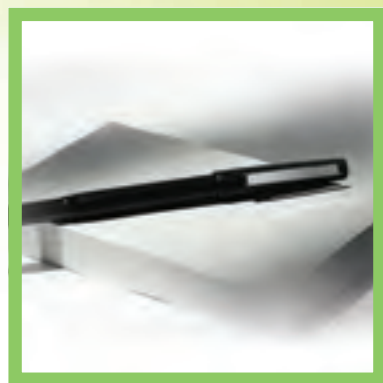


# Guidelines on

## Prevention of Communicable Diseases in Residential Care Homes for the Elderly

(3rd Edition, 2015)  
(Revised: June 2023)



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Department of Health



# Introduction

Effective prevention of communicable diseases in residential care homes for the elderly (RCHes) not only safeguards the health of residents and staff by minimising the harm caused by the diseases, but also reduces the chance of hospitalisation of the residents and thus helps save community resources. It is therefore incumbent on every staff member and resident to learn how to prevent communicable diseases. Based on the previous version published in 2007, the guideline has been updated with the latest scientific knowledge, and information on multi-drug resistant organisms (MDROs) has been added in this version. The guideline is intended to provide staff members with practical information on the preventive measures of communicable diseases in RCHes. Every staff member has the responsibility to understand the guideline and to take care of the elderly according to the principles laid down therein. The guideline is divided into six sections. While individual staff member may refer to the relevant section(s) as necessary, it is particularly important for Infection Control Officers (ICOs) to familiarise themselves with all the content so as to assist the responsible staff members of the RCHes in preventing the spread of communicable diseases within the elderly homes. However, this guideline is not meant to be exhaustive. In case of doubt or when further information on specific communicable disease or infection control is needed, advice can be sought from the Visiting Health Teams of the Elderly Health Service of the Department of Health in different districts (please refer to section 6.3.2 for details).

**Editorial Board**

*(3rd edition)*

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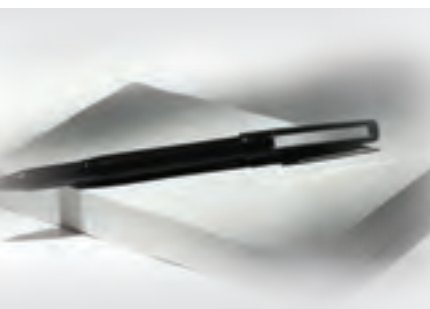
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# Abbreviations

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>CCS</b>	Community Care Service Units
<b>CENO</b>	Central Notification Office
<b>CGAT</b>	Community Geriatric Assessment Team
<b>CHP</b>	Centre for Health Protection
<b>CNS</b>	Community Nursing Service
<b>CRA</b>	Carbapenem-resistant <i>Acinetobacter</i>
<b>CRE</b>	Carbapenem-resistant <i>Enterobacteriaceae</i>
<b>DH</b>	Department of Health
<b>ESBL</b>	Extended-spectrum beta-lactamase
<b>HA</b>	Hospital Authority
<b>HBV</b>	Hepatitis B Virus
<b>HCV</b>	Hepatitis C Virus
<b>HIV</b>	Human Immunodeficiency Virus
<b>ICO</b>	Infection Control Officer
<b>LORCHE</b>	Licensing Office of Residential Care Homes for the Elderly
<b>MDRA</b>	Multi-drug Resistant <i>Acinetobacter</i>
<b>MDRO</b>	Multi-drug Resistant Organism
<b>MRPA</b>	Multi-drug Resistant <i>Pseudomonas aeruginosa</i>
<b>MRSA</b>	Methicillin-resistant <i>Staphylococcus aureus</i>
<b>PPE</b>	Personal Protective Equipment
<b>RCHE</b>	Residential Care Home for the Elderly
<b>SARS</b>	Severe Acute Respiratory Syndrome
<b>SWD</b>	Social Welfare Department
<b>VISA</b>	Vancomycin-intermediate <i>Staphylococcus aureus</i>
<b>VMO</b>	Visiting Medical Officer
<b>VRE</b>	Vancomycin-resistant <i>Enterococcus</i>
<b>VRSA</b>	Vancomycin-resistant <i>Staphylococcus aureus</i>



# 1 Concepts on communicable diseases



## 1.1 What are communicable diseases?

Communicable diseases refer to diseases that can be transmitted and make people ill. They are caused by infective agents (pathogens), e.g. bacteria and viruses, which invade the body and multiply or release toxins to cause damages to normal body cells and their functions. In severe cases, they may lead to death. These infective agents can spread from a source of infection (e.g. patients, sick animals) to a person through various routes of transmission.

## 1.2 Chain of infection

Crucial factors for the spread of communicable diseases include the infective agent, the source of infection, the mode of transmission and the host - the so-called 'chain of infection'.

### 1.2.1 Infective agent

An infective agent is a microorganism (e.g. bacteria, viruses, fungi and parasite) that will cause an infection.

## 1.2.2 Source of infection

This refers to the reservoir where infective agents can live, parasitise and breed. It includes humans (e.g. patients, carriers and people with latent infections), livestock, insects and soil. The source of infection will normally form the basis for infective agents to infect humans.

## 1.2.3 Mode of transmission

This refers to the method of transfer by which the infective agent moves or is carried from one place to another. Some communicable diseases have more than one mode of transmission, e.g. chickenpox can be transmitted by airborne, droplet or contact transmission. Please refer to **Section 1.3** for more details about the mode of transmission of communicable diseases.

## 1.2.4 Host

Hosts refer to the susceptible population. Some people are more prone to infection and become hosts. For instance, young children, elderly persons and patients with chronic diseases are more susceptible to infection because of weakened body immunity.

# 1.3 Mode of transmission of communicable diseases and examples

**Table 1-1** elaborates how communicable diseases are transmitted via different modes of transmission and lists some respective examples.

*Table 1-1 Modes of transmission of communicable diseases*

Mode of transmission	Process	Examples of communicable diseases
<b>Contact transmission</b>	<ul style="list-style-type: none"> <li>Through direct body contact with the infected person, e.g. lifting and assisting in taking baths</li> <li>Indirectly through contact with objects contaminated by infective agents, e.g. sharing towels, combs and clothes</li> </ul>	<ul style="list-style-type: none"> <li>Scabies</li> <li>Head lice</li> <li>Hand, foot and mouth disease</li> <li>Acute infectious conjunctivitis</li> <li>Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) infection</li> <li>Other multi-drug resistant organisms (MDROs) infection</li> <li>Chickenpox*</li> <li>Coronavirus Disease (COVID-19)*#</li> <li>Monkeypox*</li> </ul>

\* Some communicable diseases have more than one mode of transmission (e.g. chickenpox, COVID-19, monkeypox).

# COVID-19 can also be transmitted through short-range aerosol or short-range airborne transmission in poorly ventilated and/or crowded indoor settings

Mode of transmission	Process	Examples of communicable diseases
<b>Droplet transmission</b>	<ul style="list-style-type: none"> <li>Through droplets expelled during sneezing, coughing, spitting or speaking</li> <li>Through subsequent touching of mucous membranes of the mouth, nose and eyes, etc. with hands contaminated with infective agents</li> </ul>	<ul style="list-style-type: none"> <li>Influenza</li> <li>Common cold</li> <li>Severe Acute Respiratory Syndrome (SARS)</li> <li>Coronavirus Disease (COVID-19)*#</li> <li>Monkeypox*</li> </ul>
<b>Airborne transmission</b>	<ul style="list-style-type: none"> <li>Infective agents attached on small particles or droplet nuclei, float in the air for some time and enter the body through the respiratory tract</li> </ul>	<ul style="list-style-type: none"> <li>Chickenpox*</li> <li>Pulmonary tuberculosis (smear positive)</li> </ul>
<b>Food-borne or water-borne transmission</b>	<ul style="list-style-type: none"> <li>Infective agents enter the body through ingestion of contaminated food or water, or using contaminated eating utensils</li> </ul>	<ul style="list-style-type: none"> <li>Food poisoning</li> <li>Cholera</li> <li>Bacillary dysentery</li> <li>Hepatitis A, E</li> <li>Norovirus infection</li> </ul>
<b>Vector-borne transmission</b>	<ul style="list-style-type: none"> <li>The infective agents either parasitise or breed in the body of the insects such as mosquitoes, mites, ticks or other vectors via which human are infected</li> </ul>	<p>Mosquito-borne:</p> <ul style="list-style-type: none"> <li>Dengue fever</li> <li>Malaria</li> <li>Japanese encephalitis</li> </ul> <p>Others:</p> <ul style="list-style-type: none"> <li>Typhus</li> </ul>
<b>Blood or body fluid transmission</b>	<ul style="list-style-type: none"> <li>Injury by contaminated needles or sharps, or having unprotected sex</li> </ul>	<ul style="list-style-type: none"> <li>Hepatitis B, C</li> <li>Acquired Immune Deficiency Syndrome (AIDS)</li> </ul>

\* Some communicable diseases have more than one mode of transmission (e.g. chickenpox, COVID-19, monkeypox).

# COVID-19 can also be transmitted through short-range aerosol or short-range airborne transmission in poorly ventilated and/or crowded indoor settings

## 1.4 Principles of controlling communicable diseases

The control of the communicable diseases should focus on controlling the factors of the spread of communicable diseases to break the chain of infection.

*Table 1-2 Control measures for the transmission of communicable diseases*

Factors of transmission	Control measures
<b>Infective agent</b>	<ul style="list-style-type: none"> <li>• Disinfection to kill the infective agents</li> </ul>
<b>Source of infection</b>	<ul style="list-style-type: none"> <li>• Early detection, isolation and treatment of the sick person</li> <li>• Removal of breeding sites of infective agents</li> </ul>
<b>Mode of transmission</b>	<ul style="list-style-type: none"> <li>• Maintenance of good personal, environmental and food hygiene</li> <li>• Adoption of standard precautions and additional infection control measures appropriate to different modes of transmission</li> </ul>
<b>Host (susceptible population)</b>	<ul style="list-style-type: none"> <li>• Building up personal immunity by healthy lifestyle and immunisation</li> <li>• Prophylaxis if appropriate</li> </ul>

## 1.5 Why are residential care homes for the elderly (RCHes) more vulnerable to outbreaks of communicable diseases?

RCHes are collective living places where communicable diseases can easily spread through close person-to-person contact. The frailty of the residents also aids the spread. The source of infection can be staff, visitors or residents (e.g. residents newly discharged from hospital). Person-to-person contact then leads to cross-infection, i.e. the transmission of infective agents from one person to another. For instance, staff who fail to perform hand hygiene before and after caring for each resident may spread the infective agents from one resident to another.

## 1.6 Key points on management of communicable diseases in RCHEs

The following principles should be applied in preventing the spread of communicable diseases in RCHEs:

### 1.6.1 Medical surveillance

- Monitor the health condition of residents and staff closely
- Watch out for any sign and symptom of infection
- Maintain residents' personal health records properly

### 1.6.2 Early treatment

- Arrange prompt treatment for the infected person to prevent further spread of infection.

### 1.6.3 Prevention of spread

- Implement standard precautions and additional infection control precautions based on the mode of transmission of respective communicable diseases to prevent evolution into outbreaks such as maintaining proper hand hygiene, enhancing environmental cleaning and disinfection, proper handling and disposal of body fluid, secretion and excreta, wearing surgical masks when having respiratory symptoms.
- If outbreaks of communicable diseases are suspected, promptly notify the Central Notification Office (CENO) of Centre for Health Protection (CHP), the Licensing Office of Residential Care Homes for the Elderly (LORCHE) of Social Welfare Department (SWD) and the Community Geriatric Assessment Team (CGAT) of Hospital Authority (HA) (if applicable) for follow-up investigation.

# 2 Detection of communicable diseases in RCHEs



## 2.1 Signs and symptoms of common communicable diseases in RCHEs

Local prevalence study showed that the commonest infections in RCHEs are respiratory tract infections, skin or subcutaneous tissue infections and urinary tract infections. Other common infections include infectious gastrointestinal diseases and acute infectious conjunctivitis (red-eye syndrome).

The typical signs and symptoms of some common communicable diseases in RCHEs are listed in **Table 2-1**. Signs and symptoms of other important communicable diseases are listed in **Table 2-2**. The tables are not meant to be exhaustive. For more information on communicable diseases, please visit the CHP website at <http://www.chp.gov.hk>.



Table 2-1 Characteristics of common communicable diseases in RCHEs

Types of diseases	Infective agents	Mode of transmission	Typical signs and symptoms	Preventive measures
Respiratory tract infections (e.g. influenza, common cold, laryngopharyngitis, acute bronchitis, pneumonia)	Viruses (e.g. influenza viruses), bacteria (e.g. <i>Streptococcus pneumoniae</i> )	Droplet transmission	Fever, fatigue, cough with or without sputum, sneeze, runny nose, sore throat, muscle ache	Maintain good ventilation; Observe personal hygiene; Perform hand hygiene before and after caring for each resident; Observe respiratory hygiene and cough manner: Any individual including residents should put on a surgical mask when there is respiratory symptom if applicable and tolerable.
Skin or subcutaneous tissue infections	Parasites (e.g. scabies, head lice), bacteria (e.g. <i>Staphylococcus aureus</i> ), fungi (e.g. moniliasis, tinea)	Contact transmission	Itching, localised rash, desquamation, swelling, scales, etc. Suppurating or smelly wounds (e.g. pressure ulcers)	Wear gloves during patient contact and arrange early medical treatment for the patients; Disinfect the linen and clothing of patients with scabies following protocol or instruction.
Urinary tract infections	Bacteria (e.g. <i>E. coli</i> )	Bacteria enter the urinary tract from anal area especially in women, people with urinary catheters, etc.	Fever, urination with stabbing pain, frequent urination, urinary urgency, nocturia, urinary incontinence, lower abdominal pain, loin pain, haematuria, cloudy urine, etc.	Maintain good personal hygiene; Women should wipe their genitalia from the front to the back after urination; Ensure adequate fluid intake; Perform hand hygiene thoroughly before and after the insertion of urinary catheter; Place urine bag below the level of the bladder to avoid reflux.

