



SARS Provincial Operations Centre

April 23, 2003

SARS CLINICAL DECISION GUIDE (ONTARIO)

How to use the SARS Clinical Decision Guide

The diagnosis of SARS remains a challenge as the identification of a link to a known probable case becomes more complex. Although the epidemiological link will always be important when it is present, it may not always be identified initially. This link may not be found for several days, or it will become evident in several days if other close contacts of the patient become ill. It is for this reason that high vigilance for SARS needs to be present for every case of pneumonia.

The disposition decision is a very important decision that all health care professionals will be faced with. The decision to admit to hospital, discharge on home isolation with follow up, or send home on isolation with self-monitoring and follow up as required will be based on the diagnostic category of the patient. The decision for all probable, suspect, and persons under investigation will initially need to involve an expert infectious disease opinion or advice from the Provincial Operations Centre (POC). The “SARS Clinical Decision Guide” will provide direction in dealing with all patients and must be used for all patients you are assessing for SARS. Patients who are diagnosed with community acquired pneumonia (non SARS) and other respiratory or flu like illnesses will need the attending provider’s advice and specified follow up or self-monitoring.

The health care professional will need to consider the clinical presentation primarily and any known epidemiological link in arriving at a diagnostic category for patients that present with respiratory illness to the office/clinic or the hospital emergency department.

Defining the Diagnostic Category for your Patient

To define the diagnostic category for your patient, refer to the attached “SARS Case Definitions (Ontario)” and the “The SARS Definitions of a Patient Under Investigation (Ontario)”. It is important that health care professionals use these specific definitions to identify the category of patient that they are dealing with. The diagnostic category is

determined by applying the clinical presentation information with what epidemiological information can be identified.

It may be useful at this point to review those definitions:

1. A probable case is a person meeting the suspect case definition (clinical symptoms of fever and one or more respiratory symptoms including cough, shortness of breath, or difficulty breathing) together with severe progressive respiratory illness suggestive of atypical pneumonia or acute respiratory distress syndrome with no known cause and an epidemiological link.
2. A suspect case is a person with both clinical symptoms fever and one or more respiratory symptoms including cough, shortness of breath, or difficulty breathing and an epidemiological link. Suspect cases do not yet have radiographic abnormalities nor progression or worsening of respiratory symptoms.
3. A person under investigation is:
 - 1) A person with clinical symptoms of a fever or one or more of chills, rigors, malaise, headache, myalgia, and an epidemiological link.
 - 2) A person with pneumonia clinically compatible with probable SARS and no epidemiological link.

The epidemiological link is important when it is identified, but the person with pneumonia clinically compatible with probable SARS and no link should be considered as a SARS “person under investigation” until an alternate diagnosis is certain. Certainly the likelihood that any community acquired pneumonia is SARS is dependent on the clinical course, progression, severity and the prevalence of SARS in your community. The higher the prevalence the more likely the pneumonia is SARS. However this is not a reliable indicator in any individual patient and each case needs separate consideration. If there is any doubt then an infectious disease opinion should be sought or the Provincial Operations Center (POC) contacted.

Using the Diagnostic Category to Determine Your Clinical Decision

The clinical decision can be derived from the “SARS Clinical Decision Guide (Ontario)”:

1. The physician must notify Public Health about ALL probable SARS patients require. These patients must be admitted to hospital and expert advice sought on management.
2. The physician must notify Public Health about ALL suspect SARS patients and persons under investigation require. Public Health will investigate for any epidemiological links and decide on the period of quarantine after their investigation.

The options for the management of these patients are:

- i) ED assessment and hospital admission with expert advice sought on management, or

- ii) consultation with an infectious disease expert if available, or with the Provincial Operations Centre (POC) physician 1-866-212-2272 for review and advice on the patient's disposition: admission, or discharge on home isolation for 72 hours and follow up. These patients should have a clinical follow up within 72 hours if discharged. This can occur with their own physician, clinic or the emergency department.

Mechanisms should be put in place to ensure for the clinical follow up of these patients within 72 hours. These mechanisms should include a follow up list of all patients with daily call back to the patient and clear instructions to return for a repeat visit to the office, clinic or hospital if symptoms worsen. At the return assessment the patient should be re-assessed for SARS. Patients with worsening symptoms should be admitted. Patients improving should be reassessed in another 72 hours as the cycle of reassessment is continued until the patient is better and discharged from follow up or a diagnosis of SARS is made.

