

# COMMUNICABLE DISEASES



Child Car Resource Kit -  
Communicable Disease -  
Overheads

1

Today we are going to talk about communicable diseases. Sounds fun, doesn't it? The purpose of this presentation is not to get you to diagnose. It's a review of those diseases that are common to the population that you serve. So that when you see something, you can say, "Hey, maybe that child should see their medical provider."

# Transmission

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- Direct transmission:  
Contact with infected person/secretions.
- Indirect transmission:  
Contact with something that has been in contact with infectious agent.

Communicable diseases are those diseases that may be transmitted directly or indirectly from one person to another. (Read slide and give examples of each.)

So Direct transmission would occur when someone coughs directly on your face, or into your eye. It's a direct hit. Indirect transmission would occur when someone coughs on their kleenex, and you pick it up to put it in the garbage, and then wipe your fingers (now with germs) across your nose or you rub your eye. You've been tagged with the germ!

We need to be concerned about communicable disease because we want to stop the spread of infection.



- Diseases are caused by germs or bugs

Read slide. Those germs or bugs are bacteria, virus, fungal or parasites. This is a picture of a virus under the microscope.

All types of bugs need food,  
water and warmth to grow.

(Read slide.) So part of stopping the spread of disease is cutting off their supply!

## How Germs are Spread

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- Through human waste.
- Through other body fluids.
- Through direct skin contact.
- By touching an object with germs (droplet).
- In the air we breathe (aerosol).
- Food left at room temperature too long or improperly prepared.

(Read slide. Discuss each point and how disease is spread that way.)

# The most important ~~preventive measure:~~ HANDWASHING

- After toileting and diaper changes.
- After touching any body fluid.
- Before and after food preparation and eating.
- Between children.

(Read slide. Emphasize the importance of handwashing. Review studies and the results from handout on handwashing.)

## Other preventative measures

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- Wash toys daily in infant and toddler rooms with 1/4 teaspoon bleach to 1 quart water.
- Spray surfaces with this disinfecting spray after diaper changes, after play, before meals.
- Cover sneezes and coughs with tissues, then discard and wash hands.

There are other things that you can do to significantly decrease communicable diseases in your classroom. They are: (Read slide.)

And I can't emphasize enough to wash your hands. We'll be talking about just how long some of these viruses can live on a surface.

## Other preventative measures

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- Follow recommended procedures for food handling, including formula and breast milk.

Proper food handling is critically important in decreasing communicable disease. We won't specifically be addressing food handling today.

## Exclusion Criteria

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- Diarrhea
- Vomiting
- Eye drainage and redness
- Rashes (not diaper, heat or allergic)
- Sore throat with a fever
- Appearance/Behavior indicative of illness

Who are those kids who shouldn't be in class? (Read slide. Discuss with participants the challenges to getting parents to stay home with their children.)

# RHINOVIRUS

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- The cause of the common cold.
- There are more than 100 types.
- Contagious 1-10 days.
- Nasal mucus: 10-100 times more virus than throat secretions.
- Survives well on wood, plastic and skin.

Let's start with the common cold. Most adults have 2-4 "colds" per year. Children may have up to 12.

There are over 100 types of this virus. When you get one, you get immunity to that particular type, but you can still get the 99 other types. What usually happens in a community is that several types will circulate for a year or a period of years. Then the types will change. That is why we all keep getting colds.

You are contagious for up to 10 days of this virus, but you are the most contagious for the first 3 days. The virus can survive for 3.5 hours on the skin and on hard surfaces, like wood or plastic. But it doesn't survive well on tissues or cloth. Let's talk about the implications of that for child care.

# ADENOVIRUS

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- There are 47 types.
- Mild to severe illness.
- Transmitted by respiratory secretions.
- Portal of entry: eyes and nose.
- Communicable 1 day to many months.

Let's talk about another virus that is common to child care: adenovirus. This one only has 47 types, but it can range from a mild illness to quite a severe illness because it affects both your upper and lower respiratory tract (nose/throat as well as lungs).

It is spread through those respiratory tract secretions.

This virus can also cause diarrhea, and can live in the gut for years after an infection. What are the implications for that in child care?

# PARAINFLUENZA

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- Affects upper and lower respiratory tracts.
- Major cause of croup.
  - Usually seen in children aged 3 months to 3 years.
  - Begins suddenly and at night.

