MODULE 3
Recognizing and Managing Infectious Diseases

• Daily Health Check
• Exclusion
• Symptoms versus disease
Case 1

The teacher in the toddler room notices that 20-month-old Suzie is a little less active than normal and has a runny nose, though she has been playing on and off. She is still participating in various activities. The teacher checks her temperature by mouth and it is 101°F.

• Does Suzy need to be excluded? Why or why not?
• Is there an exclusion policy that covers this?
• What is difficult about this case?

Daily Health Check

• Routine of greeting parents/children every day
• Form of communication between parents and caregiver/teacher
• May enable caregivers/teachers to identify illness while parents are still present
What to Do When Kids Get Sick After the Daily Health Check?

- Monitor children for
  - Participation in activities
  - Need for additional care
- If participation decreases or need for care increases, then check for other symptoms
- If other symptoms are present
  - Make a decision about exclusion
  - Notify parents
  - Care for child until the parent arrives

Video: What to Do When Kids Get Sick After the Daily Health Check

Outbreaks

- Sudden rise in the occurrence of a disease
- Notify your child care health consultant or health department
- Consult Managing Infectious Diseases in Child Care and Schools for more information
Exclusion

- How do you make decisions about exclusion?
- What are characteristics of good exclusion criteria?
- Is exclusion an effective way to reduce transmission of germs?
- What are the reasons to exclude children from out-of-home child care?

Reasons for Exclusion

The caregiver/teacher should exclude if the illness:

- Prevents the child from participating comfortably in activities
- Results in a need for care that is greater than the staff can provide without compromising the health and safety of the other children
- Specific disease, symptom or condition
- Other reasons?
  - Child needs to be diagnosed
  - Child is a danger to others — Many of these conditions can be harmful to other children or require treatment with medications.

Symptoms Versus Diseases

- Children develop symptoms first but don’t yet have a diagnosis
- Caregivers/teachers SHOULD NOT need to make the diagnosis of a specific disease
- Caregivers/teachers DO need to recognize symptoms for which exclusion is necessary
Video: Symptoms and Diseases Requiring Exclusion

Symptoms of Severe Illness
Call 911 (and the parents)

- Fever with difficulty breathing or abnormal skin color (very pale, blue, or very pink)
- Child acting very strangely, much less alert or withdrawn, lethargic, or unresponsive
- Difficulty breathing, unable to speak
- Skin or lips that look blue, purple, or gray
- Rhythmic jerking of arms/legs (seizure)
- Vomiting blood
- Large volume of blood in the stools
- Stiff neck with headache and fever
- Suddenly spreading purple or red rash

Symptoms of Urgent Conditions

Urgent conditions don’t need EMS if parent notification and medical care can be achieved in an hour or so

- Fever in a child who looks more than mildly ill
- Unexplained irritability
- Fever in a child under 60 days old
- Severe vomiting and/or diarrhea
- Animal bite that breaks the skin
- Venomous bites or stings
- Injury like a break to the skin that doesn’t hold together
Symptoms Requiring Exclusion

• Fever WITH behavior change
• Diarrhea (in some cases)
• Blood in stool
• Vomiting more than 2 times in 24 hours
• Abdominal pain (in some cases)
• Drooling with mouth sores

Some of these symptoms will require a visit to a health care professional, but not all

Child Develops New Symptoms

• Often children develop new symptoms after the daily health check
• What are your responsibilities to the affected child and parents? To the other children, and the child care staff?
• When should you notify other parents?
• When should you require a health visit?
• When should you notify the health consultant or health department?
Child Already Has a Diagnosis

- Sometimes children return to care with a diagnosis from a health care professional
- What is your responsibility to other child care staff, children, and for the affected child?
- When should you notify other parents? How?
- When should you notify the health consultant or health department?
Conditions Which DO NOT Need Exclusion
• Many symptoms/conditions do not need exclusion (but frequently are excluded)
• List these conditions

Goals of Exclusion
• Goal is NOT usually to reduce spread of mild infections since symptoms occur after germs have already been spread
• Ensure children who cannot participate or need more care than possible are at home
• Ensure children have adequate supervision and teacher/caregiver to child ratios are maintained
• Keep certain serious conditions out of the program (these are uncommon)
Summary

- Exclusion decisions should be based on written criteria
  - Rules are confusing and vary a lot
  - Find your state exclusion criteria at National Resource Center for Health and Safety in Child Care
  - Use Managing Infectious Diseases in Child Care and Schools

- Three main reasons for exclusion
  - Prevents the child from participating comfortably in activities
  - Results in a need for care that is greater than the staff can provide without compromising the health and safety of the other children
  - Specific symptoms or conditions

- Decisions about who to notify can be determined by checking Managing Infectious Diseases in Child Care and Schools and consulting with local public health authorities as needed

Questions?