Types of diseases	Infective agents	Mode of transmission	Typical signs and symptoms	Preventive measures
Infectious gastrointestinal diseases	Viruses (e.g. Norovirus, Rotavirus), bacteria (e.g. <i>Salmonella</i> , <i>Staphylococcus aureus</i> , <i>Vibrio cholerae</i> )	Consuming contaminated food or water; contact with vomitus or faeces from infected persons, contaminated object, aerosols in case of norovirus infection ( <b>Appendix M</b> )	Abdominal pain, vomiting, diarrhoea, loss of appetite, fatigue, fever	Maintain good personal, food and environmental hygiene; Wash hands after using the toilet; Food handlers should refrain from work and seek early medical advice if falling sick; Proper handling of vomitus and excreta.
Acute infectious conjunctivitis (red-eye syndrome)	Viruses (e.g. Adenovirus), bacteria (e.g. <i>Streptococcus pneumoniae</i> )	Contact transmission	Redness of eyes, itchiness of eyes, excessive tears, abnormal secretion	Never share towels; Observe good personal hygiene; Perform hand hygiene before touching the eye.
COVID-19	Viruses (Coronaviruses)	Droplet and Contact transmission	Fever, dry cough and fatigue. Loss of taste or smell	Wear surgical mask/respirator/KN95, eye protection, gown and gloves when contact infected residents; Perform hand hygiene before and after resident contact; Maintain good ventilation, personal and environmental hygiene; Have adequate rest and nutrition to build up body immunity.

Table 2-2 Characteristics of other important communicable diseases

Types of diseases	Infective agents	Mode of transmission	Typical signs and symptoms	Preventive measures
AIDS	Viruses	Blood or body fluid transmission, e.g. through injury by contaminated needles or sharps, or having unprotected sex	Cannot resist the invasion of infective agents because of impaired body immunity No specific symptoms. May have persistent fever, uncommon infections and/or tumours, etc.	Never share objects likely contaminated by blood or body fluid; Standard precautions should be strictly followed when clearing up objects contaminated by blood; Avoid unprotected sex.
Hepatitis B	Viruses	Blood or body fluid transmission, e.g. through injury by contaminated needles or sharps, or having unprotected sex	Fever, jaundice, fatigue, loss of appetite	Ditto; Receive vaccination against hepatitis B.
Pulmonary tuberculosis (smear positive)	Bacteria ( <i>Mycobacterium tuberculosis</i> )	Airborne transmission	Persistent fever, cough, sputum with blood, fatigue, weight loss, night sweating	Observe respiratory hygiene and cough manner: Any individual including residents should put on a surgical mask when there is respiratory symptom if applicable and tolerable; Maintain good ventilation and environmental hygiene; Have adequate nutrition and rest.

Types of diseases	Infective agents	Mode of transmission	Typical signs and symptoms	Preventive measures
Myiasis	Larvae of flies	Flies lay their eggs on mucous membranes or wounds	Larvae crawl out from the mouth, wound, etc. and there are purulent and smelly discharges	Maintain good oral hygiene for residents especially for those requiring nasogastric tubes for feeding; Wounds should be properly treated; Maintain good environmental hygiene; Install appropriate fly screen and repellent devices.
SARS	Viruses (Coronaviruses)	Droplets, touching of mucous membranes of the mouth, nose and eyes with hands contaminated with infective agents	Fever, fatigue, headache, chill, cough, shortness of breath, difficulty in breathing, diarrhoea	Use personal protective equipment (PPE) as appropriate; Perform hand hygiene before and after resident contact; Maintain good ventilation, personal and environmental hygiene; Have adequate rest and nutrition to build up body immunity.
Monkeypox	Viruses (Monkeypox virus)	Droplet and Contact transmission	Fever, intense headache, myalgia and lymphadenopathy. Lesions in mouth and rash on the body.	Wear well-fitted surgical mask Wear respirator/KN95, eye protection, gown and gloves when contact infected residents; Perform hand hygiene before and after resident contact; Avoid unprotected sex.

## 2.2 Subtle presentation of infection

Apart from the typical signs and symptoms of infection, some infected persons (especially those frail residents) may show less obvious symptoms. This makes the infection more difficult to detect resulting in potential delay of treatment and risk of transmission within RCHes.

Those residents with cognitive impairment (such as residents with dementia) may have communication problems with carers, leading to difficulty in detecting infection.

Therefore carers should also look for other subtle signs and symptoms which may indicate infection in the residents, for example:

- Body temperature 1°C higher than the usual temperature
- Disoriented, confusion, drowsiness and restlessness
- Unexplained changes in behaviour
- Unexplained changes in body functions such as loss of bladder control due to infection like urinary tract infection, or secondary to confusion
- Change in bowel habit or consistency of stool
- Loss of appetite or unexplained weight loss
- Lethargy, increased weakness or fall for unknown reason
- Shortness of breath
- Palpitation or increased heart rate

Please refer to the checklist of signs and symptoms of communicable diseases in **Appendix A**. It is a reminder for preliminary health assessment of residents for early detection of infection and prompt medical treatment.

## 2.3 Monitoring of infection in RCHEs

### 2.3.1 Importance of health record

To detect early presentation of infection in RCHEs, carers should familiarise with the daily physical conditions and behavioural patterns of the residents. As such, proper personal health records should be maintained for each resident and their temperatures should be checked regularly. 'Daily record of febrile residents' should be kept (example at **Appendix B**).

### 2.3.2 High risk groups in RCHEs

Carers should pay particular attention to residents who have risk factors of infection, for example:

- Bedridden
- Diabetic
- Conditions leading to lower body immunity such as cancers
- Cognitive impairment and lower self-care ability
- Use of indwelling medical devices and invasive procedures such as urinary catheter, intermittent self-catheterisation, tracheostomy tube, nasogastric catheter (Ryle's tube), percutaneous gastric tube feeding (gastrostomy tube), peritoneal dialysis

## 2.4 Measuring body temperature

The normal temperature of human body (oral temperature) ranges from 36.1°C to 37.2°C. Most residents develop fever when infected. However, some residents have lower baseline body temperatures, which rise slightly when they are infected but still within the normal range. Effective surveillance of body temperature can only be carried out when self-comparison is made with the usual body temperature of the residents. RCHE staff should thus regularly take accurate body temperature for the residents and record it. Temperature should be taken more frequently under the following circumstances:

- Residents with communication problems and those who are frail;
- During outbreaks of communicable diseases, particularly influenza-like illnesses and SARS;
- When residents develop symptoms of infection (please refer to **Appendix A** for details);
- Residents newly discharged from hospital.



## 2.4.1 Accurate measurement of body temperature

Body temperature can be divided into core temperature and surface temperature. Core temperature refers to the temperature of deep tissues and can be taken through the oral cavity or ears; whereas surface temperature is the temperature of surface skin tissues and can be taken through the forehead or armpits. Comparatively, surface temperature is more easily affected by the surroundings.



To enhance accuracy in measurement, the followings should be noted:

- Residents should avoid exercise, bathing or having excessively cold or hot food and drinks within 30 minutes before taking temperature.
- Staff should follow the instructions and familiarise with the correct use of thermometers before taking temperature.
- For each resident, it is preferable to take the temperature from the same body part at the same time of the day using the same method to avoid deviations caused by changes in the surroundings or the use of different measurement methods.

## 2.4.2 Proper use of thermometers

In general, there are mercury, digital, liquid crystal display (LCD) and infrared ear thermometers, etc. for taking oral, rectal, armpit, ear and forehead temperature. Before using any thermometer, read the instructions carefully for the proper procedures of using the thermometer and the reference range of the readings. Accuracy, suitability and convenience should all be taken into account when choosing the appropriate thermometer.

If mercury thermometer is to be used, caution should be taken because of the risk of breakage and spillage of mercury. Infrared forehead thermometers are less accurate in reflecting the true core body temperature. Whenever in doubt, staff should use another type of thermometer to recheck the body temperature. Recommendations and points to note for different methods of taking temperature are stated in **Table 2–3**.

To reduce the risk of cross-infection, thermometers should be covered with plastic shields when in use. Separate thermometers should be used for infected residents.

Table 2-3 Recommendations on different methods of taking body temperature

Methods	Points to note	Recommendations
<b>Ear</b>	<ul style="list-style-type: none"> <li>The ear temperature is usually 0.5°C higher than the oral temperature.</li> <li>Direction of the probe tip should be correct, otherwise it will give an inaccurate reading.</li> <li>Stabilise the position of the resident's head and pull the ear backward and upward to straighten the ear canal.</li> <li>The ear pressed against the pillow during sleeping has a higher temperature, avoid using the pressed ear for taking temperature, use the other side instead.</li> </ul>	<ul style="list-style-type: none"> <li>It is non-intrusive and has little limitations on its application. Therefore it is suitable for use in RCHes.</li> <li>Not applicable for residents with otitis or with obstruction of ear canal caused by ear wax.</li> </ul>
<b>Oral</b>	<ul style="list-style-type: none"> <li>Digital thermometers are recommended for safety reason. If mercury thermometer is to be used, caution should be taken because of the risk of breakage and spillage of mercury.</li> <li>Ensure the resident is conscious, cooperative and be able to close his or her mouth tight.</li> <li>Avoid cold or hot foods and drinks for at least 30 minutes before taking temperature.</li> <li>Staff should place the thermometer under the tongue of the resident. Ask him or her to close the mouth and not to speak when taking temperature.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for residents who are unconscious, confused or who cannot close their mouths tight.</li> </ul>
<b>Armpit</b>	<ul style="list-style-type: none"> <li>Armpit temperature is usually 0.5°C lower than oral temperature.</li> <li>The thermometer should be held tightly under the armpit without clothes in between when taking temperature.</li> <li>Ensure the privacy of the residents and protect them from catching cold when taking temperature.</li> </ul>	<ul style="list-style-type: none"> <li>Armpit measurement is suitable for conditions when all of the above temperature measurement methods are not applicable, except for very thin resident with a socket-like hollow armpit that cannot hold the thermometer tightly.</li> </ul>

*Remarks: Read the instructions carefully for the reference range of the readings when using different methods of taking body temperatures.*

## 2.5 Management of residents with fever or infection

If a resident is found to have fever or have a temperature being 1°C higher than usual, the following actions should be taken:

- Note down on the 'Daily record of febrile residents' (example at **Appendix B**) and the resident's personal health record.
- Arrange prompt medical consultation for the infected resident with assistance from the Visiting Medical Officer (VMO) or CGAT when necessary.
- Isolate him or her from other residents.
- Early detection for any outbreaks by closely monitoring the health condition of residents and staff.
- Implement standard precautions and additional infection control precautions based on the mode of transmission of the respective communicable disease.

# 3

## General advice on prevention of communicable diseases



Building up host immunity by having a well balanced diet, adequate rest and sleep, regular exercise, being a non-smoker and avoiding alcohol consumption are vital to the prevention of communicable diseases. Vaccination should be given to high risk groups. Moreover, good personal hygiene, environmental hygiene and food safety should be observed.

### 3.1 Personal hygiene

Observing personal hygiene is an important tip in prevention of communicable diseases. It includes hand hygiene, respiratory hygiene and cough manners, skin care and avoiding sharing of personal items such as towels, combs, toothbrushes, etc.

#### 3.1.1 Hand hygiene

Hand hygiene is a prerequisite for the prevention of many infections. Two hand hygiene practices are recommended: hand washing with liquid soap and using alcohol-based handrub.

Home managers of RCHes should provide adequate hand washing facilities and place alcohol-based handrub at convenient locations to facilitate staff, residents and visitors to perform hand hygiene. They should also remind residents and staff of the following:

- Avoid wearing objects that may harbour infective agents such as artificial nails, rings, watches and bracelets, etc.
- Perform hand hygiene before wearing and after taking off gloves. Even though gloves are worn, hand hygiene can never be substituted.
- Observe proper hand hygiene techniques irrespective of whether hand washing with liquid soap or alcohol-based handrub is used.
- Staff should perform hand hygiene and encourage residents to perform hand hygiene when necessary, e.g. before each meal (for details, please refer to **Section 3.1.1 D**).

## A. Hand washing

- Wash hands with liquid soap and water when hands are visibly soiled or likely contaminated with body fluid.
- Steps for hand washing:
  - (i) Wet hands under running water.
  - (ii) Away from the running water, apply liquid soap on hands to make a soapy lather.
  - (iii) Rub the palms, back of hands, between fingers, back of fingers, thumbs, finger tips and wrists. Do this for at least 20 seconds (for details, please refer to **Section 3.1.1 C**).
  - (iv) Rinse hands thoroughly under running water.
  - (v) Do not re-contaminate washed hands by touching the faucet directly. The tap may be turned off by wrapping the faucet with the paper towel, or clean the faucet by splashing with water or asking someone for assistance.
  - (vi) Dry hands thoroughly with paper towel or a hand dryer.
- Never share towel with others.
- Dispose of used paper towel properly.
- Store personal towels properly and wash them thoroughly at least once daily.





## B. Use of alcohol-based handrub

- Using 70-80% alcohol-based handrub to rub hands is effective to prevent contracting and spreading communicable diseases via hands when hands are not visibly soiled.
- Same as hand washing, apply adequate amount of alcohol-based handrub and cover all surfaces of the hands; rub the palms, back of hands, between fingers, back of fingers, thumbs, finger tips and wrists; rub for at least 20 seconds until the hands are dry (for details, please refer to **Section 3.1.1 C**).
- Allow alcohol to evaporate naturally for maximum effect and no need to use paper towels to dry the hands.
- Need to check the expiry date of alcohol-based handrub before using it.

## C. Hand hygiene technique





## D. When to perform hand hygiene

For staff, there are 'Five moments for hand hygiene' :

- Before touching a resident;
- Before a clean or aseptic procedure, e.g. before nasogastric tube feeding or changing dressing;
- After blood, body fluid, secretion, excreta, wound or mucous membrane exposure risk, e.g. after changing diaper;
- After touching a resident;
- After touching contaminated items or resident surrounding environment.



