Ministry of Health
and Long-Term Care

Ministère de la Santé
et des Soins de longue durée

Ontario

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Directive ACO03-05
October 22, 2003

DIRECTIVE TO ALL ONTARIO ACUTE CARE FACILITIES UNDER OUTBREAK CONDITIONS

This Directive replaces the following Directives issued to Acute Care Hospitals:

- *Directives To All Acute Care Facilities In GTA (Toronto, York, Durham Regions) - June 16, 2003*
- *Directives To All Ontario Acute Care Hospitals – May 13, 2003*

The following directives continue to be applicable to the Acute Care setting:

- *Directives to All Ontario Acute Care Hospitals regarding CritiCall Database (Directive 03-02) – April 20, 2003*
- *Directives to All Ontario Acute Care Hospitals Concerning Discharge of Non-SARS Patients (Directive 03-02(R)) - June 20, 2003*
- *Directives to All Ontario Acute Care Hospitals Concerning Discharge of SARS Patients (including Probable and Suspect Cases) (Directive 03-03(R)) – June 20, 2003*

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1 INTRODUCTION

This directive describes acute care facility precautions and practices under Outbreak conditions, which can be summarized broadly as:

- Should SARS reappear anywhere in the world and especially in Canada or Ontario, local Medical Officers of Health, in cooperation with the Ministry of Health and Long-Term Care (MOHLTC), will decide upon the level of threat imposed in a given jurisdiction and will determine appropriate precautions and actions to be undertaken by acute care facilities and all other health care providers and sectors.
- All acute care facilities and other health care providers are expected to communicate their specific situation with respect to febrile respiratory illness and SARS, as well as their response and difficulties, to their local health unit. During an identified SARS outbreak in a region, hospitals may be required to reduce the volume of patient care activity to allow the hospital to continue to respond to its Emergency Department needs in managing SARS cases. This priority may require curtailment of booked procedures and non-urgent surgeries.
- Hospitals must be prepared to implement Code Orange as directed.
- Hospitals are to post appropriate signage.
- Hospitals must continue to maintain a high standard of infection control.
- Hospitals should refer to *Directive to All Ontario Acute Care Hospitals for High-Risk Respiratory Procedures (Directive HR03-12), October 22, 2003*

2 GENERAL PRINCIPLES

2.1 Purpose and Objective

The purpose of this directive is to direct the hospital's response when a SARS outbreak has been declared.

2.2 Hospital Categorization

- The SARS Health Care Facility categorization (0 –3) system will be used throughout an outbreak phase of SARS (see Appendix 2). In general, the application of the SARS Health Care Facility categories should be based on individual facility SARS risk assessment by the hospital infection control team in consultation with the local MOH and the MOHLTC with twice daily reporting through the CritiCall system.
- For SARS Health Care Facility Category 2-3 facilities, precautions and practice changes may be applied to the affected areas of the facility only, or to the entire facility, in consultation with the local MOH and with concurrence of the MOHLTC.
- Once the SARS outbreak is declared over by the local MOH, the MOHLTC may rescind the need for reporting the categorization of hospitals.

2.3 Glossary of Terms

Definitions of key terms used within this directive are listed in the glossary (see Appendix 1)

3 BASELINE INFECTION CONTROL PRACTICES AND SURVEILLANCE ACTIVITIES

3.1 Health Canada Routine Practices Guidelines

All acute care facilities are to adhere to the Health Canada Guidelines: *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health care*, Volume: 25S4 - July 1999

Reference: http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/99vol25/25s4/index.html for definitions and detailed information regarding routine practices and additional precautions.

3.2 Active Febrile Respiratory Illness Surveillance Programs

All acute care facilities are required to have an Active Febrile Respiratory Illness surveillance program.

An active Febrile Respiratory Illness surveillance program may take one of two forms:

1. Febrile Respiratory Illness (FRI) surveillance with an emphasis on detecting febrile respiratory illnesses in the emergency department and upon admission; and
2. Intensive Hospital (IH) surveillance which builds upon FRI surveillance, deepens the SARS identification processes in the emergency department and upon admission and also introduces processes to identify active SARS in-patients previously undiagnosed.

3.2.1 Febrile Respiratory Illness (FRI) Surveillance Program

All acute care facilities are required to have a Febrile Respiratory Illness (FRI) surveillance program in place. During outbreak situations, Category 0-1 facilities must continue FRI surveillance.

See Febrile Respiratory Illness Surveillance. This document will be released in November 2003.

3.2.2 Intensive Hospital (IH) Surveillance Program

Category 2 and 3 acute care facilities must heighten vigilance by conducting Intensive Hospital (IH) surveillance. The purpose of IH surveillance is to detect any cases of SARS that may reside within hospitals and to prevent subsequent spread.

See Intensive Hospital Surveillance. This document will be released in November 2003.

4 SCREENING, ASSESSMENT AND PRECAUTIONS

Health care workers must maintain a high index of suspicion when assessing any patients for new onset of fever or respiratory symptoms. During an outbreak, fever alone must be considered as a sign of potential SARS infection even in the absence of other signs or SARS contact history. Therefore, any patient developing the following symptoms or signs on or after admission – fever, unexplained cough, unexplained hypoxia, shortness of breath or difficulty breathing – must be evaluated immediately. Patients with fever and/or respiratory symptoms must be managed in respiratory and contact precautions until SARS is ruled out.

During a SARS outbreak, hospitals that are Category 0-1 must conduct a Febrile Respiratory Illness surveillance program using the SARS Risk Factor Screening Tool (see Appendix 3) and following the SARS Risk Management Algorithm in Emergency Departments and other Departments that Admit Patients - Outbreak Conditions (see Appendix 4).

Category 2-3 facilities must conduct an Intensive Hospital surveillance program using the SARS Risk Factor Screening Tool and following the SARS Risk Management Algorithm in Emergency Departments and other Departments that Admit Patients - Outbreak Conditions.

4.1 Screening at Hospital Entrances

All acute care facilities must implement **active** screening of all staff, outpatients and visitors to the facility using sections A, B **and** C of the SARS Risk Factor Screening Tool. Section D is not to be completed when screening staff, outpatients and visitors. A SARS Risk Factor Screening Tool is provided in Appendix 3.