References


- Aronson SS, Stope RJ. Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009 (Slides 1, 2, 6, 7, 12, 13, 14, 16, 18, 19, 22, 23, 24)

Module 3: Recognizing and Managing Infectious Diseases

Objectives

A. Knowledge

Each participant will be able to:

1. Identify the 3 primary reasons for exclusion, and know where to find and how to use the list of specific conditions that require exclusion.
2. Identify 2 reasons why exclusion does not reduce the spread of most common germs.
3. Explain at least 1 goal of exclusion.
4. Explain why consistent application of exclusion criteria creates clear expectations of families and child care staff, and a healthier environment.
5. Explain how to effectively manage an outbreak of an infectious disease and which people should be involved.

B. Attitude

Each participant will be able to:

1. Commit to implementing daily health checks in the child care facility.
2. Feel comfortable using a resource, such as Managing Infectious Diseases in Child Care and Schools, to determine proper management of infectious disease strategies.

C. Behavior

Each participant will:

1. Demonstrate proficiency using Managing Infectious Diseases in Child Care and Schools and Caring for Our Children (CFOC) to research a disease based on symptoms.
2. Demonstrate proficiency using Managing Infectious Diseases in Child Care and Schools and CFOC to research a disease based on a diagnosis.
Module 3: Recognizing and Managing Infectious Diseases

References


- Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009 (Slides 1, 2, 6, 7, 12, 13, 14, 15, 18, 19, 22, 23, 24)

Module 3: Recognizing and Managing Infectious Diseases

Resources


2. www.aap.org/disasters/pandemic-flu-cc.cfm (Slide 6)


Symptom-based Case 1

A 10-month-old girl had some loose stools yesterday. She came to child care today. By lunch time, she has had 3 stools that are larger in volume than usual and watery green with no blood or mucus. The stools are contained in her diaper. She is acting normal and does not feel warm (no fever if you check). Normally, she has 2 stools from morning drop-off until her late afternoon pick-up from the child care program.

Take 5 minutes to discuss and write down your answers. You should try to look up the American Academy of Pediatrics’ policies in *Caring for Our Children or Managing Infectious Disease in Child Care and Schools.*

Questions to consider:

Should she be excluded?

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on diarrhea?
**Symptom-based Case 2**

A 10-month old boy develops green/yellow eye discharge and the whites of his eyes appear red. He is otherwise acting normally other than a runny nose. He is playful, interactive, and eating and drinking well. See slide.

What are your responsibilities to the affected child, the other children, and the child care staff?

*Questions to consider:*

Should he be excluded?

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on pink eye/conjunctivitis?
Symptom-based Case 3

A 24-month-old boy develops a rash consisting of small red bumps and white, fluid-filled blisters on hands. He also complains of some mouth pain and you note some red areas with white tops inside his lips. He is otherwise acting normally other than a runny nose. He is playful, interactive, and eating and drinking well. See slides.

Take 5 minutes to discuss and write down your answers. You should try to look up the American Academy of Pediatrics' policies in Caring for Our Children or Managing Infectious Disease in Child Care and Schools.

Questions to consider:

Should he be excluded?

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on rash? Is this a specific type of rash? Does the exact diagnosis make a difference in how you manage this child?
Parent/Guardian Alert Letter

Notice of Exposure to Communicable Disease

Name of Facility/School  __________________________________________________________________________________

Address of Facility/School  ________________________________________________________________________________

Telephone Number of Facility/School  _______________________________________________________________________

Dear Parent or Legal Guardian:

A child in our facility/school has or is suspected of having  ______________________________________________________.

Without violating the confidentiality of this child, the facts you need to know about your child’s exposure in this situation are:

We want to inform you about this condition and the related exclusion and return-to-care practices at our facility/school. Please read the attached information sheet closely and call us with any questions.

