



# **HEALTH HAZARD ALERT**

## **SEVERE ACUTE RESPIRATORY SYNDROME (SARS)**

**Volume 1**

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This Health Hazard Alert for OPSEU members is provided to supplement information from Public Health, Ministry of Health (MOH), and Health Canada, and explains your rights under the Occupational Health and Safety Act and the Workplace Safety and Insurance Act.

### **How many cases of SARS are there in Ontario now?**

The Ministry of Health reported on May 28, 2003 that there are currently 12 probable cases and 19 suspect cases. Of the probable cases, six are listed as in critical or deteriorating condition. A total of 29 people have died of SARS since it first arrived in Canada in March.

As of May 29, the MOH has now changed the definition of probable SARS to the World Health Organization (WHO) definition. As a result, the number of cases has now jumped to 33 probable, 29 suspect and 107 people with symptoms being investigated. There are 7,000 people currently on home quarantine.

### **Why does it matter how suspect and probable cases of SARS are defined?**

The way in which suspect and probable cases of SARS are defined should not make any difference, either in the treatment patients receive, or in the measures workers use to protect themselves.

However, the way in which medical practitioners determine which cases fall into which categories does affect the picture presented by Toronto to the rest of the world. If the definition of a probable case of SARS is very restrictive, then it will look like there are few cases of probable SARS. If the definition is very open, there will appear to be more cases as some non-SARS pneumonias may be defined as SARS.

During this latest outbreak, Ontario initially relied on Health Canada definitions of probable and suspect SARS. The Health Canada definitions are more restrictive than those of the World Health Organization. Therefore it appeared that we had only 12 probable cases in Toronto. However, when the World Health Organization definition was applied to the same cases, a number of suspect cases were defined as probable. It is anticipated that a number of cases now under investigation will become suspect cases.

The Ministry of Health decided on May 29 to begin to apply the WHO definition (May 1, 2003) which follows below:

#### Suspect case

A person presenting with:

- High fever (over 38 degrees Celsius)

**And**

- Cough or breathing difficulty

**And**

One or more of the following:

- Close contact with a person who is a suspect or probable case of SARS
- History of travel to an area with recent local transmission of SARS
- Residing in an area with recent local transmission

### Probable case

A suspect case with x-ray changes consistent with pneumonia or respiratory distress syndrome

**Or**

A suspect case that is positive for SARS coronavirus.

The definition also sets out the criteria to apply to distinguish between suspect and probable cases after death.

### **Who is in quarantine now?**

The Ontario Ministry of Health and Long term Care has confirmed that a person from the new cluster of SARS in North York General Hospital has been linked to the original cluster. On May 23, 2003, SARS looked like it was winding down in Ontario—with only 11 active cases of SARS. By May 25, however, that number had risen to 31. When the new definitions were applied on May 29, those numbers jumped even further. It is clear that a second wave of SARS has hit the GTA, affecting the following hospitals:

- North York General

North York is closed to admissions, visitors, discharges and transfers. People should self-quarantine if they visited the hospital between May 13-23, 2003.

- St John's Rehabilitation Hospital

St. John's is closed to admissions, discharges and transfers. In consultation with Toronto Public Health on May 28, the hospital began to discharge some patients into home quarantine. People should self-quarantine if they attended the hospital between May 9-22, 2003.

- Scarborough Hospital

Scarborough General is closed to admissions, visitors, discharges, and transfers. The Emergency Department at the General site is now open. People should self-quarantine if they attended the hospital between May 12-23, 2003.

In addition to the locations above, Toronto Public Health is asking people who were in the neurosurgery unit or the cardiac care unit at St Michael's Hospital between May 15-24, 2003 to self quarantine.