Staff should also perform hand hygiene, and encourage residents to perform hand hygiene for the following situations:

- Before and after touching eyes, nose and mouth;
- Before handling or eating food;
- Before taking medications;
- After using the toilet;
- When hands are contaminated by respiratory secretions, e.g. after coughing or sneezing;
- After touching public installations or equipment, such as escalator handrails, elevator control panels or door knobs;
- After contact with animals or poultry.



### 3.1.2 Respiratory hygiene and cough manners

Respiratory hygiene and cough manners are recommended for all persons:

- Cover nose and mouth with tissue paper when coughing or sneezing.
- Dispose of soiled tissue paper in a garbage bin with lid or flush them away in the toilet.
- Wash hands thoroughly after contact with respiratory secretions or touching objects contaminated with respiratory secretions.
- Put on a surgical mask if there are respiratory symptoms.





Staff should ensure the availability of materials for residents to adhere to respiratory hygiene and cough manners.

- Provide tissue paper and garbage bin with lid for disposal.
- Ensure that supplies for hand washing (i.e. liquid soap and paper towels) are consistently available near sinks and provide dispensers of alcohol-based handrub in convenient locations.
- Put up signage and remind residents and visitors not to spit on floor.
- Put up signage to remind visitors to put on surgical mask if there are respiratory symptoms.

### 3.1.3 Skin care

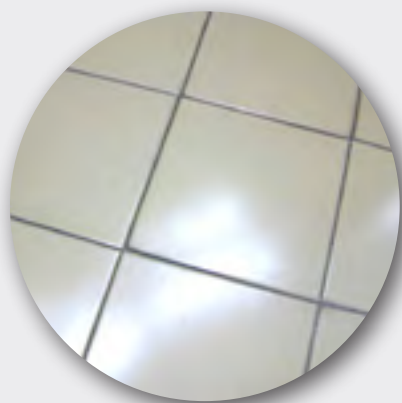
Staff should pay attention to the following points for residents' skin care:

- Help residents to check their skin condition and pay particular attention to skin fold under the armpit, around the neck and groin area.
- Assist dependent residents to dry the skin fold between the toes properly and do not use talcum powder as it forms crusts and causes skin irritation.
- Cleanse and cover abrasion, if present, with dressing to prevent wound infection.
- Advise ambulant residents to put on socks or shoes to prevent abrasion around the soles or toes.

## 3.2 Environmental hygiene

### 3.2.1 General cleaning

- Always keep the windows open for good indoor ventilation. Fans or exhaust fans can be used to improve indoor ventilation.
- Clean the dust filters of air-conditioners regularly.
- Clean and disinfect frequently touched surfaces, furniture, rehabilitation aids, floor, toilets and bathrooms regularly, for example daily clean and disinfect with 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water).
- For places soiled by vomitus, excreta or secretions, clean up the visible matter with strong absorbent disposable material, then disinfect with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water).
- For spillage of blood, clean the visible matter with strong absorbent disposable material, then disinfect with 1 in 4 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water), leave for 10 minutes and then rinse with water and keep dry.



- Clean the floor regularly and increase the frequency as the circumstances require. The floor should be kept dry after cleaning so that residents and staff will not slip on it. Carpets should be kept clean by regular washing and daily vacuum cleaning.
- Clean and examine the bedside cupboards of the residents regularly to avoid food remnants and hence the breeding of pests and rodents.
- Keep appropriate distance between beds or groups of beds (not less than 1 metre as far as possible or with partitioned barrier between beds) to reduce the chance of transmission of infective agents by droplets.
- Empty water in the saucers underneath flower pots and change water in vases at least once a week. Top up all defective ground surfaces to prevent accumulation of stagnant water and breeding of mosquitoes. To prevent rodent infestation, avoid stacking of unnecessary articles.



- Commence clean-up actions immediately when there are any signs of pest or rodent infestation such as excreta of rats, cockroaches, mosquitoes and flies. In case of need, call the Food and Environmental Hygiene Department hotline at 2868 0000 or relevant departments to follow up.
- For a hygienic environment, it is not advisable to keep pets such as dogs and cats in RCHes.

### 3.2.2 Disinfection

Generally speaking, household bleach, which normally contains 5.25% sodium hypochlorite, is the most convenient and effective disinfectant when it is diluted appropriately (**Appendix C**). Care should be taken to avoid its use on metal surfaces since sodium hypochlorite is corrosive to metal. Please refer to **Appendix D** for procedures of preparing diluted bleach.



- 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water) is sufficient for general cleaning purpose.
- 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) should be used for places contaminated with vomitus, excreta or secretions and in outbreak situations.



- 1 in 4 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water) should be used for places contaminated with blood spillage.
- Use 70% alcohol to disinfect metal surfaces.

Apart from household bleach and alcohol, there are many detergents in the market that claim to have disinfection property. Purchasers should seek more information on the effectiveness and the directions for use from the supplier.



### 3.2.3 Cleaning and disinfection for toilets and bathrooms

- Keep toilets and bathrooms dry and clean.
- Provide liquid soap for washing hands.
- Provide disposable paper towels or hand dryers for drying hands.
- Place garbage bins with lids inside toilets and bathrooms.
- Ensure the flushing system of the toilet is in proper function all the times.
- Make sure that the drain pipes are built with U-shaped water traps. Do not alter the pipelines without authorisation.
- Pour about half a litre of water into each drain outlet regularly (about once a week) so as to maintain the water column in the pipe as water lock to prevent the spread of microorganisms.
- Make sure that the soil pipes are unobstructed and the sewage drains are functioning properly without leakage so as to avoid breeding of infective agents.

### 3.2.4 Domestic waste disposal

- Garbage bins should be covered with lids.
- Rubbish should be properly wrapped up and discarded into garbage bins with lids.
- Garbage bins should be emptied at least once a day. Staff should wash their hands thoroughly after handling refuse.
- Please refer to **Section 4.1.7** for proper clinical waste disposal.

### 3.2.5 Cleaning and disinfection of cleaning tools

- To minimise the risk of cross-transmission, different sets of cleaning tools are recommended for different areas such as kitchen, toilets, general areas, isolation room or cohort areas.
- Rinse floor mop, wiper or other cleaning tools with water to remove solid or bulky waste if any. Wash with detergents.
- Disinfect by immersing them in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes.
- Rinse with water.
- Reuse after drying.

## 3.3 Food safety and hygiene

It is important for RCHes to ensure food safety and hygiene to prevent food-borne diseases.

### 3.3.1 Food handlers

- Staff should not handle food if suffering from illnesses such as fever, diarrhoea or vomiting.
- Cover wounds with waterproof dressing to prevent passing infective agents from the wounds to food.
- Wash hands properly before preparing food.
- Do not smoke while preparing or handling food.



### 3.3.2 Maintain a clean and hygienic kitchen



- Keep the kitchen clean and tidy.
- Clean the exhaust fan and range hood regularly.
- Keep worktops and floor in the kitchen clean and dry.
- Store eating utensils in a clean cupboard.
- Do not store personal items such as clothes and shoes in the kitchen.
- Cover garbage bins properly to avoid breeding of cockroaches, flies and rodents.

### 3.3.3 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.
- Do not buy ready-to-eat food or drinks that are displayed together with raw products.
- Do not buy food which looks, smells or tastes abnormal.
- Avoid unpasteurised dairy products like raw milk.
- Do not buy excessive food to avoid prolonged storage.



### 3.3.4 Food Preparation

- Wash food thoroughly and scrub with a brush when appropriate.
- Handle or store raw foods and cooked foods separately.
- Use separate knives and chopping boards for raw and cooked food to avoid cross-contamination.
- Discard the outer leaves of leafy vegetables and wash the vegetables thoroughly.
- Frozen meat or fish must be thawed completely before cooking.
- Cook food thoroughly before consumption.
- Sample food with a clean spoon, not with fingers.
- Consume food as soon as it is cooked.
- Do not prepare too much food at one time to avoid over-stocking.
- Cooked food taken out from the refrigerator should be reheated thoroughly before consumption.
- Do not touch cooked food with bare hands.



### 3.3.5 Food Storage

- Keep the storage place clean to avoid pest infestation.
- Store food in covered containers.
- Never leave perishable food at room temperature.
- Store perishable food in refrigerator immediately after purchase. Before refrigeration, pack the food into smaller portions if it is not intended for use in one go.
- Store raw meat at the bottom shelf of the fridge so that juices do not drip onto cooked food.
- Surplus food should preferably be disposed of or stored in the refrigerator. All leftovers should not be kept for more than 2 days.
- Make sure that the refrigerator is clean and functioning 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. The temperature of each refrigerator should be checked daily.
- Avoid overcrowding to allow adequate ventilation inside the refrigerator.
- Do not wrap food with newspaper, unclean paper or coloured plastic bags.

In summary, staff and residents should adopt safe food handling practice based on the '5 Keys to Food Safety' (**Appendix E**).

## 3.4 Vaccination

Vaccination should be arranged for residents and staff of RCHes according to the recommendations of the Department of Health (DH) to prevent them from acquiring vaccine-preventable communicable diseases and to minimise the risk of outbreak occurrence in RCHes.

### 3.4.1 Vaccination for residents

- Residents of RCHes may develop severe or even fatal complications when they suffer from influenza. DH offers free seasonal influenza vaccination to eligible residents of RCHes annually through the Residential Care Home Vaccination Programme. They are encouraged to receive seasonal influenza vaccination unless they have contraindications.
- Free pneumococcal vaccinations are also provided for those eligible residents who are aged 65 or above and have never received the vaccination before.

### 3.4.2 Vaccination for staff

- All staff in RCHes are offered free seasonal influenza vaccination annually through the Residential Care Home Vaccination Programme. Operators or home managers of RCHes should encourage the staff to receive seasonal influenza vaccination.
- For other vaccinations, please refer to the latest recommendations by DH.

# 4

## Infection control measures in RCHEs



Apart from general hygienic practice and vaccination, staff of RCHEs should also adopt appropriate precautions against communicable diseases. The measures fall under two main categories:

- Standard precautions – applicable to all staff and residents
- Transmission-based precautions – precautions based on the mode of transmission

In addition, isolation of residents with communicable diseases, urging visitors to comply with infection control advice and caring high-risk residents with greater caution will also help to minimise the chance of outbreak of communicable diseases in RCHEs.

## 4.1 Standard precautions

Standard precautions are designed to reduce the risk of transmission of infective agents from recognised or unrecognised sources of infection. They are based on the concepts that all blood, body fluids, secretions, excretions (except sweat) such as urine, faeces, saliva, sputum, vomitus, or secretions from wounds, as well as the non-intact skin such as wound and mucous membrane, should be treated as potentially infectious. Hence, every staff and resident should take appropriate protective measures when coming into contact with these potentially infectious sources.

These include:

- Hand hygiene
- Respiratory hygiene and cough manners
- Use of personal protective equipment (PPE)
- Environmental cleaning and disinfection
- Proper handling of used or contaminated equipment
- Proper handling of used or soiled linen
- Proper clinical waste disposal
- Proper handling of sharps

### 4.1.1 Hand hygiene

Please refer to **Section 3.1.1**

### 4.1.2 Respiratory hygiene and cough manners

Please refer to **Section 3.1.2**



### 4.1.3 Use of personal protective equipment (PPE)

To minimise the risk of infection or further transmission, staff should use appropriate PPE at work according to the risk of the nursing procedure and the physical condition of the resident so as to safeguard themselves and others. RCHES should stock up appropriate PPE. Please refer to the CHP website: <https://www.chp.gov.hk/en/static/32975.html>.

#### 入 IN

### 穿防護裝備 請跟次序

#### Donning PPE Step by Step

- 1  **潔手**  
Perform Hand Hygiene
- 2  **戴口罩 / N95口罩**  
Put on Mask / N95 Respirator \*  
\* 緊記密合性檢查  
Remember to Perform Seal Check
- 3  **戴護眼罩 / 全面罩及帽**  
Put on Eye Protection and Disposable Cap
- 4  **穿保護衣**  
Put on Gown
- 5  **戴手套**  
Put on Gloves

**注意：需視乎風險評估而選擇適當的防護裝備**  
N.B.: Selection of PPE should be based on risk assessment

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#### 出 OUT

### 除防護裝備 請跟次序

#### Doffing PPE Step by Step

- 1  **除手套**  
Remove Gloves
- 2  **潔手**  
Perform Hand Hygiene
- 3  **除保護衣**  
Remove Gown  
由內向外捲起  
Folding Inside Out
- 4  **潔手**  
Perform Hand Hygiene
- 5  **除帽及護眼罩 / 全面罩**  
Remove Disposable Cap and Eye Protection
- 6  **潔手**  
Perform Hand Hygiene
- 7  **除口罩 / N95口罩**  
Remove Mask / N95 Respirator
- 8  **再潔手**  
Perform Hand Hygiene AGAIN

**注意：請將即棄防護裝備棄置於有蓋廢物箱**  
N.B.: Disposable PPE should be properly discarded in dustbin with lid

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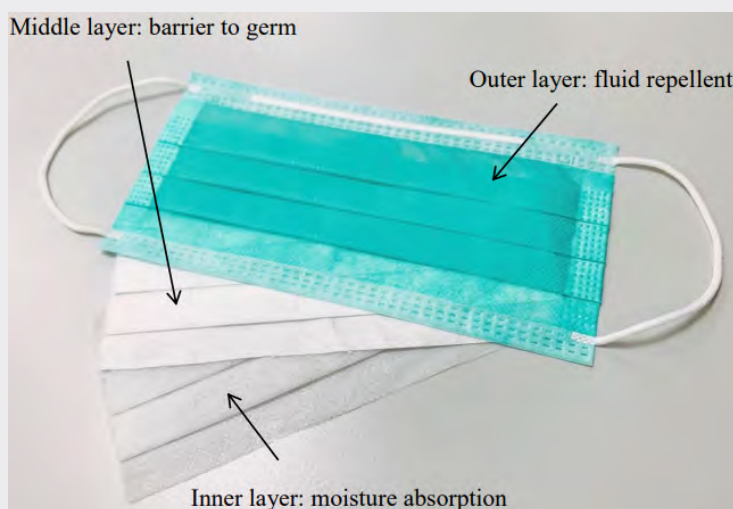
## A. Gloves

- Gloves should be worn when handling blood, body tissues, excreta, body fluids, secretions or any other contaminated wastes.
- Mucosa and wounds should only be touched after putting on gloves.
- Gloves contaminated by body secretions should be changed beforehand even though the same resident is being cared.
- Take off used gloves and perform hand hygiene immediately after taking care of residents so as to avoid transmission of infective agents to other residents or contamination of the environment in RCHes.
- Perform hand hygiene before wearing and after taking off gloves. Even though gloves are worn, hand hygiene can never be substituted.
- Discard used surgical or examination gloves. Do not wash or disinfect them for reuse.



