

MANAGING COMMUNICABLE DISEASES



IN CHILD CARE SETTINGS

There are a number of steps providers and staff of child care homes and centers can take to prevent or reduce the incidents of illness among children and adults in the child care setting.



**Prepared jointly by:
Bureau of Children and Adult Licensing
Michigan Department of Human Services
and
Divisions of Communicable Disease & Immunization
Michigan Department of Community Health**

Daily Steps to Keep Children and Adults Healthy

To provide for a healthier and safer environment on a daily basis the following steps should be taken:

1. **Wash hands** of children and adults *frequently* with soap and warm running water especially after diapering, toileting, and nose wiping, as well as before feeding, eating and handling food, for at least 20 seconds. Alcohol-based hand rub with at least 60 percent alcohol content may be used if running water is not available or if hands are not visibly soiled.
2. **Dry hands** with single-service paper towels and turn off the faucet with the paper towel or use an air blow dryer.
3. **Provide tissues** throughout the home or center. Staff should use tissues, individually and often, to wipe young children's nasal drainage. Remember to wash hands after each wipe.
4. **Teach children** (and adults) to cough or sneeze into tissue or their sleeve and not onto others, food or food service utensils.
5. **Careful observation** by caregivers for a change in a child's appearance or behavior that might indicate beginning illness. Observations should be communicated to the parent so that medical advice and diagnosis can be sought.
6. **Clean and sanitize diaper changing tables and potty chairs** after each use.
7. **Clean and sanitize toys and play equipment** regularly. Equipment and toys that are mouthed by a child should be washed before they are handled by another child. Toys used in infant/toddler rooms should be cleaned daily. Implement a sanitation checklist for keeping track of what is washed, by whom, and when.

Sanitizing Procedure

1. Wash vigorously with hot water and detergent.
2. Rinse with clean water.
3. Submerge in a *sanitizing solution.
4. Sun or air dry.

*Sanitizing Solution

Prepare fresh daily:
1 tablespoon chlorine bleach to each
gallon of water

8. **Wash and rinse all repeated use food service** utensils, then *sanitize* them by submerging in a *sanitizing solution or in water at 170° F. for one minute. Remember, water over 120° F can burn. **Air dry; do not towel dry.** Single-service articles that are discarded after use may be used instead.
9. **Immediately wash, rinse, and sanitize** articles or surfaces that have been soiled with a discharge such as urine or nasal drainage. Spray or wipe, with a *sanitizing solution, those things which cannot be submerged into a *sanitizing solution. **Air dry; do not towel dry.**
10. **Assign** each child his/her own separate sleeping area or cot with individual bedding as well as a separate clothing storage container or space.
11. A contributing factor in the spread of diarrheal illness in child care settings is often **staff** who perform both food preparation as well as the diapering and toileting of children. Avoid such combined duties when making staff assignments.
12. Some microorganisms which cause disease multiply in warm, dark, damp, dirty environments. **Keep environmental surfaces clean, uncluttered, and dry** by cleaning, sanitizing and air drying. Use sunlight wherever and whenever possible to aid drying.
13. **Develop a plan** for child care staff on how to handle illnesses and reduce their spread. Prompt action by staff and providers may prevent a serious outbreak of communicable disease. Work restrictions for ill staff should be established and monitored.
14. **Assure that** children are vaccinated completely and on time. Assure that staff have received all recommended vaccines.

