Health Canada / Santé Canada

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Infection Control Guidance for Health Care Workers in Outpatient Settings[1]
SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

The following fact sheet has been developed to assist health care workers in physician's offices, clinics and other out of hospital settings with the assessment of potential cases of SARS and provide guidelines to prevent transmission of the disease[2]. Additional guidance for SARS Clinics is appended to this document. Please be advised that as more information about the cause of this illness becomes available, the information provided below may change.

Symptomatic members of the general public should be strongly encouraged to telephone the outpatient setting for advice and not come to the outpatient setting unless they are advised to do so.

For Case definitions, please visit our website: http://www.sars.gc.ca

The recommendations are based on the following assumptions:

- Clinical presentations of SARS is of a prodromal illness with sudden onset of fever. The lower respiratory phase begins within 3 to 7 days after the onset of prodrome.
- Transmission is occurring through close contact with a symptomatic person. Close contact means having cared for, lived with or had face-to-face (within one metre) contact with, or direct contact with respiratory secretions or body substances of a person with SARS.
- The cases that are most ill are the most communicable.
- There may be transmission during the prodromal period (i.e. when early symptoms are present).
- Transmission from an asymptomatic person is unlikely.
- All current evidence indicates that infection control measures, including the use of NIOSH standard approved N95 respirator[3] (mask) or equivalent and eye protection, are effective in preventing transmission to caregivers.

Until the etiology and route of transmission are known, **in addition to routine practices**, infection control measures for suspect and probable SARS outpatients should include:

- **Airborne Precautions** (including an isolation room with negative pressure relative to the surrounding area and use of an N95 respirator[3] (mask) or equivalent for persons entering the room.
- **Droplet and Contact Precautions** (including use of gown, gloves and eye protection for contact with patients or their environment)

More stringent infection control recommendations may be required in specific situations (e.g. outbreak management in an ambulatory care clinic).

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[1]Outpatient settings include, but are not limited to, ambulatory care clinics, physicians' offices, dentists' offices, walk-in clinics, community health centres, chiropractors' offices, and optometrists' offices.

[2]Please refer to the Health Canada Infection Control Guidelines: Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care, and Guidelines for Preventing the Transmission of Tuberculosis in Canadian Health Care Facilities and Other Institutional Settings.

[3]Respirators (masks) should filter particles one micron in size, have a 95% filter efficiency and provide a tight facial seal (less than 10% leak). Provided that an adequate facial seal is present, respirators that are NIOSH certified as N96, N99, N100 meet or exceed the minnimum requirements. Other respirators (masks) may meet the filtration and fit requirements. Respirators should be fit tested. Check the manufacturers' written specifications.

Patient Triage

- Ideally, people suspected of having SARS should be triaged by phone and dispersed to a hospital or a SARS assessment clinic without being seen in the outpatient setting.
- People being assessed for SARS should be discouraged from bringing anyone with them to their medical appointments, unless necessary.
- If the person does come to the outpatient setting with a fever over 38°C and one or more respiratory symptoms, he/she should immediately be given a surgical mask to wear and be interviewed immediately to assess his/her travel history, contact with a person diagnosed with SARS, or contact with a hospital that was closed because of SARS.
- If the person meets the case definition for suspect case of SARS, the individual should be moved to a private room away from the waiting room area. Ideally, the suspect case's examining room will have a door and the door kept closed.
- Triage staff should wear an N95 respirator[3] (mask), or equivalent mask, when in contact with a patient meeting the definition of suspect or probable SARS case. HCWs in contact with suspect or probable SARS cases should not reuse a respirator (mask). When not caring for a SARS patient, if it is necessary to reuse the respirator, it should be worn, removed and stored in a manner that will prevent the HCW from becoming contaminated by the patient secretions. If an N95 respirator (mask) or equivalent is not immediately available, a surgical mask should be worn as it may provide some protection[4].
- Eye protection (i.e. goggles or full face shields) should be worn when working with a suspect or probable case of SARS:
  - **when providing direct patient care unless the patient is wearing a mask,**
  - during cough producing and aerosol-generating procedures, and
  - when there is a potential for spattering or spraying of body substances.
- Patients should not be left sitting in the waiting room area. The local public health authority may have to perform contact tracing if a suspect case (see definition) was in close contact (see definition) with other people in the waiting room.
- A suspect case should be transported immediately to the hospital. The hospital should be notified of the patient's pending arrival.
- All suspect cases should leave via the route causing the least amount of person-to-person contact (e.g. through a back entrance rather than through the waiting room area).
- A suspect or probable SARS case should wear a surgical mask during transport.
- Travel arrangements for a suspect case who is sent home should entail the least amount of person-to-person contact (i.e. a suspect case should not use public transportation).
- The local public health authority should be notified immediately of the case.
- Anyone (e.g. family members, friends, volunteers) who accompanied the suspect case to the outpatient setting should be given written information on infection prevention and control related to SARS.
- A log should be kept of all cases, (as well as family, friends, or volunteers accompanying them), who are referred to emergency departments or SARS assessment clinics.