Active screening refers to a process whereby staff, patients and/or visitors are directed to complete Sections A, B and C of the SARS Risk Factor Screening Tool and to give it to a designated staff person prior to entry into the facility. Those persons who have a contact history or symptoms of SARS may not enter the facility until further medical assessment has occurred.

More details are provided in the description of activities for each of the SARS Health Care Facility Categories that follows in section 7.0 of this document.

4.2 Outpatient/ Ambulatory Clinics

Outpatient Clinics within or associated with acute care facilities shall operate under the *Directives for Health Care Providers in Community Settings and Community Health Care Agencies under Outbreak Conditions. This Directive will be released in November 2003.*

4.3 Patient Assessments - Emergency Departments

Emergency Departments will incorporate all four sections A through D of the SARS Risk Factor Screening Tool within the triage process.

4.3.1 Infection Control Practices Algorithms

To assist with determining infection control practices based upon the information gathered from the SARS Risk Factor Screening Tool please refer to:

- SARS Risk Management Algorithm in Emergency Departments and Other Departments that Admit Patients - Outbreak Conditions (Appendix 4)

4.4 Patient Assessments upon Admission

4.4.1 Patients admitted via Departments other than Emergency

All patients being admitted are to undergo a SARS risk factor assessment as part of the admissions process.

4.4.2 Patient Admitted from the Emergency Department

Patients being admitted from the Emergency Department should have already undergone a SARS risk factor assessment as part of the triage process.

Upon admission, temperature must be reassessed to detect a fever not discovered at the first assessment.

4.4.3 Infection Control Practices and Risk Management Algorithm

To assist with determining infection control practices based upon the information gathered from the SARS Risk Factor Screening Tool, please refer to:

- SARS Risk Management Algorithm in Emergency Departments and Other Departments that Admit Patients - Outbreak Conditions (Appendix 4)

4.5 Management of Persons Accompanying a Patient

If a patient requires Respiratory and Contact Precautions (Enhanced), then the person(s) accompanying that patient either in the Emergency Department or upon Admission must be assessed using the SARS Risk Factor Screening Tool.

Reference: Directive to All Acute Care Facilities Regarding the Application of Respiratory and Contact Precautions (Enhanced) with; Patients with Febrile Respiratory Illness and a SARS Contact History; Persons under investigation; SARS Patients; and SARS Units. (Directive RCPE03-01), October 22, 2003

5 HOSPITAL PROCEDURES

5.1 General Management of Patients

Patients with febrile respiratory illness are to be managed according to infection control precautions listed under the SARS Risk Management Algorithm in Emergency Departments and Other Departments that Admit Patients – Outbreak Conditions (Appendix 4)

For those being admitted, also refer to the Febrile Respiratory Illness Isolation and Investigation Decision Guide for Admitted Hospital Patients in Outbreak Conditions for determining isolation, testing and follow up actions (Appendix 5).

All other patient care should follow Health Canada's Guidelines for Routine Practices and transmission-based precautions as outlined in the list of references in section 10.0 of this document.

5.2 Patient Accommodation

Those patients who have been assessed to require either Respiratory and Contact Precautions or Respiratory and Contact Precautions (Enhanced) according to the appropriate algorithm are to be placed as follows (in decreasing order of preference):

1. negative pressure room, with at least six air exchanges per hour or 12 air exchanges if the building is a new facility, as per Canadian Standards Association, September 2001 (highest preference),
2. single room with HEPA filtration unit which achieves at least 9 air exchanges per hour,
3. single room, with no special air handling,
4. semi-private room, cohorted with patients with similar SARS Risk Factors and/or symptoms or diagnosis.

Patients under Respiratory and Contact Precautions (Enhanced) have priority for negative pressure room accommodation. Where there are more than two patients in this category of precautions, please refer to *Directive Regarding the Application of Respiratory and Contact Precautions (Enhanced) with Patients with Febrile Respiratory Illness and a SARS Contact History; Persons under Investigation; SARS Patients; and SARS Units, (Directive RCPE03-01), October 22, 2003.*

Patients requiring infection control isolation for other reasons (e.g., tuberculosis, MRSA, etc.) according to Health Canada's Guidelines for Routine Practices (*See Febrile Respiratory Illness Surveillance. This document will be released in November 2003)* and transmission-based precautions should be provided with the required accommodations.

5.3 Discontinuing Precautions

Infection Control must be informed of and approve any change in precautions from Respiratory and Contact Precautions or Respiratory and Contact Precautions (Enhanced).

After 72 hours of observation and diagnostic testing, Infection Control is to conduct a thorough review with the attending physician, a specialist in infectious diseases or respiratory medicine as required, and nursing staff to determine if a change in precautions is required.

If as a result of this review SARS is still felt to be a diagnostic possibility, then Respiratory and Contact Precautions or Respiratory and Contact Precautions (Enhanced) and daily clinical assessment shall be continued.

5.4 Movement of Patients inside the Facility

5.4.1 Patients under Respiratory and Contact Precautions

The movement of these patients should be restricted to essential tests and procedures. When movement is required, the patient must wear a surgical mask when outside of the patient room. Respiratory and Contact Precautions are to be maintained, with staff using the personal protective equipment outlined under these precautions at all times.

5.4.2 Patients under Respiratory and Contact Precautions (Enhanced) (e.g., Suspect or Probable SARS Cases)

Every effort should be made to conduct tests and procedures within the patient room. If essential and urgent tests and procedures are required outside the patient room, the patient must wear a surgical mask. Respiratory and Contact Precautions (Enhanced) are to be maintained, with staff using personal protective equipment outlined under these precautions at all times.

5.5 Patient Transport outside of Facility

Follow revised transfer protocols for inter-facility transfers, *Provincial Inter-Facility Transfer Directive During Outbreak Conditions, Directive PIPT03-03, October 22, 2003*

5.6 Patient Discharge

Patients with febrile respiratory illness who are to be discharged should be assessed for ongoing transmissibility of their infection. The same level of precautions should be observed on discharge as during hospital admission unless advised otherwise by Infection Control.