Steps to Minimize Further Spread of Disease to Children and Adults

If a communicable disease is suspected or is diagnosed in a child care setting, the following recommendations for handling communicable diseases should **promptly** be taken:

1. **Notify** the local health department and your licensing consultant of any illness shown on the attached chart.
2. **Communicate** with parents on when to exclude a child suspected of having a communicable disease. Under some special circumstances, and in coordination with the health department, children ill with a specific disease may be asked to remain in the group care setting.
3. **Report** to all other parents and staff the illness to which children have been exposed and symptoms to watch. In unusual or serious cases, call your licensing consultant and the local health department.
4. When a **diagnosed communicable disease** is present in a child care setting or a known problem in the community, perform a health screening of children on arrival so sick children can be quickly identified and care arrangements made. Review the attendees' immunization records for completeness. If an attendee is not fully immunized against the diagnosed communicable disease, exclusion from child care during an outbreak may be recommended.
5. **Sanitation** procedures must be strictly followed and extra precautions taken regarding food handling, dish washing, highchair cleaning and hand washing by staff and children; as well as general cleanliness of toys in the environment.
6. **Re-admission** should be upon the advice of the child's doctor and the local health department.

Note: This chart is for information only. Diagnosis must always be made by a physician.

Common Infectious Diseases Children should not return to day care during the contagious period unless recommended by a health department.

PRINCIPLE MODE OF SPREAD	DISEASE	SYMPTOMS	INCUBATION PERIOD	CONTAGIOUS PERIOD
AIRBORNE, DROPLET, AND DIRECT CONTACT Droplets from nose, throat and mouth spread disease virus and bacteria by sneezing, coughing and speaking.	CHICKENPOX [Varicella] 	Sudden onset of slight fever, mild respiratory symptoms, and skin rash of itchy, blister-like lesions. Lesions may cover the body but are usually more concentrated on the face, scalp, and trunk. Blistered (new) and broken and crusted (old) eruptions are on the skin at the same time.	10-21 days Average – 14-16 days	1 to 2 days before onset of rash until all lesions have crusted. Children who have been vaccinated or previously exposed may develop lesions that don't crust. Consider these cases contagious until lesions are fading or until no new lesions occur, whichever is later.
	CYTOMEGALOVIRUS [CMV]	None or mononucleosis ("mono")-like syndrome. Virtually all persons acquire CMV infection during their lifetime and it is usually without symptoms. Infection during pregnancy may result in fetal infection.	1 month	Virus may be shed for many months with a range of 6 months to 2 years. Children should not be excluded from child care due to shedding of CMV.
	FIFTH DISEASE [Erythema infectiosum] [Parvovirus B19]	Rash begins as a solid red area on cheeks ["slapped cheek" appearance], spreading to upper arms and legs, trunk, and hands and feet. Fever occurs in some patients.	4-20 days	Patients are most infectious before the onset of illness. They are not likely to be infectious after rash and other symptoms appear.
