HA Infection Control Plan for SARS

(This document supersedes The Infection Control Guideline for SARS under Red Alert)

First issue date: 15 Feb 05
First revision: 1 Jul 06 (advanced draft)
Second revision: 31 Jan 07

Prepared by:
Central Committee on Infectious Diseases, Hospital Authority
Infection Control Branch of Centre for Health Protection
Notice of amendments

The major amendments are as follows:

1. The HA’s response system has been replaced by Government’s three-tier response system and the HA corresponding three-tier response system

2. The following sections have been revised:
   - The updated clinical information of SARS
   - Precautionary Principles based on Risk Assessment
   - Infection Control Infrastructure
   - Surveillance and Notification Mechanism
   - Temperature check section in Supplement of Summary Table of measures on temperature check, hand hygiene and wearing of surgical masks has been moved to point 5.2) Surveillance on fever and symptoms
   - Patient Care Practice has been replaced by Infection Control for SARS
   - Use of PPE has been merged into Infection Control for SARS
   - Environmental Control section has been merged into Infection Control for SARS
   - Visiting Policy
   - Supplement 4: Standard Precautions
   - Supplement 5: Respiratory Hygiene/ Cough Etiquette (moved from Supplement 9 of the first edition)
   - Supplement 6: Additional (Transmission-based) Precautions for Patients with Known/ Suspected SARS (moved from Supplement 7: Additional Precautions in High-risk Procedures/ Activities and Supplement 10: Instruction Checklist for Preparation of Negative Pressure Isolation Room of first edition)
   - Supplement 7: Summary Tables of Recommended Staff PPE in HA Hospitals Under Response and Alert Levels due to SARS
   - Supplement 8: Infection Control in Other Health Care Settings

3. The following section has been added:
   - Infection Control Measures in Other Healthcare Settings
   - Handling of Dead Bodies
   - Supplement 2: Criteria for Reporting
   - Supplement 11: Non-emergency Ambulatory Transfer Services of Patients with confirmed or suspected SARS
   - Supplement 12: Infection Control in Outreach Care
Contents

1. TITLE ...........................................................................................................................................3
2. PURPOSE, SCOPE AND BACKGROUND..................................................................................3
3. PRECAUTIONARY PRINCIPLES BASED ON RISK ASSESSMENT......................................4
4. INFECTION CONTROL INFRASTRUCTURE ..............................................................................6
5. SURVEILLANCE AND NOTIFICATION MECHANISM ............................................................6
6. LABORATORY SUPPORT ...........................................................................................................9
7. INFECTION CONTROL FOR SARS .........................................................................................9
8. INFECTION CONTROL MEASURES IN OTHER HEALTHCARE SETTINGS ......................13
9. HANDLING OF DEAD BODIES ...............................................................................................13
10. VISITING POLICY ..................................................................................................................13
11. BLOOD TRANSFUSION AND BLOOD PRODUCT SAFETY ..................................................14
12. INFECTION CONTROL TRAINING ......................................................................................14
13. REFERENCES .........................................................................................................................14

SUPPLEMENT 1: HA ACTIVATION LEVELS ..................................................................................16
SUPPLEMENT 2: CRITERIA FOR REPORTING .............................................................................18
SUPPLEMENT 3: CASE DEFINITION OF SARS ............................................................................20
SUPPLEMENT 4: STANDARD PRECAUTIONS .............................................................................24
SUPPLEMENT 5: RESPIRATORY HYGIENE/ COUGH ETIQUETTE ............................................26
SUPPLEMENT 6: ADDITIONAL (TRANSMISSION-BASED) PRECAUTIONS FOR
PATIENTS WITH KNOWN/ SUSPECTED SARS ........................................................................27
SUPPLEMENT 7: SUMMARY TABLES OF RECOMMENDED STAFF PPE IN HA
HOSPITALS UNDER RESPONSE AND ALERT LEVELS DUE TO SARS ..............................28
SUPPLEMENT 8: PRECAUTIONS FOR HIGH-RISK PROCEDURES/ACTIVITIES .............30
SUPPLEMENT 9: GENERAL PRINCIPLES FOR USE OF PPE ..................................................32
SUPPLEMENT 10: INFECTION CONTROL IN OUT-PATIENT AND ACCIDENT &
EMERGENCY SETTINGS ...........................................................................................................34
SUPPLEMENT 11: NON-EMERGENCY AMBULATORY TRANSFER SERVICES (NEATS)
FOR PATIENTS WITH CONFIRMED/ SUSPECTED OF SARS ...........................................35
SUPPLEMENT 12: INFECTION CONTROL IN OUTREACH CARE........................................36

SUPPLEMENT 13: RECOMMENDED VISITING POLICY IN HA HOSPITALS UNDER
RESPONSE LEVEL (1 AND 2)..................................................................................................38

SUPPLEMENT 14: SUMMARY ON HAND HYGIENE AND WEARING OF SURGICAL
MASKS IN .... PATIENT CARE AREAS WITHIN HOSPITAL PREMISES (E.G. A&E DEPARTMENTS AND CLINICS) AND OUTSIDE HOSPITAL PREMISES (E.G. GENERAL OUT-PATIENT CLINICS, DAY CENTRES)....40
1. **Title**

   HA Infection Control Plan for SARS.

2. **Purpose, Scope and Background**

   2.1 **Purpose**

   This Infection Control Plan covers infection control measures for healthcare facilities during SARS outbreaks when the three-tier response system is activated.

   2.2 **Scope**

   To prepare health care professionals and laboratory staff working in healthcare facilities (hospitals, outpatient clinics, day care centres and Accident & Emergency Departments) on infection control management of SARS when the three-tier response system is activated.

   Infection control (IC) covers surveillance and notifications, laboratory containment, patient care practices (including patient placement), personal protective equipment, environmental control, linen management, and medical waste management, as well as training). This document should be read together with the following documents:

   a) Hospital Authority’s Response Plan for Infectious Disease Outbreak (accessible via internet at http://www3.ha.org.hk/idctc/default.asp);

   b) HA Arrangement on Laboratory Diagnosis of SARS-CoV Infection (accessible via internet at http://ha.home/hp/ps/Yellowalert_standdown26_3_04_a_appI.doc);

   c) Supplementary Guidelines for Handling of Clinical Specimens in the Laboratory (Revised Jan 06) (accessible via internet at http://ha.home/hp/ps/Specimens.doc);

   d) Guideline on Transport of Clinical Specimens and Infectious Substances (accessible via internet at http://www.ha.org.hk/hsd/nsapi/?MIval=ha_view_content&c_id=124711);

   e) Management Approach of Influenza-like Illness (ILI) and Community-acquired Pneumonia (CAP) Suspected of SARS

2.3 **Background**

SARS, a new emerging disease in 2003, caused an epidemic in Hong Kong leading to 1755 infected cases, of whom 299 died. Vigilance for SARS must therefore be maintained in both community and hospital settings because resurgence of SARS is possible as experienced in Singapore and China in 2004. The last SARS outbreak occurred in Beijing and Anhui in 2004. There were 9 cases with one fatality. Since the last reported SARS case in China in early May 2004, the World Health Organization (WHO) then declared that the chain of human-to-human transmission appeared to have been broken.

