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Directive PHCO03-01
December 7, 2003

**DIRECTIVES TO ALL PREHOSPITAL CARE PROVIDERS AND
AMBULANCE COMMUNICATIONS CENTRES REGARDING
MANAGEMENT OF PATIENTS WITH POSSIBLE COMMUNICABLE
DISEASES INCLUDING SARS
UNDER OUTBREAK CONDITIONS**

This Directive replaces the outbreak sections of the following:

- *Directives to all Ontario Prehospital Care Providers and Ambulance Communications Services – May 13, 2003*

Notification about SARS outbreaks will originate from the local public health unit.

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1 OVERALL CONSIDERATIONS

The goal of this document is to provide direction to EMS Services to screen patients for communicable illnesses and to take measures to prevent the spread of disease during outbreak conditions. These directives concern patients who may be encountered during an emergency response call or transfer between facilities.

All EMS personnel will receive initial and ongoing education in basic communicable disease recognition, use of personal protective equipment, decontamination of equipment and vehicles and the disposal of hazardous waste.

These directives and recommendations are based on current knowledge and expert opinion and may be updated as further information becomes available.

2 GENERAL MEASURES

2.1 EMS Operators

2.1.1 Must ensure their staff maintains immunization schedules.

These are outlined in the MOHLTC Ambulance Service Communicable Disease Standard, as set out under Regulation 257/00 as may be amended from time to time.

2.1.2 Must meet the equipment requirements of the MOHLTC.

These are listed in the Provincial Equipment Standards for Ontario Ambulance Services, (version 1.1) as set out under Regulation 257/00 as may be amended from time to time; plus: gowns, face shields, head covers, ETT tubes with in-line suctioning and drug delivery capacity, hydrophobic submicron filters, low flow high oxygen concentration masks, and any other equipment as directed by the MOHLTC.

2.1.3 Must ensure personal protective equipment (PPE) is properly used and maintained.

Personal protective equipment must be properly used, fit and maintained in a manner consistent with manufacturers' directions. N95 or equivalent masks must be qualitatively fit-tested to ensure maximum effectiveness. (See Canadian Standards Association Z94.4-02 Selection, Use, and Care of Respirators, October 2002, also refer to NIOSH website at <http://www.cdc.gov/niosh> -Publication No.99-143.)

2.1.4 Must record all paramedic exposures to a communicable disease reported by a paramedic or a public health unit. Recorded information must include protective precautions used and the incidence of disease development.

2.1.5 Must co-operate with the local public health unit regarding follow-up of exposures parameters for quarantine, work quarantine, home isolation, and post-exposure prophylaxis (if available) of paramedics.

2.1.6 Deliver or facilitate delivery of initial and ongoing infection control education as required by MOHLTC.

2.2 Paramedics

2.2.1 Self surveillance

Paramedics exhibiting signs or symptoms indicative of a communicable infectious illness must exclude themselves from work in accordance with Part B (Communicable Disease Management) in the Ambulance Service Patient Care and Transportation Standard (revised October 2002) as set out under Regulation 257/00 as may be amended from time to time. They must contact the ambulance service supervisor or appropriate person at the ambulance service for further direction.

A paramedic who develops a fever or respiratory symptoms while at work should immediately stop work.

In addition, EMS operators must implement an approved workplace screening tool (SARS Risk Factor Screening Tool enclosed, see Appendix 2) to be completed prior to starting a shift. Individuals who screen positive (answer YES to Section A **or** B **or** C) must take appropriate precautions and report to their supervisor for further direction.

2.2.2 Reporting Possible Infectious Disease.

Paramedics who suspect a call may involve a potentially harmful infectious disease or who encounter a cluster of patients exhibiting similar symptoms must notify their supervisor. The supervisor will be responsible for informing the appropriate authorities as needed, including the local public health unit. Paramedics involved in these calls must document all protective equipment and patient isolation measures used on the Ambulance Call Report (ACR).

3 BASIC INFECTION CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

3.1 General Directions

- All used protective equipment must be treated as biohazardous materials.
- During a communicable disease outbreak, detailed directives may be issued for specific situations where various items of personal protective equipment must be worn, e.g., N95 mask for ALL patient contacts in certain regions.
- When required during outbreak conditions, the only personal protective equipment to be worn in the driver compartment of an ambulance is an unused N95 or equivalent mask.