- 3. Patients with community-acquired pneumonia, clinically not consistent with SARS, can be discharged home with clinical follow up in the form of a repeat visit or telephone contact. The patient should seek medical attention at any time should their condition worsen. If other household contacts have febrile illnesses, the physician should notify Public Health to investigate. Other respiratory or flu-like illnesses can be discharged home with advice to remain in isolation at home for 72 hours with self-monitoring of fever, until they are improved, or to seek medical attention if they worsen (see attached). Instruction sheets should be given to discharged patients. These patients do not need to be referred to Public Health for follow up.

The Importance of the Epidemiological Link

The epidemiological link is an extremely important clinical factor if identified. When present, the patient is at higher risk for developing SARS. Should patients with a definite link have any symptoms consistent with SARS then they become either a person under investigation or suspect SARS as defined above.

The people at greatest risk are those with a known unprotected contact with a probable SARS patient. Physicians can access the list of sites identified as at risk for contact with probable SARS patients at www.health.gov.on.ca/login. This website contains current at-risk sites as well as sites that were previously of concern but are no longer. Returning travelers do not have the same level of risk however the link is still present.

Public Health Unit Management

The Public Health units have risk stratified the cases that you will be referring to them for contact management and follow up. It is important that you refer only those that have been identified using the SARS Clinical Decision Guide. This will allow them to follow up the cases that are most likely SARS or linked to SARS while allowing the Health Care Provider to clinically follow those cases that do not meet the criteria for SARS.

The Various Radiological Manifestations of SARS

SARS radiographic findings can be focal consolidations (lobar), patchy consolidations, lower lung zone opacities (basilar infiltrates), or ground glass opacities that are more typical of the atypical pneumonia.

Summary

It is important to remain vigilant for SARS in all patients that present with respiratory illnesses. The “SARS Clinical Decision Guide (Ontario)” is meant to assist the health care provider in making decisions around disposition of the patient.

SARS Clinical Decision Guide (Ontario) – April 23, 2003 – 1510 hours

Case Definitions	Clinical Symptoms	Epidemiologic link /Contacts	Other	Decision
1. Probable Case	A person meeting the suspect case definition together with severe progressive respiratory illness suggestive of atypical pneumonia or acute respiratory distress syndrome with no known cause	One or more of the following: <ul style="list-style-type: none"> • Close contact within 10 days of onset of symptoms with a suspect or probable case OR • A recent visit, within 10 days of onset of symptoms to a defined setting, or encounter with a group that is associated with a cluster of SARS cases OR • Recent travel within 10 days of onset of symptoms to a WHO reported 'affected area' outside of Canada 	No other known cause of the current illness	Notify Public Health ED assessment and hospital admission
2. Suspect Case	Fever (over 38 degrees Celsius) AND One or more respiratory symptoms including cough, shortness of breath, difficulty breathing	One or more of the following: <ul style="list-style-type: none"> • Close contact within 10 days of onset of symptoms with a suspect or probable case OR • A recent visit, within 10 days of onset of symptoms to a defined setting, or encounter with a group that is associated with a cluster of SARS cases OR • Recent travel within 10 days of onset of symptoms to a WHO reported 'affected area' outside of Canada 	No other known cause of the current illness.	Notify Public Health <i>Options</i> : ED assessment and hospital admission, or consult I.D. expert if available, or the POC physician 1-866-212-2272 for review and advice on the patient's disposition: admission or discharge on home isolation for at least 72 hours and follow up with repeat visit or telephone contact by the physician, return if worsens
3. Persons Under Investigation	1.Fever over 38 degrees OR One or more of chills, rigors, malaise, headaches, myalgia	One or more of the following: <ul style="list-style-type: none"> • Close contact within 10 days of onset of symptoms with a suspect or probable case OR • A recent visit, within 10 days of onset of symptoms to a defined setting, or encounter with a group that is associated with a cluster of SARS cases OR • Recent travel within 10 days of onset of symptoms to a WHO reported 'affected area' outside of Canada 	No other known cause of the current illness.	Notify Public Health <i>Options</i> : ED assessment and hospital admission, or consult I.D. expert if available, or the POC physician 1-866-212-2272 for review and advice on the patient's disposition: admission or discharge on home isolation for at least 72 hours and follow up with repeat visit or telephone contact by the physician, return if worsens
	OR	<ul style="list-style-type: none"> • No known epidemiologic link 		
4. Community acquired pneumonia	clinical picture <u>unlikely</u> SARS	<ul style="list-style-type: none"> • <u>NO</u> epidemiologic link 	ONLY Notify Public health if other family contacts have a febrile illness	Discharge home on isolation for at least 72 hours and follow up with repeat visit or telephone contact by the physician, return if worsens
Other respiratory/flu like illness		<ul style="list-style-type: none"> • <u>NO</u> epidemiologic link 	Do NOT notify Public Health	Discharge home on isolation for 72 hours and self monitor with temperature bid until improves or follow up if worsens

