Hygiene-Infection prevention practice
Outline

- Introduction to infections and infection control
- Factors related to risk of infection in schools
- Main modes of transmission
- Reporting
- Exclusion
- HAAD notifiable infectious diseases
Introduction
Standard precautions

- Follow hand hygiene guidelines.
  - Wear gloves (clean, non-sterile)
    - Blood.
    - body fluids.
    - non-intact skin
    - contaminated items.
  - Change gloves between patients and tasks, and *always* practice hand hygiene whenever gloves are removed.
  - Gowns, masks, and eye protection.
    - Splashes
    - spray of blood
    - body fluids.
Standard precautions

- Disinfect surfaces contaminated equipments
  - 1:10 solution of bleach for 30 seconds,
  - Any approved disinfectant used according to manufacturers’ recommendations.
  - Bleach solutions should be mixed on a routine basis and stored in an opaque bottle.
- Dispose of needles, syringes, and all other sharps in a puncture-proof container.
- Dispose of infectious waste (anything contaminated with blood or body fluids) in a leak-proof sealable bag.
Nurse Role in Infection Control

- Prevent infection from spreading.
- Immunize children.
- Report illnesses.
- Temporarily exclusion of some children who are ill or may be incubating communicable disease.
- Prepare respond to outbreaks and emergencies of all types.
Factors Related to Risk of Infection

- **Host (infants and children)**
  - immature immune system
  - lack of previous exposure
  - incomplete immunizations
  - non-hygienic practices

- **Care givers**
  - close proximity to children

- **Environment**
  - space
  - staffing ratios
  - ventilation
  - sanitation
  - presence of sick children
  - unstable population
High risk areas in schools

- A shared computer mouse and keyboard
- Shared musical keyboards and instruments
- Shared desks
- Doorknobs, elevator buttons, light switches, door push bars, handrails
- Faucet handles, toilet handles, toilet stall door locks, towel dispensers, hand driers
Continuation...

- School bus doors and railings
- Coffee pots, microwave doors, refrigerator doors, cafeteria trays and tables athletic departments - gym mats, exercise equipment, shower and locker rooms
- Bathrooms, kitchens and lunch rooms
- Nurse's offices
When a Communicable Disease is Diagnosed or Suspected

- Separate ill child from well children at facility
- Notify parents/guardians immediately
- Adhere to exclusion/readmission recommendations
- If recommended
  - Inform parents of exposed children
  - Advice parents/guardians to watch for early S & S
When a Communicable Disease is Diagnosed or Suspected

- Prevent spread of communicable diseases
- Utilize a sanitizing procedure
  - Wash, rinse and sanitize any object or surface that has been soiled with discharge (nasal or feces)
  - Sanitize diaper-changing tables, toilets and potty chairs after each use
- Encourage staff and children to take extra precautions with
  - hand washing,
  - food handling,
  - dishwashing and
  - general cleanliness
Main Modes of Transmission

AIRBORNE

DROPLET

CONTACT

Direct

Indirect
Transmitted by Droplets

- *Hemophilus influenzae*
- *Meningococci*
- Pneumococcal infections (invasive, resistant)
- **BACTERIAL RESPIRATORY Infections**
  - Diphtheria, Pertussis, pneumonic plague, *Mycoplasma pneumonieae*
  - Streptococcal pharyngitis, pneumonia, scarlet fever
Continuation...

- VIRAL RESPIRATORY Infections
  - Adenovirus, Influenza, Mumps, Parvovirus, Rubella

- ANY PAROXYSMAL COUGH (Pertussis?)
Transmitted by Contact

- Blood & Body Fluids
- Gastrointestinal, respiratory, skin, wound infections
- Infectious skin infections: HSV, impetigo, cellulitis, scabies, staphylococcal furunculosis, abscess
- Viral hemorrhagic conjunctivitis, viral fevers
- Some respiratory infections, bronchiolitis in infants, children: RSV, parainfluenza
Transmitted by Contact: Fecal Oral Route

- Shigella
- Enteroviruses:
  - Polio
  - Coxsackie,
  - Echo,
  - Reo
- Norovirus
- Rotavirus
- Hepatitis A
Hand washing

- When to Wash Hands?
  - After coughing, sneezing, wiping nose, up messes
  - After using toilet
  - Before eating or drinking
  - After handling animals
  - Whenever hands are soiled
  - Food handlers before handling food an hands are soiled

- Hand sanitizer OK
- Wash 10-15 seconds
Cleaning and Sanitizing

- Cleaning with detergent & water most useful method for removing germs from surfaces
- Sanitizing: additional step after cleaning to germs on surface
- In classrooms with young children: clean & sanitize toys
- Common areas, desks/tables, doorknobs, handles, phone receivers, drinking fountains
Cleaning and Sanitizing