SARS-coronavirus (CoV) can be found in respiratory secretions, saliva, blood, urine and feces of SARS patients. It is stable in environment for up to 2 days at room temperature and longer at a lower temperature. Survival in a variety of stool suspension varies depending on the pH, consistency of stool and possibly other factors (up to 4 days in alkaline, diarrhoeal stool, 6 hours in normal stool and 3 hours in normal, acidic baby stool). The virus loses infectivity after exposure to different commonly used disinfectants (including alcohol and hypochlorite), and heating at 56°C for 15 minutes.

The main mode of transmission is by respiratory droplets of an infected person, especially during coughing, sneezing and talking, though airborne transmission cannot be completely ruled out. The chances are highest during close, direct or face-to-face contact with the infected persons. Direct contact with patient’s secretion, excreta and fomites or via contaminated environmental surfaces or equipment is also an important mode of transmission.

3. **Precautionary principles based on risk assessment**

3.1 HA should maintain vigilance to SARS by:


h) A&E Clinical Guideline No. 16: Guideline for in-hospital resuscitation of patients at risk of SARS

i) AED management of travellers screened at borders and tourists with fever guidelines.
3.1.1. maintaining a high index of suspicion by enhanced surveillance, rapid detection and isolation of cases, prompt clinical management and notification to CHP;
3.1.2. ensuring effective infection control with onsite assessment of environment, patient characteristics, healthcare activities, prevailing staff awareness and practices;
3.1.3. consolidating hospital infection control mechanisms to ensure effective implementation of infection control measures at all workplaces;
3.1.4. updating staff and public on the latest SARS information and infection control precautions;
3.1.5. ensuring that adequate supplies for infection control measures are provided
3.1.6. planning for adequate staffing;
3.1.7. educating staff on correct use of PPE;
3.1.8. developing risk communication strategy.

3.2 Standard and droplet precautions should be the minimum level of precautions to be used in all health care facilities when providing care for patients with acute respiratory illness, regardless of whether SARS infection is suspected. The most critical elements of these precautions include facial protection (eyes, nose and mouth) and hand hygiene and these precautions should be prioritized.

3.3 Each hospital must categorize its clinical settings by risk and implement corresponding levels of infection control precautions and Personal Protective Equipment (PPE) standards. The following specialties/units are at particular risk either because of nature of the patient group they serve or as first point of contact with potentially infectious patients:

a) medical and paediatrics specialties
b) intensive care units
c) accident and emergency departments (AED)
d) general outpatient departments

*Colleagues of medical and paediatrics specialties, ICU, A&E and GOPD in particular are reminded to keep vigilance on suspected cases.*

3.4 Risk assessment on caring for SARS should be based on two categories

3.4.1 Patient-related risk (confirmed/ suspected SARS, super spreading events,
day of illness from onset, severity of symptoms, patient with fever of unknown origin, etc.)

3.4.2. Procedure-related risk (procedures with high risk of generating aerosols e.g. highflow oxygen, resuscitation or requiring prolong close contact with affected patients, etc.)

4. **Infection Control Infrastructure**

4.1 HA will activate the corresponding Alert or Response Level according to the Government’s response system (Supplement 1)

4.2 HA has established a comprehensive infection control infrastructure in public hospitals comprising infection control teams of infection control officers and nurses, and link personnel.

4.3 During Response Level (1 and 2), the HA Infection Control Network (Table 1) becomes fully functional with an objective to implement effective infection control regime in all places, at all times, and by all staff at the shortest possible time.

**Table 1  HA Infection Control Network**

<table>
<thead>
<tr>
<th>HAHO</th>
<th>Central Committee on Infectious Diseases (CCID), BSS (supplies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Cluster/Hospital</td>
<td>IC coordinators: liaise with HO, supplement existing IC mechanism, enforce training and practice</td>
</tr>
<tr>
<td>Department/unit</td>
<td>1 IC link person in each department (clinical/paraclinical/non-clinical): plan/supervise IC precautions</td>
</tr>
<tr>
<td>Workplace</td>
<td>1 IC link person in each work shift to take care of IC within workplace. Special attention to minor staff</td>
</tr>
</tbody>
</table>

4.4 Each hospital and cluster should have its staff mobilization plan in place to prepare for sudden influx of SARS patients in Response Level (1 and 2).

5. **Surveillance and Notification mechanism**

5.1 **Notification Mechanism**
When SARS is suspected or confirmed in hospital patients (as defined in Supplement 2 and 3), notify Central Notification Office (CENO) of the Centre for Health Protection (CHP) and Central Committee on Infectious Disease (CCID) of HAHO by phone in addition to reporting via NDORS. The details of contact numbers are as below:

<table>
<thead>
<tr>
<th>Reporting Channels</th>
<th>Telephone (Office hours)</th>
<th>Pager (After Office Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHP(CENO) (Operation hours-w.e.f. 1st July 2006)</td>
<td>2477 2772</td>
<td>7116 3300 call 9179</td>
</tr>
<tr>
<td></td>
<td>Monday : 9:00am - 1:00pm / 2:00pm – 6:00pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tuesday to Friday : 9:00am - 1:00pm / 2:00pm – 5:45pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Saturday/Sunday/Public Holiday : Closed</td>
<td></td>
</tr>
<tr>
<td>CCID, HAHO (24 hours pager)</td>
<td>71163328 call 1333</td>
<td></td>
</tr>
</tbody>
</table>

5.2 Surveillance on fever and symptoms:

a) **Patients** (administered by hospital staff)
   At least daily temperature check for inpatients and report of clustering phenomenon to ICT.

b) **Staff** (including contract out staff)
   Staff should conduct daily body temperature check. Mandatory record is not required. Supervisors and the hospital infection team should make use of the Staff Early Sickness Alert System (SESAS) for the early report of sick staff and alert to unusual clustering.

c) **Visitors**: temperature check required

5.2.1. **Staff Early Sickness Alert System (SESAS):**
Staff is encouraged to conduct daily body temperature check. Mandatory record is not required, but they have to report fever (≥38°C) and/or respiratory symptoms 10 days after exposure to SARS infected patients to hospital management immediately and seek medical advice (e.g. staff clinic or A&E Department). Data would be entered into the Staff Early Sickness Alert System (SESAS). All wards/work units have to
alert the infection control teams of their hospitals of abnormal upsurge in sickness among their staff.

5.2.2. **Surveillance by TOCC**

Patients with fever (≥38°C) in the past 48 hours, with or without respiratory symptoms, and NO other obvious cause of fever, e.g. cellulities, cholangitis, should be observed on TOCC as follows:

- a) Travel: recent (10 days) travel to SARS area (please refer to epidemiology table);
- b) Occupational exposure: working in laboratory with SARS virus specimens or contact with risky animals, e.g. civet cats;
- c) Contact history: unprotected close contact with (suspected) SARS patient in the past 10 days OR hospitalized or as visitor in a facility with known SARS patients in the past 10 days;
- d) Clustering phenomenon: cluster of persons with fever and pneumonia symptoms of recent onset or known cluster with high attack rate (during time with outbreak).

Please refer to the latest update of the followings:
A&E and GOPC Triage Assessment for Febrile Patient for SARS/Avian Influenza Infection by Hospital Authority and Department of Health at:

5.2.3. **Significance of TOCC**

The result of TOCC directly influences the infection control measures, including the patient placement, PPE level, etc. It is crucial to make use of this system to identify the suspected cases.