Facility/School Staff Person’s Name  ____________________________ at  ____________________________
Telephone Number  ____________________________

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Pinkeye (Conjunctivitis)

What is conjunctivitis?
Inflammation (ie, redness, swelling) of the thin tissue covering the white part of the eye and the inside of the eyelids

What are the signs or symptoms?
There are several kinds of conjunctivitis, including
- Bacterial
  - Red or pink, itchy, painful eye(s).
  - More than a tiny amount of green or yellow discharge.
  - Infected eyes may be crusty shut in the morning.
  - May affect one or both eyes.
- Viral
  - Pink, swollen, watering eye(s) sensitive to light.
  - May affect only one eye.
- Allergic
  - Itching, redness, and excessive tearing, usually of both eyes.
- Chemical
  - Red, watery eyes, especially after swimming in chlorinated water.
- Immune mediated, such as that related to a systemic disease like Kawasaki disease.

What are the incubation and contagious periods?
Depending on the type of conjunctivitis, the incubation period varies.
- Bacterial
  - The incubation period is unknown because the bacteria that cause it are commonly present in most individuals and do not usually cause infection.
  - The contagious period ends when the course of medication is started.
- Viral
  - Sometimes occurs early in the course of a viral respiratory tract disease that has other signs or symptoms.
  - One type of viral conjunctivitis, adenovirus, may be contagious up to 14 days after the appearance of signs or symptoms. Children with adenovirus infection are often ill with fever, sore throat, and other respiratory tract symptoms. This virus may uncommonly cause outbreaks in child care and school settings. Antibiotics for this condition do not help the patient or reduce spread.
  - The contagious period continues while the signs or symptoms are present.

How is it spread?
Hands become contaminated by direct contact with discharge from an infected eye, or by touching other surfaces that have been contaminated by respiratory tract secretions and gets into the child’s eyes.

How do you control it?
- Consult a health professional for diagnosis and possible treatment. The role of antibiotics in treatment and preventing spread is unclear. Most children with pinkeye get better after 5 or 6 days without antibiotics.
- Careful hand hygiene before and after touching the eyes, nose, and mouth.
- Careful sanitation of objects that are commonly touched by hands or faces, such as tables, doorknobs, telephones, cots, cuddle blankets, and toys.

What are the roles of the caregiver/teacher and the family?
- Report the infection to staff designated by the child care program or school for decision making and action related to care of ill children. That person, in turn, alerts possibly exposed family members and staff to watch for symptoms.
- Notify child’s parent/guardian to consult with the child’s health professional about diagnosis and treatment by telephone or office visit. Documentation from the child’s health professional is not required.

➤ continued
Pinkeye (Conjunctivitis), continued

- Seek advice from the health department or the program’s health consultant about how to prevent further spread if 2 or more children in one room have red eyes with watery discharge.
- Review hand-hygiene techniques and sanitation routines.
- Complete course of medication, if prescribed, for bacterial conjunctivitis.

Exclude from group setting?

No, unless
- The child is unable to participate and staff determine that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.
- The child meets other exclusion criteria, such as fever with behavior change (see “Conditions Requiring Temporary Exclusion” on page 41).
- There is a recommendation of the health department or the child’s health professional.

Readmit to group setting?

- When exclusion criteria are resolved, the child is able to participate, and staff determine that they can care for the child without compromising their ability to care for the health and safety of the other children in the group.
- Antibiotics are not required to return to care.

Comments

- It is helpful to think of pinkeye like the common cold. Both conditions may be passed on to other children but resolve without treatment. We do not exclude for the common cold. Pinkeye generally results in less symptoms of illness than the common cold. The best method for preventing spread is good hand hygiene.
- One form of viral conjunctivitis, caused by adenovirus, can cause epidemics. If 2 or more children in a group care setting develop conjunctivitis in the same period, seek the advice of the program’s health consultant.

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Hand-Foot-and-Mouth Disease

What is hand-foot-and-mouth disease?
A common set of symptoms associated with viral infections that are most frequently seen in the summer and fall. Despite its scary name, this illness generally is mild. Most commonly caused by coxsackievirus A16 and enterovirus 71.

What are the signs or symptoms?
- Tiny blisters in the mouth and on the fingers, palms of hands, buttocks, and soles of feet that last a little longer than a week (one, few, or all of these may be present).
- May see common cold signs or symptoms with fever, sore throat, runny nose, and cough. The most troublesome finding is blisters in the mouth, which make it difficult for the child to eat or drink. Other signs or symptoms, such as vomiting and diarrhea, can occur, but are less frequently troublesome.
- Hand-foot-and-mouth disease caused by enterovirus 71 can cause neurologic symptoms.

