Prevention and Control of Communicable Diseases in Kindergartens / Child Care Centres / Schools

Infection Control Branch
Sep 2017
Contents

• Introduction

• Infection control in schools / centres
  • A brief introduction on the “Guidelines on Prevention of Communicable Diseases in Schools / KG / KG-Cum-CCC / CCC”
  • Sentinel surveillance
  • Leaflets and posters
  • Videos
  • Health advices
  • Letter to schools/ kindergartens
Introduction

• Communicable diseases can easily spread through close person-to-person contact in children
• Prevention, early detection and management
  ➢ Prevent the spread of communicable diseases
• Roles of school / centre staff are important
• Designated staff should coordinate and monitor the implementation of preventive and control measures for communicable diseases
Infection Control in Schools/ Centres

1. Guideline
2. Sentinel surveillance
3. Leaflets and posters
4. Videos
5. Health talks
6. Letter to schools/ kindergartens
Guidelines on Prevention of Communicable Diseases in Schools / KG / KG-Cum-CCC / CCC
Contents in Guideline

7 major sections

1. Concepts of communicable diseases
2. Communicable diseases in schools/ centres
3. General guidelines on prevention of communicable diseases
4. Preventive measures to be adopted by schools/ centres against communicable diseases
5. Outbreak of communicable diseases
6. Roles of school/ centre staff and related support
7. Appendix (15 attachments)
What are Communicable Diseases?

• Infective agents (pathogens)

- Bacteria
- Viruses
- Fungi
- Parasite

• Transmission
  - Invade the body or release toxins
  - Damage normal body cells and their functions
  - In severe cases, they may lead to death
Transmission of Communicable Diseases

Crucial factors for the spread of communicable diseases

- Infective agents
- Host (susceptible population)
- Mode of transmission

Infection cannot occur if any factor is missing
General Guidelines on Prevention of Communicable Diseases

Controlling crucial factors → Break the chain of infection
→ Control the spread of communicable diseases

Preventive measures

✓ Disinfection to kill the **infective agents**
✓ Early detection, isolation and treatment
✓ Removal of breeding sites
✓ Maintenance of good environmental, personal and food hygiene
✓ Adoption of infection control measures appropriate to the different modes of transmission
✓ Building up personal immunity by immunisation and healthy lifestyles
## Mode of transmission

1.2.3 mode of transmission

<table>
<thead>
<tr>
<th>Mode of transmission</th>
<th>Process</th>
<th>Examples of communicable diseases</th>
</tr>
</thead>
</table>
| Contact transmission | Through direct body contact with the infected persons, e.g. playing together with direct skin contacts; or indirect through contact with objects contaminated by infective agents, e.g. sharing towels, combs and clothes | - Hand, foot and mouth disease  
- Acute conjunctivitis  
- Head lice  
- Scabies  
- Chickenpox * |
| Droplet transmission | Inhale or contact of droplets expelled from the sick during sneezing, coughing, spitting and speaking, or through subsequent touching of mucous membranes of the mouth, nose and the eyes, etc with hands contaminated with infective agents | - Influenza  
- Common cold  
- Acute bronchiolitis  
- Pneumonia  
- Severe acute respiratory syndrome (SARS)  
- Scarlet fever  |
Contents in Guideline

7 major sections

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7. Appendix (15 attachments)
### Examples of Communicable Diseases in Schools/Centres

