the feet are called plantar warts or *Verruca vulgaris*.