Public Health must be notified of the discharge of a patient under Respiratory and Contact Precautions or Respiratory and Contact Precautions (Enhanced) (i.e., any suspect or probable SARS patient)

Reference: *Directives to all Ontario Acute Care Hospitals Concerning the Discharge of Non-SARS Patients (Directive 03-02(R)), June 20, 2003.*

5.7 High-Risk Respiratory Procedures

For details on how to manage high-risk respiratory procedures, please refer to:

- *Directive to All Ontario Acute Care Facilities for High-Risk Respiratory Procedures (Directive HR03-12), October 22, 2003*

5.8 Quality Assurance on Assessments and Precautions

Quality assurance measures, such as periodic audits, are to be implemented and results documented to ensure that an active Febrile Respiratory Illness surveillance program is appropriately applied.

5.9 Infection Control Coverage

Hospitals designated as SARS Category 0-2 are to establish 24-hour access to infection control advice and consultation through an assigned hospital designate to ensure continuity of infection control practices, fever and respiratory surveillance.

Hospitals designated as SARS Category 0-2 need not provide on-site round-the-clock infection control coverage by Infection Control Practitioners.

Hospitals designated as SARS Category 3 are required to have 24-hour on-site round the clock infection control coverage by an Infection Control Practitioner.

6 FACILITY INFRASTRUCTURE AND BUILDING MANAGEMENT

6.1 Hand Hygiene Stations

Hand hygiene stations are to be available and accessible:

- in all patient care areas, and
- throughout the facility, as recommended by the facility's Infection Control Practitioner.

6.2 Signage

Signs are to be posted at all hospital entrances with the key messages of:

- Restricted visitor access
- SARS Screening in effect

See Appendix 6 for sample.

6.3 SARS Unit Operation

In consultation with the local MOH and the MOHLTC, hospitals may be asked to re-establish their SARS units if required.

For information regarding the operation of SARS units, please refer to: *Regarding the Application of Respiratory and Contact Precautions (Enhanced) with Patients with Febrile Respiratory Illness and a SARS Contact History; Persons Under Investigation; SARS patients; and SARS Units (Directive RCPE03-01), October 22, 2003.*

6.4 Negative Pressure Isolation Rooms

6.4.1 Emergency Departments and Critical Care Areas

Hospitals must establish and maintain negative pressure isolation room(s) with a minimum of 6 air exchanges per hour, or 12 air exchanges if building a new facility, per the Canadian Standards Association, September 2001, in all Emergency Department and Critical Care areas.

6.4.2 General Inpatient Areas

Hospitals must establish and maintain at least one negative pressure isolation room in the general inpatient area of the hospital. If negative pressure isolation rooms are not available, hospitals must install a HEPA filtration unit in one or more rooms within the general inpatient area, which achieves at least 9 air exchanges per hour. Negative pressure rooms must be monitored daily to ensure supply and exhaust system function and have an exhaust system supplied by emergency power.

6.5 Cleaning of High-Risk and General Public Areas

Hospitals must maintain thorough surface cleaning in high-risk public areas as defined by Infection Control, in addition to patient rooms and patient care areas.

6.6 Facility Entrance Restrictions

Controlled access to the facility through restrictions on the number of entrances to the facility is directed for hospitals designated as SARS Category 2 or 3.

6.7 Hospital Workers

Workers are broadly defined to include, but not be limited to: staff, physicians, residents, fellows, volunteers and students.

Staff from SARS Category 0-1 facilities may work in other category 0-1 facilities and in category 2 facilities in areas not affected by unprotected exposure.

All hospitals will have all workers undergo active screening for SARS symptoms using the SARS Risk Factor Screening Tool. Staff should self screen at home and should not come to work if they are ill.

In SARS Category 2-3 facilities, there shall be no communal eating. All staff are to eat alone or a minimum of two (2) metres from any other person.

Only essential staff may work in areas affected by the unprotected exposure(s). These staff must work in the affected area only and cannot work at other facilities or other health care settings.

Volunteers, research staff, students, consultants, contractors, delivery personnel, couriers, floral shop staff etc will not enter SARS-affected areas in SARS Category 1-2 hospitals. These same persons will not enter the hospital if it is designated a SARS Category 3 hospital unless their function is deemed essential to the operation of the hospital.

Hospital workers who have been exposed to cases of suspect or probable SARS will be quarantined as per direction from the local public health unit. Essential hospital workers may be placed on "working quarantine" if approved by the local public health unit.

For hospitals designated as SARS Category 3 hospitals "working quarantine" applies for essential staff only; all others must go on "home quarantine" as directed by the local public health unit. Residents and fellows are allowed (under working quarantine) if they are essential for patient care, but they may not rotate to other facilities. Health science students will be under quarantine protocols if they were in the institution during the exposure period. Prevent entry of unexposed students. Universities and colleges may have their own directives which take precedence if more restrictive. Deliveries are to be made to facility doors only and hospital staff are to accept items from that point.

7 ACTIVITY LEVELS

7.1 General Activity Levels

During an outbreak of SARS, hospitals designated as SARS Category 0 –2 should make every effort to provide the highest level of service possible depending upon the needs of the region to manage SARS cases or overflow from SARS-affected hospitals. Coordination of hospital activity levels will be provided by the local MOH and the MOHLTC.

Hospitals designated as SARS Category 3 will have their service levels reviewed by the MOHLTC and a determination will be made with the hospital, MOHLTC and the local MOH as

to what level of service the hospital will be able to provide to the region at that time. The levels of service provided will be reviewed regularly.

7.2 Visitors

Acute care facilities are required to secure public entrances using security staff, limit visitation and actively screen all visitors using the SARS Risk Factor Screening Tool.

7.3 Visitors to patients under Respiratory and Contact Precautions

These visitors should be limited to two visitors at a time. They must adhere to respiratory and contact precautions when visiting. They must practice good hand hygiene and are not to visit the hospital if they are feeling unwell.

7.4 Visitors to patients under Respiratory and Contact Precautions (Enhanced) (i.e., to Suspect or Probable SARS Patients)

Patients under Respiratory and Contact Precautions (Enhanced) have febrile respiratory illness and SARS Contact History and are suspect or probable SARS Cases.

The number of visitors to these patients must be restricted. Exceptions may be made on compassionate grounds, in consultation with Infection Control and the medical and nursing staff caring for the patient.