## B. Surgical mask (also called facemask)

- Surgical masks can protect the mouth and nose from contamination by droplets via sneezing or coughing, blood spill, body fluids, secretions and excreta like sputum, urine or faeces during nursing procedures.
- Select three-layer designed surgical masks for infection control purpose.
- Encourage person with respiratory symptoms to wear surgical mask to reduce spread of droplets to surrounding area and other persons.
- Wear surgical mask when taking care of residents with respiratory symptoms.
- Wear surgical mask properly to ensure optimal protection.



### C. Protective gown

- Putting on clean and long-sleeved protective gowns can protect the skin and prevent clothes from contamination by respiratory droplets, blood spill, body fluids, secretions, urine or faeces during nursing procedures.
- Contaminated protective gown should be taken off carefully and hand hygiene should be performed immediately afterwards to avoid spread of infective agents.



### D. Goggles and face shield

- Put on goggles or face shield to enhance protection during anticipated splashing situations.



### E. Others

- Other PPE such as caps can protect hair from contamination by secretions during nursing procedures and hence minimise the risk of transmission of infective agents from the hair of the staff to other places.



## 4.1.4 Environmental cleaning and disinfection

Please refer to **Section 3.2**

## 4.1.5 Proper handling of used or contaminated equipment

- To avoid cross-infection within RCHes, all instruments or articles should be cleaned and disinfected thoroughly after use.
- Clean up all visible soils before disinfection.
- Wipe items such as electrical and electronic equipment with alcohol since they will be damaged by soaking in aqueous solution.
- Ensure the disinfectant reaches all surfaces, including internal surfaces of lumens.
- Replace articles with disposable items when they cannot be cleaned or disinfected properly.

- If stained with large amount of blood, clean up the visible matter with strong absorbent disposable material, then disinfect with 1 in 4 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water) and leave for 10 minutes, then rinse with water and keep dry.
- Please refer to **Appendix F** for cleaning and disinfection of articles commonly used in RCHES.

#### 4.1.6 Proper handling of used or soiled linen

- Infective agents can be transmitted through contact with linen. Therefore, all linen should be washed thoroughly after use.
- Appropriate PPE (e.g. gloves, surgical masks, and if appropriate, disposable gowns or aprons) should be used during the process of handling.
- Cleaning procedures include removal of stains with detergent, rinsing with water, drying, ironing and storage in clean and dry cabinets.
- Soiled linen should be handled separately. Solid and bulky waste should be cautiously removed first, then immerse in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes before routine treatment.

#### 4.1.7 Proper clinical waste disposal

- Separate clinical waste from domestic waste. Clinical waste includes used needles and gauze dribbling with blood, caked with blood or containing free-flow blood, etc.
- Pack and label clinical waste properly in colour-coded bags with biohazard signs.
- Wear gloves before handling clinical waste and wash hands thoroughly afterwards.
- Store clinical waste securely before collected by licensed clinical waste collector.
- Avoid prolonged storage of clinical waste. Whenever there is a substantial amount of clinical wastes and sharps for disposal, contact the clinical waste collector for collection.
- Keep a record of the clinical waste consigned.

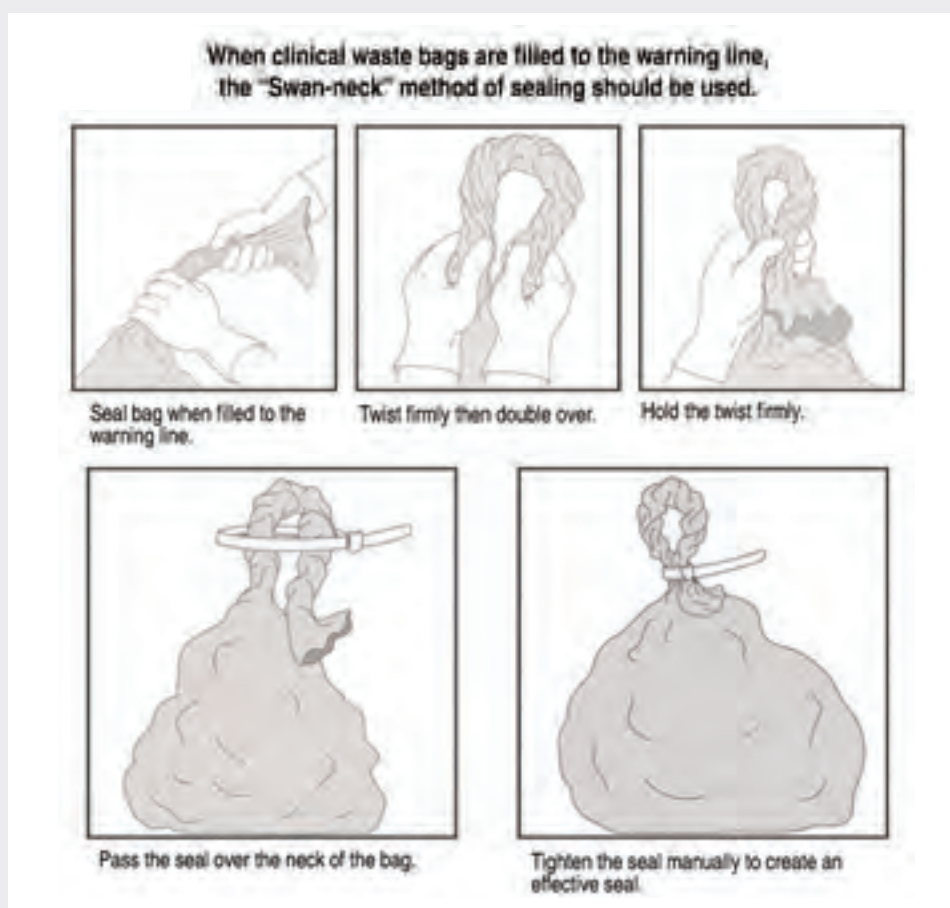




Please refer to the *Code of Practice for the Management of Clinical Waste for Small Clinical Waste Producers* by the Environmental Protection Department for details to comply with the legal requirements of the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Clinical Waste) (General) Regulation and any future amendment. If in doubt, please contact the Clinical Waste Control Section, Territorial Control Office of the Environmental Protection Department at 2835 1055 or visit the Environmental Protection Department website at: <https://www.epd.gov.hk/epd/clinicalwaste/en/index.html>.

### 4.1.8 Proper handling of sharps

- Take extra care when disposing of sharps.
- Do not recap used needles. If recapping is necessary, use recapping aids to avoid being pricked by contaminated needles.
- Syringes and sharps must be disposed of in a puncture-proof and spill-proof container labelled 'Biohazard' on the outside.
- Take note of the capacity of the sharp box. While mandatory daily disposal of sharp boxes is not necessary, a sharp box should not be overloaded and should be disposed of properly when it is 70% to 80% full.
- Keep sharp boxes clean and dry.
- Seal the sharp box and dispose in a well-fastened robust plastic bag by using 'swan-neck' sealing method with a warning sign reading 'Biohazard' or 'Beware of Sharps' to alert others during disposal.



- For the management of needlestick injury, please refer to the updated CHP guideline – *Recommendations on the Management and Postexposure Prophylaxis of Needlestick Injury or Mucosal Contact to HBV, HCV and HIV*. The key management involves provision of first aid, establishment of reporting mechanism, referral for proper risk assessment, counselling and postexposure prophylaxis as appropriate.
- Points to note for first aid following needlestick injury, regardless of whether or not the source is known to pose a risk of infection:

- The wound should be washed immediately and thoroughly with liquid soap and water.
- Antiseptics are not necessary as there is no evidence of their efficacy.
- Wounds should not be sucked.
- The exposed staff should then seek medical advice for proper wound care and postexposure management.



## 4.2 Transmission-based precautions

In addition to general hygiene practices, vaccination and standard precautions, additional precautions should be adopted when dealing with diseases with different modes of transmission. Some diseases can be transmitted by more than one mode. To prevent the spread of such diseases, combined precautions should be considered.

### 4.2.1 Contact precautions

- Keep both hands clean and perform hand hygiene properly.
- Use of PPE depends on the nature of contact.
- Clean and disinfect items used by residents properly.
- Increase the frequency of environmental cleaning and disinfect all frequently touched surfaces.
- Do not share towels and other personal items.
- Adopt proper isolation measures.



### 4.2.2 Droplet precautions

- Maintain good indoor ventilation.
- Cover mouth and nose with tissue paper when sneezing or coughing.
- Dispose of soiled tissue paper in a garbage bin with lid or flush them away in the toilet.
- Keep both hands clean. Perform hand hygiene properly and immediately after contact with residents or handling respiratory secretions.
- Wear surgical masks if residents, staff and visitors have respiratory symptoms.
- Keep a distance of at least 1 metre from the sick resident or use partitioned barrier to separate from the bed of sick resident.
- Increase the frequency of environmental cleaning and disinfect all frequently touched surfaces.
- Adopt proper isolation measures.
- Use appropriate PPE when necessary.

### 4.2.3 Airborne precautions

- Identify persons with airborne infection and arrange prompt medical consultation.
- Residents with active airborne diseases need to stay in hospital for management. Residents with tuberculosis under treatment and with negative smear may be cared in RCHes.
- Maintain good indoor ventilation.
- Cover mouth and nose with tissue paper when sneezing or coughing.
- Dispose of soiled tissue paper in a garbage bin with lid or flush them away in the toilet.
- Keep both hands clean. Perform hand hygiene properly and immediately after contact with residents or handling respiratory secretions.
- Wear surgical masks if residents, staff and visitors have respiratory symptoms.
- Adopt proper isolation measures.

## 4.3 Isolation measures

If a resident is suspected to have a communicable disease, he or she should be temporarily isolated and medical consultation should be arranged promptly. Infection control measures should be strictly implemented so as to protect uninfected residents, staff and visitors and to stop the spread of the communicable disease. Isolation measures include:

- Reserve some quiet, separate designated area or rooms in the RCHEs for caring those residents showing respiratory symptoms or infected with communicable diseases.
- Carers should attend to both the physical and psychological needs of the isolated resident as much as possible.
- Staff should take appropriate protective measures including hand hygiene, wearing surgical mask and the use of other suitable PPE when entering the designated area or rooms.
- The separate designated area or rooms for isolation should be available at any time and should not be used for any other purpose.

If a resident is confirmed or suspected of SARS or other serious communicable diseases, DH staff will help the RCHE to delineate 'high risk' and 'low risk' zones and draw up working procedures. For details, please follow the instruction of DH staff.

## 4.4 Advice for visitors

Visitors should be advised to comply with infection control measures so as to prevent the spread of the disease as follows:

- Advise visitors to pay attention to their personal health conditions. They should not visit the RCHE to avoid the spread of the disease to residents if having fever, respiratory symptoms, influenza or COVID-19.
- Advise visitors to wear surgical masks during visits.
- Visitors should comply with the request of the RCHE by filling out the visiting dates and other information required for the necessary follow-up by DH.
- Wash hands thoroughly with liquid soap or use alcohol-based handrub before and after visits.
- Advise visitors to take infection control measures, including wearing surgical masks, or wearing appropriate PPE as recommended in accordance with the condition of the elders being visited.
- Maintain respiratory hygiene and cough manners.
- If outbreaks occur or advised by DH, visitors should avoid visiting the RCHE to prevent cross-infection. If necessary, other means such as telephone calls can be used to contact the residents.

## 4.5 Infection control measures for specific groups of residents

In addition to standard precautions and transmission-based precautions mentioned above, RCHes should implement the following infection control measures for specific groups of residents.

### 4.5.1 Prevention of urinary catheter-associated infection

- The urinary catheter should be changed by qualified and experienced healthcare professional.
- Perform hand hygiene thoroughly before and after the insertion of the catheter.
- Residents without medical contraindications should be encouraged to drink plenty of water to help dilute the urine and optimise the urine flow required for irrigation of the catheter.
- Check if the resident has cloudy and smelly urine, malaise or fever. If so, seek medical consultation promptly.
- Keep the urine bag clean and change it as required. Monitor the urine output and record on need basis.
- Empty the urine bag regularly by using a clean and separate collecting container for each resident or disinfect the container after every use.
- Prevent kinking or sagging of urinary catheter to ensure free flow of urine.
- Observe the height of the urine bag at any time, especially when helping the resident to change positions. The urine bag should always be placed below the level of the bladder to avoid reflux which may lead to urinary tract infection.
- Do not allow the outlet of urine bag touching the floor.
- Do not disconnect the urine bag from the catheter. If deemed necessary, perform hand hygiene and disinfect the connection part with alcohol swab before disconnection and after reconnection.
- Use liquid soap and water for daily cleansing of urethral opening and removing debris from the surface of urinary catheter during bathing or showering.

### 4.5.2 Prevention of aspiration pneumonia associated with nasogastric tube feeding

- Observe proper feeding procedures and in particular the position of the resident during feeding (for example, bed-bound residents should be propped at a sitting angle of at least 30°).
- Make sure that the nasogastric tube goes into the stomach.
- Pay attention to the cleaning method of the feeding set, the temperature of the food and safe positioning of the feeding syringe or funnel.
- The nasogastric tube should be changed regularly by qualified and experienced healthcare professional. After each feed, the feeding set, such as feeding bag, feeding funnel and connecting tube should be flushed with water and air dried separately for each resident before putting into a clean covered container for the next use. The feeding funnel should be disinfected daily by boiling for 10 minutes. The feeding bag and connecting tube should be disposed daily (**Appendix F**).
- Each resident should have separate feeding sets and feeding equipment such as feeding syringe.
- All items should be thoroughly cleaned after use and kept in clean covered containers.
- Observe oral and nasal hygiene. Oral cavity should be cleansed at least three times a day with visual checking.