- Sanitizer solutions:
  - Spray bottle: diaper changing surfaces, toilets, potty chairs
  - Cloths rinsed in sanitizing solution - for food preparation areas, large toys, books and activity centers
  - Dipping object into container filled with sanitizing solution

- Important to determine sanitizer dilution & contact time
- Sanitizer must be sufficient: example - 2 min for bleach on counter
Contact Hygiene

- Avoid sharing glasses, water bottles, drinks, spoons/forks, etc.
- Avoid sharing clothes, hats, combs, towels
- Alcohol hand gels in classrooms to minimize disruption
- Disinfect commonly handled interior surfaces
  - Door handles, hand rails, eating surfaces, desks
  - School building, bus
  - Bleach solutions or commercial disinfectants
Respiratory Hygiene

- Employee, student, teacher, or staff having URTI should not attend school
- Tissues available in all classrooms
- Cover mouth when coughing
- Use tissue when sneezing or blowing noses
- Tissues to be thrown away immediately then... hand washing
Vaccine Preventable Disease

- MMR (measles, mumps, rubella)
- DPT (diphtheria, pertussis, tetanus)
- OPV/IPV polio
- Hemophilus influenza type B
- Influenza
- Chickenpox
- Pneumococcal
- Hepatitis A and B
Animals & Pets at School

- Avoid species known to transmit zoonoses
- Keep cages or enclosures clean and in good repair
  - If students clean cages; supervise, wash hands
- Wash hands after animal contact
- Never “kiss” animals or have contact with faces
- Have animals inspected by a veterinarian
- Minimize handling of animals, only by mature students
- Disposable gloves
- "No fingers in the mouth" policy
- Human food not allowed in room with animals
- Check for student allergies before bringing animals
Exclusion

- School attendance is important ⇒ No frivolous exclusion
- Justification for exclusion: reduction of spread of disease
- Decision made by school (school nurse) following guidelines
- HAAD- Communicable Diseases Section for consultation
- Guidelines have exclusion recommendations for most infectious diseases
- Return to school when exclusion period met, or HCW clears
General Conditions for Exclusion

- Child not able to participate comfortably in regular activities
- Child requires more care than staff can provide
- Potentially contagious illness
- Unvaccinated students exposed to vaccine preventable disease (measles, mumps, rubella, pertussis), may be excluded after consultation
General Conditions for Exclusion

- high fever
- behavior changes
- lack of energy, lethargy
- persistent crying
- difficult breathing
- diarrhea
- bloody stools with, or, high quantity of mucus
- vomiting >2 times within 24 hours
- uncontrolled coughing
- other S & S that may indicate a severe illness
Reporting

- HAAD mandates that all HCF report any notifiable disease, whether the disease is suspected or confirmed
- HCW or laboratories report diseases in most cases
- School personnel have similar obligation
- List of reportable diseases at HAAD website ID Notification
- Notifying HAAD of reportable disease does not breach confidentiality laws
Why Report

- To confirm diagnosis
- To prevent transmission
- To prevent secondary cases
- Investigation of individual cases
- Outbreak investigation
Reportable Communicable Diseases

- **Group A**: communicable diseases that require notification to HAAD within less than 2 hours of initial diagnosis (suspected or confirmed).

- **Group B**: communicable diseases that require notification to HAAD one calendar day from initial diagnosis (suspected or confirmed).

- **Group C**: communicable diseases that require notification to the HAAD within seven calendar days from initial diagnosis.

- *Some of the communicable diseases have a sub form*
Registration

- Important information
  - Fill your information
  - HAAD license ID
  - Facility Name
  - Mobile Number
  - E-mail address

- You will receive an authorization E-mail to start ID notification.
Nurse Role in Outbreak

- Confirm the diagnosis with the help of doctor and needed lab investigation.
- Inform the head teacher
- Inform HAAD- Communicable Disease Section immediately
- Use investigation procedure for school outbreaks
- Inform parents and other concerned people.
Nurse Role in Outbreak

- Basic information that need to collected
  - How many children are ill?
  - What is the usual percentage of children absent? Has this changed?
  - When did the illness start?
  - What are the main symptoms?
  - Are there any particular classes affected?
  - Are the staff affected?
  - Names, ages and addresses of children involved
Summary

- Infection prevention and control is an integrated, responsive process that is applied to all programs, services and settings.

- The goals of the infection prevention and control program are to reduce the risks of transmission of infectious agents among and between patients and health care personnel.