<table>
<thead>
<tr>
<th>Disease</th>
<th>Signs/symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute conjunctivitis</td>
<td>Redness of eyes, itching eyes, excessive tears, abnormal secretion</td>
</tr>
<tr>
<td>Avian influenza</td>
<td>Similar symptoms as influenza viruses but more likely to result in high fever, pneumonia, respiratory failure, multi-organ failure and eventual death</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>Fever, fatigue, vesicles on head and body</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>Fever, headache, muscle pain, impaired mental state</td>
</tr>
<tr>
<td>Gastroenteritis</td>
<td>Abdominal pain, vomiting, diarrhoea, poor appetite, fatigue, fever</td>
</tr>
<tr>
<td>Hand, foot and mouth disease</td>
<td>Fever, poor appetite, malaise, sore throat, painful sores in the mouth, rash (red spots) on palms of the hands and soles of the feet</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Fever, jaundice, fatigue, poor appetite</td>
</tr>
<tr>
<td>HIV infection and acquired immunodeficiency syndrome (AIDS)</td>
<td>Weight loss, fever, profuse night sweating, swollen lymph nodes, pink to purplish blotches on or under the skin, inside the mouth, nose, or eyelids. Patients with HIV infection can be without symptoms for years</td>
</tr>
<tr>
<td>Influenza</td>
<td>Fever, cough, sneeze, runny nose, sore throat, muscle ache, fatigue</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Fever, fatigue, cough, thick sputum, sputum with blood, shortness of breath</td>
</tr>
<tr>
<td>Severe Acute Respiratory Syndrome (SARS)</td>
<td>Fever, fatigue, headache, chills, cough, shortness of breath, difficulty in breathing, diarrhoea</td>
</tr>
<tr>
<td>Scabies</td>
<td>Itchiness, localized rash, desquamation, swelling, scales, etc.</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>Persistent fever, cough, sputum with blood, fatigue, weight loss, night sweating</td>
</tr>
</tbody>
</table>

### Typical signs and symptoms
- Fever
- Vesicles

### Subtle signs and symptoms
- Crying and nagging for no reason, restlessness
- Loss of appetite
- Lack of energy
- Shortness of breath
- Frequent eye rubbing
- Frequent scratching
Measuring Body Temperature

<table>
<thead>
<tr>
<th>Measuring method</th>
<th>Celsius scale (°C)</th>
<th>Fahrenheit scale (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear</td>
<td>38.5 °C</td>
<td>100.4 °F</td>
</tr>
<tr>
<td>Rectal</td>
<td>38.5 °C</td>
<td>100.4 °F</td>
</tr>
<tr>
<td>Oral</td>
<td>37.5 °C</td>
<td>99.5 °F</td>
</tr>
<tr>
<td>Armpit</td>
<td>37.3 °C</td>
<td>99.1 °F</td>
</tr>
</tbody>
</table>

**Importance:**
Body temperature varies with age, time of day and level of physical activity. For screening purpose, temperature above the reference range will be considered as significant and one should consult a doctor for suspected fever.
Child Health Records

- Maintain proper personal health records for each child
- Check and record children temperatures regularly
- **Most** children develop fever / **Some** children have fluctuating temperature when infected
  - Vigilant to identify children with fever
  - Influenza season
  - Outbreak of communicable diseases
- Pay more attention to young children who have special health conditions since they are more vulnerable to infection
General guidelines on prevention of communicable diseases

- Personal hygiene
- Food hygiene
- Environmental hygiene
- Vaccination
Personal Hygiene
Researches show performing **Hand Hygiene** properly is the most effective way to prevent the spread of communicable diseases.
Hand Hygiene

• Supervise children to develop good hand hygiene habits
• Indicate the moments for hand hygiene
Hand Hygiene

- Either hand washing or proper use of alcohol-based handrub can achieve hand hygiene
- Provide adequate hand hygiene facilities in the schools / centres
- Liquid soap, paper towel or hand dryer
- Proper means for hand drying: disposable paper towel or hand dryer
- Put up hand hygiene posters to remind others the importance of hand hygiene
Hand Hygiene

Wash hand with soap and water when hands are visibly soiled or likely contaminated with body fluid, e.g. after using the toilet, after coughing or sneezing.
Hand Hygiene
When hand are not visibly soiled, 70-80% alcohol-based handrub is effective for disinfection.

Use of alcohol-based handrub

7 steps hand hygiene technique

1. Palm Palms
2. Between fingers Between fingers
3. Back of hands Back of hands
4. Back of fingers Back of fingers
5. Thumbs Thumbs
6. Finger tips Finger tips
7. Wrist Wrists
Respiratory hygiene

Instruct the children to maintain respiratory hygiene practices

Visual alert

😊 Post up posters

- Cover both the nose and mouth with a handkerchief or tissue paper when coughing or sneezing
- Wrap up sputum with tissue paper and discard it into garbage bins with lids
- Wash hands immediately after contacting respiratory secretions or touching objects contaminated with respiratory secretions
- Put on a surgical mask for those with respiratory infection symptoms
Points to note about wearing a surgical mask