These visitors must adhere to the Respiratory and Contact Precautions (Enhanced). They must practice good hand hygiene and are not to visit the hospital if they are feeling unwell.

If a visitor to a patient under Respiratory and Contact Precautions (Enhanced) develops a fever **or** respiratory symptoms, they are to report this fact to the hospital's Infection Control and public health unit. Medical assessment should be arranged through the local health unit.

8 HEALTH AND SAFETY IN THE WORKPLACE

8.1 Personal Protective Equipment and Fit-testing

Personal protective equipment must be properly used and maintained consistent with the *Regulation for Health Care and Residential Facilities* (Reg. 67/93. S.10) made under the Occupational Health and Safety Act.

Staff requiring N95 or equivalent masks must be qualitatively fit-tested to ensure maximum mask effectiveness. (See NIOSH website at www.cdc.gov/niosh -Publication No.99-143 and the Canadian Standards Association, Selection, Use and Care of Respirators Z94, 4-02, October 2002).

Hospitals are to implement fit-testing for staff in identified high-risk areas as a priority**.**

8.2 Hospital Workers Infection Prevention Practices

All workers within the facility are to practice infection prevention in the workplace.

Infection prevention practices to be encouraged include:

- Good hand hygiene
- Not working when feeling feverish or ill
- Properly wearing and maintaining the appropriate personal protective equipment, as determined by the type of precautions assessed for the circumstances.

Workers with febrile illnesses or who are feeling unwell and may infect others are to report to their supervisor or appropriate managing body and exclude themselves from work.

For hospital employees, Occupational Health is to be notified and will follow up and document the illness as per hospital policy and FRI and IH surveillance programs.

Workers who become febrile while at work are to notify their supervisor, and leave work if authorized. They are to be assessed or followed up by Occupational Health.

8.3 Occupational Health Notification

As part of the Febrile Respiratory Illness (FRI) or Intensive Hospital (IH) surveillance programs, Occupational Health is to be notified and is to follow up on workers who report sick, or become sick at work, to assess for febrile respiratory illness.

See Febrile Respiratory Illness Surveillance. This document will be released in November 2003.

9 LIST OF APPENDICES

10 LIST OF REFERENCE DOCUMENTS

Reference	Source
Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health care, Volume: 25S4 - July 1999	www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/99vol25/25s4/index.html
Febrile Respiratory Illness (FRI) Surveillance, This document will be released in November2003.	
Directive Regarding the Application of Respiratory and Contact Precautions (Enhanced) with Patients with Febrile Respiratory Illness and a SARS Contact History; Persons under Investigation; SARS Patients; and SARS Units, Directive RCPE03-01, October 22, 2003	www.health.gov.on.ca
Provincial Inter-Facility Patient Transfer Directive During Outbreak Conditions, Directive PIPT03-03, October22, 2003	www.health.gov.on.ca
Directives to All Ontario Acute Care Hospitals Concerning Discharge of Non-SARS Patients (Directive 03-02(R)) - June 20, 2003	www.health.gov.on.ca
Publication No. 99-143 and the Canadian Standards Association, Selection, Use and Care of Respirators Z94, 4-02, October 2002	www.cdc.gov/niosh

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Original signed by

Dr. Colin D'Cunha
Commissioner of Public Health
and Chief Medical Officer of Health

APPENDIX 1 - GLOSSARY OF TERMS

Active Surveillance Program: a term to describe surveillance activities for SARS within an acute care facility. The intent of such a program is the early detection of clusters of potential SARS cases requiring investigation.

There are two types of Active Surveillance Program: Febrile Respiratory Illness (FRI) Surveillance and Intensive Hospital (IH) Surveillance.

ARDS: Adult Respiratory Distress Syndrome is the rapid onset of progressive malfunction of the lungs usually associated with the malfunction of other organs due to the inability to take up oxygen. The condition is associated with extensive lung inflammation and small blood vessel injury in all affected organs.

Cluster: a grouping of cases of a disease (e.g., respiratory illness indicative of SARS) within a specific in time frame and geographic location suggesting a possible association between the cases with respect to transmission.

CXR: Chest x-ray (roentgenogram).

Droplet Precautions: (see also Routine Practices) The use of surgical or procedure masks and eye protection or face shields for patients who have respiratory infections especially if associated with coughing, sneezing, felt to be transmissible principally by large respiratory droplets particularly when within 1 meter of such a patient. Also used where appropriate to protect the mucous membranes of the eyes, nose and mouth during procedures and patient care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions (e.g., air way suctioning).

Febrile Respiratory Illness (FRI): temperature greater than 38^0 C and new or worsening cough or shortness of breath. During non-outbreak conditions this includes a fever of greater than 38^0C **and** new or worsening cough or shortness of breath to increase the specificity of this designation. During outbreak conditions, to maximize the sensitivity to potential SARS infection, this includes a fever of greater than 38^0C **or** new or worsening cough or shortness of breath. The context in which FRI is determined must take the outbreak vs. non-outbreak conditions into account.

Febrile Respiratory Illness (FRI) Surveillance Program: a type of Active Surveillance Program for SARS characterized by surveillance for febrile respiratory illness in patients in Emergency Departments and patients being admitted through regular admitting procedures to the acute care facility.

Hand Hygiene: hand washing with soap and running water or alcohol-based hand sanitizers

Health Care Facility: a location where ill people are examined and assessed by health care workers and/or provided with direct health care services. Locations may range from private physician offices, ambulatory clinics or diagnostic facilities, to hospitals.

Health Care Facilities SARS Categories: a categorization system established by the Ministry of Health and Long-Term Care to determine precautionary measures to be taken during a SARS outbreak. The levels are as follows:

SARS Category 0: Health care facility has no known cases of SARS (suspect or probable).

SARS Category 1: No unprotected SARS exposure – staff and/or patients. Health care facility has one or more cases of SARS (suspect or probable).

SARS Category 2: Any unprotected SARS exposure within the last 10 days but without transmission to staff or patients. The health care facility may or may not currently have one or more cases of SARS (suspect or probable).

SARS Category 3: Unprotected SARS exposure with transmission to health care workers and/or patients. The health care facility may or may not currently have one or more case of SARS (suspect or probable).