### 4.5.3 Prevention of pressure ulcer and wound infection

- Help residents to keep their skin and clothing clean and dry. Avoid prolonged skin contact with sweat, urine or faeces which will cause skin lesions and infection.
- Help bed-bound residents to maintain correct postures to minimise the risk of pressure ulcer.
- Apply proper techniques in lifting and transfer as well as proper positioning so as to avoid the development of pressure ulcer.
- Help bed-bound residents to change posture at least once every two hours. When helping the resident change positions, avoid rubbing or bumping his or her body against the bed.
- Consider using pressure-reducing aids, such as cushioned mattress for bed-bound residents.
- Wear gloves when taking care of wounds. Observe aseptic technique. Wash hands afterwards.
- Encourage regular exercise to enhance mobility and improve blood circulation.

#### 4.5.4 Prevention of infection for residents with cognitive impairment

Residents suffering from cognitive impairment such as dementia, stroke or other brain lesions may develop difficulties in comprehension, expression and self-care. They may not cooperate with staff in implementing infection control measures or meeting the requirements of such measures.

- For residents who retain certain degree of cognition, staff can guide them to adopt good personal hygiene to prevent infection.
- For residents with serious cognitive impairment, staff should pay extra attention and do the cleaning for them so as to ensure proper personal and environmental hygiene.

#### 4.5.5 Care of residents newly discharged from hospitals

- Staff should help residents newly discharged from hospitals to wash their hair, bathe and change their clothes as soon as possible.
- Pay extra attention to their health conditions. Residents with respiratory symptoms should wear surgical masks.
- Measure their body temperature more frequently for the first few days.
- Newly recovered residents, e.g. after scabies or norovirus infection, should stringently observe personal hygiene.

#### 4.5.6 Care of multi-drug resistant organism (MDRO) carriers

MDROs can be carried in asymptomatic persons for months or even years. Immunocompromised or critically-ill persons are more prone to be colonised and infected. MDROs are transmitted by contact with excreta, wounds, secretions of infected residents or contaminated objects and environment surfaces.

Apart from standard precautions, risk assessments should be performed to decide whether modified contact precautions should be implemented during caring of MDRO carriers.

For details, please refer to **Appendix G**.

# 5

## Outbreak of communicable disease



### 5.1 What does an outbreak of communicable disease mean?

From the epidemiological point of view, an outbreak occurs if the residents or staff in a RCHE develop similar symptoms one after another and the incidence rate is higher than that at ordinary times. A common example is the influenza outbreaks which have seasonal peaks in winter (January to March) and summer (July and August), while sporadic cases occur at other times.

The Infection Control Officers (ICOs) of RCHEs should monitor the health condition of residents and staff for any evidence of suspected outbreaks. Some examples are cited below for reference:

- The residents living in the same room or on the same floor develop similar symptoms in clusters within short period of time.
- The residents and staff concurrently develop similar symptoms in clusters, such as symptoms of influenza (fever, cough and sore throat). This means that cross-infection may have occurred in the RCHE.



- Two or more people develop similar symptoms after eating common food items. This means that a cluster of food poisoning may have occurred. The infective agent may be bacteria, viruses or toxins contained in the food.
- A single case of communicable disease may sometimes be treated as an outbreak. For example, a new disease unprecedented in the past or a situation which has major impact on public health such as avian influenza A (H5N1) in 1997 and SARS in 2003.

## 5.2 What should be done if an outbreak is suspected?

Early detection of occurrence of communicable disease is essential to the prevention of its spread. For such purpose, all healthcare workers, including the ICOs and other staff in the RCHes, should be responsible for close monitoring of the physical conditions of the residents to enable early detection of communicable diseases, particularly the statutory notifiable infectious diseases, and notify the relevant parties according to **Appendix H** as soon as possible so that control measures can be implemented promptly.

## 5.3 Is notification only applicable to confirmed cases of statutory notifiable communicable diseases?

In Hong Kong, all registered medical practitioners are required to notify the CENO of CHP of all suspected or confirmed cases of statutory notifiable infectious diseases in accordance with the Prevention and Control of Disease Ordinance (Cap. 599) (**Appendix I**). The ICO of RCHE should contact the attending doctor of the infected resident if there is query about the resident's condition.

Furthermore, under Section 18 of the Residential Care Homes (Elderly Persons) Regulation (Cap. 459A), the home managers of RCHes are required to report to the Director of Social Welfare (via LORCHE) of any suspected or confirmed cases of the statutory notifiable infectious diseases among the residents and staff of RCHes.

Apart from statutory notifiable infectious diseases, CHP also encourages RCHes to report suspected institutional outbreak of infectious diseases for investigation and recommendation of appropriate control measures. The LORCHE of SWD and the CGAT of HA (if applicable) should also be informed. Common examples of institutional outbreaks in RCHes include respiratory tract infections, acute gastroenteritis and scabies.

The notification form of suspected infectious disease outbreak in RCHEs is shown in **Appendix J**. Additional information for the investigation is listed in **Appendix K**.

## 5.4 General guidelines on management of suspected outbreak of communicable disease

- Isolate the suspected resident(s) properly.
- Arrange early medical treatment. Alert the attending health care providers of the occurrence of an outbreak in the RCHE.
- Keep proper medical records of residents to facilitate early detection of cases and prompt management.
- Reinforce the practice of standard precautions and additional precautions according to the mode of transmission of the communicable disease.
- Increase the frequency of environmental cleaning and disinfection. (**Section 5.5**)
- Notify relevant parties according to the established procedures for prompt investigation and implementation of control measures (**Section 5.3**). Please refer to the flow chart of the notification mechanism for communicable diseases in **Appendix H**.
- Inform the relatives, guarantors or guardians of the residents.
- Residents falling sick should avoid participating in group activities.
- Staff falling sick should refrain from work till fully recovered.
- Minimise contact between residents and staff of different floors to avoid cross-infection, and arrange staff of the same team to take care of a fixed group of residents as far as possible in preparation of the shift roster.
- In general, visit to the affected RCHE is discouraged. If visiting is necessary, personal hygiene should be strictly observed.

## 5.5 Cleaning and disinfection during outbreaks of communicable disease

- Increase the frequency of environmental cleaning and disinfection.
- Disinfect furniture, floors and toilets with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water). Special attention should be paid to the disinfection of toilets, kitchens and objects which are frequently touched such as light switches, door knobs and handrails.
- Use strong absorbent disposable materials to preliminarily clean up surfaces contaminated with vomitus or excreta before performing the above disinfection procedure.
- Avoid using household bleach on metal surfaces since it contains sodium hypochlorite which is corrosive to metal. Use 70% alcohol if disinfection of metal surfaces is required.

## 5.6 Specific recommendations on management of selected communicable diseases

### 5.6.1 Outbreak of respiratory tract infection

- Notify relevant parties by filling in and faxing the notification form (**Appendix J**) if there are increased numbers of residents and/or staff with respiratory symptoms such as cough, sore throat, runny nose and fever.
- Provide names of people suspected to be infected and details of their medical records as advised by the CHP of DH for investigation.
- The RCHE should implement standard precautions and additional droplet precautions.
- Reinforce stringent hand hygiene, respiratory hygiene and cough manners among the residents and staff.
- Improve indoor ventilation by switching on exhaust fans and opening windows, if possible.
- Infected residents not admitted to hospitals should wear surgical masks and be relocated to the same designated area or room for isolation as far as possible.



- Group activities should be suspended during the outbreak period.
- Sick staff should refrain from work till fully recovered.
- Minimise staff movement, arrange the same group of staff to take care of the same group of residents as far as possible and provide them with appropriate PPE.
- Enhance health surveillance for other residents like measuring body temperature.
- Depending on the situation, the DH will consider giving vaccination to staff and residents who have not yet received seasonal influenza vaccination as well as distributing prophylactic medicines against seasonal influenza.

## 5.6.2 Outbreak of scabies

- Notify relevant parties by filling in and faxing the notification form (**Appendix J**) if there is a cluster of residents and/or staff with symptoms of scabies such as intensive itchiness.
- Provide names of people suspected to be infected and details of their medical records as advised by the CHP of DH for investigation.
- Thoroughly trace the infected cases and the contacts (including staff, relatives or visitors) and arrange proper medical treatment for them.
- Implement contact precautions and preferably isolate the infected residents until treatment has been completed.
- Clothing and linen of infected persons should be handled separately and ensure that high temperature disinfection procedures are performed properly to kill the mites and eggs (**Appendix L**).
- Staff should put on protective gowns and gloves before touching infected residents under treatment and should wash their hands thoroughly after taking off the protective gowns and gloves.
- Instruct and supervise staff on the proper way to use and apply anti-scabies medication following doctor's instruction.
- Staff should regularly and repeatedly check the skin condition of both the infected residents and other residents, and seek medical advice if any suspected case is found.

### 5.6.3 Outbreak of acute gastroenteritis

- Notify relevant parties by filling in and faxing the notification form (**Appendix J**) if there are increased numbers of residents and/or staff with gastrointestinal symptoms such as vomiting and diarrhoea.
- Provide names of people suspected to be infected and details of their medical records as advised by the CHP of DH for investigation.
- For acute gastroenteritis caused by norovirus, please refer to **Appendix M**.
- Reinforce good personal, food and environmental hygiene in the RCHE.
- Disinfect articles or places soiled by excreta or vomitus.
- Clean and disinfect commodes and toilets with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water).
- Save stool specimens for investigation as advised by the CHP of DH.
- Infected staff, especially food handlers, should refrain from work till fully recovered.

### 5.6.4 Food poisoning

- Notify relevant parties by filling in and faxing the notification form (**Appendix J**) if there are two or more persons developing similar symptoms such as vomiting, diarrhoea and abdominal pain after eating common food items.
- Provide names of people suspected to be infected, details of their medical records, and the food menus as advised by the CHP of DH for investigation.
- Save food remnants and stool specimens for investigation as advised by the CHP of DH.
- Disinfect articles or places soiled by excreta or vomitus.
- Clean and disinfect commodes and toilets with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water).
- Reinforce good personal, food and environmental hygiene in the RCHE.
- Maintain a hygienic environment in the kitchen and make sure that the refrigerator works properly.
- Infected staff, especially food handlers, should refrain from work till fully recovered.

# 6

## Role of RCHE staff



### 6.1 Responsibilities of operators and home managers of RCHEs

- The RCHE operator should appoint either a nurse or a health worker (or for a self-care hostel, the home manager who has received infection control training) as an ICO who is the key person responsible for dealing with matters related to infection control and prevention of the spread of infectious diseases in the RCHE. ICO should receive regular infection control training.
- The home manager should report suspected or confirmed cases of statutory notifiable communicable diseases among the residents or staff of the RCHE to the Director of Social Welfare (via LORCHE).
- For the suspected outbreaks of communicable diseases, the CENO of CHP, the LORCHE of SWD and the CGAT of HA (if applicable) should also be informed.



- The home manager should ensure that infection control standard is maintained and oversee the compliance and implementation of the infection control guidelines including:
  - Maintain personal, environmental and food hygiene;
  - Provide the necessary PPE, advise and supervise staff on the proper application and disposal of PPE;
  - Ensure the provision of adequate hand hygiene and other infection control facilities and equipment in the RCHE;
  - Keep proper personal health records for every resident. Body temperature should be checked regularly and recorded;
  - Keep the sick leave records of staff;
  - Arrange prompt medical consultation by the CGAT or the VMO or other doctors if an individual resident is suspected to have communicable disease;
  - Set up an area or room with good ventilation, waste disposal and hand washing facilities for isolation to prevent the spread of infection;
  - Set up rules for visitors and encourage compliance;
  - Encourage residents and staff to receive seasonal influenza vaccination and other vaccinations provided by DH;
  - Arrange regular training on infection control for staff including knowledge, practical care skills and non-discriminative positive attitude;
  - Assess the risk of infectious disease outbreak in the RCHE, regularly review and devise strategies to prevent infectious disease outbreaks through consultation with the CGAT, VMO, and the staff of DH.

## 6.2 Duties of Infection Control Officers (ICOs)

The responsibilities of ICO include:

- Coordinate and oversee all matters related to infection control and the prevention of infectious diseases in the RCHE;
- Disseminate updated information and guidelines on infection control to all staff and residents in the RCHE and to orientate new staff to the updated information;
- Assist the home manager in arranging training on infection control for staff;
- Assist the home manager in overseeing that the infection control guidelines are being observed and implemented properly, including the observation of personal, environmental and food hygiene;

- Oversee that all medical equipment and other instruments are properly disinfected after use, and soiled linen and wastes are properly handled and disposed of;
- Assist the home manager in arranging the provision of the necessary PPE and advise and supervise staff on the proper application and disposal of PPE;
- Observe for signs and symptoms of infectious diseases (such as unusual clustering of fever, upper respiratory tract infection or gastrointestinal symptoms) in residents and staff; assist the home manager to report cases/ outbreak or suspected cases/outbreaks of infectious diseases to the LORCHE of SWD and the CENO of CHP as appropriate; if the RCHE is covered by the CGAT, CGAT should also be informed; provide information as necessary to CHP to facilitate investigation; and collaborate with CHP to contain the spread of the infectious disease;
- Isolate the infected resident according to the instruction of the in-charge doctor to prevent the spread of infection; and
- Assist the home manager in assessing the risk of infectious disease outbreak in the RCHE; regularly review and devise strategies to prevent infectious disease outbreaks through consultation with the home manager, CGAT, VMO and the staff of DH.