3.2 Routine

3.2.1 Hand Hygiene

Hands must be washed:

- After any direct contact with a patient and before contact with the next patient.
- After contact with body fluids, secretions and excretions.
- After contact with items known or considered likely to be contaminated with respiratory secretions (e.g., oxygen tubing, masks, used tissues)
- Immediately after removing gloves.
- Immediately after completing patient care.

Soap and water may be used for routine hand washing. Waterless hand disinfectant must be available as an alternative to hand washing. However, when there is visible soiling, hands must be washed with soap and water whenever possible before using waterless hand disinfectant.

3.2.2 Gloves

- Gloves must be worn as an additional measure, not as a substitute for hand washing.
- Clean, non-sterile gloves must be worn by paramedics for all patient contacts in which there is a risk of infectious disease exposure or contamination from body fluids.
- Gloves must be put on prior to contact with the patient.
- Gloves must be changed when circumstances permit after a procedure where there is contamination with blood or body substances.
- Gloves must not be worn in the driver compartment of an ambulance.
- Hands must be disinfected by hand washing or waterless hand disinfectant after gloves are removed.
- Gloves must not be reused or used for more than single patient care. When encountering a patient with symptoms suggestive of a communicable disease during a declared SARS outbreak, **double gloves** must be worn.

3.2.3 Surgical Masks

- Where possible, surgical masks must be worn by any patient who has **respiratory symptoms** (see Appendix 1) suggestive of infection. Oxygen may be administered by nasal cannula under a surgical mask.
- For the patient who has respiratory symptoms suggestive of infection and requires high concentration oxygen therapy, a low flow high oxygen concentration mask outfitted with a hydrophobic submicron filter on the exhalation port must be used.

3.2.4 N95 Masks (or Equivalent)

- Paramedics must wear an N95 or equivalent mask when encountering any patient with fever **or** respiratory symptoms.
- Paramedics must wear an N95 or equivalent mask when administering nebulized or aerosolized therapy.

- The N95 or equivalent mask must be changed after every patient contact.

3.2.5 Protective Eyewear (safety glasses or goggles)

- Protective eyewear must be worn by a paramedic for all patients who require airway management and for any patient where there is a significant risk of being splashed by body fluids [e.g. vomiting, uncontrolled hemorrhage, excessive coughing].
- Eye protection must be worn when encountering ANY patient with respiratory symptoms suggestive of infection.
- Eye protection must be worn when administering nebulized or aerosolized therapy.
- If a paramedic wears eyeglasses, protective eyewear designed for use over eyeglasses must be worn.
- After caring for the patient, paramedics must disinfect protective eyewear with a hospital grade disinfectant at the health care facility.

3.2.6 Face Shields

- Face shields must be worn for all patients who require airway management [e.g., oral/nasal airways, suctioning, positive pressure ventilation, intubation or surgical airway]; and for any patient where there is a significant risk of being splashed by body fluids [e.g., vomiting, uncontrolled hemorrhage, excessive coughing].

3.2.7 Gowns/Coveralls

- A long-sleeved gown/coveralls sufficient to cover the front and back of the paramedic is mandatory when caring for a patient with fever **or** respiratory symptoms.
- A long-sleeved gown/coveralls must be worn for any patient where there is a significant risk of being splashed by body fluids [e.g., vomiting, uncontrolled hemorrhage, excessive coughing].

3.2.8 Head Cover

- An open face hood is mandatory when caring for a patient with fever **or** respiratory symptoms.
- An open face hood must be worn for any patient where there is a significant risk of being splashed by body fluids [e.g., vomiting, uncontrolled hemorrhage, coughing].

3.2.9 Shoes

- Shoes must be wiped down with a hospital grade disinfectant if they may have been soiled with body fluids or substances.

3.2.10 Daily Clothing

- If contaminated, paramedics must change their uniform as soon as practical following a call. Work clothes worn during the shift must not be worn after leaving work. Uniforms should be placed in a bag and may be laundered with normal household linen unless specific instructions are given in relation to a known disease.