Parainfluenza is another very common virus that causes much distress. It looks like a mild flu. However, it is the major cause of croup.

Have you all heard a child with croup? It usually occurs in children between 3 months to 3 years. It begins quite suddenly and usually at night. (Demonstrate a croup cough.) Each episode usually lasts several nights in a row. The symptoms usually subside when the child is exposed to moist air, like steam from a shower or going outside.

# INFLUENZA

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- Epidemics: Winter and Geography
- Simultaneous circulating types
- Spread by respiratory secretions
- Contagious 1-7 days
- There is a vaccine

Anyone here ever have the flu?

It tends to come in epidemics which peak within 2 weeks of beginning and last 4-8 weeks.

(Read slide.)

You are the most infectious 24 hours before you begin having symptoms, and you remain contagious for up to 7 days.

Children in group care usually have the highest rate of the disease.

Why do you think that is?

# RESPIRATORY SYNCYTIAL VIRUS

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- The most common respiratory pathogen in children.
- Almost all children infected by age 3.

RSV is the most common respiratory pathogen (germ) in children.

In fact, in the US, 40-50% of hospitalizations for bronchiolitis and 25% of pediatric hospitalizations for pneumonia are attributed to RSV.

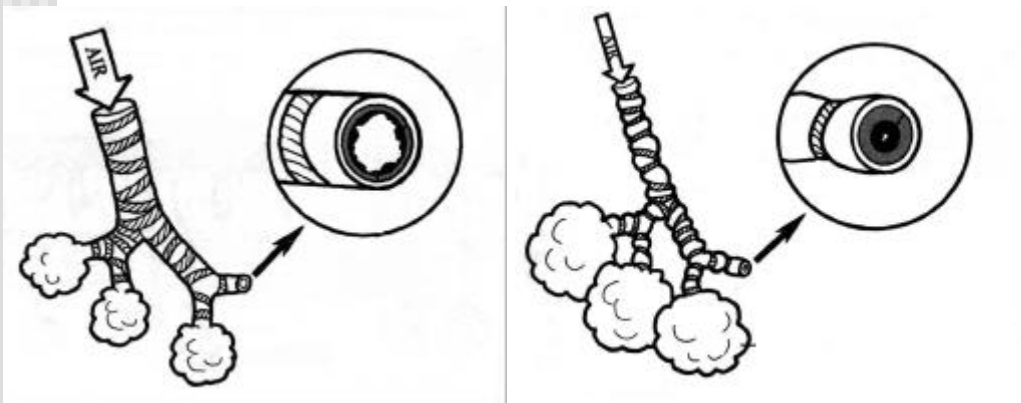
And most all children are infected by the time they are 3. It is the most dangerous, however, to children less than 1 year of age.

Most of the infections with RSV are mild. However, in some children, within 1-2 days they start to breath fast, they work hard at breathing and they start wheezing because their small air tubes are all swollen.

Almost half of those children who initially wheeze because of RSV, will go on to wheeze for 4-5 years after that initial episode.

It's important to note that RSV can live on a surface for many hours, and for more than half an hour on the hands. Child care implications for this?

## RSV Airway



Here is a picture of a normal opening in the tiny little airways called bronchioles. And beside it is the picture of a bronchiole with swelling. You can see how it would be difficult to breath through that tiny little opening.

## FUN FACTS TO SURVIVE VIRUS SEASON

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- It's normal to cough for 2-3 weeks after you've survived a virus.
- The worse the virus, the longer you are going to cough when it's gone.
- Coughing longer than 6 weeks is not normal.

(Read slide.)

## Conjunctivitis: Clinical Findings

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- Redness
- Burning, stinging, or itching
- Light-sensitive
- Sticky, pus-like discharge
- Matted eyelashes

Conjunctivitis, or pink eye, is very common. It is redness and swelling to the lining of the upper and lower eyelids, and sometimes to the layer of tissue over the sclera, called the conjunctiva.