5.2.4. Patient admission: consideration for admission of patient with TOCC history to negative pressure isolation room should be prioritized according to the guideline on “Guideline on Management Approach of Influenza-like Illness (ILI) and Community-acquired Pneumonia (CAP) Suspected of SARS”

5.2.5. Designated staff (preferably Infection Control Team) should report the SARS cases by following means:
During Alert Level, report through notification mechanism depicted in Para 5.1.

During Response Level (1 and 2), report through e-SARS System.

5.3 Contact tracing

Staff of HA should liaise with the Surveillance and Epidemiology Branch (SEB) of CHP for contact tracing of exposed staff, patients and visitors in healthcare settings if a case of human SARS is confirmed.

6. Laboratory support

Please refer to the following guidelines at HA Intranet website for details:

- HA Arrangement on Laboratory Diagnosis of SARS-CoV Infection
- Supplementary Guidelines for Handling of Clinical Specimens in the Laboratory (Revised Jan 06)
- Guideline on Transport of Clinical Specimens and Infectious Substances

7. Infection Control for SARS

7.1 Isolation precautions (a two-level approach)

- Standard Precautions (Supplement 4) incorporated with respiratory hygiene and cough etiquette (Supplement 5) should be applied to ALL patients at ALL times, including those who have SARS.
- Additional (Transmission-based) precautions which include, droplet and contact precautions (Supplement 6) should be adopted in addition to standard precautions.
- Higher level of precautions (airborne precautions) should be adopted in performing high risk procedures/activities (Supplement 8).
- All healthcare personnel are recommended to wear uniform / working clothes in patient care areas.
- Staff working in high-risk areas should take a shower before leaving hospital or on returning home if possible.

7.2 Operational Highlights
7.2.1 Transporting High Risk Patients:

- Transportation of the patient from the isolation room should be limited unless for essential purpose.
- Patient should wear a surgical mask during transportation if not contraindicated.
- Attendants should wear protective apparels according to the risk assessment and use appropriate PPE for handling of suspected/confirmed SARS patients.
- The ward/area to receive the patient should be informed beforehand of the transport so as to make the appropriate arrangement.
- Administration support should be notified to prepare the designated route for transport. The involved area should be disinfected afterwards.
- Transport vehicles should be disinfected after use.
- For patient transport using Non-Emergency Ambulatory Transfer Services (NEATS), please refer to Supplement 11.

7.2.2 Use of Personal Protection Equipment (PPE)

- All persons coming into contact with a probable or suspected SARS patients or their immediate environment must practice IC precautions according to the risk of exposure as judged by patient- and procedure-related risks.
- The hospital IC team should establish PPE standards making reference to the recommended standards by the HA and other factors pertaining to the hospital.
- PPE is not meant to be foolproof and healthcare workers are advised to change PPE and wash liberally without delay whenever having substantial splashing, or contamination occurs.
- If SARS infected patients are cohort in a common area or in several
rooms on a nursing unit, and multiple patients will be visited over a short time, it may be practical to wear one respirator for duration of the activity.

➤ Refer to Supplement 7 for summary tables on recommended staff PPE during Response Level and Alert Level due to SARS.
➤ Refer to Supplement 9 for general principles for use of PPE.

7.2.3 Decontamination of Environment

➤ Clean and disinfect the environment, furniture and facilities at least once daily or more frequently depending on risk.
➤ Contaminated area, especially isolation and procedure rooms should be disinfected after use by a high-risk patient by 1:50 dilution (1,000 ppm available chlorine) of 5.25% hypochlorite solution (one part of hypochlorite solution add in 49 parts of water).
➤ If blood spills occur:
  ◇ If spills involve a small amount of blood, use 1:50 dilution (1,000 ppm available chlorine) of 5.25% hypochlorite solution (one part of hypochlorite solution add in 49 parts of water) for non-metallic and 70% alcohol for metallic items.
  ◇ If spills involve large amount of blood, the blood should be removed by disposable material soaked with 1:5 dilution (10,000 ppm available chlorine) of 5.25% hypochlorite solution (one part of hypochlorite solution add in 4 parts of water) before further cleaning and disinfection.

7.2.4 Decontamination of Health Care Equipment

➤ Individual equipment dedication is necessary, especially for items that cannot be readily disinfected, for suspected / confirmed SARS patients. If sharing is unavoidable (e.g. use of stethoscopes), they must be cleaned and disinfected before using on other patients, e.g. by 1:50 dilution (1,000 ppm available chlorine) of 5.25% hypochlorite solution (one part of hypochlorite solution add in 49 parts of water) or 70% alcohol.
➤ Central decontamination, e.g. by CSSD, is preferred for reusable
respiratory equipment based on local hospital policy. Transfer of contaminated items should be well packed in order to prevent environmental contamination. Proper cleaning should be ensured before disinfection if manual decontamination method is used.

- Bedpans and urinals used by patients should be handled with care, preferably with cover during transport to the dirty utility room.
- If a bedpan washer is used, there is no need to empty the bedpan first. Just put it into the bedpan washer unless it contains waste that could block the drainage outlet.
- If bedpan washer is not used, urinals, bedpans and urine measuring jugs should be emptied before disinfection. They should be cleaned and then immersed in 1:50 dilution (1,000 ppm available chlorine) of 5.25% hypochlorite solution (one part of hypochlorite solution add in 49 parts of water) for 30 minutes.

7.2.5 Waste Management

- All waste generated in the isolation room/area should be disposed of in suitable containers or bags. All waste from a room/area housing patient(s) with SARS should be treated as clinical waste.
- Staff responsible for removing wastes from isolation ward/areas should wear appropriate PPE.
- Waste should be placed in the bag without contaminating the outside surface of the bag.
- Biohazard labeling should be printed or tagged on the waste disposal bags.

7.3 Administrative Support

- Management should ensure adequate provision of hand washing facilities and/or alcohol based hand rub to encourage hand hygiene in wards and clinics, as hand hygiene is the single most important measure against transmission of infection that spreads through contact.
- Hospital should issue instructions to visitors and patients concerning the infection control requirements and post appropriate signage at all entrances and clinical evaluation areas.
- To minimize the number of healthcare workers entering the rooms of
suspected or confirmed SARS infected patients, wards may consider primary care of such patients by selected staff that will provide meals, collect specimens, clean room, handle laundry and waste disposal.

8. **Infection Control Measures in other Healthcare Settings**

Please refer to:

- Supplement 10 for Infection Control in Out-Patient and Accident & Emergency Settings
- Supplement 11 for Non-Emergency Ambulatory Transfer Services (NEATS) for Patients with Confirmed/ Suspected of SARS
- Supplement 12 for Infection Control in Outreach Care

9. **Handling of Dead Bodies**

9.1 Standard precautions should be applied.
9.2 Appropriate PPE should be worn.
9.3 Dead bodies of patients with known SARS are classified as Category 2 with the following precautionary measures:
   - Autopsy should generally not be performed.
   - The body should be bagged in a robust, plastic bag.
   - Hygienic preparation in funeral parlour is not advisable.
   - Viewing in funeral parlour is allowed.
   - Embalming is not allowed.
   - Cremation is not mandatory.

