Module 1
Understanding Infectious Diseases

- Impact
- Vulnerability
- Symptoms
- Spread

Types of Germs

- **Virus**
  - Frequently get better on their own
  - Limited treatment, other than rest and control of symptoms
  - Few medications to treat viruses

- **Bacteria**
  - Often need to be treated with antibiotics

- **Fungus**
  - Often on surfaces of body and can be treated with creams or oral medication

- **Parasite**
  - Typically cause diarrhea
  - Often need to be treated with antiparasitic medications

Definitions

- **Infection**
  - When a germ causes a disease

- **Contamination**
  - When a germ is placed in or on the body, a surface, or in food or water
More Definitions

- **Contagious**
  - When germs can be spread to others
- **Infectious**
  - Capable of causing an infection
- **Communicable**
  - Can be transmitted to others

_Essentially all mean the same thing_

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**Child Care at 2:00 pm**

A 20-month-old child wakes up from a nap and is flushed. She does not want to play with other children and is irritable. Her temperature was taken and is 101°F.

- How does this affect:
  - Parents?
  - Caregivers/teachers at the center?
  - Health care professionals?

- How will the impact influence their decision making?

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**Impact of Infectious Diseases**

- **Economic**
  - Loss of revenue for the family
  - Loss of productivity for the employer
- **Contagion**
  - Other children in child care
  - Families
  - Caregivers/teachers and their families
- **Disruption**
  - Alternative caregivers
  - Other colleagues filling in for missing parent at work
- **Health care**
  - Many office visits to get “sick notes”
  - Inappropriate use of antibiotics
  - Added responsibility of administering medication in child care
Impact of Infectious Diseases
• All members of society are affected

Bad News: Illness Frequency
Children in early education and child care
• Sick more often
• Illnesses last longer
• More ear infections and are more likely to have tympanostomy tubes placed
• More antibiotic-resistant bacterial infections

Good News: Annual Illness Incidence by Age
More Good News
- Germs in early education programs are the same as those in community outbreaks
- 90% of infections are mild, self-limited, and require no treatment

Good News for Child Care
- Illness incidence decreases after the first full year of attendance
- Kindergarteners with prior early education program attendance have fewer infections
- Children who attended early education programs were less likely to develop asthma at 6 years of age

Why Are Children More Vulnerable to Infectious Diseases?
Who is Most Vulnerable to Infection?

- Young infants
- Children with special health care needs
  - Equipment in their bodies (catheters, g-tubes)
- Children with impaired immune systems
- Pregnant women

Symptoms of Infectious Diseases

- What symptoms might this child have or develop in the next few days?

- Cough
- Runny nose and/or congestion
- Difficult or noisy breathing
- Vomiting, nausea, or stomachache
- Diarrhea
- Rash
- Itching
- Drainage or irritation of eye or other infected body part
- Fever
- Aches or pains: Sore throat, earache, headache, body ache
- Mouth sores
- Swollen glands
- Behavior changes
Common Symptoms Reported in Early Education Settings

- Respiratory: 68%
- Fever: 14%
- Gastroenteritis: 9%
- Rash: 5%
- Earache: 5%

Symptoms That Cause The Most Absence

- Gastroenteritis: 23%
- Pus/boils: 15%
- Rash: 11%
- Earache: 9%
- Respiratory: 8%

How Infectious Diseases Spread

- Respiratory droplets
- Fecal-oral
- Direct contact with people or objects (especially by germs on hands)
- Body fluids: blood, urine, and saliva
- Insects
Bingo Matching Exercise

- Pull out your blank bingo card
- In random order on your card, fill in the squares with these methods of how infectious diseases are spread:
  - Direct Contact 1
  - Fecal-Oral 1
  - Body Fluids 1
  - Insects
  - Respiratory
  - Direct Contact 2
  - Fecal-Oral 2
  - Body Fluids 2
  - Free Space

We will be projecting photos of ways to spread disease.
Match the photo with the way it spreads disease.
Call out if you get BINGO!
Summary

- All members of society are affected by the spread of infectious diseases in groups of children
- Children are more vulnerable because of immature immune systems
- Infectious diseases spread by different methods
- Each method of spread can be prevented by specific strategies, which will be discussed in the next module

Questions?

References

Module 1: Understanding Infectious Diseases

Objectives

A. Knowledge

Each participant will be able to:

1. Identify 3 ways infectious diseases impact our society.
2. State reasons why some children with special health care needs are at higher risk for acquiring infectious diseases.
3. Name the 3 most common symptoms of infectious diseases in children in early education settings.
4. Identify 5 ways infectious diseases are spread.

B. Attitude

Each participant will be able to:

1. Have an understanding of the different impacts of infectious disease on parents, caregivers/teachers, and health care professionals.
2. Be willing to educate parents and other child care staff members on methods to decrease the spread of infectious diseases.

C. Behavior

Each participant will:

1. Answer the pre-assessment questions under Getting Started in the Participant’s Manual.
2. Correctly identify methods by which infectious diseases spread through the bingo matching exercise.
Module 1: Understanding Infectious Diseases

References

- Ball TM, Holberg CJ, Aldous MB, Martinez FD, Wright AL. Influence of attendance at day care on the common cold from birth through 13 years of age. Arch Pediatric Adolescent Medicine. 2002;156:121–126 (Slide 11)