	INFLUENZA [Viral influenza] 	Sudden onset of high fever, often with chills, headache, extreme tiredness, muscle aches, and dry cough. Subsequently, respiratory signs such as sore throat, runny or stuffy nose, and cough become more prominent. Red eyes, stomach ache, nausea, vomiting, and diarrhea have been reported infrequently. In some children, influenza can appear as an upper respiratory tract infection without fever or as a fever with few respiratory tract signs.	24-72 hours	1 day before onset of symptoms to about 7 days from the first symptoms in children.
	MEASLES [Rubeola] 	Illness begins with a 2–4 day fever, runny nose, red eyes, and coughing. This is followed by a red, raised rash that begins at the hairline, then involves the face and upper neck and gradually proceeds downward and outward, reaching the hands and feet. The rash lasts about 5 days. Sensitivity to light is also common.	10-12 days	4 days before rash and for up to 4 days after.
	MENINGITIS [Meningococcal and Haemophilus] 	Illness has a sudden onset of high fever, headache, and stiff neck. In severe cases, delirium, stupor or coma can also occur. In meningococcal meningitis, purplish spots may be seen on the skin and mucous membranes.	1-10 days Average – 2-4 days	Until live bacteria is no longer present in nasal and mouth secretions. This usually occurs 24-48 hours after antimicrobial treatment.
	MUMPS [Infectious parotitis] 	The classic symptom of mumps is swelling of one or more salivary glands. The parotid salivary glands (which are located within the cheek, near the jaw line, below the ears) are most frequently affected. Nonspecific symptoms including muscle aches, anorexia, tiredness, headache, and low-grade fever may precede salivary gland swelling by several days. There is evidence that as many as 40–50 percent of mumps infections are associated with nonspecific or primarily respiratory symptoms, particularly among children younger than 5 years.	14–25 days Average – 14-18 days	7 days prior to onset and up to 9 days after.
	RESPIRATORY SYNCYTIAL VIRUS [RSV]	Illness frequently begins with runny nose, cough, fever, and sometimes wheezing. Other symptoms depend on site of involvement: bronchitis, pneumonia, and/or ear infections. Infants and children with underlying cardiac, immunologic, and pulmonary disease have the most severe symptoms.	3-7 days	Young infants: 1 to 3 weeks or more. Older children and adults: 3 to 7 days.
	ROSEOLA [Exanthm subitum] [Human herpesvirus]	Illness is marked by a sudden high fever (104 ^o -105 ^o F.) which falls with the appearance of a rash on about the third or fourth day of illness. Most cases are in children between 6 months and 3 years. The rash consists of small rose-pink spots which first appear on the chest and abdomen but may spread to the face, legs and arms. The rash is usually limited to only one or two days.	9 days	Greatest during the period of fever.
	RUBELLA [German Measles] 	The rubella rash is red and raised, begins on the face then progresses from head to foot, lasting about three days. Children usually develop few or no respiratory symptoms, but adults may experience low-grade fever, headache, fatigue, mild runny nose, and red eyes 1–5 days prior to rash onset. Swelling of the lymph nodes behind the ear and at the base of the skull is characteristic and precedes the rash by 5-10 days. Joint pains are frequent in older patients.	1-2 days Average – 14 days	7 days before to 7 days after rash onset.
	SCARLET FEVER [Scarlatina]	Caused by the streptococcal bacterium. Illness begins with fever and sore throat. Rash appears as a pink-red flush which looks like a sunburn with goose pimples that spreads to all parts of the body. Afterwards the skin may peel off like sunburn. Often tongue has a "strawberry" appearance.	2-5 days	Variable. If not treated, can be contagious for weeks.