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

SARS CASE RECORD /CLINICAL DECISION GUIDE (ONTARIO) April 23 1330 h

Patient name/identification (or label):	Today's date:
Date of birth/Age:	
Telephone / Address:	

SYMPTOMS	EPIDEMIOLOGIC LINK
Date of symptom onset:	Date of contact:
Prodrome: chills or rigors <input type="checkbox"/>	ANY known SARS Contact <input type="checkbox"/>
malaise <input type="checkbox"/>	Identified as a patient under quarantine <input type="checkbox"/>
headache <input type="checkbox"/>	Worked on SARS unit/cared for SARS patient <input type="checkbox"/>
muscle ache <input type="checkbox"/>	Encounter with a group identified with SARS <input type="checkbox"/>
Onset date:	Worked or visited category 3 hospital in the last 10 days <input type="checkbox"/>
Fever <input type="checkbox"/>	Visit to a defined setting with known cluster of SARS* <input type="checkbox"/>
Onset date:	Visited WHO identified area <input type="checkbox"/>
Respiratory Symptoms: cough <input type="checkbox"/>	see list of defined settings www.health.gov.on.ca/login
shortness of breath <input type="checkbox"/>	OTHER CONSIDERATIONS
difficulty breathing <input type="checkbox"/>	
Onset date :	
Other : diarrhea <input type="checkbox"/>	living in or visited a "geo link" GTA(Toronto) <input type="checkbox"/>
	other family/close contacts with febrile illness <input type="checkbox"/>

HISTORY/PHYSICAL EXAMINATION	Temp: O2 Sat: (normal > 94% on room air)
	BP: HR: RR:

LABORATORY TEST RESULTS (if done) Check if normal or provide actual value

WBC <input type="checkbox"/> _____	CK <input type="checkbox"/>
AST <input type="checkbox"/> _____	ALT <input type="checkbox"/>
LDH <input type="checkbox"/> _____	CXR results (if done)

OTHER

DIAGNOSIS:	NOTIFICATION:	DECISION:
1. Probable SARS <input type="checkbox"/>	Notify Public Health	ED assessment and hospital admission
2. Suspect SARS <input type="checkbox"/>	Notify Public Health	<u>Options for 2 and 3 :</u>
3. Person Under Investigation <input type="checkbox"/>	Notify Public Health	ED assessment and hospital admission <input type="checkbox"/>
		<u>or</u> consult I.D. expert if available or POC and admit <input type="checkbox"/>
		<u>or</u> consult I.D. expert if available or POC and discharge home on isolation at least 72 hours and follow up* <input type="checkbox"/>
4. Community acquired pneumonia <input type="checkbox"/>	ONLY Notify Public Health if other household contacts have a febrile illness	Discharge home on isolation for 72 hours and follow up* <input type="checkbox"/>
Other respiratory/flu like syndromes <input type="checkbox"/>	Do NOT notify Public Health	Discharge home on isolation for 72 hours and self monitor, temperature b.i.d until improves, follow up if worsens <input type="checkbox"/>

MANAGEMENT PLAN: * follow up: repeat visit or telephone contact by the physician or clinician

Signature: _____ 6

**Severe Acute Respiratory Syndrome (SARS)
Case Definitions (Ontario)**

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

Suspect case:

A person presenting with:

- Fever (over 38 degrees Celsius)