- Choose the appropriate mask size. **Child size** is available for children
- **Perform hand hygiene** before putting on a mask
- The coloured side of the mask faces outwards, with the metallic strip uppermost
- For those masks without a coloured side, the side with folds facing downwards on the outside
- The metallic strip moulds to the bridge of the nose and the mask should fit snugly over the face
- Extend the mask to fully cover **mouth, nose and chin**
- Try not to touch the mask once it is secured on the face. If you must do so, wash hands before and after touching the mask
- After taking off the mask, put it into a rubbish bin with a lid and **perform hand hygiene** immediately
Food Hygiene

• Choice of food
  ➢ Buy fresh meat and vegetables
  ➢ Do not patronise illegal food hawkers
  ➢ Do not buy packaged food without proper labelling, beyond its expiry date or with damaged packages

• Preparation of food
  ➢ Wash hands properly before preparing food
  ➢ Wash food thoroughly, and scrub with a brush when appropriate
  ➢ Handle and store raw food and cooked food separately. Use separate knives and chopping boards for each to avoid cross-contamination
  ➢ Cook food thoroughly before consumption
Food Hygiene

• Storage of food
  ➢ Store food in well-covered containers
  ➢ Never leave perishable food in room temperature
  ➢ Keep the refrigerator clean and function properly, and clean it at regular intervals. Keep the temperature inside the refrigerator at or below 4°C and the freezer at or below -18°C
  ➢ Temperature of each refrigerator should be recorded regularly in a temperature log book
  ➢ Cold foods should be kept at 4°C or below
  ➢ Store perishable food in the refrigerator immediately after purchase
Environmental Hygiene
Environmental Hygiene

Maintain good indoor ventilation to remove or dilute the infective agents in the air

- Open windows wide
- Turn on fans or exhaust fans
- Clean air-filters regularly
Environmental Hygiene

Since infective agents can survive in the environment for a period of time, it is essential to observe proper environmental hygiene.

Choice of disinfectants

- Different types of disinfectants can be used to clean the environment.
- Household bleach, which normally contains 5.25% hypochlorite solution, is the most convenient and effective disinfectant.
  - General cleaning: 1 in 99 diluted household bleach (5.25%)
  - Places contaminated with respiratory secretions, vomitus or excreta: 1 in 49 diluted household bleach
- Use 70% alcohol for disinfection of metal surfaces.
Environmental Hygiene

Clean and disinfect the area of schools / centres daily including classrooms, playrooms, kitchens, canteens, toilets, bathrooms
Environmental Hygiene

• Toys and equipment should be cleaned thoroughly
  Increase the cleansing frequency of frequently touched surfaces such as computer keyboards, handrails

Reminder:
To prevent items from contamination

• Clean and disinfect school buses daily
Vaccination

Remind parents to vaccinate their children according to the childhood immunisation programme recommended by CHP

- Childhood immunisation programe
- Childhood influenza vaccination subsidy scheme
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Sentinel Surveillance

Occurrence of fever in sentinel CCC/KG, 2016-2017

Occurrence of cough in sentinel CCC/KG, 2016-2017
Leaflets and Posters
Videos

Guidelines on Prevention of Communicable Diseases in Schools/Kindergartens/Kindergartens-cum-Child Care Centres/Child Care Centres

Video

Chapter 1: Introduction (1.4MB)

Chapter 2: Symptoms & signs of common communicable diseases (7.6MB)

Chapter 3: General guidelines on prevention of communicable diseases (29.6MB)

Chapter 4: Handling of suspected outbreak of communicable diseases (16.8MB)

Chapter 5: Demonstration (28.8MB)

Health Talk

• Hand, foot and mouth disease
• Influenza
• Outbreak of communicable diseases
Letter to schools/kindergartens

Vigilance against Hand, Foot and Mouth Disease (HFMD) and Enterovirus 71 (EV71) Infection

I would like to draw your attention to the recent increase in activity of hand, foot and mouth disease (HFMD) and enterovirus 71 (EV71) infections at our schools and institutions, and to remind you of the importance of vigilance against these diseases.

HFMD is a viral infection commonly seen in children. The infection can occur throughout the year in Hong Kong, but the disease activity usually peaks from May to July. Common symptoms include fever, sore throat, and skin rashes on the hands and feet. Although the illness is usually mild, severe cases can occur in young children, especially those caused by EV71. These can be associated with complications such as meningitis, meningoencephalitis, or polyneuritis.