	STREP THROAT [Streptococcal sore throat]	Strep throat is similar to scarlet fever but without the rash. A sore throat and fever are the most pronounced symptoms.	2-5 days	Variable. If not treated, can be contagious for weeks.
	STREPTOCOCCUS PNEUMONIAE	Variable, depends on site of infection – ear infection, sinusitis, bloodstream infections, pneumonia, or meningitis	Unknown. Maybe 1-3 days	Variable. Usually 24-48 hours after antimicrobial therapy.
	TUBERCULOSIS [TB]	Most children have no symptoms when first infected. When disease does occur, symptoms most often appear 1 to 6 months following infection. The symptoms for pulmonary TB include fever, growth delay or weight loss, cough, night sweats, and chills. TB disease outside the lungs may cause meningitis or disease of the lymph nodes, bones, joints, and skin.	2-10 weeks	Variable. After starting treatment with anti-TB drugs, a symptomatic patient may become non-infectious in as little as two weeks.
	WHOOPING COUGH [Pertussis]	 The initial signs are runny nose and sneezing progressing to cough and followed 1-2 weeks later by spasms of coughing characterized by a series of short convulsive-like coughs, followed by a high-pitched gasp of air called a whoop, commonly followed by vomiting. Fever is absent or minimal. Symptoms wane gradually over weeks to months. Disease in infants younger than 6 months of age can progress quickly, with gagging, gasping, or apnea as prominent early manifestations; absence of whoop; and prolonged convalescence. Sudden unexpected death can be caused by pertussis. Disease in older children and adults also can have atypical manifestations when the cough is not accompanied by spasms or whoop. The duration of classic pertussis is 6 to 10 weeks in children.	5-21 days Average – 10 days	Early, when patient has common cold-like symptoms to approximately three weeks after cough onset.
FECAL-ORAL Contamination of hands, food and drink or of objects placed in the mouth.	CAMPYLOBACTER [Vibronic enteritis]	The disease is recognized by sudden onset of fever and abdominal pain and diarrhea which may be severe. There may also be vomiting or blood in the stools.	1-10 days Average – 2-5 days	Throughout the illness (1-2 weeks). If not treated, up to 7 weeks.
	E. COLI 0157 [Escherichia coli, Shiga Toxin]	Sudden onset of diarrhea that may become bloody on day 2-3 of illness. Severe abdominal cramps, nausea, vomiting; usually no fever. Some infections can lead to a life-threatening complication involving the kidneys called hemolytic-uremic syndrome (HUS). Highly infectious.	Variable; 2-10 days.	For duration of diarrhea thereafter until stool is culture-negative.
	GIARDIASIS [Protozoan diarrhea]	Chronic, intermittent diarrhea, bloating, foul-smelling stools and fatigue and weight loss. Sometimes observable symptoms are not present.	1-4 weeks	Entire period of infection, often months.
	SALMONELLOSIS [Acute gastroenteritis] [Food poisoning]	Sudden onset of fever, abdominal cramps, diarrhea, possible vomiting, and possible dehydration. There may be blood in the stools.	6-72 hours Average – 12-36 hours	Variable. Throughout course of illness. Infants can be carriers for extended periods of time.
	SHIGELLOSIS [Acute gastroenteritis] [Food poisoning]	Sudden onset of fever, diarrhea, abdominal pain. Loss of appetite and vomiting may also occur. There may be blood, mucus, or pus in the stools. Highly infectious.	Average – 1-3 days	From onset of illness until stool culture is negative.
	VIRAL GASTROENTERITIS [Norovirus and related caliciviruses (winter vomiting disease); Rotavirus]	Abrupt onset of illness characterized by any combination of the following symptoms: nausea, vomiting, diarrhea, abdominal pain and discomfort. Fever, if present, is usually low-grade. Occurs most often between November and April, but can occur at any time. Highly contagious illness. Transmission may also occur through aerosolized of vomit vs. containing the virus.	24-72 hours	From onset of illness until 3 days after symptoms subside. In rare circumstances the contagious period may last up to 2 weeks after recovery.
	HEPATITIS A [Infectious hepatitis] [Epidemic jaundice]	 Sudden start with loss of appetite, nausea and abdominal pain or discomfort and fever. Within a few days, jaundice occurs with yellowing of eyes and skin and darkening of urine. Symptoms are generally much milder in young children or may be absent compared with adults.	15-50 days Average – 28-30 days	1-2 weeks before symptom onset to one week after jaundice development. Virus shedding may occasionally last up to several months.