### **What is work quarantine and what are the rules?**

Work quarantine only applies to health care workers who are allowed to continue to work in the hospital or health care setting where they were exposed as long as they remain well. When the workers go home after their shift—they are still in quarantine. Members of the general public, however, are not allowed to attend work while in quarantine. Individuals on work quarantine must wear an N95 mask at all times while at work, practice diligent hand hygiene, and eat in a separate room if possible. In any case, while eating, they should stay two meters away from other people. These workers should check their temperature twice per day, and if they develop a fever, they need to stop work right away and notify their local health unit. For more information about work quarantine, refer to the [May 27, 2003 fact sheet](#) issued by Toronto Public Health.

### **What Directives should hospitals be following?**

Hospitals should be following the 'New Normal' directives issued on May 13, 2003. In addition, the GTA hospitals have been instructed to return to the heightened infection protocols in their emergency departments. Given the heightened concern regarding SARS at this time, the Ministry of Health recommends that the screening of staff be reinstated and that movement of staff between sites and between health care sectors be limited as much as possible. Links to the May 13, 2003 POC directives are at the bottom of this page.

### **A Reminder: Level Definitions and Staff Mobility**

- **Category 0**

A health care facility that has no known cases of SARS (suspect or probable). Staff movement is unrestricted.

- **Category 1**

A health care facility that has no unprotected exposure to staff and/or patients—has one or more cases of SARS (suspect or probable). Staff movement is unrestricted.

- **Category 2**

A Health care facility with any unprotected SARS exposure within the last 10 days, but without transmission to staff and/or patients. The facility may or may not currently have one or more cases of SARS (suspect or probable). In Category 2 facilities, staff working in areas with unprotected exposure to potential SARS cannot work at other facilities or health care settings.

- **Category 3**

Unprotected SARS exposure with transmission to Health care workers and/or patients. The facility may or may not currently have one or more cases of SARS (suspect or probable). At Category 3, staff cannot work at any other facility or health setting. Working quarantine is permitted for essential staff only. Others must be in home quarantine.

### **Respiratory Protection—Fundamental in the containment of SARS**

#### **Is it correct that some Health Care Workers (HCW) have contracted SARS even though they were wearing their personal protective equipment including N95 masks and face shields?**

Yes, there is one known cluster of cases of HCWs who contracted probable or suspect SARS after assisting with the care of a critically ill SARS patient either immediately before, during or after a very

difficult intubation. A total of nine HCWs became ill; six of these had been present during the intubation procedure.

A detailed description of the circumstances that may have allowed transmission to take place is offered in a Canada Communicable Disease Report (May 15, 2003) published on Health Canada's website (Cluster of Severe Acute Respiratory Syndrome Cases Among Protected Health Care Workers – Toronto, April 2003).

The authors of the study speculate that the following factors may have contributed to SARS transmission to HCWs in this case:

- The workers wore PCM2000 respirators, which are approved by Health Canada as equivalent to N95 masks. However, the PCM2000 is not approved by the U.S.-based National Institute for Occupational Safety and Health (NIOSH). In addition, at the time the exposures occurred, fit-testing of the masks had not been done. No formal respiratory protection program existed at the hospital. In fact, the primary nurse for the patient had a small beard and reported that his mask did not fit well. At times he could feel air entering around the sides of his mask.
- A number of aerosol-generating procedures were performed on this patient as well as intubation. The patient had: positive pressure ventilation via facemask (BiPAP) during which air may be forced out around the patient's facemask; and high frequency oscillatory ventilation (HFOV) during which exhaust from the ventilator tubing is more likely to escape without passing through an antibacterial/antiviral filter.
- Direct contact with patient or contact with an environment contaminated by large respiratory droplets might have led to HCWs contaminating themselves as they removed their Personal Protective Equipment (PPE). Many HCWs apparently lacked a clear understanding of how best to remove PPE without contaminating themselves.

The study concludes with the following:

- HCWs caring for SARS patients must be properly trained in the correct use and removal of PPE.
- Patients who are most ill should be considered the most infectious.
- Procedures that might generate aerosols should be avoided when possible.
- When intubating a patient, limit the number of HCWs present to reduce the number of possible exposures and adequately sedate the patient to reduce cough.