What are the incubation and contagious periods?
- Incubation period: 3 to 6 days.
- Contagious period: Virus may be shed for several weeks after the infection starts; respiratory shedding of the virus is usually limited to a week or less.

How is it spread?
- Respiratory route (ie, coughing, sneezing)
- Direct contact
- Fecal-oral route

How do you control it?
- Teach children and caregivers/teachers to cover their mouths and noses when sneezing or coughing with a disposable facial tissue if possible, or with a shoulder if no facial tissue is available in time (“give your cough or sneeze a cold shoulder”). Teach everyone to wash hands right after using facial tissues or having contact with mucus.
- Dispose of facial tissues that contain nasal secretions after each use.
- Use good hand-washing technique at all the times listed in “When to Wash Hands” on page 25, especially after diaper changing.

What are the roles of the caregiver/teacher and the family?
- Report the infection to staff designated by the child care program or school for decision making and action related to care of ill children. That person, in turn, alerts possibly exposed family members and staff to watch for symptoms.
- Encourage the family to seek medical advice if the child is very uncomfortable with signs of illness from the infection, such as an inability to drink or eat, or if the child seems very ill.

Exclude from group setting?
No, unless
- The child is unable to participate and staff determine that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group. Excessive drooling from mouth sores might be a problem that staff will find difficult to manage for some children with this disease.
- The child meets other exclusion criteria, such as fever with behavior change (see “Conditions Requiring Temporary Exclusion” on page 41).
Hand-Foot-and-Mouth Disease, continued

• Note: Exclusion will not reduce disease transmission because some children may shed the virus without becoming recognizably ill, and other children who became ill may shed the virus for weeks in the stool.

Readmit to group setting?

When exclusion criteria are resolved, the child is able to participate, and staff determine that they can care for the child without compromising their ability to care for the health and safety of the other children in the group.

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**Diagnosis-based Case 1**

You are the director of a center-based program. The third child in the past 2 weeks was just excluded from the toddler room for bloody diarrhea. The first 2 were diagnosed with shigella. They were treated and allowed back in the program after being cleared by their doctor. You just learned that 1 of your child care staff members who prepares the lunch each day has been coming to work despite having stomach cramps and diarrhea. You feel you have a major problem on your hands.

Take 5 minutes to discuss and write down your answers. You should try to look up the American Academy of Pediatrics' policies in *Caring for Our Children* or *Managing Infectious Disease in Child Care and Schools*.

**Questions to consider:**

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on shigella?

Why is this policy stricter than other policies?
Diagnosis-based Case 2

You notice that 3-year-old Billy has been scratching his head quite a bit the last few days. You take a closer look and, in horror, note a small insect running from the lower neck into the deeper hair. Though your instinct is to run, you do look closer, and note lots of white casings at the bases of the hair follicles behind both ears and…1 more live critter. You take a deep breath and…

Take 5 minutes to discuss and write down your answers. You should try to look up the American Academy of Pediatrics' policies in *Caring for Our Children* or *Managing Infectious Disease in Child Care and Schools*.

**Questions to consider:**

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on lice?
**Diagnosis-based Case 3**

Sally, age 4 years, was bitten by a mosquito about a week ago. Despite your best efforts she continued to scratch at it. Today, the area of the bug bite looks worse. It is bigger, a little red, and is oozing some fluid. It doesn’t seem to hurt. Sally seems to be feeling well, participating in activities, and is not warm to touch or temperature. You remember that her mom told you that another family member had a MRSA skin infection last month.

Take 5 minutes to discuss and write down your answers. You should try to look up the American Academy of Pediatrics’ policies in *Caring for Our Children* or *Managing Infectious Disease in Child Care and Schools*.

**Questions to consider:**

What are your responsibilities to the affected child, the other children, and the child care staff?

When should you notify other parents or guardians?

When should you require a health visit?

When should you notify the health consultant or health department?

