

3.14 Severe Respiratory Illness, unknown origin

Severe Respiratory Illness (SRI) encompasses diseases of unknown origin believed to be caused by infective respiratory pathogens. It is imperative to carry out standard surveillance and prudent diagnostic measures to determine what is causing the SRI.

The standard format for each disease in this manual will not be followed for this particular section.

SRI Case

To be confirmed as an SRI case, criteria must be met in four categories for being either (A) hospitalized or (B) deceased. The categories are:

- 1) Respiratory symptoms
- 2) Evidence of severe disease progression
- 3) No alternate diagnosis within the first 72 hours of hospitalization
- 4) Epidemiological exposure

For more information, please read the section *SRI Alert* beginning on page 3 of http://www.phac-aspc.gc.ca/eri-ire/pdf/02-SRI-Surveillance-Protocol_e.pdf

Diagnosis

Along with clinical symptoms, there are several methods of laboratory analysis that can be undertaken to confirm diagnosis, and to identify the organism causing the illness:

- Blood culture
- Sputum for culture and sensitivity
- Nasopharyngeal swab in viral transport for:
 - Virus culture (influenza, parainfluenza, RSV, adenovirus)
 - Direct antigen testing
- Nasopharyngeal swab in transport medium for:
 - *Chlamydia pneumoniae* PCR or culture
 - *Mycoplasma pneumoniae* PCR or culture
- Serology for *Mycoplasma pneumoniae*

Other diagnoses may include:

- Tuberculosis: sputum, lower respiratory tract specimen if available
- Legionella: urine, sputum, lower respiratory tract specimen if available, acute and convalescent serum

For more information on diagnosing SRI, please visit http://www.phac-aspc.gc.ca/eri-ire/pdf/07-Novel-Influenza-Laboratory-Guidelines_e.pdf

Reporting Requirements and Procedures

- Physicians, laboratories and communicable disease control nurses (CDCNs), and infection control practitioners (ICPs) must immediately report suspect or confirmed cases to the Regional Medical Officer of Health (RMOH)

- RMOH office will notify local physicians, nurse practitioners, environmental health officers, community health nurses, CDCNs, and ICPs, in the particular region as required for follow-up and case investigation
- RMOH reports to provincial office as per list A
- CDCN enters the case into the electronic reporting system and completes an outbreak report form if indicated
- Provincial Disease Control
 - Reports the aggregate case data to Public Health Agency of Canada

Links

The page “Emerging Respiratory Infections” from Public Health Agency of Canada provides a great deal of information on surveillance of SRIs, management of SRIs, and laboratory testing.

<http://www.phac-aspc.gc.ca/eri-ire/index-eng.php>