What you see with conjunctivitis is: (read slide)

## Treatment and Education

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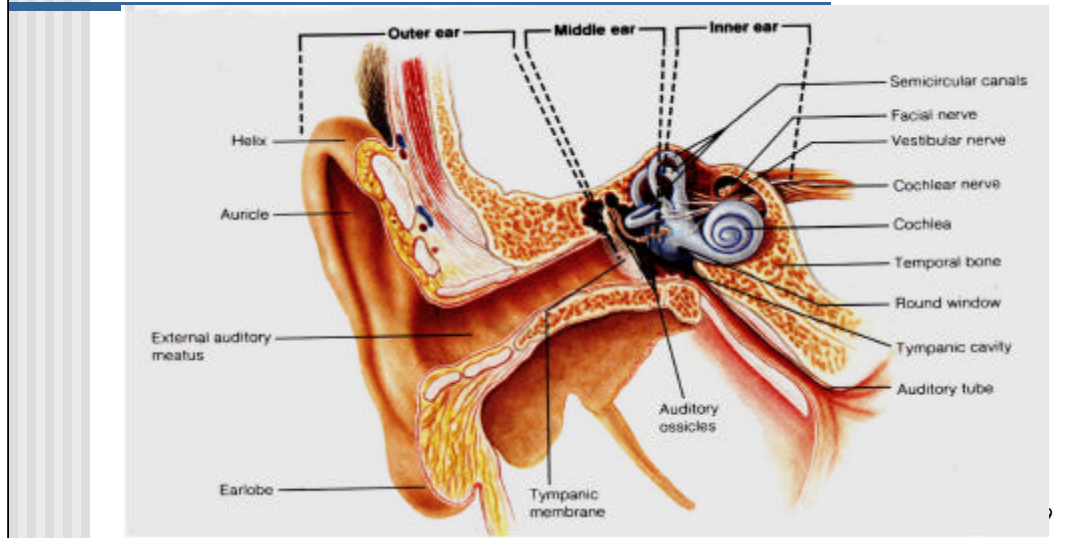
- May need topical antibiotics.
- Highly contagious.
- Wash eye inside to outside.
- Warm soaks for comfort.
- Wash hands frequently.

It's important to remember that pink eye is very contagious. (Read slide and discuss how to care for pink eye.)

The child should be excluded from care until they are on antibiotics for 24 hours or until the eye is free of drainage.

If it has been established that this is allergic, then they don't need to be excluded.

# Anatomy of the Ear



(Show them where an otitis media would occur and why it is so common in children.)

## Otitis Media (middle ear infection)

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- Very common.
- Clinical Findings:
  - Ear pain, loss of hearing
  - Tiredness, dizziness
  - Ringing in ears
  - Fever
  - Stuffy or runny nose
  - Blood or pus from the ear

Half of the office visits for ill children in the US are for ear infections—that is more than 30 million visits per year at a cost of about \$3 billion in health care dollars.

What the child experiences is: (read slide).

They should see their medical provider for their treatment options.

## Yeast or Thrush (Candidiasis)

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- White patches to mouth.
- Rash to diaper area that doesn't respond to usual ointments.
- Both require prescription medications.
- Oral thrush-excluded until on treatment.

A disease process that occurs often in infants is: (read slide).

## Streptococcal Infections

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- Transmission: upper respiratory tract secretions.
- Communicable: onset of symptoms up to a few months in the untreated person.

There are several diseases common to child care that are caused by the bacteria strep.

All of them are: (read slide.)

The length of time they are communicable is important to note. It could go on forever. And 50% of the people who are exposed to strep infection, will get strep infection.

## Strep pharyngitis (sore throat)

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- Incubation period is 2-5 days.
- Clinical Findings:
  - Abrupt onset sore throat, difficulty swallowing
  - Fever
  - Tiredness
  - Headache

Sore throat caused by strep occurs more often in the fall, winter and spring, presumably because of close person-to-person contact indoors.  
(Read slide.)

# Impetigo

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- Acquired by direct physical contact with an infected person.
- Incubation is 7-10 days.
- Clinical Findings:
  - Honey-colored scab on a reddened base
  - Swollen lymph glands

Impetigo is caused by strep. It is more common in preschool-age children.

(Read slide.)

## Clinical Findings for Scarlet Fever

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- Sore throat
- High fever
- Headache
- Tiredness
- Vomiting
- Red coated tongue
- Sandpaper-like rash 12-24 hours after other symptoms.

Scarlet fever is a strep infection. It is seen when strep sore throat has gone untreated for quite some time.

(Read slide.)

## Treatment for all Strep infections

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- Antibiotics
- Fever medication
- Fluids, Rest, TLC
- Follow-up appointment to re-culture
- Exclusion: Until on antibiotics 24 hours.

The treatment for all strep infection is the same.  
(Read slide.)