10. **Visiting Policy**

Restrictive hospital visiting policy should be instituted by HCE based on risk assessment under Response Level (1 and 2) (Supplement 13). In general:

10.1 children under 12 are generally not permitted in patient care area (unless with prior approval).
10.2 pregnant women are strongly discouraged from visiting the hospital.
10.3 volunteer activities/ attachment/ placement programs within clinical areas of the hospital will be stopped under Response Level.
11. **Blood Transfusion and Blood Product Safety**


12. **Infection Control Training**

12.1 All personnel working inside a patient setting must receive documented training on infection control precautions against SARS including hand hygiene and use of PPE in different areas of hospitals based on risk assessment.

12.2 This applies to HA employees as well as contractor staff, staff on temporary employment terms, students (medical, nurses, paramedics) and volunteers.

12.3 Hospital management should maintain records of training for independent review.

12.4 Regular update and drills on infection control practice should be conducted.

13. **References**


13.5 HAHO. Management Approach of Influenza-like Illness (ILI) and Community-acquired Pneumonia (CAP) Suspected of SARS. (to be prepared)


The objective of the WHO SARS Alert system is an operational definition to ensure that appropriate infection control and public health measures are implemented until SARS has been ruled out as a cause of the atypical pneumonia or respiratory distress syndrome (RDS).

### WHO Definition of a SARS alert

(please refer to: http://www.who.int/csr/resources/publications/WHO_CDS_CSR_ARO_2004_1.pdf)

1. **An individual** with clinical evidence of SARS AND with one or more of the following epidemiological risk factors for SARS-CoV infection in the 10 days before the onset of symptoms:
   - Employed in an occupation associated with an increased risk of SARS-CoV exposure (e.g. staff in a laboratory working with live SARS-CoV/SARS-CoV-like viruses or storing clinical specimens infected with SARS-CoV; persons with exposure to wildlife or other animals considered a reservoir of SARS-CoV, their excretions or secretions, etc.);
   - Close contact (having cared for, lived with, or had direct contact with the respiratory secretions or body fluids) of a person under investigation for SARS;
   - History of travel to, or residence in, an area experiencing an outbreak of SARS.

**OR**

2. **Two or more health care workers** with clinical evidence of SARS in the same health-care unit and with onset of illness in the same 10-day period.

**OR**

3. **Three or more persons** (health care workers and/or patients and/or visitors) with clinical evidence of SARS with onset of illness in the same 10-day period and epidemiologically linked to a health-care facility.
With reference to the Checklist of Measures to Combat SARS, Hong Kong Government adopts a three-tier response system to SARS. HA will activate the corresponding alert levels: (please refer to: http://www.info.gov.hk/info/sars/eindex.htm)

<table>
<thead>
<tr>
<th>Government’s three-tier response system</th>
<th>HA’s corresponding three-tier response system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alert Level</strong> – activated when there is (a) laboratory-confirmed SARS case(s) outside Hong Kong (b) SARS Alert in Hong Kong</td>
<td>Alert Level</td>
</tr>
<tr>
<td><strong>Response Level 1</strong> – activated when there is one or more laboratory-confirmed SARS cases in Hong Kong occurring in a sporadic manner. The activation should be completed within 12 hours of the laboratory confirmation.</td>
<td>Response Level 1</td>
</tr>
<tr>
<td><strong>Response Level 2</strong> - activated when there are signs of local transmission of the disease.</td>
<td>Response Level 2</td>
</tr>
</tbody>
</table>
Supplement 2: Criteria for Reporting

(Please refer to CHP – Surveillance Case Definitions of Statutory Notifiable Diseases at: https://ceno.chp.gov.hk/casedef/casedef.jsp)

(a) Person with:

- Fever (≥38℃) AND
- One or more symptoms of lower respiratory tract illness (cough, difficulty breathing, shortness of breath) AND
- Radiographic evidence of lung infiltrates consistent with pneumonia or RDS OR autopsy findings consistent with the pathology of pneumonia or RDS without an identifiable cause, AND
- No alternative diagnosis can fully explain the illness.

OR

(b) Anyone of the following

- PCR positive for SARS-CoV using a validated method from:
  - i. At least two different clinical specimens (e.g. nasopharyngeal and stool) OR
  - ii. The same clinical specimen collected on two or more occasions during the course of the illness (e.g. sequential nasopharyngeal aspirates), OR
  - iii. Two different assays or repeat PCR using a new RNA extract from the original clinical sample on each occasion of testing.

- Seroconversion by ELISA or IFA
  - i. Negative antibody test on acute serum followed by positive antibody test on convalescent phase serum tested in parallel, OR
  - ii. Fourfold or greater rise in antibody titre between acute and convalescent phase sera tested in parallel.

- Virus isolation
  - 1. Isolation in cell culture of SARS-CoV from any specimen AND
     PCR confirmation using a validated method
**Confirmed case**

A person with signs and symptoms that are clinically suggestive of SARS **AND** with positive laboratory finding of SARS-CoV based on one or more of the following diagnostic criteria:

a. PCR positive for SARS-CoV

b. Seroconversion by ELISA or IFA

c. Virus isolation

**Probable case**

Fulfill clinical case definition of SARS, plus (a) epidemiological linkage with a laboratory-confirmed case, or (b) high degree of clinical suspicion based on clinical and laboratory findings.
### Supplement 3: Case Definition of SARS

HA has adopted the following WHO definition: (Please refer to: http://www.who.int/csr/resources/publications/WHO_CDS_CSR_ARO_2004_1.pdf)

**Clinical evidence of SARS**

A person with a history of:

Fever (>38°C)

**AND**

One or more symptoms of lower respiratory tract illness (cough, difficulty breathing, shortness of breath)

**AND**

Radiographic evidence of lung infiltrates consistent with pneumonia or ARDS, **OR** autopsy findings consistent with the pathology of pneumonia or ARDS without an identifiable cause

**AND**

No alternative diagnosis can fully explain the illness.

**Laboratory evidence of SARS**

Any one of the following:

a) **PCR positive for SARS-CoV using a validated method from:**
   - At least two different clinical specimens (e.g. nasopharyngeal and stool) **OR**
   - The same clinical specimen collected on two or more occasions during the course of the illness (e.g. sequential nasopharyngeal aspirates) **OR**
   - Two different assays or repeat PCR using a new RNA extract from the original clinical sample on each occasion of testing.

b) **Seroconversion by ELISA or IFA**
   - Negative antibody test on acute serum followed by positive antibody test on convalescent phase serum tested in parallel **OR**
   - Four-fold or greater rise in antibody titre between acute and convalescent phase
c) Virus isolation

- Isolation in cell culture of SARS-CoV from any specimen AND PCR confirmation using a validated method.

Preliminary positive case of SARS
- An individual with clinical evidence for SARS AND who meets the laboratory case definition of SARS-CoV infection where testing has only been performed at a national reference laboratory.

Confirmed case of SARS
- A ‘preliminary positive’ case where testing performed at a national reference laboratory has been independently verified by a WHO International SARS Reference and Verification Laboratory.

OR
- A ‘preliminary positive’ case of SARS where at least one case in the first chain of transmission identified in the country/area has been independently verified by a WHO International SARS Reference and Verification Laboratory.

