Severe Acute Respiratory Syndrome (SARS)

On March 14, 2003, the Ontario Ministry of Health and Long-Term Care alerted health care providers about four cases of atypical pneumonia resulting in two deaths within a single family in Toronto. These cases provided an epidemiological link to Severe Acute Respiratory Syndrome (SARS) in Ontario.

On March 26, 2003 SARS was declared a provincial emergency. The government and health care providers took steps to contain the spread of SARS isolating those people who were exposed. All patients and visitors to health care facilities were screened and had their temperature taken. Dedicated SARS wards were created in select acute care hospitals and SARS assessment clinics were set up to evaluate symptoms presented by the general public. Health care workers were exposed to the virus from direct contact while caring for patients. New enhanced infection control procedures were enacted at all levels of the health care system.

At the height of the outbreak thousands of people, including health care workers, mostly in the Toronto area were quarantined for 10-day periods at home and given specific advice on preventing family members from infection. Public Health Units and Community Care Access Centres set up dedicated SARS phone lines to counsel those in self-isolation and supported many in need of groceries, medicine and other supplies with a delivery service. The government INFOline fielded more than 50,000 calls relating to SARS and Telehealth Ontario faced extraordinary SARS call volumes, which at times reached 10,000 calls per day.

The last viral transmission in Ontario was reported June 12, 2003. Over the six months from the infection's arrival until the last patient was discharged from hospital, 375 cases were recorded. The battle against SARS in Ontario is characterized in two phases. Total probable and suspect cases were 257 in Phase I with 27 deaths related to SARS. Phase II total number of cases was 118 with 17 deaths related to SARS. The World Health Organization has confirmed reported totals of 8098 SARS cases in 31 countries including China, Taiwan, Hong Kong, Singapore, Germany, the United States, as well as other regions in Canada.

The plan of action to combat the spread of infection during the outbreak has established enhanced practices for a new reality of infectious diseases like SARS in the community and in the health care system. Infection Control standards remain high as regular practice throughout the medical community.

SARS would most likely re-emerge in Ontario by importing the virus from a foreign source. In other words, transmission of the virus would most likely occur by an infected individual from a SARS-affected area outside of Canada who came in close contact with someone in Ontario.

At this time, national and international laboratory testing and collaboration is ongoing to conclusively determine the cause of the illness. Most scientists consider a previously unknown strain of coronavirus originating in animals to be the source of SARS. This germ is referred to as SARS-associated coronavirus or SARS-CoV. Some researchers suggest that other infectious agents may have had a role in SARS cases.

Various methods were used to test patients for the SARS virus. A reverse transcription polymerase chain reaction (RT-PCR) test is used to detect SARS-CoV in clinical specimens, including blood, stool, and nasal secretions. Serologic testing also can be performed to detect SARS-CoV antibodies produced after infection. Finally, viral culture has been used to detect SARS-CoV. Currently there are no vaccines or proven medical procedures to cure a patient with SARS. Because SARS is a new disease, patients in Ontario were treated with a number of different drugs, although the effectiveness of some of these treatments has not been clearly established. Although there is no specific cure to date, scientists and researchers from Ontario and around the world are working on more effective treatments for SARS.

The disease is spread from one person to another through close contact. This droplet and contact transmission means having cared for, lived with, or had direct contact with respiratory secretions or body fluids of a person with the SARS virus.
The onset of the virus or incubation period is believed to be within 10 days. There is no evidence to date that the disease spreads through casual contact, or through the air.

The main symptoms of SARS are both a high fever (over 38° Celsius) and respiratory problems, including dry cough, shortness of breath or breathing difficulties. A chest X-ray would indicate pneumonia. People with SARS may also experience other symptoms, including headache, muscular stiffness, loss of appetite, malaise, confusion, rash and diarrhea.