 Immunizations can help prevent this illness; the vaccine for this disease is part of the U.S. recommended immunization schedule for children. Other serious diseases such as polio, typhoid, syphilis, hepatitis B, and gonorrhea are not included on this chart because their occurrence is less common than diseases listed here. **Should one of these illnesses be suspected in a child, it must be reported immediately to the local health authority and to the licensing consultant.**

Common Nuisance Diseases

PRINCIPLE MODE OF SPREAD	DISEASE	SYMPTOMS	INCUBATION PERIOD	CONTAGIOUS PERIOD
INFESTATIONS Contact with others, including their belongings	HEAD LICE; CRABS [PEDICULOSIS]	Gradual onset of itching and burning. Scalp becomes dry and pink with patches that tend to spread, become rough and flake-off. Hair may become matted, as nits (white eggs) stick to hair shafts. Close examination show nits on hair near the scalp.	6-10 days	Until eggs and lice in hair and on clothing and bedding have been destroyed.

	RINGWORM [Tinea capitis; tinea corporis]	Ringworm of the scalp begins as a small pimple which grows and spreads, leaving scaly patches of temporary baldness. Ringworm of the body appears as flat, spreading, ring-shaped lesions. The outside is usually red while the skin on the inside tends to appear lighter.	Unknown	As long as lesions are present and spores persist on contaminated materials.
	PINWORM [Enterobiasis]	A mild illness with itching in anal area, disturbed sleep, irritability and local irritation due to scratching.	Unknown	As long as the female worm survives in the intestine.
	SCABIES [Itch]	A skin disease characterized by pimples and tiny burrows that appear as slightly discolored lines. Intense itching is frequent. Areas most affected are skin folds, such as between fingers, inside elbow, inner thighs, waistline, genital area, and between buttocks.	2-6 weeks for first infestation. 1-4 days for those infected before.	Until mites are destroyed by treatment. Cases should be re-evaluated every week for 4 weeks for symptom resolution. Consideration for repeating treatment should occur if symptoms do not resolve.
DIRECT CONTACT Direct skin contact with wounds or discharges from an infected person.	IMPETIGO [Impetigo contagiosa]	An inflammatory skin disease marked by isolated pus-filled spots which become crusted and break, releasing a straw-colored fluid. Occurs principally around the mouth and nostrils.	4-10 days	As long as pus-filled lesions continue to drain.
	HERPES [Herpes simplex; cold sore; fever blister]	An infectious disease characterized by thin-walled blisters which tend to recur in the same area of skin. Common sites include the lips, gums, cheeks, and eyelids.	2-12 days	Up to 7 weeks after first infection and whenever blisters are present in repeated episodes.
	PINKEYE [Epidemic form of acute conjunctivitis]	An irritation of the mucus membranes which line the eye accompanied by a discharge of tears, swelling of lids, extreme sensitivity to light, and a buildup of a sticky fluid which dries to a straw-colored crusty material and tends to accumulate at the corners of the eye.	27-72 hours	During the period of active infection. Some children recover in only a few days but many cases take 2 to 3 weeks.
	HAND, FOOT & MOUTH [Herpangina]	Sudden onset of fever and development of tiny blisters inside of the mouth and throat and on the extremities.	3-6 days	Probably from 2 to 3 days before onset to several days after onset.
	Staphylococcus Aureus and Methicillin-resistant Staphylococcus Aureus (MRSA)	A bacterial infection that may sometimes be resistant to certain antibiotics. Commonly staph is a skin lesion or soft tissue infection that may look like a pimple or boil. A draining lesion or purulent wound discharge is a common source of spread. Staph is also commonly found on the skin or in the anterior nares, but not causing infection, known as a carrier state.	Varies and can be indefinite	As long as lesions continue to drain or indefinitely in the carrier state.

EFFECTIVE HAND WASHING

Hand washing is the **single most effective way to prevent** the spread of **illness** in child care settings. Illness rates will drop remarkably when adults and children wash hands frequently after toileting, diapering and coming in contact with body fluids, caring for an ill child, **before** handling foods, and when hands are soiled.

HOW to EFFECTIVELY WASH HANDS:

First - Wet hands under warm water.

Second - Apply soap.

Third - Vigorously rub hands together for at least **20 seconds** to lather **all** surfaces of the hands.

Fourth - Thoroughly rinse hands under warm running water.

Fifth - Dry hands using a single-use disposable towel or air dryer.

Please note that a quick pass under the faucet to dampen hands is not an effective way to wash hands!

KEEPING DIAPER CHANGING SURFACES CLEAN

1. Surface should have plastic-covered pad with no cracks or tears.
2. Use disposable material to cover the pad on changing table, e.g., shelf paper, wax paper, scrap computer paper, cut-up paper bags, etc. Discard after each changing.
3. Clean the surface after every diaper change by washing with detergent, water and friction, rinsing with clean water, and applying a *sanitizing or disinfecting agent. The *sanitizing/disinfecting agent can be sprayed on.
4. Caregivers must wash their hands immediately with warm running water and soap; use friction and lather. Special attention must be paid to under the fingernails. The diapered child's hands should also be washed.