OR
- An individual with clinical and epidemiological evidence* for SARS and with preliminary laboratory evidence of SARS-CoV infection based on the following tests performed at a national reference laboratory or a designated sub-national laboratory:
  a) A single positive antibody test for SARS-CoV
  OR
  b) A positive PCR result for SARS-CoV on a single clinical specimen and assay.

*Epidemiological evidence for SARS is linkage to a chain of human transmission where at least one case in the first chain of transmission identified in the country/area has been independently verified by a WHO International SARS reference and Verification Laboratory.

Probable case of SARS
An individual with clinical evidence of SARS epidemiologically linked to a ‘preliminary positive’ or ‘confirmed’ case of SARS.
OR

An ‘unverifiable’ case of SARS if epidemiologically linked to a ‘preliminary positive’ or ‘confirmed’ case.

Unverifiable case of SARS

An individual with clinical evidence of SARS but in whom initial laboratory results are negative, if done, and the patient is lost to follow up.

OR

A deceased individual with a pre-morbid history of illness compatible with SARS AND

a) whose autopsy findings are consistent with the pathology of pneumonia or ARDS but in whom SARS-CoV testing was not done or was incomplete

OR

b) in whom neither an autopsy nor laboratory testing were performed.

Notes:

- One or more cases in the first chain of human transmission occurring in countries/areas previously free of SARS should always be independently verified by a WHO International SARS Reference and Verification Laboratory.

- In the event of a large outbreak where sub-national laboratories may be designated to perform SARS testing by the national health authority, WHO recommends that at least one case in all subsequent new (independent) chains of transmission should be independently verified by a national SARS reference laboratory.

Definition of the SARS Alert

1 An individual with clinical evidence of SARS AND with one or more of the following epidemiological risk factors for SARS-CoV infection in the 10 days before the onset of symptoms:

- Employed in an occupation associated with an increased risk of SARS-CoV exposure (e.g. staff in a laboratory working with live SARS-CoV/SARS-CoV-like viruses or storing clinical specimens infected with SARS-CoV; persons with exposure to wildlife or other animals considered a reservoir of SARS-CoV, their excretions or secretions, etc.).
- Close contact (having cared for, lived with, or had direct contact with the respiratory secretions or body fluids) of a person under investigation for SARS.
- History of travel to, or residence in, an area experiencing an outbreak of SARS.
Two or more health-care workers with clinical evidence of SARS in the same health-care unit and with onset of illness in the same 10-day period.

OR

Three or more persons (health-care workers and/or patients and/or visitors) with clinical evidence of SARS with onset of illness in the same 10-day period and epidemiologically linked to a health-care facility.

Notes

- In the context of a SARS Alert, the term “health-care worker” includes ALL hospital staff.
- A jurisdiction may choose, based on its national SARS risk assessment and local experience of acute respiratory disease, to increase the minimum number of ‘alert’ cases defining a cluster. The definition of the health care unit in which the cluster occurs will depend on the local situation. Unit size may range from an entire health care facility if small, to a single department or ward of a large tertiary hospital.
- All laboratories that propagate SARS-CoV/SARS-CoV-like viruses, or use clinical materials from SARS patients or infected animals, infectious clones and/or replicons should implement a health monitoring programme for staff.
- Personnel with an occupational risk of SARS should be informed of their responsibility to volunteer details of their occupational history when seeking health care for an acute febrile illness.
- It is important that clinicians ask patients about risk factors for SARS if they present with a clinically compatible illness. This includes determining whether other family members and/or close social or occupational contacts (particularly in a laboratory or hospital setting) have had a similar illness, or a relevant history of travel to an area at risk of SARS-CoV transmission from animal reservoirs or a recent outbreak of SARS.
- Following the last reported case in an outbreak of SARS, an individual fulfilling the clinical case definition for SARS should be asked about travel to the outbreak area(s) in the preceding 28 days before illness onset.
Supplement 4: Standard Precautions

Use Standard Precautions for the care of **ALL patients:***

1  **Hand hygiene**

1.1  Perform hand hygiene:

1.1.1  Before and after patient contact;

1.1.2  After removing gloves or any other PPE item;

1.1.3  After touching blood, body fluids, secretions, excretions, and contaminated items, whether or not gloves are worn.

1.2  Routine hand hygiene by alcohol hand rub (preferably) or by washing hands with soap and water.

1.3  Perform hand hygiene after touching surgical mask/ N 95 respirator or before touching the face (especially the eyes, nose and mouth).

2  **Gloves**

2.1  Wear gloves (clean, non-sterile gloves are adequate) when touching blood, body fluids, secretions, excretions, and contaminated item.

2.2  Put on clean gloves just before touching mucous membranes and non-intact skin.

2.3  Change gloves between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms.

2.4  Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces, and before going to another patient, and perform hand hygiene immediately to avoid transfer of microorganisms to other patients or environments.

2.5  Gloves should not be used for activities with no direct patient contact.

3  **Surgical Mask, Eye Protection, Face Shield**

Wear a surgical mask and eye protection or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

4  **Gown**

4.1  Wear a gown (a clean, non-sterile gown is adequate) to protect skin and to prevent soiling of clothing during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Perform hand hygiene after touching used PPE and before touching the face (especially the eyes, nose and mouth).

4.2  Select a gown that is appropriate for the activity and amount of fluid likely
to be encountered.

4.3 Remove a soiled gown as promptly as possible and perform hand hygiene to avoid transfer of microorganisms to other patients or environments.

5 Patient-Care Equipment

Handle used patient-care equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environments. Ensure that reusable equipment is not used for the care of another patient until it has been cleaned and reprocessed appropriately. Ensure that single-use items are discarded of properly.

6 Environmental Control

Ensure that the hospital has adequate procedures for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces, and ensure that these procedures are being followed.

7 Linen

Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing and that avoids transfer of microorganisms to other patients and environments.

8 Occupational health and Bloodborne Pathogens

8.1 Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of used needles.

8.2 Never recap used needles, or otherwise manipulate them using both hands, or use any other technique that involves directing the point of a needle toward any part of the body. Use either one-handed “scoop” technique or a mechanical recap device for holding the needle sheath if recapping is unavoidable.

8.3 Do not remove used needles from disposable syringes by hand, and do not bend, break, or otherwise manipulate used needles by hand.

8.4 Place used disposable syringes and needles, scalpel blades, and other sharp items in appropriate puncture resistant containers, such as sharpbox.

9 Patient Placement

Place a patient who contaminates the environment or who does not (or cannot be expected to) assist in maintaining appropriate hygiene or environmental control in an isolation room.
The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection.

1. Visual Alerts
   - Notice to patients to report flu symptoms, e.g. poster
   - Demonstrates the sequences for donning and removing personal protective equipment.

2. Respiratory Hygiene/ Cough Etiquette for those with signs and symptoms of respiratory infection:
   - Cover the nose/ mouth when coughing or sneezing.
   - Use tissue paper to contain respiratory secretions and dispose of them in waste receptacle.
   - Perform hand hygiene afterwards or after having contact with respiratory secretions and contaminated objects/ materials.

3. Masking and Separation of Persons with Respiratory Symptoms
   - Persons with respiratory symptoms should wear a mask to contain the respiratory secretion.
   - Encourage persons with respiratory symptoms to sit at least one metre away from others.

4. Droplet Precautions
   Health care personnel should apply droplet precautions when caring persons with respiratory symptoms.