Prevention and control measures are essential to prevent HFMD and EV71 infections. Schools and institutions are recommended to take the following measures to prevent outbreaks:

- Maintain good hygiene practices, such as frequent hand washing with soap and water.
- Ensure proper disposal of waste, including used tissues and disposable face masks.
- Encourage children to drink plenty of water to prevent dehydration.
- Avoid close contact with sick children.

Alert on Sharp Increase in Activity of Seasonal Influenza

Dear Principals / Persons-in-charge,

I would like to inform you of the recent increase in activity of seasonal influenza in Hong Kong recently.

Hong Kong has experienced an unusual influenza season so far. Our latest surveillance data show that the local seasonal influenza activity has been increasing gradually in the past two weeks and has reached a very high level. We expect that the influenza activity will remain at a high level in the coming weeks. We strongly urge the public, particularly young children, elderly and chronic disease patients, to observe strict personal, hand and environmental hygiene for better personal protection against the seasonal influenza.

The percentage of respiratory specimens collected by the Centre for Health Protection (CHP) Public Health Laboratory Services Branch inoculated with influenza A/H1N1 and A/H3N2 viruses has been increased since the end of June, with the highest rate of A/H3N2 detected on 8 July. The percentage of positive specimens has also been increased in recent weeks. Since the last update, the percentage of positive specimens has increased from 34.5% to 80.4% in the week of 22-28 July 2017, and in the week of 28 July to 4 August 2017, the percentage of positive specimens has decreased to 1.1%.

Dear Principals / Persons-in-charge:

Monitoring and control measures are essential to prevent influenza outbreaks. Schools and institutions are recommended to take the following measures to prevent outbreaks:

- Ensure proper disposal of waste, including used tissues and disposable face masks.
- Encourage children to drink plenty of water to prevent dehydration.
- Avoid close contact with sick children.

Increase in Scarlet Fever Activity

Dear Principals / Persons-in-charge:

The Centre for Health Protection (CHP) of the Department of Health today (July 4) received 187 (223 cases) reports of and confirmed 176 (211 cases) cases of scarlet fever (SF), a disease that has been increasing in the past few weeks.

According to CHP's surveillance data, the weekly number of SF cases increased from 16 in the week of June 4, 2017 to 79 in the week of June 11, 2017. The number of SF cases in schools/institutions increased sharply in the past week, and 214 (267 cases) SF cases were reported in the week of June 18 to June 24, 2017. The number of SF cases in schools/institutions has increased from 16 in the week of June 4, 2017 to 79 in the week of June 11, 2017. The number of SF cases in schools/institutions increased sharply in the past week, and 214 (267 cases) SF cases were reported in the week of June 18 to June 24, 2017.

The CHP has noted an unusual increase in SF activity in recent weeks. The percentage of positive specimens collected by the CHP Public Health Laboratory Services Branch has increased from 34.5% to 80.4% in the week of 22-28 July 2017, and in the week of 28 July to 4 August 2017, the percentage of positive specimens has decreased to 1.1%.

The place of SF activity appears to be in primary schools. The percentage of positive specimens has increased from 34.5% to 80.4% in the week of 22-28 July 2017, and in the week of 28 July to 4 August 2017, the percentage of positive specimens has decreased to 1.1%.

The number of positive samples of SF activity in primary schools (223 cases) in the week of June 18 to June 28, 2017 is 8 times that of the same period in 2016 (27 cases) and 2015 (97 cases).

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Letter to schools/ kindergartens

Prevent influenza and respiratory tract infection

• If students/ children develop fever and symptoms of respiratory tract infection, advise them to stay at home for rest until fever has subsided for at least 2 days

• Staff with respiratory illnesses who are suspected to be epidemiologically linked to an outbreak should refrain from work

➢ Report promptly to CHP if notice an increase in cases of respiratory illnesses or absenteeism (Tel: 2477 2772, Fax: 2477 2770)
Infection Control in Schools/ Centres

- To develop variety of infection control information
- To enhance communication mechanism
- To ensure a delightful learning environment to support the healthy development of children
Thank You