What do you think about the AAP policy on boils, abscesses, and MRSA infections?
Lice (Pediculosis Capitis)

What are head lice?
- Small, tan-colored insects (less than 1/8" long) that
  - Live on blood they draw from the scalp.
  - Live for days to weeks depending on temperature and humidity.
  - Crawl. (They do not hop or fly.)
  - Deposit tiny, gray/white eggs, known as nits, on a hair shaft 3 to 4 mm from the scalp because the eggs need the warmth from the scalp for hatching.
  - Cannot live for more than 48 hours away from the scalp as adult insects, and as eggs, cannot hatch at temperatures lower than those found close to the scalp.
- Having an infestation with lice may cause irritation and scratching, which can lead to secondary skin infection.
- Families and caregivers/teachers often get very upset about lice; however, head lice do not carry disease. Head lice infestations occur in all socio-economic groups and do not represent poor hygiene.
- Often, normal activities are disrupted because people become so upset about these insect pests.

How do you control them?
- By using medications (pediculocides) that kill lice and nits. Resistance of lice and nits to these chemicals has been reported, but the extent of resistance to the chemicals varies. Some chemicals may require 2 treatments. Since the chemicals are toxic, they should be used according to the approved instructions only. If a particular chemical fails to work, repeated use of that chemical is unlikely to be successful, and an alternative chemical that has been shown to be effective should be tried.
- None of the suggested remedies using common household products (eg, salad oils, mayonnaise, petroleum jelly) or chemicals intended for other purposes have been shown to be effective. Some that have been tried (eg, kerosene) are very dangerous.
- Mechanical removal of the lice and nits by combing them out with a special fine-tooth comb is tedious and very time-consuming.
- Have families examine the heads of household and close contacts.
- Infested articles that can be laundered should be cleaned at 130°F (54.4°C) and dried on the hot setting. Dry-cleaning clothing and bedding, or separating them from contact with people also is effective.

What are the signs or symptoms?
- Itching of skin where lice feed on the scalp or neck or complaints about itchiness by older children.
- Nits may be glued to hair, most easily seen behind ears and at or near the nape of the neck.
- Scratching, especially behind and around ears and at the nape of the neck.
- Open sores and crusting from secondary bacterial infection that may be associated with swollen lymph nodes (commonly called swollen glands).

What are the incubation and contagious periods?
- Incubation period: 10 to 14 days from laying to hatching of eggs.
- Lice can reproduce 2 to 3 weeks after hatching.
- Contagious period: Until lice are killed with a chemical treatment.

How are they spread?
- Direct contact with infested hair.
- Only lice, not nits, spread the infestation. (Nits must be near a warm scalp to hatch.)

Child with nits on hair behind ears and at nape of neck

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Lice (Pediculosis Capitis), continued

• Toys, personal articles, bedding, other fabrics, and upholstered furniture that cannot be laundered with hot water and a dryer or dry-cleaned can be kept away from people (eg, in a plastic bag) for more than 2 days if there is concern about lice having crawled from an infested child onto these articles.
• Because head lice can only live for 1 to 2 days away from the scalp, chemical treatment of the environment is not necessary. Vacuum floors, carpets, mattresses, and furniture (a safe alternative to spraying).
• Help prevent lice infestation by encouraging children not to engage in activity that causes head-to-head contact.

What are the roles of the caregiver/teacher and the family?
• Report the infestation to staff designated by the child care program or school for decision making and action related to care of ill children. That person, in turn, alerts possibly exposed family members and staff to watch for symptoms.
• Have parents/guardians consult with a health professional for a treatment plan.
• Check children observed scratching their heads for lice; check all contacts.
• Educate caregivers/teachers and families on how to recognize lice and nits.

Exclude from group setting?
Yes, at the end of the program or school day.
• Children with lice should be referred for treatment at the end of the day.
• Until the end of the program or school day, avoid any activity that involves the child in head-to-head contact with other children or sharing of any headgear.

Readmit to group setting?
After the child has received the treatment recommended by the child’s health professional

Comments
• Removal of nits from the hair near the scalp that might contain live eggs is very difficult. Those farther than ¼" from the scalp are empty egg casings. Nit removal may help reduce diagnostic confusion about reinfection of children who have been successfully treated. However, no-nit policies that require children to be nit free are not recommended because they have not been shown to be effective in controlling outbreaks, may keep the child out of the program needlessly, and unduly burden the child’s parents/guardians who must implement this measure.
• Education of families and caregivers/teachers about the relatively benign consequences of head lice infestations should be attempted to reduce the level of disruption for the infested child and all the others involved in the program. It may be necessary to arrange for a health professional to provide this education to overcome the widespread beliefs about this problem.
• The itching results from an allergic reaction to the saliva of the lice; itching often persists for weeks after the infestation has resolved.