Hospitals and out-patient clinics should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for patients and visitors.

- Provide no-touch receptacles for disposal of used tissue paper.
- Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.
Supplement 6: Additional (Transmission-Based) Precautions for Patients with Known/ Suspected SARS

In addition to standard precautions, droplet and contact precautions should be applied to patients with known or suspected SARS. Measures include:

1. Place the patient in an **airborne isolation room with negative pressure ventilation if available** and keep the doors closed at all time.

2. When single rooms are fully occupied, patients with confirmed laboratory diagnosis of SARS may be cohorted in cubicles and maintained separated from each other for more than one metre.

3. Confirmed cases should not be nursed in the same cubicle with unconfirmed cases.

4. Designated areas for gowing and degowning should be established.

5. Hand washing facilities and alcohol based hand rub should be provided to facilitate appropriate hand hygiene.

6. Staff should wear recommended PPE (Supplement 7) when entering the room. Eye protection should be worn when he/she is within one metre to the patient.

7. Further precautions should be applied when high risk procedures are performed. (Supplement 7 and 8)

8. Staff caring for patients should have easy access to shower facilities.

**Instruction checklist for preparation of negative pressure isolation room (with or without anteroom)**

| 1. Ensure additional precautions by indicating with **appropriate signage on the door**. |
| 2. Place only essential furniture that can be easily decontaminated. |
| 3. Stock the hand basins with suitable supplies for hand washing. |
| 4. Place appropriate waste bags in the room on a foot-operated bin. |
| 5. Place a puncture-proof container for sharps in the room if condition allowed. |
| 6. Keep the patient’s personal belongings to a minimum and in a closed container as far as possible. |
| 7. Patients should be allocated his/her own non-critical items of patient care equipment, e.g. stethoscope, thermometer and sphygmomanometer. Any designated reusable patient care equipment should be thoroughly cleaned and disinfected after use. |
| 8. Items that are difficult to decontaminate should be protected by cover. Disposable items may be considered. |
| 9. Stock adequate PPE at gown-up areas. |
| 10. Place appropriate container with a lid outside the door for equipment that require disinfection and sterilization if necessary. |
| 11. Maintain scrupulous daily cleaning of the isolation room. |
### Recommended Staff PPE in HA Hospitals during SARS Response Level (1 and 2)

<table>
<thead>
<tr>
<th>Activity</th>
<th>High risk patient areas* for caring suspected or confirmed SARS</th>
<th>Other patient areas</th>
<th>Non-patient areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter into isolation room (no patient contact)</td>
<td>N95 respirator/ surgical mask **</td>
<td>Surgical mask</td>
<td>***</td>
</tr>
<tr>
<td>Close patient contact (&lt; one metre)</td>
<td>N95 respirator/ surgical mask ** Eye protection Disposable gown</td>
<td>Surgical mask</td>
<td>***</td>
</tr>
<tr>
<td>Procedures with **</td>
<td>N95 respirator Disposable gown Eye protection Latex gloves Cap</td>
<td>Surgical mask/ N95 respirator Disposable gown Eye protection Latex gloves</td>
<td>***</td>
</tr>
<tr>
<td>Other activities, no anticipated patient contact</td>
<td>Surgical mask</td>
<td>Surgical mask</td>
<td>***</td>
</tr>
</tbody>
</table>

### Recommended Staff PPEs in HA Hospitals During SARS Alert Level

<table>
<thead>
<tr>
<th>Activity</th>
<th>High risk patient areas* for caring suspected SARS</th>
<th>Other patient areas</th>
<th>Non-patient areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter into isolation room (no patient contact)</td>
<td>N95 respirator/ surgical mask **</td>
<td>#</td>
<td>***</td>
</tr>
<tr>
<td>Close patient contact (&lt; one metre)</td>
<td>N95 respirator/ surgical mask ** Eye protection Disposable gown</td>
<td>#</td>
<td>***</td>
</tr>
<tr>
<td>Procedures with **</td>
<td>N95 respirator Disposable gown Eye protection Latex gloves Cap</td>
<td>Surgical mask/ N95 respirator Disposable gown Eye protection Latex gloves</td>
<td>***</td>
</tr>
<tr>
<td>Other activity, no anticipated patient contact</td>
<td>Surgical mask</td>
<td></td>
<td>***</td>
</tr>
</tbody>
</table>

Please note remarks to the tables on the next page.
Remarks:

1. **The hospital IC team should establish and review PPE standards** making reference to the recommended optimal standards, epidemiology and other risk factors pertaining to the hospital.

2. Indications for hand hygiene and use of gloves should be in accordance with standard precaution. (please refer to Supplement 4)

3. Eye protection refers to face shields/ goggles/ visors. Please refer to Supplement 9 section on face and eye protection for details.

4. Please refer to Supplement 8 for high risk procedures.

* High risk patient areas refer to triage stations of GOPDs, whole designated clinics, A&E Department (triage stations, resuscitation rooms, waiting areas/consultation rooms & isolation room in fever triage cubicles) and, isolation wards for confirmed SARS patients or for triaging suspected SARS cases. All staff working in high risk patient areas should put on uniform or working clothes.

** Based on risk assessment including clinical condition of patient and physical condition of the patient placement.

*** Individuals with signs and symptoms of respiratory infection should put on surgical mask.
Supplement 8: Precautions for High-risk Procedures/Activities

High-risk procedures/activities refer to:

a) Patient care procedures

i) Aerosol-generating procedures, such as endotracheal intubation, nebulizer therapy, nasopharyngeal aspiration (NPA), tracheostomy care, chest physiotherapy, open system airway suctioning, diagnostic sputum induction and bronchoscopy.

ii) Procedures with extensively dispersal, such as high flow oxygen, non-invasive ventilation (BiPAP & CPAP).

iii) Prolonged close contact with confirmed/suspected cases, such as extensive nursing care for dependent, confused or uncooperative patients.

b) Maintenance work in high risk patient areas

i) Heavily splashing procedures, such as maintenance on sewage system.

ii) Particle-generating procedures, such as changing HEPA filter in isolation area or local exhaust.

Principles of precautions are as follows:

1) Limit indications

1.1 Use alternative method as far as possible, for example, use metre-dose inhalation instead of nebulizer if clinically possible, perform bed bath rather than a shower for the dependent patient.

1.2 The procedure should be done only if deemed essential.

2) Limit extent of procedure

2.1 During autopsy, avoid use of power saws, conduct procedures under water if there is chance of aerosolization, avoid splashing when removing lung tissue.

2.2 When changing the filter in the ventilation system, handle the used filter gently to prevent dislodgement of particles.

3) Appropriate use of sedation during resuscitation procedure, e.g. intubation, to avoid patient coughing and struggle.

3.1 Contain the aerosols by using appropriate devices, for examples, use bacterial-viral filter when performing manually assisted ventilation, use closed circuit suctioning device to avoid spillage, mask the patient’s mouth when taking NPA to avoid dispersal of droplet particles.
4) Limit number of persons involved to avoid unnecessary exposure. Only workers who need to perform the procedure should be present.

5) Use appropriate PPE as follows:

5.1 Refer to Supplement 7 for recommended PPE.
5.2 Boots may be necessary for heavily splashing procedure or attending the flooding area.
5.3 Gloves are used for procedure only and should be removed immediately after the procedure is completed.
5.4 All PPE should be removed/changed after the procedure is completed.