# Hand, Foot and Mouth Disease Coxsackie A

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- Sores in mouth, on hands and on the soles of the feet.
- Rash on the buttocks.
- Fever or headaches.
- Disease lasts 7-10 days and is mild.

Hand, Foot and Mouth disease is caused by the coxsackie virus.

It is spread by the fecal-oral route (review with them what that is) and the respiratory route.

Transmission can continue for several weeks after the onset of the infection. It is usually mild, although it can be severe or devastating.

## Coxsackie: Treatment and Exclusion

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- There is no treatment required.
- No exclusion necessary, but avoid contact with nose, mouth discharge and feces of the infected person.

(Read slide.)

# GOOD HANDWASHING IS EXTREMELY IMPORTANT IN THE CONTROL OF THIS ILLNESS

Child Car Resource Kit -  
Communicable Disease -  
Overheads

29

Particular attention should be given to hand washing and personal hygiene, especially after diaper changing.

## Fifth's Disease

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- Incubation: 4-14 days.
- Communicable: until the rash appears.
- Children in the rash stage can attend school.

Fifth's disease is transmitted via respiratory secretions and blood.

It usually occurs to children between the ages of 2-15.

50% of the people exposed who have been in close contact, will become infected.

(Read slide.)

It's important to note that once the rash appears, they are no longer communicable. It's important to remind parents that children with fever shouldn't be in school.

## Clinical findings

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- Low grade fever
- Rash in 3 stages:
  - 1) slapped cheek
  - 2) lacy rash to arms, face, thighs and buttocks
  - 3) rash recurrences.

With Fifth's disease you see: (read slide.)

There isn't any treatment.

## Cold sore (herpes virus 1)

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- Primary infection: affects ages 1-4.
- Period of communicability: unknown.
- Can be transmitted during primary or recurrent infections.

(Read the first point of the slide.)

90% of the world's population has herpes. Where is everyone getting it? Kissing. Are we going to stop all those parents from kissing their children? Absolutely not.

The period of communicability is unknown, although it is probably less than 1 week. However, you are communicable **BEFORE** the bump appears on the lip.

## Cold Sore Exclusion

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- No exclusion if control of saliva.
- Sores should be covered if possible.

Children with cold sores may attend school as long as they have control over their saliva. Covering the lesion with a dressing is appropriate as long as it is only on the outside of the lip, and not on the inside.

## Clinical findings

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- Most common symptoms in 1-4 yr. olds.
  - Abrupt fever
  - Irritability
  - Lesions and pain to mouth and throat
  - Swollen, reddened and bleeding gums

Clinical findings differ, based on age, the general state of health, how it enters the body and whether or not the child has an underlying case of eczema. But the most common symptoms for a primary infection in a young child are: (Read slide.)

Recurrent infections are common as the virus is never truly eradicated.

# Molluscum Contagiosum

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- Highly Contagious.
- Spread by direct or indirect contact.
- 2 month incubation.
- Waxy lesions to face, axillae, trunk and extremities

Molluscum Contagiosum is one of those diseases that doesn't get too much press. But it is very contagious, is hard to get rid of, and occurs often in child care.

There aren't any serious complications from this disease, other than the bumps. It is spread by direct contact with the bumps, or by sharing towels or other things that have been in contact with the bumps. But the child with the bumps is contagious as long as the lesions are present.

It is a long time from exposure to getting the bumps, 2 months incubation time.

What you see with Molluscum is a few, usually 2-20, waxy lesions on the face, axillae, trunk and extremities.

The lesions resolve spontaneously if left untreated, but this takes months to years. These children need to see their medical provider.

There is no need to exclude from school, but the bumps should be covered while they are in group care, and they shouldn't share clothing or towels.

# Hepatitis A

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- Is highly contagious.
- Non-symptomatic illness common.
- Most contagious 2 weeks before and 1 week after onset of jaundice (yellow).
- Incubation is 15-50 days.

Hepatitis A causes a primary infection in the liver.

It is highly contagious and is spread through person-to-person contact and fecal-oral contamination of food and water. What does that mean?

(Discuss fecal-oral contamination.)

(Discuss places where there is a high rate of occurrence.)

(Discuss vaccine.)

80% of cases in babies less than 2 years of age and 50% of children 3-4 years of age have non-symptomatic illness. (Discuss what that means.)