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[4]A surgical mask will capture large, wet particles near the nose and mouth of the wearer, thus preventing the spread from the wearer to others. Nonetheless, a surgical mask does not provide adequate respiratory protection to the HCW if the infection is airborne.

Precautions

In order to prevent self-contamination, health care providers should be instructed (and monitored if necessary) in the proper method for donning and removing personal protective equipment.

1. Hand Hygiene

Hand hygiene is the most important measure in preventing the spread of infection.

- Hand hygiene should be performed:
  - before contact with a patient
  - after any direct contact with a patient, before contact with the next patient
  - after contact with body fluids, secretions or excretions
  - after contact with items known or considered likely to be contaminated with respiratory secretions (e.g. inhalers, masks, used tissues)
  - immediately after removing gloves and other protective equipment.
- Waterless, alcohol-based antiseptic hand rinses are effective for hand hygiene and should be readily available. If there is visible soiling, hands should be washed with soap and water before using waterless antiseptic hand rinses. If soap and water are unavailable, cleanse hands first with detergent-containing towelettes to remove visible soil.
- HCWs should not wash hands in washrooms used by patients or the general public.
- Patients should be instructed in proper hand hygiene.

2. Respiratory and Eye Protection

2.1 General Procedures

- A NIOSH approved N 95 respirator[3] (mask) or an equivalent mask is recommended for HCWs during all patient contact. If an N95 or equivalent mask is not immediately available, a surgical mask should be worn as it may provide some protection[4].
- Respirators (masks) should be closely fitted to the face to prevent leakage around the edges and be fit tested.
- Respirators (mask) should be fit checked for adequate seal each time that they are used. To fit check a mask the wearer takes a quick, forceful inspiration to determine if the mask seals tightly to the face.
- Respirators (masks) with expiration valves may be used by HCWs.
- Respirators (masks) with expiration valves SHOULD NOT be used for suspect or probable SARS patients because the expiratory valve could disseminate the virus into the environment.
- A respirator (mask) which has been exposed to a probable case of SARS is considered contaminated and should be discarded. Appropriate hand hygiene and glove use must be followed.
- A respirator (mask) should be removed carefully using the straps so as not to contaminate the HCW.
- Respirators (masks) should be changed according to the manufacturer's recommendations.
- Respirators (masks) are disposable but can be re-used repeatedly (unless the HCW was in contact with a suspect or probable SARS case) by the same HCW if the respirators (masks) are stored in a clean, dry location. Discard the mask if it is crushed, wet or has become contaminated by patient secretions.
- Eye protection (goggles or full face shields) should be worn:
  - **when providing direct patient care unless the patient is wearing a mask**
  - during aerosol-generating procedures (e.g. aerosolized medication treatments), and

- when there is a potential for spattering or spraying of body substances.
- Prescription eye glasses do not provide adequate protection from droplets.

2.2 Cough Producing and Aerosol-Generating Procedures

- The stimulation of coughing and aerosol-generating procedures on patients with suspect or probable SARS should be avoided, if at all possible, in the outpatient setting.
- At this time there is no evidence to support the need for enhanced respiratory personal protective equipment (PPE) such as powdered air purified respirator system (PAPRS) during high risk procedures involving airway interventions such as endotracheal intubation. In fact, enhanced PPE, and the complexity involved in the removal and disposal/cleaning/decontamination of this equipment, may increase the potential risk for self contamination. Sustained compliance with proper use and cleaning/decontamination of PPE bears an inverse relation with the complexity of those PPE measures.
- Goggles and face shields should be removed and cleaned in a manner that will not contaminate the HCW. They should be cleaned between patients according to *Infection Control Guidelines Hand Washing, Cleaning, Disinfection and Sterilization in Health Care.* (See web address for this guideline on the last page.)

3. Gloves

- Gloves should be used as an additional measure, not as a substitute for hand hygiene.
- Clean, non-sterile gloves that provide a snug fit over the wrist should be worn for all patient contact.
- Gloves should be put on directly before contact with the patient or just before the task.
- Gloves should be changed between patients
- Gloves should not be reused or washed.

4. Gowns

- Long sleeved gowns or lab coats should be worn by HCWs entering the room of a suspect or probable SARS patient.
- Gowns/lab coats should be removed before leaving the patient's room.

5. Patient Care Equipment (Refer to *Infection Control Guidelines Hand Washing, Cleaning, Disinfection and Sterilization in Health Care.* See web address on the last page.)