6) Staff arrangement

6.1 The procedure shall be performed by trained/experienced staff. Sufficient instruction and supervision should be given when necessary especially for supporting staff.
6.2 Work assignment should be scheduled to enhance staff’s attention span during high risk activities.
6.3 Shower facilities should be made available to staff after performing the potentially extensively contaminated procedure, e.g. resuscitation and whenever they are contaminated during the procedure.
6.4 Staff list after performing high risk procedure in high risk areas should be maintained for contact tracing if necessary. They should report for any symptoms of respiratory symptoms immediately.
Supplement 9: General Principles for Use of PPE

1 General Guide

1.1 Remove PPE immediately and take a shower when encountering gross splashing by blood or body fluid.
1.2 Perform hand hygiene when hands get contaminated during removal of PPE.
1.3 PPE worn should be treated as contaminated and should not be worn out of the workplace into non-clinical areas.
1.4 Change PPE after completing aerosol generating procedure or caring patients with extensive dispersal of droplets or after prolonged close contact of dependent patients in high risk areas.
1.5 Disposable PPE should be discarded properly after use.
1.6 Reusable PPE must be properly maintained and disinfected after use.

People (staff or visitors) entering the clinical area should adhere to the PPE standard based on the activity performed (Supplement 7).

2 Gloves

2.1 Gloves should not be worn routinely on entering the cohort areas or isolation room.
2.2 Gloves do not replace hand hygiene. Washing or disinfection of gloves for continual use is not allowed and double gloving is not recommended.
2.3 Remove gloves and perform hand hygiene before touching one’s eyes, nose and mouth to prevent contamination of the mucous membrane.

3 N95 Respirator

3.1 Prior to using a respirator, staff is required to be evaluated for safety to wear a respirator. Utilize appropriate procedure to select the appropriate respirator size and type that fits well according to hospital protocol. Proper record is required. Training on how and when to use a respirator should be provided. Perform user seal check each time a disposable respirator is worn.

3.2 After touching a used N95 respirator, user must perform hand hygiene.

3.3 N95 respirator with exhalation valve is not recommended in healthcare setting.

3.4 a). If the healthcare worker is attending an individual with confirmed SARS or a high risk patient (e.g. close contact with SARS infected human case or bird/poultry) who is in isolation, the respirator should be discarded after leaving the room.

b). If the health-care worker is attending multiple confirmed SARS
patients in a cohort area, the same respirator may be used until the health-care worker leaves the area provided there is no contamination of the respirator. The respirator should be discarded immediately after leaving the cohort area.

3.5 Placing surgical mask over N95 respirator is not advised.

3.6 N95 respirator must be discarded immediately after performing invasive procedure.

4 Face and eye protection

4.1 Personal prescription lenses do not provide optimal eye protection and should not be used as a substitute for goggles.

4.2 Goggles provide more reliable protection to eyes. It should fit snugly over and around the eyes with/ without the personal prescription lenses. Goggles with anti-fog features and indirect vents locating on two sides are preferred. Alternatively, eye shields may be used.

4.3 Full face shield provides protection to eyes and other facial areas in situation that extensive splashing or spills may occur, such as irrigating a wound or suctioning copious secretions. The face shield should cover from the forehead, extend below the chin, and wrap around the side of the face.

5 Removing PPE

5.1 Careful gowning down is crucial in avoiding contamination. Do not gown down together in close proximity to another person.

5.2 Remove PPE in a manner that prevents self-contamination or self-inoculation with contaminated PPE or hands.

5.3 Remove PPE either in the anteroom or if there is no anteroom make sure that neither the environment outside the isolation room/ area nor other persons can get contaminated.

5.4 Suggested sequence of PPE removal:

1. Remove gloves
2. Perform hand hygiene
3. Remove gown
4. Perform hand hygiene
5. Remove disposable cap and eye protection
6. Perform hand hygiene
7. Remove mask/ respirator
8. Perform hand hygiene

Rationale:
- Keep mucosal protection intact throughout

(Footnote: The sequence may vary slightly according to local practice without jeopardising the general infection control principles.)
**Supplement 10: Infection Control in Out-Patient and Accident & Emergency Settings**

<table>
<thead>
<tr>
<th>Precautionary measures in Out-Patient setting (i.e. polyclinics &amp; day centres)</th>
<th>Precautionary measures in Accident &amp; Emergency setting</th>
</tr>
</thead>
</table>
| ➢ To avoid overcrowding in the patient waiting areas.  
➢ Schedule patient appointment and remind patients to adhere to it. | To avoid overcrowding in the patient waiting areas. |
| Temperature check for patients according to clinical conditions. | All patients to be triaged promptly to pick up high risk cases. Perform temperature check for all patients. |

Respiratory hygiene and cough etiquette for patients with respiratory symptoms. (Supplement 5). They are also reminded to properly dispose of the surgical masks when leaving clinics.

High risk patients as defined in Para 5.2.2. are to be segregated in separate waiting, consultation and procedure areas as far as feasible and provide prompt consultation and management by:

- Physical separation
- Optimize air exchange by engineering control, local exhaust fan, etc
- Mask for all segregated patients
- Allow minimum number of accompanying person
- Minimize unnecessary patient movement

Follow recommended PPE (supplement 7 & 8) when caring patients with suspected SARS

<table>
<thead>
<tr>
<th>Notify receiving parties of any suspected case of SARS before transfer</th>
<th>Notify any suspected cases of SARS to hospital infection control team promptly.</th>
</tr>
</thead>
</table>

Clean and disinfect the environment at least once daily or more frequently as indicated (for places have frequent patient flow or high chance of environmental contamination, such as for patient lavatories).
Supplement 11: Non-Emergency Ambulatory Transfer Services (NEATS) for Patients with Confirmed/ Suspected of SARS

General Consideration

1) This guideline applies to inter-hospital transfer of non-emergency patients.

2) Patients confirmed or suspected of SARS are contagious during the infectious period and patients with exposure history in the incubation period are at high risk.

3) NEATS staff should therefore assess the patients’ risk, such as by information from the referring units about the current infectious status of individual patient before transfer, so that appropriate infection control measures can be applied.

4) Convenient hand hygiene facilities, for examples, handrub and antimicrobial-impregnated wipes, should be available during the transfer operation.

5) Adequate PPEs should be available for immediate use or change during the transfer operation.

6) The referring unit should notify the receiving hospitals in advance to facilitate the reception of patients at different risk of infection.

Infection Control Measures

1) Maintain cohort practice throughout the transfer operation:
   1.1 Patients of different risk categories of SARS, (i.e. confirmed, suspected or with exposure history of SARS) should not be transported together in the same vehicle; nor with other patients.
   1.2 Minimise the number of staff involvement in transfer operation.

2) NEATS staff should apply appropriate precautions (Supplement 4 & 6) and wear recommended PPE when transferring high risk patients.

3) NEATS staff should wear recommended PPE as when entering high risk patient areas (Supplement 7).

4) Patients should wear a surgical mask unless contraindicated to prevent droplet transmission.

5) Staff should perform hand hygiene before and promptly after direct patient contact or contact with contaminated items or environment. (Supplement 4)

6) Staff should remove PPE and wash hands after each journey. Disposable items should be discarded properly. Reusable items should be cleaned and disinfected.