High-Risk Respiratory Procedure: any procedure with the potential to generate respiratory droplets, including, but not limited to nebulized therapy, endotracheal intubation, bronchoscopy, bag-valve mask ventilation, non-invasive ventilation (CPAP, BiPAP), and ventilation using high frequency oscillation.

Home Quarantine: To prevent potential transmission of SARS virus by persons who have been in contact with a known probable or suspected case of SARS and may be in the incubation period of illness.

Measures include but are not limited to the following:

1) Remain home during the period of quarantine
2) No visitors during the period of quarantine
3) A surgical or procedure mask to be worn when in the presence of other persons. Masks should be changed approximately every 4 hours if worn for extended periods of time
4) Meals are to be taken away from other household members
5) Persons under quarantine should sleep alone in a separate room
6) Frequent hand washing is emphasized to all household members
7) Body temperature is to be taken twice daily. Any temperature reading 38 degrees Celsius is to be reported to the Public Health Department right away
8) Any new onset of cough or shortness of breath is to be reported to the local public health unit right away

Intensive Hospital (IH) Surveillance Program: a type of Active Surveillance Program for SARS characterized by surveillance for either fever **or** respiratory illness in patients in Emergency Departments, patients being admitted to the facility and inpatients.

This program is limited to health care facilities within the area of a **current** SARS outbreak as designated by the MOHLTC in consultation with the local Medical Officer of Health.

Non-Outbreak: *Non-outbreak* refers to the conditions once a SARS Outbreak is declared over by the local Medical Officer of Health (MOH) or in a region where no SARS outbreak has occurred. Facilities within the region may have one or more SARS patient(s), either local cases or those imported through travel activity, provided there has been no transmission within the hospital population.

Outbreak: for the purposes of SARS activity, an *outbreak* is defined as local transmission of SARS. The local Medical Officer of Health is responsible for declaring a SARS outbreak. An outbreak may be setting-specific (e.g., a hospital with transmission) or health unit wide (e.g. transmission in more than one setting or significant community exposure).

Personal Protective System (PPS): a full body suit or equivalent protective apparatus consisting of head, face and neck protection with or without enclosed body protection; or a powered air-purifying respirator (PAPR).

Respiratory and Contact Precautions (RCP): infection control procedures for institutional and community-based settings with the intent of protecting the Health care worker from SARS.

1. Common Elements for both institutional and community-based settings:

    A. Personal protective equipment (PPE):

    - Staff to use an N95 or equivalent mask, eye protection, gown, and gloves.
    - Remove PPE after there is no further contact with the patient/client in the following order: Remove gloves, clean hands, remove gown, clean hands, remove eye protection and finally the N95 mask. Wash hands carefully after removing the final PPE. Avoid touching other objects or people until after removing PPE and washing hands.
    - Disinfect non-disposable equipment (e.g., stethoscope, testing items) and anything the client used or touched before it is used for others.
    - When the patient leaves the examining room it should be cleaned with a hospital grade disinfectant.

    B. Patient Management:

    - Isolate the patient/client immediately from other patients/clients and staff.
    - Whenever the patient/client is in a public setting (eg in the hallway, or waiting room), in the same room with others, and during transport, the patient/client must wear a surgical mask, unless medically contraindicated..
    - Limit visitation to the symptomatic patient/client except for essential or compassionate reasons. Visitors should wear PPE.

2. For Institutional Settings:

Patient Accommodation for Hospitals: Patients are to be placed as follows (in order of decreasing preference):

1. Single room with negative pressure ventilation, with at least 6 air exchanges per hour or 12 air exchanges if the building is a new facility, as per Canadian Standards Association, Sept 2001 (highest preference)
2. Single room with HEPA filtration unit which achieves at least 9 air exchanges per hour
3. Single room, with no special air handling
4. Semi-private room, cohorted with patients with similar SARS Risk Factors and/or symptoms or diagnosis

3. For Community-Based Settings:

Includes physician's offices, community health practice settings, non-acute care facilities, and home and community care:

- Physician, if present, to assess the patient
- If SARS is possible, or if hospitalization is required, arrange for the patient/client to be taken to an Emergency Department for evaluation (call ahead)
- Transportation for medical examination must be by private vehicle or medical transport with the patient/client wearing a surgical mask during transport.
- Contact the local Public Health Unit, as appropriate

Respiratory and Contact Precautions (Enhanced) (RCP[E]): an enhanced form of infection control procedures, which require the following in addition to procedures under Respiratory and Contact Precautions:

A. Personal Protective Equipment: also includes a full face shield and hair covering

B. Patient Accommodation in hospitals: patients assessed to be at risk for having SARS, based on the SARS Risk Management Algorithms have priority for the highest level of accommodation

Respiratory Symptoms: new or worse cough (onset within 7 days) OR new or worse shortness of breath (worse than what is normal for the patient).

Routine Practices (See also "Droplet Precautions"): the Health Canada term to describe the system of infection prevention recommended in Canada to prevent transmission of infections in health care settings. These practices describe prevention strategies to be used with all patients during all patient care, and include:

- Hand washing or cleansing with an alcohol-based sanitizer before and after any direct contact with a patient.
- The use of additional barrier precautions to prevent health care worker contact with a patient's blood and body fluids, non intact skin or mucous membranes.
    - Gloves are to be worn when there is a risk of body fluid contact with hands; gloves should be used as an additional measure, not as a substitute for hand washing.
    - Gowns are to be worn if contamination of uniform or clothing is anticipated.

- The wearing of masks and eye protection or face shields where appropriate to protect the mucous membranes of the eyes, nose and mouth during procedures and patient care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.

The full description of routine practices to prevent transmission of nosocomial pathogens can be found on the Health Canada website (http://www.hc-sc.gc.ca/pphb-dgspsp/dpg_e.html#infection)

RSV: respiratory syncytial virus, a common respiratory virus especially common in winter months and recognized as a common cause of symptomatic respiratory infection in children, the elderly and individuals who are immunocompromised.