- Disposable equipment should be used wherever possible**.**
- Equipment that is visibly soiled should be cleaned promptly with soap and water, detergents or enzymatic agents.
- Equipment should be cleaned and disinfected prior to being used with other patients. The reprocessing method required for a specific item depends on the item's intended use, the risk of infection to the patient, and the amount of soiling.
- Reusable respiratory equipment should undergo high level disinfection as a minimum or sterilization between patients, following the *Infection Control Guidance for Respiratory Equipment and Devices* available on the Health Canada website at: http://www.sars.gc.ca

6. Environmental Control (Refer to *Infection Control Guidelines, Cleaning, Disinfection and Sterilization in Health Care.* See web address on the last page.)

a) Waiting Room Area

- Disinfect or destroy magazines and toys if there is any possibility that they may have been contaminated.

b) Patient Assessment Area

- Frequent cleaning of environmental surfaces and noncritical patient care items using hospital grade germicide with virucidal label claim is recommended. Frequently touched surfaces require more frequent cleaning.
- Sufficient quantity of germicide in the correct concentration applied with clean cloth are components of an effective cleaning process. Comply with contact time on label and workplace safety.
- Soiled linen: Routine practices are sufficient. Linen should be transported in leak resistant, closed laundry bags.
- Waste: Routine practices should be applied to handling clinical waste. Routine sharps precautions should be followed. Clinical waste should be placed in an appropriate leak-resistant biohazard bag or container, labelled and disposed of safely. Double bagging of waste is not necessary.

7. Patient and Family Education

- Patients should understand the nature of their infectious disease and the reason for the precautions being used in order to decrease the risk of transmission of SARS to family and friends.
- Family members and other contacts should be given a fact sheet on what symptoms to watch for and what to do if they become symptomatic.

Infection Control Guidelines Hand Washing, Cleaning, Disinfection and Sterilization in Health Care
http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/98pdf/cdr24s8e.pdf

Infection Control Guidelines Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care
http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/99vol25/25s4/index.html

Guidelines for Preventing the Transmission of Tuberculosis in Canadian Health Care Facilities and Other Institutional Settings
http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/96vol22/22s1/index.html

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Appendix

Severe Acute Respiratory Syndrome (SARS) Assessment Clinic

The following appendix has been developed to assist health care workers who are setting up or working in SARS assessment clinics. The information is meant to be used in conjunction with the infection control measures described in the *Infection Control Guidance for Health Care Workers in Outpatient Settings*.

Mandate

A SARS clinic will function as an assessment clinic for people who are at risk or symptomatic to be screened for SARS. The goal is to divert routine SARS screening away from hospital emergency rooms and outpatient settings.

Suggested Staffing

The following personnel requirements are anticiptated for all SARS clinics:

- security personnel at the clinic entrance
- clerical staff including medical record staff
- nursing staff
- infection control professional (available for consultation)
- infectious disease physician (available for consultation)
- information technology support

Physical Requirements

Preferably, the clinic should be in its own free standing building separate from a health care institution. If the clinic is a part of a larger institution, the clinic must be physically isolated from the larger institution and should have negative pressure relative to that institution.

Patient Registration and Triage

In addition to infection control precautions for triage outlined in the *Infection Control Guidance for Health Care Workers in Outpatient settings:*

- Access to the clinic should be to the person requiring assessments for SARS plus one support person, if the patient requires physical assistance, an interpreter, or is unable to give informed consent/reliable history.
- Prior to entering the clinic, all potential patients, as well as anyone accompanying them, should be required to put on a surgical mask and wash their hands using alcohol-based hand sanitizer.
- All potential patients should be asked to complete a simple screening form (see example attached)
- The triage nurse should review the form with the potential patient, declare them “pass” or “fail” patients and decide on the person’s disposition (e.g. home with information sheet, home and contact public health authority, send to outpatient setting or to hospital emergency room) according to set criteria.

- If a suspect case is being transferred to a hospital, the hospital should be notified of the patient’s pending arrival and the local public health authority should be notified of the case.
- Suspect cases should wear a surgical mask during transport.
- Suspect cases should leave the clinic via a route causing the least amount of person-to-person contact (i.e., through a back entrance rather than through the waiting room)

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SAMPLE TRIAGE QUESTIONNAIRE

Name (please print)_____Date:_____Time:_____

Please complete sections A, B and C by circling No or Yes and return your completed sheet to the registration clerk.

SECTION A

Have you or someone in your household had close contact with a person with SARS in the last 10 days?
OR
Have you been to a health care facility closed due to SARS in the last 10 days?
OR
Are you currently under quarantine?

No_____ Yes_____

SECTION B

Have you traveled to China, Hong Kong, Vietnam, Singapore, or Taiwan *(adapt this information according to current travel advisory)* in the last 10 days?

No_____ Yes _____

SECTION C Are you experiencing **any** of the following symptoms?

- myalgia (muscle aches)
- malaise (severe fatigue, feeling unwell)
- severe headache (worse than usual)
- cough (onset within 7 days)
- shortness of breath (worse than is normal for you)
- feeling feverish or have had a fever in the last 24 hours

No Yes

SECTION D Record temperature if the answer to C is yes.

Temperature: _____ degrees C. Is temperature > 38C No _____ Yes _____

RESULTS:

If the response is YES to Section A, quarantine applies, notify public health authority

PASS

If the response is NO to all Sections A through C
If the response if YES to only Section B, or only to Section C

FAIL

If 2 or more sections of B, C or D are answered YES, then the person fails. A physician's evaluation is required. If the response to A or B is YES, and the person has symptoms as in Section C or D, then give the person a surgical mask and send them to an emergency department for this assessment. If C and D alone are positive, this assessment may take place in an outpatient setting.

Clinic patient name:_____Signature:_____Date:_____
Clinic staff name:_____Signature:_____Date:_____