3.3 Patient Isolation

If a patient is febrile **or** has respiratory symptoms suggestive of infection **or** is suspected of having a communicable disease:

- All individuals must remain at least 1 meters away unless outfitted with the appropriate level of PPE.
- The patient must be outfitted with a surgical mask with or without nasal cannula oxygen. If higher concentrations of oxygen are required, a hydrophobic submicron filter as part of low flow high oxygen concentration mask or endotracheal tube system must be used.
- Only persons essential to patient care should be in the patient compartment of the ambulance. All persons participating in the care of the patient or in the patient compartment must be provided with appropriate personal protective equipment.
- For inter-facility transfers only a single patient may be transported unless otherwise directed by CACC/PTAC.
- If possible, close the window or door between the driver and patient compartments.

3.4 Personal Protection Systems and Special Transport Teams

- Services may be directed to use a dedicated inter-facility transport team for patients deemed to have high communicability and/or who require high risk procedures for life threatening illness.
- The transport team will consist of individuals trained in the use of advanced Personal Protection Systems and must follow the Provincial Inter-Facility Patient Transfer Directive During Outbreak Conditions (Directive PIPT03-03), October 22, 2003.

3.5 Ambulance Ventilation Considerations

During transportation of any patient with an infectious respiratory disease (even if the disease is droplet spread, such as SARS), it is recommended to attempt to create a negative pressure environment around the patient. This also applies to diseases such as tuberculosis (pulmonary and laryngeal), chicken pox, and measles which are known to have an airborne transmission.

3.5.1 Land vehicles

- Exhaust fans must be on in the patient compartment.
- If a vehicle does not have separate compartments, the outside air vents in the driver compartment should be open, and the rear exhaust ventilation fans should be turned on at the highest setting to provide maximum continuous air flow through the patient care compartment.

3.5.2 Rotor Wing / Fixed Wing

- Refer to policies of the Ontario Air Ambulance Base Hospital Program for direction (Ontario Air Ambulance Base Hospital Directive for the Inter-facility Transport of the Symptomatic Patient with a Communicable Respiratory Disease, July 2003).

3.5.3 Hospitals

- Although paramedics do not determine the bed allocation for a patient, paramedics must be aware of general patient isolation requirements so the Emergency Department staff can be alerted. During outbreak conditions, upon arrival at hospital, the receiving staff will assess the patient with the SARS Risk Factor Screening Tool (Appendix 2).

4 NEW PROCEDURES FOR:

4.1 Airway Management

- Airway management consists of insertion of oral or nasal airway, suctioning, positive pressure ventilation, intubation or the creation of a surgical airway.
- Every effort must be made to reduce coughing or generating aerosols.
- Oropharyngeal/nasopharyngeal airways should be used only if a gag reflex is absent and airway adjuncts are necessary to maintain a patent airway.
- Avoid suctioning airway if a gag reflex is present as this may precipitate gagging or coughing.
- If the patient requires ventilatory assistance using a face mask or an endotracheal tube, a tube extender and a hydrophobic submicron filter must be used. The tube extender must be inserted between the mask/endotracheal tube and the filter. A tube extender is not necessary for pediatric patients and must not be used for any infants (< 1 year old).
- Use only endotracheal tubes with inline suctioning and in-line drug delivery capacity. This does not apply to paediatric patients when using endotracheal tubes ≤ 6 mm.

4.2 O₂ Therapy

These directives apply to adult and pediatric patients.

Patient with No or Mild Respiratory Distress

- O₂ sat >92% on room air
- Mild dyspnea (speaks full sentences).

Patient must be outfitted with a surgical mask with or without nasal cannula oxygen.

Patient in Moderate Respiratory Distress

- O₂ sat >92% with supplemental O₂
- Moderate dyspnea present (unable to speak full sentences, may have accessory muscle use).
- Patient must be outfitted with a low flow high oxygen concentration mask with hydrophobic submicron filter.