SARS Contact History: SARS contact history in a patient with febrile and/or respiratory illness is defined as any one of:

- Unprotected contact with a person with SARS in the last 10 days prior to the onset of this illness
- Were present in a healthcare facility closed due to SARS before the onset of symptoms, 10 days prior to the onset of this illness
- Instructed by Public Health to be in quarantine or isolation.
- Travel to a SARS affected area in the 10 days prior to the onset of illness

SARS Risk Management Algorithm: a tool to be used by health care workers to assist in the management of a patient based on information derived from the SARS Risk Factor Assessment Tool. There are various algorithms, depending on whether the health care worker is in a facility operating under FRI or IH Surveillance, or in the community.

SARS Risk Factor Screening Tool: a tool to be used by health care workers during triage, admitting, and outpatient /ambulatory settings (or otherwise defined by FRI or IH surveillance). This tool gathers information from the patient regarding temperature, respiratory illness, contact history and SARS Risk Factors.

SARS Risk Factors: SARS risk factors in a patient with febrile and/or respiratory illness are defined as:

- Travel (patient or household/close family) to a former or current SARS affected area in the last 30 days.
- Admission to a hospital* or nursing home* in the 10 days prior to the onset of this illness.
- Household members or other close contacts with fever or pneumonia.
- Health care worker with direct patient contact in a healthcare facility.
- (*Only facilities in Toronto, York, Durham regions of Ontario or Taiwan, Singapore or Hong Kong are considered as positive Risk Factors.)

Working Quarantine: To prevent the potential transmission of SARS virus by persons who have been in contact with a known probable or suspected case of SARS and may be in the incubation period of illness and those who work in an area where exposures to SARS may have occurred. The precautionary measures are to be applied to those who meet the above criteria and whose work has been identified as essential (e.g., health care workers during a SARS outbreak).

Measures include but are not limited to the following:

1) Arrive to the workplace wearing a mask.
2) Go directly to the quarantine workplace area.
3) All breaks and meals are to be taken in the designated quarantine area.
4) Respiratory and Contact Precautions, which include gowns, gloves, masks, and eye protection, are to be worn while working in the quarantined area.
5) All staff on working quarantine are to leave work wearing a clean procedure mask.
6) Public transit is to be avoided.
7) For persons who were exposed to SARS virus and considered contacts, they are to apply Home Quarantine Measure when not at work.

APPENDIX 2 - HEALTH CARE FACILITIES SARS CATEGORIES

Health Care Facilities SARS Categories is a categorization system established by the Ministry of Health and Long-Term Care to determine precautionary measures to be taken during a SARS outbreak.

The levels are as follows:

SARS Category 0: Health care facility has no known cases of SARS (suspect or probable).

SARS Category 1: No unprotected SARS exposure – staff and/or patients. Health care facility has one or more cases of SARS (suspect or probable).

SARS Category 2: Any unprotected SARS exposure within the last 10 days but without transmission to staff or patients. The health care facility may or may not currently have one or more cases of SARS (suspect or probable).

SARS Category 3: Unprotected SARS exposure with transmission to health care workers and/or patients. The health care facility may or may not currently have one or more case of SARS (suspect or probable).

APPENDIX 3 - SARS RISK FACTOR SCREENING TOOL

Patient Name/Information

Date _____ Unit _____

SECTION A: SARS Symptoms			
Are you experiencing any of the following symptoms?			
• New / worse cough (onset within 7 days) **OR**	NO	YES	
• New / worse shortness of breath (worse than what is normal for you)	NO	YES	

SECTION B: Temperature			
Are you feeling feverish, had shakes or chills in the last 24 hours?	NO	YES	*If yes to symptoms in **Sections A or B** record temperature*
RECORD TEMPERATURE [ ] *Is the temperature above 38°C?*	NO	YES	

SECTION C: SARS Contact History			
1. Have you had contact with a person with SARS while not wearing protection against SARS in the 10 days prior to onset of this illness?	NO	YES	
2. Have you been in a healthcare facility designated as Category 2 or 3 in the last 10 days prior to onset of this illness? (insert facility)	NO	YES	
3. Has Public Health asked you to be in home quarantine or isolation in the 10 days prior to onset of this illness?	NO	YES	
4. Have you been to any of the following SARS affected areas in the last 10 days? (facility to insert areas)	NO	YES	If yes, identify area?

SECTION D: SARS Risk Factors			
1. Have you, or a member of your household or someone you have had close contact with, traveled within the last 30 days to China?	NO	YES	If yes, identify area? Who?
2. Have you been admitted to a hospital* in the 10 days prior to the onset of this illness?	NO	YES	If yes, name facility:
3. Does anyone in your household, or a close contact, have fever or pneumonia?	NO	YES	If yes, who?
4. Are you a healthcare worker with direct patient contact in a healthcare facility?	NO	YES	If yes, where?
5. Do you live in a nursing home* that has had a respiratory infection outbreak in the 10 days prior to the onset of your illness?	NO	YES	If yes, name facility:

Apply the appropriate Assessment Algorithm to data

_____ _____

Patient Signature Interviewer Signature

_____

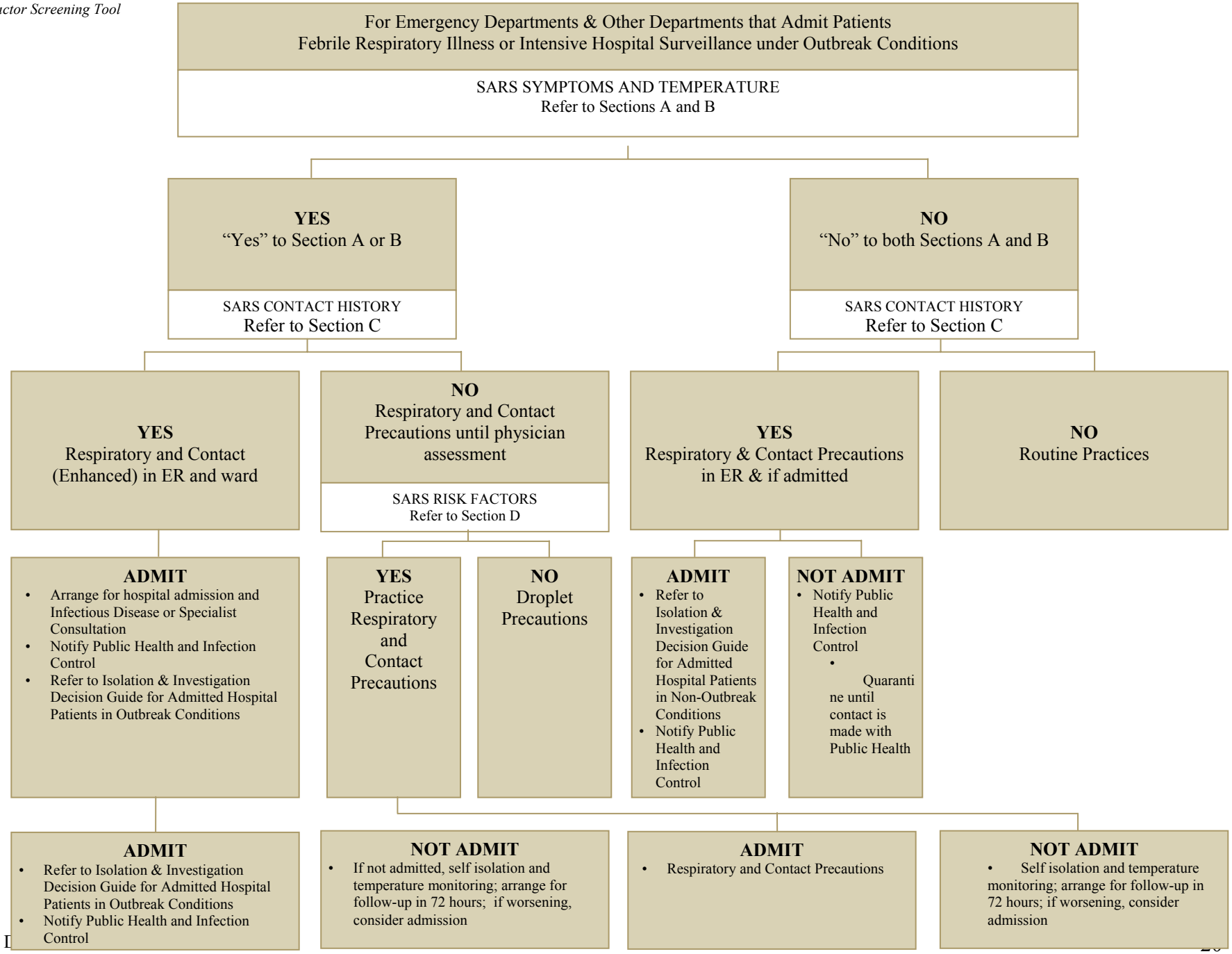
Nurse Signature (required if admitted)

*Only facilities in Toronto, York, Durham regions of Ontario or Taiwan, Singapore or Hong Kong are considered as positive Risk Factors.

APPENDIX 4

SARS Risk Management Algorithm
Outbreak Conditions

For Section Descriptions see:
SARS Risk Factor Screening Tool



This algorithm is intended to be used in conjunction with, and not in place of, the directives as issued by Ontario's health ministry.

APPENDIX 5

ISOLATION AND INVESTIGATION DECISION GUIDE FOR ADMITTED PATIENTS IN OUTBREAK CONDITIONS

Date:_____ Completed By:_____

This patient has been admitted with/found to have febrile or respiratory symptoms requiring follow-up and isolation as outlined in the table below:

Precautions for this patient indicated by √	**Epidemiological Risk Factors? (+ responses to section C OR D of SARS Risk Factor Screening Tool)**	**Fever or Respiratory Symptoms? (+responses to sections A OR B of SARS Risk Factor Screening Tool)**	**Do Lab Investigations for SARS?**	**Isolation Precautions and other actions**
	No	Yes	If symptoms severe, or progress or infiltrates on CXR	respiratory and contact precautions ≤ 72 hours depending on results of clinical assessment
	Yes (or unknown or incomplete information)	Yes	If symptoms severe, or progress or infiltrates on CXR	respiratory and contact precautions ≥ 72 hours depending on results of clinical assessment
	Yes	No	If symptoms develop	respiratory and contact precautions only if positive contact history

Close follow up is required to determine if this patient develops a clinical picture consistent with suspect or probable SARS. If progression occurs notify infection control and/or infectious diseases service. Patients who are suspect or probable SARS cases should be managed with Respiratory and Contact Precautions (Enhanced) in a negative pressure isolation room.

Infection Control Service Telephone/pager number:_____

_____ _____

Signature of Infection Control Professional Date

PLACE ON HIGHLY VISIBLE LOCATION OF PATIENT HEALTH RECORD

APPENDIX 6 - SARS SIGN (TABLOID) JULY

Effective July 10, 2003

Please follow these three steps before entering – Screen, Clean & Go.

SCREEN

If you are not feeling well, please do not visit. You could put our patients in danger if you expose them to infectious diseases.

If you have any of the following unexplained symptoms, do not visit:
cough, fever, runny nose, sore throat or diarrhea.

CLEAN

Wash your hands.
It's one good way of helping to stop the spread of infectious diseases. Rub hands together until dry.

GO

Be considerate.
For the comfort and protection of our patients, visitors should follow these guidelines:

- 2 visitors per patient
- visiting hours are between 4 p.m. and 8 p.m. on weekdays and 1 p.m. and 8 p.m. on holidays and weekends

APPENDIX 7 - SARS CLINICAL DECISION GUIDE:

CASE DEFINITIONS (HEALTH CANADA) – JUNE 5, 2003

Case Definitions	Clinical Symptoms	Epidemiologic link /Contacts	Other
1. Probable Case	A person meeting the suspect case definition together with radiographic evidence of infiltrates consistent with pneumonia or respiratory distress syndrome (RDS) on chest x-ray.	One or more of the following exposures during the 10 days prior to onset of symptoms: • Close contact[1] with a person who is a suspect or probable case **OR** • Recent travel or visit, to an identified setting in Canada where exposure may have occurred (e.g. hospital, household, workplace, school etc.) **OR** • Recent travel to an Area with recent local transmission outside of Canada.[2]	No other known cause of the current illness
2. Suspect Case	Fever (over 38 degrees Celsius) **AND** Cough, or difficulty breathing	One or more of the following exposures during the 10 days prior to onset of symptoms: • Close contact[1] with a person who is a suspect or probable case **OR** • Recent travel or visit, to an identified setting in Canada where exposure may have occurred (e.g. hospital, household, workplace, school etc.) **OR** • Recent travel to an Area with recent local transmission outside of Canada.[2]	No other known cause of the current illness.
3. Persons Under Investigation	Fever over 38 degrees **AND** One or more of chills, rigors, malaise, headaches, myalgia	One or more of the following exposures during the 10 days prior to onset of symptoms: • Close contact[1] with a person who is a suspect or probable case **OR** • Recent travel or visit, to an identified setting in Canada where exposure may have occurred (e.g. hospital, household, workplace, school etc. **OR** • Recent travel to an Area with recent local transmission outside of Canada.[2]	No other known cause of the current illness.