So what do you need to do to stop this disease? **WASH YOUR HANDS.**

The person with hepatitis is most contagious 2 weeks before the onset of illness until 1 week after they turn yellow. And the incubation period is 15-50 days. It takes about a month to get sick after exposure.

## Clinical findings

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- Pre-yellow phase
  - Tiredness
  - Nausea, Vomiting
  - Loss of appetite
- Yellow phase
  - Dark urine
  - Poor weight gain
  - Yellow tinged skin and eyes

This is what Hepatitis A looks like. (Read slide.)

There isn't any treatment. There is a shot you can get after exposure and before you may get the illness.

Children should be excluded from school for one week after the onset of the illness.

# Diarrhea

- 10% of preventable deaths in the US.
- 500 deaths/year in the US in children.
- Treatment:
  - Restore fluids.
  - Fluids only for 24 hours.
  - BRAT diet.
  - Medication based on the causative organism.
  - Anti-diarrheals not recommended

Diarrhea is an excessive loss of fluid and electrolytes into the stool.

It is responsible for 10% of preventable deaths in the US.

It is responsible for 500 deaths per year in the US for children ages 1-4 years old.

There are numerous causes of diarrhea, viral or bacterial infection are among them.

Treatment: (Read slide)

What is the primary prevention for diarrhea in child care?

- Good Hand washing
- Good Sanitation and appropriate removal of soiled clothing.
- Proper food preparation and storage.

# Pinworms

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- It is the most common parasite in children in US.
- Incubation: 1-2 months or longer.
- Communicable: 2-4 weeks.
- Treatment:
  - A single dose of medication, and then a second dose 2 weeks later.
  - Excluded until after first dose of medication.

Pinworms are 1 cm long, white and thread-like worms that live in the colon and rectum.

It is estimated that 5-15% of the US population is infected. And those rates are the highest in preschool-age and school-age children and their mothers. Now why do you think that is?

Treatment is a single dose of medication, then a second dose 2 weeks later. All the family members should be treated simultaneously. The rate of re-infection is really very high. And the child should be excluded until after the first dose of medication.

# Ringworm

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- Bald patches or areas of broken hairs.
- Red, scaly and crusty circular lesions.
- Exclusion Guidelines:
  - Children should be kept out of school for 2-3 days. They may return to school after treatment has begun.
  - Sores must be covered until completely healed.

Ringworm is a fungal infection. It presents on the head with bald patches or areas of broken hair and/or the typical red, scaly and crusty circular lesion.

It is transmitted by direct contact with the lesion from a human, an animal, or by indirect contact with an object.

(Read Exclusion Guidelines)

## Treatment for Ringworm

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- Anti-fungal medication or shampoo.
- Family members and pets checked and treated.
- Follow-up visit 2 weeks after treatment.

(Read slide)

## Lice Clinical Findings



- Itching
- Visible nits and lice.

We need to talk now about a disease that we all know too well: Lice.

Lice finds all socioeconomic groups.

Transmission occurs by direct contact with the hair of an infested person, or indirectly by contact with their belongings (combs, brushes, hats).

(Discuss the implications of this for child care.)

Head lice can survive only 1-2 days away from the scalp and their eggs cannot hatch at temperatures different than that close to the scalp.

The adult female louse deposits 4-6 eggs per day at the base of the hair shaft within a cement-like substance. The eggs mature in 7-10 days. In a 30 day life span, one louse can lay 150-300 eggs.

What you see with lice: (Read slide)

# Treatment

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- Lice treatments.
- Combing out the nits.
- Treat the environment.
- Excluded until nit free.

There are many different treatments. (Include here your health districts guidelines for treating lice.)

Exclusion guidelines are set by individual centers. You may choose to exclude until nit free, or you may exclude only until louse free.

# Scabies



- Highly contagious.
- Incubation: 1-2 months after contact.
- Itching begins 3 weeks after infestation.
- Communicable: as long as infected and untreated.

Scabies are little mites that burrow under the skin and cause intense itching. They are highly contagious and are spread through close contact and shared clothing or linen.

The female mite burrows into the skin, laying eggs as she travels. The eggs hatch in about 2 weeks and the new mites repeat the process. Incubation, exposure time to itching, is 1-2 months following contact.

Scabies is communicable as long as the infected person remains untreated, and that includes the interval before the symptoms develop.

## Clinical findings

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- Itching, worse at night
- Fitful sleep
- Characteristic lesions

(Read the slide.)

The lesions are curving burrows, especially on the webs of fingers, the folds of wrists and elbows, and in armpits.