Patients in Severe Respiratory Distress

- O₂ sat <92% with supplemental O₂.
- Obvious respiratory distress and/or fatigue or apnea.
- Immediate transport to and notification of the closest appropriate receiving hospital.
- Assist ventilation with a BVM that has been outfitted with a hydrophobic submicron filter and a tube extender between mask and bag-valve device. If the patient is intubated, a hydrophobic submicron filter and a tube extender between the endotracheal tube and the bag-valve device must be used.

During a declared SARS outbreak, specific directives may be issued regarding airway management.

4.3 Administration of Nebulized/Aerosolized Medications

DO NOT ADMINISTER nebulized medications. An exception shall be made in paediatric patients with symptoms suggestive of croup for which the medical directive using nebulized epinephrine may be followed. Base Hospital medical directives may allow for the use of metered dose inhaled medications using a spacer device or the use of subcutaneous epinephrine.

5 SCREENING PATIENTS FOR INFECTIOUS ILLNESSES

5.1 Central Ambulance Communications Centres (CACC)

CACCs are the first point of access into the healthcare system for many people seeking assistance. During a declared SARS outbreak, questions from Section A and B of the SARS Risk Factor Screening Tool (Appendix 2) will be used to determine if an infectious disease may be present.

Other directives specific to CACC operations may be issued by MOHLTC as needed.

5.2 Patient Transfer Authorization Centre (PTAC)

The Patient Transfer Authorization Centre (PTAC) currently monitors and approves all patient transfers between health care facilities in the Province of Ontario except 911 calls.

PTAC must ensure the sending facility and the paramedics are advised of the necessary precautions. PTAC must also ensure that the receiving facility can appropriately isolate a patient if necessary.

During a declared SARS outbreak, the Provincial Inter-Facility Patient Transfer Directive During Outbreak Conditions (Directive PIPT03-03), October 22, 2003, will be used to authorize patient transfers.

Other directives specific to PTAC operations may be issued by MOHLTC as needed.

5.3 Paramedics

In addition to information obtained from CACC/PTAC, paramedics must use the SARS Risk Factor Screening Tool (Appendix 2) at the scene. Personal protective equipment must be chosen based on all available information. In situations of inadequate information, patient complaint alone will dictate protective precautions:

- E.g. need for airway management = gloves, N95 mask, eye protection + a gown, face shield and open face hood.

6 SUMMARY OF GUIDELINES TO SELECTING PERSONAL PROTECTIVE EQUIPMENT

In the prehospital setting, it can be difficult to determine the risk of a patient having a communicable disease. However, in a declared outbreak, specific precautions may be recommended for all patient contacts regardless of symptoms.

Appendix 3 summarizes personal protective equipment requirements. Typical examples to assist in the choosing protective equipment are outlined below. For details refer to previous sections.

6.1 Respiratory Symptoms suggestive of infection, where fever may be present (including a positive CACC or PTAC screen)

Paramedics must wear Respiratory and Contact Precautions (Enhanced):

1. Double Gloves
2. N95 or equivalent mask
3. Protective eyewear
4. Gown/coveralls
5. Face shield
6. Head cover

The patient must wear:

1. Surgical mask if tolerated. May be used with or without nasal cannula oxygen.
2. Low flow high oxygen concentration mask with hydrophobic submicron filter if higher concentrations of oxygen are required.

6.2 Airway Management

In all circumstances paramedics must wear:

1. Double gloves
2. N95 or equivalent mask
3. Protective eyewear
4. Gown/coveralls
5. Face shield
6. Head cover

6.3 Nebulized/Aerosolized Therapy

The use of nebulized therapy for adults must not be used in outbreak conditions. An exception shall be made in paediatric patients with symptoms suggestive of croup for which the medical directive using nebulized epinephrine may be followed. Base Hospital medical directives may allow for the use of metered dose inhaler medications with a spacer device or the use of subcutaneous epinephrine.

For the administration of nebulized/aerosolized medication, paramedics must wear:

1. Gloves (1 pair)
2. N95 or equivalent mask
3. Protective eyewear
4. Gown/coveralls
5. Face shield
6. Head cover

6.4 Fever or Prodromal Symptoms

Many infectious diseases begin with fever or vague symptoms such as malaise, fatigue, and muscle aches. Other associated symptoms can include vomiting, diarrhea, headache, neck stiffness, or an unexplained rash. These symptoms rarely predict what the ultimate disease will be or its mode of transmission.