[1] Close contact: having cared for or lived with, or had face-to-face (within 1 metre) contact with, or having direct contact with respiratory secretions and/or body fluids of a person with SARS.

[2] www..hc-sc.gc.ca/pphb-dgspsp/sars-sras/

Severe Acute Respiratory Syndrome (SARS)
Case Definitions (Health Canada and Ontario)

Case definitions and related recommendations are subject to revision as future epidemiological/laboratory information becomes available.

Suspect case:

A person presenting with:

- Fever (over 38 degrees Celsius),

AND

- Cough or difficulty breathing,

One or more of the following exposures during the 10 days prior to the onset of symptoms:

- Close contact[1] with a person who is a suspect or probable case,
- Recent travel to an "Area with recent local transmission" of SARS outside of Canada
- Recent travel or visit to an identified setting in Canada where exposure to SARS may have occurred (e.g. hospital [including any hospital with an occupied SARS unit], household, workplace, school etc.). This includes inpatients, employees or visitors to an institution if the exposure setting is an institution.

OR

A person with unexplained acute respiratory illness resulting in death after 1 November 2002, but on whom no autopsy has been performed

AND

One or more of the following exposures during the 10 days prior to the onset of symptoms:

- Close contact[1] with a person who is a suspect or probable case,
- Recent travel to an "Area with recent local transmission" of SARS outside of Canada
- Recent travel or visit to an identified setting in Canada where exposure to SARS may have occurred (e.g. hospital [including any hospital with an occupied SARS unit], household, workplace, school etc.). This includes inpatients, employees or visitors to an institution if the exposure setting is an institution.

[1] Close contact means having cared for, lived with or had face-to-face (within one metre) contact with, or having had direct contact with respiratory secretions and/or body fluids of a person with SARS.
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Close contact means having cared for, lived with or had face-to-face (within one metre) contact with, or having had direct contact with respiratory secretions and/or body fluids of a person with SARS.

Probable Case:

A suspect case with radiographic evidence of infiltrates consistent with pneumonia or respiratory distress syndrome (RDS) on chest x-ray (CXR).

OR

A suspect case with autopsy findings consistent with the pathology of RDS without an identifiable cause.

Exclusion Criteria

A suspect or probable case should be excluded if an alternate diagnosis can fully explain their illness.

Comments:

- In addition to fever and cough or breathing difficulty, SARS may be associated with other symptoms including: headache, myalgia, loss of appetite, malaise, confusion, rash and diarrhoea.

Areas outside Canada with recent Local Transmission
For updates see http://www.who.int/csr/sarsareas

Severe Acute Respiratory Syndrome (SARS)
Definition of Persons Under Investigation (Ontario)

Case definitions and related recommendations are subject to revision as future epidemiological/laboratory information becomes available.

Persons Under Investigation (PUI) (Ontario)

A person presenting with:

- Fever (over 38 degrees Celsius),

OR

- One or more of chills, rigors, malaise, myalgia or headache,

AND

One or more of the following exposures during the 10 days prior to the onset of symptoms:

- Close contact[1] with a person who is a suspect or probable case,
- Recent travel to an "Area with recent local transmission" of SARS outside of Canada
- Recent travel or visit to an identified setting in Canada where exposure to SARS may have occurred (e.g. hospital [including any hospital with an occupied SARS unit], household, workplace, school etc.). This includes inpatients, employees or visitors to an institution if the exposure setting is an institution.

AND

- No other known cause of current illness.

Areas outside Canada with recent Local Transmission
For updates see http://www.who.int/csr/sarsareas

[1] Close contact means having cared for, lived with or had face-to-face (within one metre) contact with, or having had direct contact with respiratory secretions and/or body fluids of a person with SARS.

Follow Up Instructions for Patients with Fever and Respiratory Illness

My doctor has sent me home on self-monitoring. What does this mean and what should I do?

Your doctor feels that your symptoms are mild enough to send you home for observation. However, while at home it is important that you monitor your own health to be sure that your symptoms do not progress. In addition, you must take proper precautions so that you do not pass an infection on to others.

How do I self-monitor?

- Measure your temperature with your own thermometer twice a day over the next 72-hour period. Record the results on a piece of paper with the dates and times.

- If you develop a new fever (over 38° C/100.4° F), you should call your doctor and/or Telehealth Ontario at 1-866-797-0000 (TTY 1-866-797-0007) where you will be advised how to seek medical attention.

- If you begin to develop other new symptoms such as shortness of breath, difficulty breathing, or if your symptoms worsen, you should immediately call your doctor and/or Telehealth Ontario at 1-866-797-0000 (TTY 1-866-797-0007) where you will be advised how to seek medical attention.

What precautions do I take to prevent my family members and friends from becoming ill?

- Remain at home for the next 72 hours or until you are feeling better. Do not go to work, school or public places.
- Wash your hands frequently.
- Remind others in your household to wash their hands often, especially if they have spent time in the same room as you.
- Limit your contact with other people.
- Cover your mouth with a tissue when you cough or sneeze. Wash your hands immediately after covering your mouth, and after blowing your nose.
- Do not share personal items, such as towels, drinking cups, cutlery, thermometers, and toothbrushes.
- Dispose of used tissues directly into a garbage bag used only by you.
- Rest and drink plenty of fluids.
- Family members who become ill must stay home and call their physician.
- At the end of 72 hours, if you are feeling entirely well, you can return to work or school and resume normal activity. If your symptoms persist, call your doctor.