# Treatment

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- Elimite cream
- Exam/treat all contacts and family members.
- Treat the environment.
- Children can return to school 24 hours after treatment.

(Read slide. Insert your health districts protocol for treating scabies.)

# Varicella

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- Spread by direct contact, droplets and airborne transmission.
- Incubation period--10-21 days.
- Communicable-1-2 days before the rash and until lesions are dry.

Varicella is a herpesvirus. Chicken pox is the primary illness. Shingles or herpes zoster is the reactivation infection.

The illness is spread by direct contact, airborne from the respiratory tract, and droplet. (Discuss these and the implications for child care.)

From the time of exposure until the disease starts is 10-21 days, with the average being 14 days. The ill person is communicable 1-2 days before the rash erupts and lasts until all the lesions are dry.

## Clinical findings

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- Prodrome phase
  - Low grade fever
  - Headache
  - Cold S/S
- Rash phase
  - Begins on the trunk.
  - Crops of lesions progress from spots to teardrop vesicles to scabs.
  - Scabs last 5-20 days.

The symptoms for chicken pox come in two phases. (Read Slide.)  
There is a vaccine for varicella. There isn't a treatment.

## Measles (rubeola)

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- Easily transmitted via respiratory secretions.
- Incubation: 10-12 days.
- Communicable: 3-5 days before and 4 days after rash.

Measles, rubeola, is a viral infection that involves a rash. It is serious in children. It is transmitted via respiratory secretions, blood and urine by aerosol transmission, or indirectly by secretions on an inanimate object.

The incubation period is 10-12 days. And the ill person is communicable 3-5 days before the rash and for 4 days after the appearance of the rash.

90% of those in close contact with rubeola will get it.

There is a vaccine. This is the first "M" in the MMR.

## Clinical findings

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- Prodrome stage
  - Cold S/S
  - Fever
- Rash stage
  - Increased fever
  - Rash begins behind the ears and on forehead. Progresses downward for 3 days.
  - Rash fades day 4.

The symptoms come in two phases. (Read Prodrome stage).  
The rash stage usually appears on the 3<sup>rd</sup>-4<sup>th</sup> day of the illness.  
(Read rash stage.)

# Mumps

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- Incubation: 14-21 days.
- Communicable: 1-7 days before and after onset of swelling.
- Exclusion from school until 9 days after swelling begins.

Mumps is a viral disease with painful enlargement of the salivary glands.

The virus is spread by direct contact and aerosol transmission of the saliva of the infected person.

The incubation period is 14-21 days and the ill person is communicable 1-7 days before the swelling begins and after the swelling begins.

Children should be excluded from school until 9 days after the beginning of the swelling.

There is a vaccine to prevent this disease. It is the second "M" in the MMR.

## Clinical findings

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- Prodrome stage
  - Fever
  - Headache
  - Neck pain
- Swelling stage
  - Parotid swelling
  - Pain
  - Rash to body
  - Fever

Once again, the symptoms come in two phases. (Read prodrome stage.)

The swelling stage occurs approximately 24 hours after the prodrome stage. (Read swelling stage.)

# Rubella

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- Incubation: 14-21 days.
- Communicable: 7 days before and 5-7 days after the onset of the rash.
- Children should be kept at home for 1 week after the rash appears.

Rubella is an acute disease. The infection is spread through nose and throat secretions. The incubation period is 14-21 days and the period of the most communicability is 7 days before and 5-7 days after the onset of the rash.

## Clinical findings

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- Swollen lymph glands
- Rash begins on the face, fades, and then spreads to the rest of the body over 24 hours. Lasts up to 3 days.
- Low fever

The symptoms are:

Swollen lymph glands—this can begin as early as 7 days before the rash appears and can last 2 weeks.

Rash (read slide).

Low fever.

Children should be kept at home for about 1 week after the rash appears.

There is a vaccine to prevent this disease. This is the “R” in MMR.

# Diphtheria

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- Lives in respiratory tract.
- Spread through direct contact.
- Incubation: 2-5 days.
- Symptoms:
  - Sore throat
  - Fever/chills
  - Thick gray coating over back of throat

You are not likely to see Diphtheria, but it is one of the communicable diseases that is vaccine preventable. This is the “D” of DPT.

Diphtheria is a serious illness and kills 1 in 10 people infected with it.