AND

- One or more **respiratory symptoms** including cough, shortness of breath, difficulty breathing

AND

One or more of the following:

- Close contact¹ within 10 days of onset of symptoms with a suspect or probable case
- Recent travel within 10 days of onset of symptoms to a WHO reported 'affected area' in Asia
- Recent travel or visit within 10 days of onset of symptoms to a defined setting, or encounter with a group², that is associated with a cluster of SARS cases

AND

- No other known cause of current illness

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

² Ontario addition to the Health Canada case definition

Probable Case:

A person meeting the suspect case definition together with severe progressive respiratory illness suggestive of atypical pneumonia or acute respiratory distress syndrome with no known cause.

OR

A person meeting the suspect case definition with an unexplained acute respiratory illness resulting in death, with an autopsy examination demonstrating the pathology of acute respiratory distress syndrome with no known cause.

Comments:

- In addition to fever and respiratory symptoms, SARS may be associated with other symptoms including: headache, myalgia, loss of appetite, malaise, confusion, rash and diarrhoea.
- Severe respiratory illness may be characterized by decreased oxygen saturation requiring oxygen support including ventilation. Chest X-ray abnormalities may or may not be present.

Areas in Asia with Local Transmission

(April 23, 2003 19:13)

China, including Hong Kong Special Administrative Region

Vietnam: City of Hanoi

Singapore

Taiwan

For updates see <http://www.who.int/csr/sars/en/>

**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 is
available.**

Persons Under Investigation (PUI) (Ontario)

This classification includes two distinct categories of persons under investigation. Persons in the first category have early symptoms with an epidemiological link. Persons in the second category have severe respiratory disease but no epidemiological link.

1. Persons Under Investigation – Category 1

A person presenting with:

- OR**³
- Fever (over 38 degrees Celsius)
 - One or more of chills, rigors, malaise, headache or myalgia⁴

AND

One or more of the following:

- Close contact⁵ within 10 days of onset of symptoms with a suspect or probable case
- Recent travel within 10 days of onset of symptoms to a WHO reported ‘affected area’ in Asia
- Recent travel or visit within 10 days of onset of symptoms to a defined setting, or encounter with a group,⁴ that is associated with a cluster of SARS cases

AND

- No other known cause of current illness

³ Changed from “and” in the Health Canada case definition.

⁴ Ontario addition to the Health Canada case definition.

⁵ Close contact means having cared for, lived with or had face –to- face (within 1 metre) contact with, or having had direct contact with respiratory secretions and/or body fluids of a person with SARS.

2. Persons Under Investigation – Category 2⁶

A person presenting with:

- Severe progressive respiratory illness suggestive of atypical pneumonia or acute respiratory distress syndrome but no epidemiological link

AND

- No other known cause of current illness

Areas in Asia with Local Transmission
(April 23, 2003) China , including Hong Kong Special Administrative Region Vietnam : City of Hanoi Singapore Taiwan For updates see http://www.who.int/csr/sars/en/

⁶ This whole category is an Ontario addition to the Health Canada case definition.

**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 and not admit you to hospital 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 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.
- If you begin to develop other new symptoms such as headache, muscle aches, cough, 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 in isolation for the next 72 hours. Do not leave your house for any reason other than an extreme emergency.
- Do not have anyone visit you at home. If someone must deliver something, do not allow them into the home, but rather have them leave the item on the door step for pick up later.
- Stay in one room as much as possible, with the window open as much as practical. Use a separate bathroom if possible and separate towels from the rest of the family.
- If possible, have only one person take care of you. If there are others in the household, spend as little time as possible with them.
- Remind others in your household to wash their hands often, especially if they have spent time in the same room as you.
- Cover your mouth 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, toothbrushes, telephones (clean receiver after use if you must share), etc.
- Keep your room clean. Dispose of used tissues directly into a garbage bag used only by you.
- Rest and drink plenty of fluids. If you take acetaminophen or ibuprofen for fever or pain, take your temperature at least 4 hours after the last dose of these medications.

- Your family members, including children, do not need to stay home. However, a family member who becomes 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 physician.

We realize any kind of isolation is a tremendous hardship for a household. Please know you are playing a vital role in Ontario's response to SARS, and helping all of us to bring this virus under control.