APPROPRIATE USE OF ANTIBIOTICS AND ANTIBIOTIC RESISTANCE

Antibiotics are very useful drugs for certain types of infections caused by bacteria, but they **should not be used for** such illnesses as **colds, flu, or other viral infections**. Not all cases of ear infections, sore throat, coughs or sinusitis require antibiotic treatment since many are caused by viruses. Antibiotics do not stop viral infections. **Therefore, antibiotics should never be taken for viral infections**. In fact, as many as half of the courses of antibiotics which are prescribed each year in the United States are unnecessary. This is important because unnecessary and improper use of antibiotics results in bacteria that are antibiotic-resistant. When antibiotics are prescribed by a doctor, they should be taken exactly as prescribed until gone.

Fever and Measuring a Child's Temperature

Fevers have many causes. Although fevers may occur during teething, it is important to rule out other, more serious causes of elevated temperature which may require specific treatment. It is generally recommended that a child who has been running a fever of 101°F (38.3°C) or greater should stay home until the temperature has stayed below 100.2°F (37.9°C) for 24 hours. However, **a final decision regarding a child's return to child care should be made based on the child's overall condition in conjunction with his or her health care provider and, in an outbreak situation, with the local health department.**

When a fever is suspected, a child's temperature may be taken in a number of ways. Some methods, however, present more risk than others to the child. One of the safest methods, under the arm of the child, follows:

1. **Wipe** one armpit dry.
2. **Place** the bulb end of the thermometer against the skin under the dry armpit. (Make sure clothing does not interfere.)
3. **Hold** the child's elbow close to the child's side and place the child's hand on the opposite shoulder to keep the thermometer in place. If you hold the child in your arms or on your lap, you may feed or read to the child during the time you are taking the temperature.
4. **Keep** the child's arm in this position for at least **5 minutes** before removing the thermometer.
5. Write down the reading. **The normal body temperature under the arm is 97.6°F.**

An alternative method for taking a child's temperature is to use a **tympanic (ear) thermometer**. The directions that come with this type of thermometer should be carefully read and followed.

6. Mercury-containing thermometers should never be used and should be disposed of in an approved manner.

Vaccines to Protect Children and Adult Caregivers

Vaccines are medications given to both children and adults to protect them from serious diseases. The immune system is the body's defense against disease. Vaccines cause the immune system to make antibodies. Antibodies are special "smart cells" that find and fight off germs. Vaccines prevent infections that can cause serious illness and death.

To protect children, all states have laws requiring children in child care and schools to be vaccinated. In Michigan, child care and school immunization requirements outline the number of doses appropriate for the child's age. Michigan's school and child care requirements include the following vaccines:

- Hep B- Hepatitis B.
- DTaP- diphtheria, tetanus, pertussis.
- PCV7- pneumococcal conjugate vaccine.
- Hib- *Haemophilus Influenzae* type B.
- Polio.
- MMR- measles, mumps, rubella.
- Var- varcella (chicken pox).

The Michigan Department of Community Health and Centers for Disease Control and Prevention recommend additional immunizations to protect children, including seasonal influenza (flu), rotavirus (RV) and hepatitis A (hep A) vaccines.

Monitor children's immunization status by using the MCIR/SIRS program to remind parents when their children are due for an immunization. Also encourage staff to review their own immunization status to protect those they care for and their families.

Adults who care for infants and young children should have vaccines to protect themselves and the children in their care. These vaccines include diphtheria, tetanus and pertussis (DTaP), and seasonal influenza (flu) vaccines. Measles, mumps, rubella (MMR) and varcella (chicken pox) vaccines should be obtained with no proof of disease history or other proof of immunity. **Review your immunization status for needed vaccines and encourage your staff to do so also. Vaccines will protect caregivers, their families and the children they care for.**

For more information on vaccines and school/child care immunization requirements, contact your local health department or visit www.michigan.gov/immunize.

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