Paramedics must wear protection appropriate for the exposure:

1. Gloves (1 pair)
2. N95 or equivalent mask, if unexplained fever or rash
3. Protective eye wear, if unexplained fever or rash
4. Gown/coveralls

If additional splash/spray precautions are needed:

5. Face shield
6. Head cover

The patient must wear a surgical mask.

6.5 Body Fluid Splash Risk including uncontrolled bleeding (in the absence of fever or respiratory symptoms suggestive of infection)

Paramedics will wear:

1. Gloves (1 pair)
2. N95 or equivalent mask
3. Protective eyewear
4. Gown/coveralls
5. Face shield
6. Head cover

7 LIST OF APPENDICES

Appendix 1: Glossary of Terms

Appendix 2: SARS Risk Factor Screening Tool

Appendix 3: Prehospital Infection Control Measures for Paramedics Outbreak Conditions

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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.

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 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 38⁰ C and new or worsening cough or shortness of breath. During non-outbreak conditions this includes a fever of greater than 38⁰ C **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 38⁰ C **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.

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 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 local public health unit right away
- 8) Any new onset of cough or shortness of breath is to be reported to the local public health unit right away

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). In declaring an outbreak the local Medical Officer of Health takes into account global and neighbouring jurisdiction conditions and the potential impact of those conditions.

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). PPS is to be used for any health care worker involved in a high-risk respiratory procedure.

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 or equivalent 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 (e.g., 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, or nurse practitioner, 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-dgsp/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 health care facility closed due to SARS before the onset of symptoms, 10 days prior to the onset of this illness
- Instructed by the local public health unit 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 Screening Tool. There are various algorithms to reflect patient care in different settings.

SARS Risk Factor Screening Tool: a tool to be used by health care workers during triage, admitting, and outpatient /ambulatory settings. 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 long-term care facility* 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, China, 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 at the workplace wearing a mask
- 2) Go directly to the quarantine workplace area
- 3) Take breaks and meals in the designated quarantine area
- 4) Use Respiratory and Contact Precautions, which include gown, gloves, N95 mask or equivalent, and eye protection, while working in the quarantined area
- 5) Leave work wearing a clean procedure mask
- 6) Avoid public transit
- 7) For persons who were exposed to SARS virus and considered contacts, follow home quarantine measures

APPENDIX 2

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	<i>If yes to symptoms in Sections A or B record temperature</i>
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<i>RECORD TEMPERATURE</i>	<input type="text"/>	<i>Is the temperature above 38°C?</i>	NO	YES
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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 3

PREHOSPITAL INFECTION CONTROL MEASURES FOR PARAMEDICS OUTBREAK CONDITIONS

	SARS	TB, Chicken Pox, Measles,	Necrotizing Fasciitis	VRE	MRSA	SOB / Cough with fever	Fever +/--Prodrome, (Vomiting/Diarrhea/headach e/neck stiffness, unexplained rash, extreme fatigue, muscle	Airway Management	Significant Splash Risk	Nebulized/Aerosolized Therapy
Precautions for Paramedics										
Gloves	2	X	X	X	X	2	2	2	X	X
N95 Respirator	X	X				X	X	X	X	X
Protective Eyewear	X	X	X			X	X	X	X	X
Gown	X					X	X	X	X	X
Face Shield	X					X		X	X	X
Head cover	X					X		X	X	X
Splash/Spray Protection as needed [gown, face shield, head cover]		X		X	X		X			
Isolation in Transport										
Essential Persons Only with patient	X	X				X	X			
Place Mask on Patient to prevent droplet dispersal	X	X				X	X			
Low Flow High O2 mask	X	X				X	X			
BVM, or ETT with filter	X	X	X	X	X	X	X	X		
Avoid aerosol generating procedures	X	X				X	X			
Disinfection Equipment/Vehicle and linen disposal										
Routine cleaning with Hospital grade disinfectant	X	X	X	X	X	X	X			
Disposable Equipment to be left at patient destination.	X	X	X	X	X	X	X			