## 6.3 Useful telephone numbers

### 6.3.1 Report of suspected outbreak to the Department of Health

#### **Central Notification Office (CENO) of Centre for Health Protection (CHP)**

Telephone No.: 2477 2772

Fax No.: 2477 2770

### 6.3.2 Other support and enquiry telephone numbers

#### **Department of Health**

Elderly Health Service, Department of Health

Elderly Health Service information hotline: 2121 8080

## Telephone numbers of Visiting Health Teams under Elderly Health Service

Operating hours: Monday to Friday: 8:30 am to 1:00 pm

2:00 pm to 5:30 pm

Visiting Health Team	Telephone No.
Central and Western District Visiting Health Team	2816 6555
Eastern District Visiting Health Team	2569 6464
Wan Chai District Visiting Health Team	2891 4443
Southern District Visiting Health Team	2817 1584
Shamshuipo District Visiting Health Team	2779 9389
Kwun Tong District Visiting Health Team	2750 5665
Yau Tsim Mong District Visiting Health Team	2243 3635
Wong Tai Sin District Visiting Health Team	2383 2109
Kowloon City District Visiting Health Team	2383 2053
Shatin District Visiting Health Team	2145 8972
North District Visiting Health Team	2671 6745
Sai Kung District Visiting Health Team	2623 7980
Tai Po District Visiting Health Team	2671 6745
Islands District Visiting Health Team	2816 6555
Tsuen Wan District Visiting Health Team	2439 5806
Tuen Mun District Visiting Health Team	2458 0417
Kwai Tsing District Visiting Health Team	2439 5806
Yuen Long District Visiting Health Team	2458 0417

## **Food and Environmental Hygiene Department**

Hotline: 2868 0000

## **Environmental Protection Department**

Territorial Control Office: 2835 1055

## **Social Welfare Department**

Licensing Office of Residential Care Homes for the Elderly (LORCHE):

Telephone No.: 3184 0729 / 2834 7414

Fax: 3106 3058 / 2574 4176

Enquiry Time: Monday to Friday: 8:45 am to 1:00 pm

2:00 pm to 6:00 pm

## Hospital Authority (HA)

Enquiry hotline: 2300 6555

### Hospital Authority Community Geriatric Assessment Teams (CGATs)

Hospital	Telephone No.
Tung Wah Group of Hospitals Fung Yiu King Hospital	2855 6144
Ruttonjee & Tang Shiu Kin Hospitals	2291 1337
Caritas Medical Centre	3408 7871
Haven of Hope Hospital	2703 8632
Kowloon Hospital	3129 7818
Queen Elizabeth Hospital	2332 4317
Kwong Wah Hospital	3517 5026 / 3517 5456
United Christian Hospital	2379 5154
Princess Margaret Hospital	2749 8212
Yan Chai Hospital	2749 8212
Prince of Wales Hospital	2632 3643
Alice Ho Miu Ling Nethersole Hospital	2689 2777
North District Hospital	2683 7729
Tuen Mun Hospital	2468 5801
North Lantau Hospital	3467 7248



## Hospital Authority Community Nursing Services (CNS)

Hospital Cluster	Centre Name	Tel No.	Fax No.
<b>Hong Kong East Cluster</b>	Wan Chai CNS Centre	2893 0184	2836 5807
	Causeway Bay CNS Centre	3553 3228	2153 9617
	North Point CNS Centre	2563 3615	2960 1498
	Shaukeiwan CNS Centre	2595 6869	2515 2686
	Chai Wan CNS Centre	2558 7929	2515 9289
	Chai Wan Yue Wan & Tsui Wan Estate Community Nursing Center	2556 1676	2556 7319
	St. John Hospital CNS Centre	2981 9511	2986 9323
<b>Hong Kong West Cluster</b>	Aberdeen CNS Centre	2553 6849	2552 2326
	Tsan Yuk CNS Centre	2589 2280	2549 8474
	Wah Fu Community Centre	2550 8511	2875 0966
<b>Kowloon Central Cluster</b>	Queen Elizabeth Hospital CNS Referring Station	2958 8425	2374 5897
	Community Nursing Centre (Oi Man Estate) - Sub-Centre	2597 5166	2761 4258
	Kowloon Hospital CNS Centre - Main Centre	3129 6969	2761 4258
<b>Kowloon East Cluster</b>	Kowloon East Cluster CNS Headquarter	2340 0815 / 3949 4517	2349 6616
	Sau Mau Ping CNS Sub-Office	3949 4616	2709 0651
	Lam Tin CNS Sub-Office	2349 7671	2348 1657
	Ngau Tau Kok CNS Sub-Office	2344 2418	2357 9075
	Tseung Kwan O CNS Centre	2208 0880	2706 0514
	Tiu Keng Leng CNS (Sub-Office)	2701 0806	2701 0810
<b>Kowloon West Cluster</b>	Caritas Medical Centre Main Centre	3408 7701	2745 8301
	Shek Kip Mei Sub-Centre	2777 4611	2788 4235
	Fu Cheong Community Nursing Centre	2267 4455	2267 4135

Hospital Cluster	Centre Name	Tel No.	Fax No.
<b>Kowloon West Cluster</b>	Kwong Wah Hospital CNS Centre	3517 5187 / 3517 2762	3517 5188
	Princess Margaret Hospital CNS Liaison Office	2990 3206	2990 3482
	Princess Margaret Hospital CNS Centre	2741 4317 / 2614 1732	2741 7491
	Tsing Yi CNS Centre	2497 1791 / 2497 1467	2431 0108
	Tsuen Wan CNS Centre	2614 5169 / 2417 8955	3145 1327
	Kwai Chung Community Nursing Service Centre	2428 3433	2428 3717
	Our Lady Maryknoll Hospital CNS Centre	2354 2222	2354 9867
	North Lantau Hospital CNS Centre	3467 7248	3467 7249
<b>New Territories East Cluster</b>	Alice Ho Miu Ling Nethersole Hospital Community Outreach Services Team (CNS Centre)	2689 2777	2666 9404
	North District Hospital Community Outreach Services Team (CNS Centre)	2683 7742	2683 7743
	Prince of Wales Hospital Community Outreach Services Team (CNS Centre)	2632 3656	2632 4689
<b>New Territories West Cluster</b>	Tuen Mun CNS Main Centre	3511 1189 / 3511 1183	3511 1190
	Yuen Long CNS Main Centre	2486 8414 / 2486 8417	2475 9642
	Yuen Long Yung Fung Shee Clinic CNS Centre	2443 4206	3193 4387
	Tin Shui Wai Community Health Centre (Tin Yip Road) CNS Centre	3124 2242 / 3124 2241	3124 2243

Hospital Cluster	Centre Name	Tel No.	Fax No.
<b>New Territories West Cluster</b>	Tin Shui Wai Clinic Community Nursing Service Centre	2617 0895	2617 5943
	Neighbourhood Advice-action Council (Shan King) CNS Centre	3511 1183	3511 1190
	Pok Oi Hospital Board (Leung King) Community Nursing Service Centre	2466 3685	2466 5954
	CCTA Rev. Hau Po Woon (Tin Tsz) CNS Centre	2446 9130	2446 3075
	Shui Pin Wai CNS Centre	2442 0247 / 2475 8300	2449 3247
	Tuen Mun Hospital CNS Liaison Office	2468 5713 Pager: 7116 3228 - 3878	2453 2317
	Pok Oi Hospital CNS Liaison Office	2486 8414 Pager: 7327 8308	2443 5745

## 6.4 Useful websites

Organisation	Website
Department of Health	<a href="http://www.dh.gov.hk">http://www.dh.gov.hk</a>
Centre for Health Protection	<a href="http://www.chp.gov.hk">http://www.chp.gov.hk</a>
Central Notification Office (CENO)	<a href="http://www.chp.gov.hk/ceno">http://www.chp.gov.hk/ceno</a>
Elderly Health Service	<a href="http://www.elderly.gov.hk">http://www.elderly.gov.hk</a>
Central Health Education Unit	<a href="http://www.cheu.gov.hk">http://www.cheu.gov.hk</a>
Environmental Protection Department	<a href="http://www.epd.gov.hk">http://www.epd.gov.hk</a>
Food and Environmental Hygiene Department	<a href="http://www.fehd.gov.hk">http://www.fehd.gov.hk</a>
Hospital Authority	<a href="http://www.ha.org.hk">http://www.ha.org.hk</a>
Social Welfare Department	<a href="http://www.swd.gov.hk">http://www.swd.gov.hk</a>
Centers for Disease Control and Prevention	<a href="http://www.cdc.gov">http://www.cdc.gov</a>
World Health Organization	<a href="http://www.who.int">http://www.who.int</a>

# Appendix



## Appendix A

### Checklist on signs and symptoms of communicable diseases

A. General signs and symptoms	
Fever or body temperature 1°C or more above baseline	<input type="checkbox"/>
Malaise	<input type="checkbox"/>
Headache	<input type="checkbox"/>
Loss of appetite and/or unexplained weight loss	<input type="checkbox"/>
Confusion, drowsiness, feeling irritable and restless	<input type="checkbox"/>
Sudden change in body functioning, e.g. increased fragility or fall for unknown reason	<input type="checkbox"/>
Red eye	<input type="checkbox"/>
B. Cardiorespiratory signs and symptoms	
Runny nose, sneezing	<input type="checkbox"/>
Sore throat	<input type="checkbox"/>
Cough	<input type="checkbox"/>
Increased sputum production	<input type="checkbox"/>
Blood stained sputum	<input type="checkbox"/>
Shortness of breath	<input type="checkbox"/>
Chest pain on breathing	<input type="checkbox"/>
Lowered blood pressure, i.e. systolic pressure below 90mmHg	<input type="checkbox"/>
Increased heart rate	<input type="checkbox"/>

<b>C. Abdominal signs and symptoms</b>	
Abdominal pain	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>
Diarrhoea	<input type="checkbox"/>
<b>D. Urinary signs and symptoms</b>	
Urination: difficult, painful, frequent, sudden onset of incontinence	<input type="checkbox"/>
Urine: cloudy urine, blood in urine	<input type="checkbox"/>
<b>E. Skin signs and symptoms</b>	
Sudden onset of skin itchiness	<input type="checkbox"/>
Rash	<input type="checkbox"/>
Local symptoms of skin reddening, swelling, hotness or pain	<input type="checkbox"/>
Wound with pus draining or bad smell	<input type="checkbox"/>



## Appendix B

## Daily record of febrile residents

[illegible]

# Appendix C

## Characteristics of recommended disinfectants

Name	Concentration	Usage	Properties
<b>Sodium Hypochlorite</b> e.g. household bleach containing 5.25% sodium hypochlorite	<ul style="list-style-type: none"> <li>• 1% (10,000 ppm) Dilution ratio 1 in 4</li> <li>• 0.1% (1,000 ppm) Dilution ratio 1 in 49</li> <li>• 0.05% (500 ppm) Dilution ratio 1 in 99</li> </ul> <p>Please refer to <b>Appendix D</b> for preparation and use of bleach</p>	Environmental or equipment disinfection	<ul style="list-style-type: none"> <li>• Mix with water</li> <li>• Corrosive to metals</li> <li>• Avoid contact with skin or mucous membrane</li> <li>• Liberate toxic gas when contact with acids or expose to sunlight</li> <li>• Diluted solution decomposes rapidly and its effectiveness will decrease</li> <li>• Diluted bleach should be used within 24 hours</li> </ul>
<b>Alcohols</b> e.g. ethyl alcohol, isopropyl alcohol	<ul style="list-style-type: none"> <li>• 70%</li> </ul>	Skin, metal surface or equipment disinfection	<ul style="list-style-type: none"> <li>• Inflammable liquid must be stored away from high temperatures or flames</li> <li>• Rapid action but volatile</li> <li>• Poor penetration into organic matter</li> </ul>

# Appendix D

## Preparation and use of bleach

### Preparation

1. Ensure and be aware of good ventilation when diluting or using bleach.
2. Put on appropriate PPE when diluting or using bleach as it irritates mucous membranes, the skin and the airway.
3. Cold water should be used for dilution as hot water decomposes the active ingredient of bleach and renders it ineffective.
4. For accurate measurement of the amount of bleach added, measuring cup should be used.
5. Household bleach containing 5.25% sodium hypochlorite should be diluted as follows:



### *Recommended use of sodium hypochlorite*

Dilution ratio	Concentration	Dilution method	Usage
1 in 4	10,000 ppm (1%)	1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water	For surfaces or articles contaminated with blood
1 in 49	1,000 ppm (0.1%)	1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water	For surfaces or articles contaminated with vomitus, excreta or secretions
1 in 99	500 ppm (0.05%)	1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water	For general environmental cleaning

## Precautions

- Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
- Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.
- Bleach should not be used together or mixed with other household detergents as this reduces its effectiveness in disinfection and causes chemical reactions. It can result in accidents and injuries as a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. Use detergents first and rinse thoroughly with water before using bleach for disinfection if necessary.
- As undiluted bleach liberates a toxic gas when exposed to sunlight, it should be stored in place that is cool, shaded and out of reach of residents.
- Sodium hypochlorite decomposes with time. To ensure its effectiveness, it is advised to purchase recently produced bleach and avoid over-stocking.
- For effective disinfection, diluted bleach should be used within 24 hours after preparation as decomposition increases with time if left unused.