7) Disinfect the beds, wheelchairs, patient care items and the interior compartment of the vehicle after transfer.
Supplement 12: Infection Control in Outreach Care

1 Purpose of the Document

The document highlights the infection control issues specially encountered by outreach staff, for examples, Community Nursing Services (CNS), Community Geriatric Assessment Team (CGAT), etc. who may deliver the care in home environment, or residential care homes in the community. Readers should adhere to basic infection control measures as described in the HA Infection Control Plan for SARS.

2 Risk Assessment

An assessment on client’s infectious diseases is preferred prior to starting the outreach trip. Clients and carers should be asked if having any fever or respiratory symptoms. If he / she are positive for the aforesaid symptoms, further questioning on TOCC (Point 5.2.2 of the main content) is deemed necessary. If the client or carer is suspected of contracting SARS, respiratory hygiene /cough etiquette (as Supplement 5) should be reinforced and they are strongly encouraged to seek medical advice immediately. A follow up telephone visit may be conducted afterwards.

If a client or carer is suspected of contracting SARS during the visit, the staff should implement the infection control measures (Point 7 of the main content) and wear PPE as recommended in high risk patient area in Supplement 7.

3 Education to Patient and/ or Carer

Education should include personal hygiene, which should include information concerning hand hygiene, respiratory hygiene/ cough etiquette, and maintaining a clean environment.

4 Hand Hygiene

Hand hygiene is the most important element in infection control. The availability of hand hygiene facility may not be guaranteed during outreach situation. Therefore, hand hygiene materials, such as alcohol-based handrub, liquid soap, paper towel and towelette should be made readily available before each outreach duty. In situations where water access is not available, antimicrobial-impregnated wipes, such as towelettes, may be used as an alternative to washing hands with plain soap and water.
5 **Personal protective equipment (PPE)**

PPE should be made readily available before each outreach duty unless the quality and provision of PPE is ensured from the service area, such as residential care homes.

6 **Specimen collection**

6.1 Wear PPE as recommended in Supplement 7.

6.2 If specimen collection involves high risk procedure, review the indication if deemed necessary.

6.3 Pack the specimen properly to prevent leakage according to local policy without contaminating the outer surface.

6.4 Remove PPE and wash hands after the specimen collection procedure is completed.


7 **Cardiopulmonary resuscitation**

7.1 Avoid direct mucosal contact during resuscitation, such as mouth to mouth resuscitation.

7.2 Resuscitation bags, pocket masks, or mouthpieces should be used as an alternative to mouth–to–mouth resuscitation method.

7.3 Wear appropriate PPE (Supplement 8).

8 **Waste management**

Used sharps should be disposed according to local policy, in a way to prevent other’s injury, such as contained in a non-penetrating container. Non-sharps wastes should be disposed of as ordinary waste. Hand hygiene should be performed after waste disposal.
Supplement 13: Recommended visiting policy in HA Hospitals under Response Level (1 and 2)

1. High-risk areas:
   a) "No Visiting" rule applies unless on compassionate ground. Flexible arrangement for special circumstances e.g. paediatric patients. The number of visitors should be kept to minimum and the risk of infection should be explained to the visitors.
   b) Visitors (to high risk areas under special considerations) must register on visitor’s record. Advise visitors to comply with infection control precautions, including correct use of PPE and hand hygiene.
   c) Other means, such as mobile phone, video-phone, video-conferencing could be used to facilitate communication between patients and family members.

2. Other patient areas:
   a) Visiting should be kept to a minimum. If allowed, there should be no more than 2 visitors at any one time, and this is subject to control and regulation by ward manager to avoid overcrowding. The visiting hours are up to 2 hours per day. Exceptions may be made for special situations such as paediatric wards.
   b) Simple process to keep track of the number of visitors is desirable.
   c) Visitors are encouraged to wear surgical masks in patient areas.

Remarks:
   a) PPE for visitors should be appropriate to the area of visit.
   b) Health advice and information on proper infection control precautions should be available to visitors e.g. poster.
   c) Make arrangements for the provision of surgical masks and hand washing facilities and/ or hand rub within their hospitals and clinics.
Infection control Measures for the Public

<table>
<thead>
<tr>
<th>HK Gov’t</th>
<th>Alert Level</th>
<th>Response Level 1</th>
<th>Response Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA Response Items</td>
<td>Alert Level</td>
<td>Response Level 1</td>
<td>Response Level 2</td>
</tr>
<tr>
<td>Items</td>
<td>Isolation wards</td>
<td>No visiting unless on compassionate ground</td>
<td></td>
</tr>
<tr>
<td>Visiting hours</td>
<td>Other patient areas</td>
<td>Not more than 4 hrs per day, 2 persons at a time</td>
<td>2 hrs per day, 2 persons at a time</td>
</tr>
<tr>
<td></td>
<td>Convalescent hospitals</td>
<td>Not more than 6 hrs per day, 2 persons at a time</td>
<td>4 hrs per day, 2 persons at a time</td>
</tr>
<tr>
<td>Hand Hygiene</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Surgical Masks</td>
<td>Not required</td>
<td>Required in visiting patient areas</td>
<td>Required in all areas</td>
</tr>
<tr>
<td>Temperature check</td>
<td>Publicize the general public to take temperature check by themselves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration</td>
<td>Registration is required for visiting suspected/confirmed SARS case in isolation wards under special permission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer Service (including Chaplaincy)</td>
<td>Isolation wards</td>
<td>Only allowed on a case-to-case basis</td>
<td>Suspended</td>
</tr>
<tr>
<td></td>
<td>Other patient areas</td>
<td>Allowed</td>
<td>Allowed under directives given by Infection Control Team</td>
</tr>
<tr>
<td></td>
<td>Non-patient areas and Non-hospital settings</td>
<td>Allowed</td>
<td>Allowed under directives given by Infection Control Team</td>
</tr>
</tbody>
</table>
Supplement 14: Summary on Hand Hygiene and Wearing of Surgical Masks in patient care areas within hospital premises (e.g. A&E Departments and clinics) and outside hospital premises (e.g. General Out-Patient Clinics, Day Centres)

1. Hand hygiene

1.1) Staff (including contract out staff)
- Staff should always perform hand hygiene after any patient contact, and whenever after removing gloves.
- Staff are encouraged to use alcohol-based hand rub as alternative when hands are not visibly soiled.

1.2) Patients
Outpatients/ Day patients are encouraged to perform hand hygiene before leaving clinics or day centres.

1.3) Visitors
Encouraged to perform hand hygiene before leaving wards, clinics or day centres.

2. Wearing of Surgical Masks

2.1) Staff (including contract out staff)
- A surgical mask must be changed if it gets wet or is visibly soiled, and must be disposed of properly.
- Staff are reminded to remove PPE after completion of patient care procedure or on exit from patient care area.

2.2) Patients
- Surgical masks are recommended for outpatients and day patients.
- Inpatients/ Outpatients/ Day patients should wear surgical masks if they have respiratory symptoms.
- A surgical mask must be changed if it gets wet or is visibly soiled, and must be disposed of properly.

2.3) Visitors
- Encouraged to wear surgical masks in patient areas.
- A surgical mask must be changed if it gets wet or is visibly soiled, and must be disposed of properly.