The germ lives in the mouth, nose and throat of the infected person and is spread through direct contact with an infected person.

Incubation is 2-5 days.

And the symptoms are: (read the slide.)

# Tetanus

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- Lives in dirt and in the feces of animals.
- Enters the body through wounds.
- Incubation: 3 days-3 weeks.
- Symptom: Stiff muscles

Tetanus does still occur in the US. In 2000, a baby born at home in Montana had mud put on it's umbilical cord instead of iodine. The mud was considered "natural". The baby contracted and died of tetanus.

The germ for tetanus lives in the dirt and the intestines and feces of animals. It enters the body through cuts, punctures or other wounds.

Once infected, it takes 3 days to 3 weeks to get sick.

The symptoms are stiff muscles in the jaw and neck with difficulty swallowing, difficulty opening your mouth, and muscle rigidity in the arms, legs and stomach with painful convulsions.

There is a vaccine to prevent tetanus. It is a shot that you receive periodically throughout your life. For children, it is the "T" in the DPT.

# Pertussis

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- Lives in respiratory tract.
- Aerosol transmission.
- Incubation: 5-10 days.
- Symptoms:
  - Coughing
  - Fever
  - Vomiting and Exhaustion

Pertussis, whooping cough, has been making a come back recently. It can be a very serious disease, particularly for babies.

The germ lives in the respiratory tract and is spread through coughing and sneezing. It spreads very easily from parent to child or child to child.

Once infected, it takes 5-10 days to get sick.

The symptoms: For adults, they just cough and cough and really don't look too sick. For children however, they have a severe cough with a whooping sound as they try to take in air, they have fever and they may vomit and become exhausted from all the coughing.

There is a vaccine to prevent this disease. It is the "P" in DPT.

# Polio

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- Lives in throat and intestines.
- Spread by fecal-oral route.
- Incubation: 6-20 days.
- Symptoms:
  - Fever
  - Severe muscle pain/spasm
  - Headache

Polio can cause severe illness, paralysis and even death.

The germ lives in the throat and the intestines of an infected person and is spread through contact with feces.

Once infected, it takes 6-20 days to get sick.

The symptoms are: (read slide).

Polio, while rare in the US, is still prevalent in other parts of the world.

There is a vaccine to prevent polio.

# Hib

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- Enters the body through nose and throat.
- Incubation: unknown.
- Symptoms:
  - Fever
  - Severe Headache
  - Severe Sore throat

Haemophilus influenzae type b, HIB, is very dangerous to children under 5 years old, and even more dangerous to infants.

The HIB germ enters the body through the nose and throat. It is unknown how long it takes to get sick after exposure.

The symptoms are: (read slide.)

There is a vaccine to prevent Hib.

# Smallpox

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- Does not infect people anymore.

Smallpox was eradicated from the globe in 1980. It lives in the CDC in a freezer, and now they believe possibly in the hands of potential terrorists. However, it was eradicated because of mass vaccination. Immunization works.

# TUBERCULOSIS

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- Infecting agent--mycobacterium tuberculosis
- More than 25,000 people in US get TB every year.
- Spread by inhalation of infected respiratory secretions.

Tuberculosis is caused by mycobacterium tuberculosis.

It is spread from person to person contact through the air, and the droplets can stay suspended in the air for several hours. However, not everyone who is exposed to infectious TB becomes infected.

We are seeing more cases of TB in some parts of the US now.  
(Discuss your counties TB statistics.)

- Exposure--recent contact with infected person.
- Infection--positive skin test without physical findings.
- Disease--person with infection and symptoms.
- Communicable only short time if take medication.
- Children usually not contagious.

There are several definitions that go with TB. (Read slide and explain.)

- Incubation period from infection to positive skin test--2-12 weeks.
- High risk--6 months to 2 years.
- Highest risk--infants and post-pubertal adolescents.
- Highest attack rate:
  - minorities from high risk countries
  - lower socioeconomic groups
  - the homeless
  - inmates
  - the malnourished
  - those with chronic diseases

(Read slide and explain.)

## Symptoms of TB

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- Not feeling well
- Cough
  - minimally productive at first
  - more productive as progresses
- Low-grade fever
- Generalized tiredness
- Decreased appetite
- Subsequent weight loss

(Read slide.)

## Take home message

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- Most of these diseases will happen in your room.
- Good hand washing will stop the spread of these diseases, even when in very close proximity.

(Read slide.)