# Appendix E

## Five keys to food safety

### 1. Choose: Choose safe raw materials

- Choose fresh and wholesome food
- Do not buy damaged, swollen or rusty cans
- Do not use food after its expiry date
- Use safe water to prepare food
- Choose foods processed for safety, such as pasteurised milk

### 2. Clean: Keep hands and utensils clean

- Maintain good hand hygiene by washing hands with soap for 20 seconds before handling and preparing food
- Wash utensils and worktops with hot water and detergent
- Keep the kitchen clean
- Protect kitchen areas and food from insects, pests and animals

### 3. Separate: Separate raw and cooked food

- Use separate utensils to handle raw and cooked food
- Prevent raw food and their juices from contaminating cooked food
- Store food in containers and put raw food below cooked food

### 4. Cook: Cook thoroughly

- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Bring soup and stew to boiling and continue boiling for at least one minute
- Ensure that the core temperature of food should reach at least 75°C
- Ensure that meat and poultry are fully cooked with the juices turned clear, not red
- Reheat cooked food thoroughly

## 5. Safe temperature: Keep food at safe temperature

- Do not leave cooked food at room temperature for more than two hours
- Refrigerate promptly the leftover and perishable food at or below 4°C
- Keep cooked food piping hot above 60°C prior to serving
- Do not store food too long even in the refrigerator
- Do not thaw frozen food at room temperature



### References:

Centre for Food Safety, Food and Environmental Hygiene Department

[http://www.cfs.gov.hk/english/multimedia/multimedia\\_pub/files/5keys\\_pos-Overall.pdf](http://www.cfs.gov.hk/english/multimedia/multimedia_pub/files/5keys_pos-Overall.pdf)

World Health Organization's 'Five keys to safer food'

[http://www.who.int/foodsafety/publications/consumer/flyer\\_keys\\_eng.pdf](http://www.who.int/foodsafety/publications/consumer/flyer_keys_eng.pdf)



## Appendix F

### Cleaning and disinfection of articles commonly used in RCHEs

Articles	Recommended method of cleaning and disinfection
<b>Suction bottle</b>	<ul style="list-style-type: none"> <li>• Disposable suction bottle is preferred</li> <li>• For reusable suction bottle:               <ul style="list-style-type: none"> <li>- Empty the bottle at least daily</li> <li>- Brush to clean with detergent and water every day</li> <li>- Immerse in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes</li> <li>- Rinse and store dry</li> </ul> </li> </ul>
<b>Connection tubing and Y-shape connector</b>	<ul style="list-style-type: none"> <li>• Disposable tubing and connector are preferred</li> <li>• For reusable tubing and connector, clean and disinfect separately for each resident after every use:               <ul style="list-style-type: none"> <li>- Rinse thoroughly by suctioning with full power of the suction machine</li> <li>- Immerse in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes</li> <li>- Rinse and store dry</li> </ul> </li> </ul>
<b>Suction tubing</b>	<ul style="list-style-type: none"> <li>• Dispose of after use</li> </ul>
<b>Tracheostomy tube</b>	<ul style="list-style-type: none"> <li>• Inner tubes should be cleaned and disinfected separately for each resident</li> <li>• Follow manufacturer's instruction</li> <li>• Alternative method:               <ul style="list-style-type: none"> <li>- After cleaning, disinfect by immersing in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 3 minutes or 3% hydrogen peroxide for 30 minutes</li> <li>- Rinse with sterile water<sup>†</sup> and store dry</li> </ul> </li> </ul>
<b>Nebuliser bottle</b>	<ul style="list-style-type: none"> <li>• Clean with detergent and water every day</li> <li>• Immerse in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes</li> <li>• Rinse with sterile water<sup>†</sup></li> </ul>

<sup>†</sup> If sterile water is not available, boiled water (after cooling down) can be used as an alternative.

Articles	Recommended method of cleaning and disinfection
<b>Humidifier bottle of oxygen concentrator</b>	<ul style="list-style-type: none"> <li>• Daily cleaning with detergent and water; then rinse with sterile water<sup>†</sup></li> <li>• Weekly disinfection by immersing in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes; then rinse with sterile water<sup>†</sup></li> </ul>
<b>Nebuliser mask Nebuliser tubing Oxygen cannula Oxygen tubing Oxygen mask</b>	<ul style="list-style-type: none"> <li>• Disposable</li> <li>• Follow manufacturer's instruction</li> </ul>
<b>Tongue depressor</b>	<ul style="list-style-type: none"> <li>• Disposable wooden tongue depressor is preferred</li> <li>• For stainless steel tongue depressor: <ul style="list-style-type: none"> <li>- Wash with detergent and water until clean</li> <li>- Then, immerse in 70% alcohol for not less than 10 minutes</li> <li>- Store in a clean covered container after drying</li> </ul> </li> </ul>
<b>Thermometer</b>	<ul style="list-style-type: none"> <li>• Cover thermometers with plastic shields when in use</li> <li>• Use separate thermometers for residents with infection</li> <li>• For electronic thermometer: <ul style="list-style-type: none"> <li>- Follow manufacturer's instruction for disinfection</li> <li>- Must NOT disinfect with high heat as it will damage the electronic components and affect normal functioning</li> </ul> </li> <li>• For mercury thermometer: <ul style="list-style-type: none"> <li>- Wash with detergent and cold water</li> <li>- Immerse in 70% alcohol for not less than 10 minutes</li> <li>- Dry and store in a clean covered container</li> </ul> </li> </ul>
<b>Dressing trolley (stainless steel)</b>	<ul style="list-style-type: none"> <li>• Clean with detergent and water</li> <li>• Disinfect by wiping with 70% alcohol</li> </ul>
<b>Feeding set (feeding bag, feeding funnel and connecting tube)</b>	<ul style="list-style-type: none"> <li>• After each feed, the feeding set should be flushed with water and air dried separately for each resident, before putting into a clean covered container for the next use</li> <li>• The feeding funnel should be disinfected daily by boiling for 10 minutes</li> <li>• The feeding bag and connecting tube should be disposed daily</li> <li>• Alternative method: follow manufacturer's instruction</li> </ul>

<sup>†</sup> If sterile water is not available, boiled water (after cooling down) can be used as an alternative.

Articles	Recommended method of cleaning and disinfection
<b>Urine collecting container</b>	<ul style="list-style-type: none"> <li>• Rinse with water first then clean with detergent and water</li> <li>• Disinfect with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water)</li> <li>• Rinse afterwards and store dry</li> </ul>
<b>Bedpan</b>	<ul style="list-style-type: none"> <li>• Clean with detergent and water with a brush</li> <li>• Disinfect with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water)</li> <li>• Rinse afterwards and store dry</li> </ul>
<b>Commode</b>	<ul style="list-style-type: none"> <li>• Wash with detergent and water after each use, then keep dry</li> <li>• If any contamination is noted: <ul style="list-style-type: none"> <li>- Wash with detergent and water before cleaning with a brush</li> <li>- Wipe with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water)</li> <li>- Rinse afterwards and store dry</li> </ul> </li> </ul>
<b>Gown and cap</b>	<ul style="list-style-type: none"> <li>• Disposable gown and cap are preferred</li> <li>• For contaminated or soiled reusable textile items, soak in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes before general handling</li> </ul>
<b>Face shield or goggles</b>	<ul style="list-style-type: none"> <li>• Disposable face shield or goggles are preferred</li> <li>• For reusable face shield or goggles: <ul style="list-style-type: none"> <li>- Clean with detergent and water first</li> <li>- Immerse in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 10 minutes</li> <li>- Rinse and store dry</li> </ul> </li> </ul>

Articles	Recommended method of cleaning and disinfection
<b>Gloves</b>  <b>Note:</b> <b>Wearing gloves cannot replace hand hygiene</b>	<ul style="list-style-type: none"> <li>• Disposable sterile gloves should be used for aseptic procedures, when hands are likely to come into contact with sterile areas or when performing invasive procedures (e.g. inserting urinary catheter)</li> <li>• Disposable latex gloves should be used for procedures involving contact with blood and body fluids</li> <li>• For general environmental cleaning, reusable household latex gloves can be used: <ul style="list-style-type: none"> <li>– To minimise the risk of cross-transmission, different gloves should be used for different areas such as kitchen, toilets, general areas, isolation room or cohort areas</li> <li>– Clean with detergent and water first</li> <li>– Disinfect by immersing in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 10 minutes</li> <li>– Air dry before reuse</li> </ul> </li> </ul>
<b>Sphygmomano-meter cuff</b>	<ul style="list-style-type: none"> <li>• Wash with detergent and water regularly. Hot water cycle machine wash is preferred</li> <li>• If contaminated with body fluid, <ul style="list-style-type: none"> <li>– Clean with detergent and water first</li> <li>– Disinfect by immersing in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes</li> <li>– Rinse and dry</li> </ul> </li> </ul>
<b>Stethoscope</b>	<ul style="list-style-type: none"> <li>• Wipe with 70% alcohol regularly, before and after use</li> </ul>

# Appendix G

## Multi-drug resistant organisms (MDROs)

MDROs refer to those microorganisms that cause infections not treatable by several classes of commonly used antimicrobials. Although there are some alternative antimicrobials available for treatment, they may be less effective, or cause more side effects.

### Clinical features

MDROs can normally be carried in people without signs or symptoms. However, immunocompromised or critically ill patients are more prone to be infected, causing pneumonia, urinary tract infection, wound infection or even blood infection. These infections in susceptible patients are often more severe with limited treatment options.

### Mode of transmission

MDROs are transmitted by direct contact with excreta, wounds, secretions of infected patients or contaminated objects and environment surfaces. Therefore, poor personal and environmental hygiene favour transmission of these organisms.

## Infection control measures for ALL residents

Key elements on infection control measures for ALL residents in several aspects are listed as below:

<b>1. Hand hygiene</b>	<ul style="list-style-type: none"> <li>• Clean hands with liquid soap and water when visibly soiled or likely contaminated with blood and body fluid.</li> <li>• When hands have touched contaminated material but are not visibly soiled, 70-80% alcohol-based handrub may be used instead.</li> <li>• Assign one container of alcohol-based handrub in close proximity to each resident.</li> <li>• Perform hand hygiene before providing care to any resident.</li> </ul>
<b>2. Changing diapers</b>	<ul style="list-style-type: none"> <li>• Ensure the following are readily available for each resident: alcohol-based handrub; gloves; wet-wipes; clean diaper; non-touch waste bin.</li> <li>• Use one wet-wipe per cleaning action.</li> <li>• For females, always wipe from front to back to avoid contamination of genitalia with faecal material.</li> <li>• Dispose of all contaminated materials (soiled diaper, used wet-wipes, contaminated gloves) into non-touch waste bin.</li> <li>• Perform hand hygiene before putting on clean diaper for resident.</li> </ul>
<b>3. Maintain environmental hygiene</b>	<ul style="list-style-type: none"> <li>• At least once daily: Disinfect all accessible surfaces with 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water).</li> <li>• Metal surfaces: Use 70% alcohol instead.</li> </ul>
<b>4. Laundry (clothing and linen)</b>	<ul style="list-style-type: none"> <li>• Use hot water cycle in washing machine if available (at least 65°C).</li> <li>• If hot water washing machine is not available, dry all laundry in drying machine (at least 65°C).</li> <li>• For cold water laundry, when drying machine is not available, soak laundry items in diluted household bleach (mixing 1 part of 1 in 99 bleach with 4 parts of water) for at least 30 minutes prior to laundering.</li> </ul>
<b>5. Eating utensils</b>	<ul style="list-style-type: none"> <li>• After thorough cleansing, disinfect by immersion in near-boiling water for at least 1 minute; OR</li> <li>• Clean and disinfect by dish washer following manufacturer's recommendations</li> <li>• Followed by air drying and storage</li> </ul>



## Additional infection control measures for residents with MDRO

The following infection control measures are applicable to residents with any of the MDRO below:

1. Vancomycin-Resistant *Enterococcus* (VRE)
2. Carbapenemase-Producing Enterobacteriaceae (CPE)
3. Carbapenem-Resistant *Acinetobacter* (CRA) / Multi-drug Resistant *Acinetobacter* (MDRA)
4. Multi-drug Resistant *Pseudomonas aeruginosa* (MRPA)
5. Methicillin-Resistant *Staphylococcus aureus* (MRSA) / Vancomycin-Intermediate / Resistant *Staphylococcus aureus* (VISA / VRSA)
6. *Candida auris*

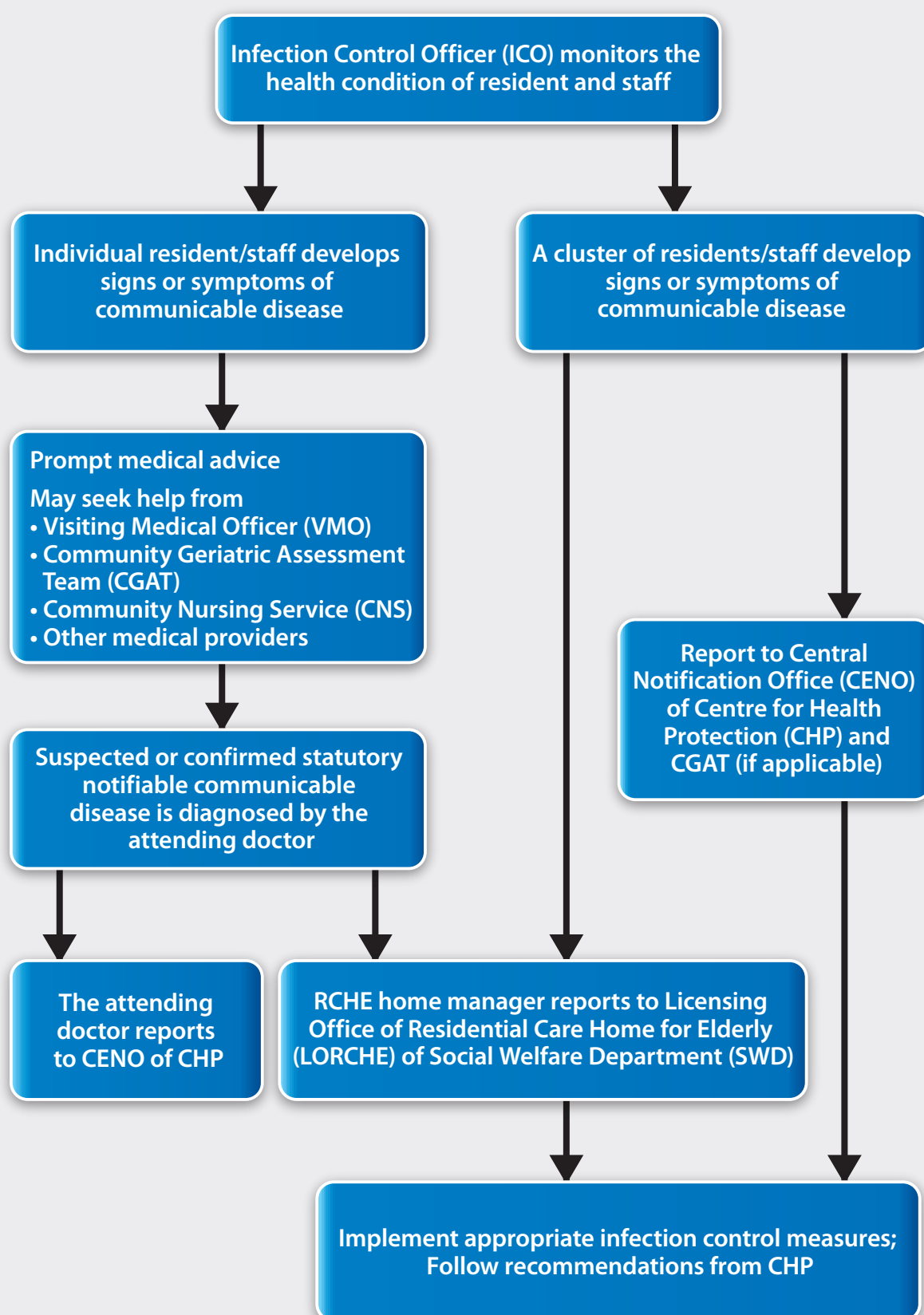
Key elements on infection control measures in several aspects are listed as below:

<b>1. Placement</b>	<ul style="list-style-type: none"><li>• The resident should be placed in a single room if available.</li><li>• Otherwise, residents with the same MDRO type should be cohorted in the same room or partitioned area.</li></ul>
<b>2. Infection control precautions</b>	<ul style="list-style-type: none"><li>• Gown and gloves should be worn before entering the room if the staff will have direct contact with the resident or contaminated objects.</li><li>• Disinfect all accessible surfaces with 1 in 49 diluted household bleach at least twice daily (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water). Metal surfaces: Use 70% alcohol instead.</li></ul>
<b>3. Dedicated equipment</b>	<ul style="list-style-type: none"><li>• Dedicate the specific use of non-critical items (such as wheelchairs, blood pressure cuffs) and cleansing tools.</li><li>• Otherwise they should be disinfected thoroughly after use.</li></ul>
<b>4. Dedicated facilities</b>	<ul style="list-style-type: none"><li>• Dedicated toilet and bath facilities are preferred.</li><li>• Otherwise, assign MDRO carriers as the last one in the nursing care rounds (such as diaper or bath rounds). Disinfect the facilities thoroughly after use.</li></ul>

For further information on MDROs, please visit the following websites:  
Centre for Health Protection (<http://www.chp.gov.hk>) or  
Hong Kong Training Portal on Infection Control and Infectious Disease  
(<https://icidportal.ha.org.hk>).

## Appendix H

### Notification mechanism for communicable diseases in RCHEs



# Appendix I

## Statutory notifiable communicable diseases

- Acute poliomyelitis
- Amoebic dysentery
- Anthrax
- Bacillary dysentery
- Botulism
- Chickenpox
- Chikungunya fever
- Cholera
- Community-associated methicillin-resistant *Staphylococcus aureus* infection
- Coronavirus Disease (COVID-19)
- Creutzfeldt-Jakob disease
- Dengue fever
- Diphtheria
- Enterovirus 71 infection
- Food poisoning
- *Haemophilus influenzae* type b infection (invasive)
- Hantavirus infection
- Invasive pneumococcal disease
- Japanese encephalitis
- Legionnaires' disease
- Leprosy
- Leptospirosis
- Listeriosis
- Malaria
- Measles
- Melioidosis
- Meningococcal infection (invasive)
- Middle East Respiratory Syndrome
- Monkeypox

- Mumps
- Novel influenza A infection
- Paratyphoid fever
- Plague
- Psittacosis
- Q fever
- Rabies
- Relapsing fever
- Rubella and congenital rubella syndrome
- Scarlet fever
- Severe Acute Respiratory Syndrome
- Shiga toxin-producing *Escherichia coli* infection
- Smallpox
- *Streptococcus suis* infection
- Tetanus
- Tuberculosis
- Typhoid fever
- Typhus and other rickettsial diseases
- Viral haemorrhagic fever
- Viral hepatitis
- West Nile Virus Infection
- Whooping cough
- Yellow fever
- Zika Virus Infection

*Footnote:*

Please refer to CENO On-line website at [https://cdis.chp.gov.hk/CDIS\\_CENO\\_ONLINE/disease.html](https://cdis.chp.gov.hk/CDIS_CENO_ONLINE/disease.html) for the update list of statutory notifiable diseases and at [https://cdis.chp.gov.hk/CDIS\\_CENO\\_ONLINE/ceno.html](https://cdis.chp.gov.hk/CDIS_CENO_ONLINE/ceno.html) for the case definitions.

# Appendix J

## Notification form for suspected infectious disease outbreak in RCHE

Code of Practice for Residential Care Homes (Elderly Persons) January 2020 (Revised Edition)  
(updated in March 2023)

Annex 12.2

### Suspected Infectious Disease Outbreak in RCHE

#### NOTIFICATION FORM

**To: Central Notification Office (CENO), Centre for Health Protection (Fax: 2477 2770 )**

**(Email: [diseases@dh.gov.hk](mailto:diseases@dh.gov.hk))**

c.c.: LORCHE

(Fax: 2574 4176 or 3106 3058 )

CGAT (if applicable)

(Fax: )

Name of institution: _____ (LORCHE No.: _____ )	
Address of institution: _____ _____	
Contact person: _____ (Post: _____ )	Tel: _____
Total no. of residents: _____	Total no. of staff: _____ Fax: _____
No. of sick residents: _____ (No. admitted into hospital: _____ )	
No. of sick staff: _____ (No. admitted into hospital: _____ )	
Common symptoms: <input type="checkbox"/> Fever <input type="checkbox"/> Sore throat (May tick multiple) <input type="checkbox"/> Cough <input type="checkbox"/> Runny nose <input type="checkbox"/> Diarrhoea <input type="checkbox"/> Vomiting <input type="checkbox"/> Skin rash <input type="checkbox"/> Blisters on hand/foot <input type="checkbox"/> Oral ulcers <input type="checkbox"/> Others (Please specify: _____ )	
Suspected disease: _____	
Reported by: _____	Contact tel.: _____
Signature: _____	Fax on: _____
For enquiries, please call 2477 2772	



# Appendix K

## Information required for outbreak investigation

### Preliminary information

- (1) Name and LORCHE number of the RCHE
- (2) Address of the RCHE
- (3) Name, position and telephone number of the contact person
- (4) Number of sick residents and number of residents admitted to hospital
- (5) Number of sick staff
- (6) Total number of residents in the RCHE
- (7) Total number of staff in the RCHE

### Further information in details (if necessary)

- (1) Detailed information of the sick
  - Name
  - Age
  - Sex
  - ID number
  - Room number and floor number
  - Symptoms
  - Date of onset of illness
  - Medical consultation record
- (2) Resident list
- (3) Staff list (stating the floor or area where the staff work)
- (4) Staff sick leave record
- (5) Influenza vaccination record for residents and staff
- (6) Floor plan of the RCHE (stating the room or bed number)
- (7) Timetable for residents' activities
- (8) Food menu

# Appendix L

## Scabies

Scabies is an infectious skin disease caused by a barely visible mite the *Sarcoptes scabiei*. It is a parasite that burrows into, resides and reproduces in human skin and affects people of all ages. Due to weakened immunity, elderly are more susceptible to scabies. Outbreaks of scabies have been reported in hospitals, hostels and elderly homes.

### Mode of transmission

Scabies usually spreads through direct skin contact with the infested people. Their clothing and bedding may also carry the mites/eggs and transmit the disease. Transmission within household and institutional setting is common.

### The scabies mite

The female mite penetrates into the skin by its forelegs and mouth. It digs tunnels and lays down its eggs. The eggs hatch in 3 to 4 days. The mites mature in about 10 days, and then start to breed the next generation.

### Symptoms of scabies

- The main symptom is intensive itchiness in the affected areas, which is more severe at night and after hot bath.
- The common affected areas are the finger webs and the skin folds of wrists, elbows, armpits, nipples, lower abdomen and external genitalia. The face and scalp of elderly are usually spared.
- Rash develops at the point where the mite penetrates the skin. Thread like tunnel (usually less than 1 cm) can be seen as they dig tunnels under the skin.
- If the infected person is allergic to the mite or its excreta, he or she may develop blisters.

### Norwegian or crusted scabies

- It is a rare but severe form of scabies which is highly contagious because an infested person may harbour thousands of mites.
- Infected persons may have marked scales and crusts, particularly on the palms and soles. The nails may thicken with debris in the nail bed.
- Face and scalp can also be affected.
- It occurs more frequently among people with weakened immunity, physical debilitation, sensory impairment or mental retardation.
- It has enhanced potential for transmission.

## Management of scabies

### 1. Management of residents and staff in elderly home

- Staff should closely monitor the conditions of themselves and the residents. Immediate medical advice should be sought when scabies infestation was suspected. If there are several residents and staff diagnosed to have scabies, staff should report to the CHP and SWD.
- During a scabies outbreak, people who are in close contact with the patient, e.g. residents in the same room and staff, should apply the anti-scabies medication to prevent the spread of the disease.
- Staff should wear gloves and apron when performing cleaning work or taking care of the infested resident. After direct care, care-givers should change their working clothes and wash their hands thoroughly.

### 2. Management of the clothing and bed-linen

- Patient's clothing, towels, bed-linen, pillowcase, etc., should be washed separately from those of their family members or other elderly home residents.
- Patient's clothing, bed-linen, pillowcase, etc., must be washed in hot water (60°C or above, for not less than 10 minutes) to get rid of the mite and their eggs.
- Place all non-washable personal items such as shoes, mattress, etc. in a plastic bag and seal them up for at least 7 days before they can be cleaned and used as usual.

### 3. Medical treatment

Effective medical treatment for scabies includes topical anti-scabies agents (e.g. Benzyl Benzoate or Permethrin) and oral drugs to control itchiness. The followings are instructions on how to use two anti-scabies agents:

#### ***How to apply Permethrin Lotion***

- After taking a bath, scrub and dry the body thoroughly. With the help of another person, use latex gloves to thoroughly massage the lotion into the skin of the whole body down to the soles (including hairline, forehead, temple, scalp, skin creases like finger webs, toe webs and under the nails), while taking care to avoid contact with the eyes and the mouth. Then put back the same clothes.
- Leave for 8 to 14 hours, take a warm water bath to wash away the medication. Then put on clean clothes and change bed linen.
- Most of the time, a single-dose application would suffice.
- After treatment, the itching may persist. If the itchiness lasts for more than 2 weeks or if there are other changes in the skin, consult your doctor again.
- Aggressive treatment with multiple applications over the entire body may be needed for Norwegian scabies. Please consult the doctor in-charge for instruction and reassessment.

### ***How to apply Benzyl Benzoate Lotion***

- In the evening after taking a bath, scrub and dry the body thoroughly. With the help of another person, use latex gloves to massage the lotion from the neck downwards to cover the whole body (finger webs and toe webs should be included, but not the head). Then put back the same clothes.
- On the next morning, repeat the application without taking a bath. Then put back the same clothes.
- On the next evening, take a warm bath and clean the whole body with soap. Put on clean clothes and change bed linen afterwards.
- In between the two applications of the lotion, there is no need to change the clothing or bed linen.
- Only two applications of the lotion suffice to kill the mite (except in Norwegian scabies). Over treatment gives rise to irritation and causes contact dermatitis. Re-apply the lotion to the hands after washing since the previous coating has been removed by water.
- After treatment, the itching may persist. If the itchiness lasts for more than 2 weeks or if there are other changes in the skin, consult your doctor again.
- Aggressive treatment with multiple applications over the entire body at an interval of 2-7 days may be needed for Norwegian scabies. Please consult the doctor in-charge for instruction and reassessment.

# Appendix M

## Norovirus infection

### Causative agent

This infection is caused by a group of viruses known as noroviruses, which is previously known as 'Norwalk-like viruses'. These viruses are a common cause of sporadic cases of acute gastroenteritis as well as outbreaks of food poisoning and acute gastroenteritis, especially in elderly homes and schools. The disease affects people of all age groups and tends to be more common during winter.

### Clinical features

The disease is usually self-limiting with symptoms of nausea, vomiting, diarrhoea, abdominal pain, low-grade fever and malaise. The symptoms usually last for 12 to 60 hours.

### Mode of transmission

The infection can be transmitted via the following ways:

- by food or water contaminated with the virus;
- by contact with vomitus or faeces from infected persons;
- by contact with contaminated objects; or
- by aerosol spread with contaminated droplets of splashed vomitus.

### Incubation period

The incubation period is usually 24 to 48 hours.

### Management

Given adequate fluids to prevent dehydration and supportive treatment, the disease is usually self-limiting, lasting 1 to 3 days. Antibiotics are of no value in treatment.

## Prevention

- Maintain high standards of personal, food and environmental hygiene.
- Wash hands before handling food and eating, and after going to toilet.
- All food, particularly shellfish, should be cooked thoroughly before consumption.
- Food handlers and caretakers developing vomiting or diarrhoea should refrain from work and seek medical advice.
- Wear gloves and a surgical mask while disposing of or handling vomitus and faeces, and wash hands thoroughly afterwards.
- Clean and disinfect soiled linen, clothes and surfaces promptly and thoroughly with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water). Wash hands thoroughly afterwards.
- No vaccine is available for norovirus infection.

## Disinfection of environment after vomiting or faecal spillage from patients with norovirus infection

- Keep residents away from the contaminated area during the cleaning process.
- Wear gloves and a surgical mask throughout the disinfection procedure.
- Discard all food if vomiting and diarrhoea occurs in an area where open food is displayed.
- Remove the bulky waste cautiously from all soiled linens and clothing before washing. Then, soak them in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes and then wash thoroughly. If immediate washing cannot be arranged, place the soiled linen and clothing inside sealed bags and wash them as soon as possible.
- Use disposable towels to wipe away all the vomitus or faecal spillage from outside inward. Then apply 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) to the contaminated surface and the adjacent areas liberally (as a rough guide, preferably disinfect areas within 2 metres from the edge of the vomitus or faecal spillage), especially the frequently touched surfaces, e.g. door knobs and hand rail.
- Never use floor mops for cleaning up the vomitus.
- Soak all cleaning tools in 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes and then rinse thoroughly before reuse.
- Wash hands thoroughly afterwards.



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Department of Health