### **Where can I get more information on respiratory protection and fit-testing of respirators?**

It is critical that you know how to protect yourself from exposures to SARS. Remember that your employer has an obligation under the *Occupational Health and Safety Act* (OHSa) to warn you of hazards in your work and train you on how best to protect yourself; that includes training you how to safely wear your respiratory protection, perform a fit test, and safely put on and take off your N95 respirator. You have the right to know how to protect yourself under the *OHSa* and your employer has the obligation to take all precautions reasonable to ensure that you are working safely. If you are not confident that your mask fits properly or if you do not understand any part of the protective measures you must follow, demand that your supervisor assist you. Seek assistance also from your OPSEU member on your Joint Health and Safety Committee.

The following four documents will provide you with more information:

- Provincial Operations Centre (POC) Communication regarding mask fit testing services (May 2, 2003)

- POC Directives to All Ontario Acute Care Hospitals for High-Risk Procedures Involving SARS Patients Critical Care Areas
- Health Canada Infection Control Guidance for Respirators (Masks) worn by Health Care Workers – Frequently Asked Questions
- CDC Interim Domestic Infection Control Precautions for Aerosol-Generating Procedures on Patients with Severe Acute Respiratory Syndrome (SARS)

**Are there any other measures that can be taken to protect workers' health and safety in the healthcare sector?**

All the directives stress the importance of hand-washing to avoid transmission of SARS. Evidence about the latest cluster of cases among healthcare workers suggests that workers may not have understood how to safely remove their PPE without contaminating themselves. Follow directions around hand-washing meticulously – if you are not sure about the procedure ask.

OPSEU continues to advise that Joint Health and Safety Committees (JHSCs) within the health care sector meet to discuss directives and all infection control measures in their facilities. If OPSEU members of the JHSCs believe that worker training is inadequate, insist that the employer take steps to improve and correct training to prevent further transmission of SARS.

For more information, contact OPSEU's Health and Safety Unit: 1-800-268-7376, 416-443-8888, ext. 772. Check the OPSEU website at [www.opseu.org](http://www.opseu.org) for future updates.

**Directives from SARS Provincial Operations Centre**

**[NEW ! Health Canada Case Definitions May 21, 2003](#)**

**[Directives to All Ontario Acute Care Facilities – May 13, 2003](#)**

**[Directives to All Ontario Acute Care Hospitals for High-risk Procedures involving SARS patients Critical Care Areas May 13, 2003.](#)**

**[Directives to All Ontario Acute Care Hospitals Regarding Infection Control Measures - April 24, 2003](#)**

**[Directive to All Ontario Non-Acute Care Facilities – May 13, 2003.](#)**

**[Directive to Ontario Health Care Providers in Community Settings and Community Health Care Agencies \(excluding Community Care Access Centres\) – May 13, 2003](#)**

**[Directive to All Community Care Access Centres – May 13, 2003](#)**

**[Directives to All Ontario Prehospital Care Providers and Ambulance Communications Services – May 13, 2003](#)**

**[NEW ! SARS Bulletin for Healthcare Providers – May 28, 2003](#)**

**[Healthcare Facility SARS Categories - April 14, 2003](#)**

**Emergency Department Barrier Precautions**

**SARS POC Questions and Answers – May 6, 2003**

**Useful Links:**

Health Canada for updates and Guidelines: [www.hc-sc.gc.ca/pphb-dgsp/sars-sras](http://www.hc-sc.gc.ca/pphb-dgsp/sars-sras)

Toronto Public Health updates: [www.toronto.ca/health](http://www.toronto.ca/health)

Centres for Disease Control: [www.cdc.gov/ncidod/sars/](http://www.cdc.gov/ncidod/sars/)

World Health Organization for daily updates and guidelines: [www.who.int/csr/sars/](http://www.who.int/csr/sars/)

Ministry of Health: [www.health.gov.on.ca](http://www.health.gov.on.ca)

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