## What is SARS?

Severe acute respiratory syndrome (SARS) is a viral respiratory illness that first emerged in China in November 2002, and later spread through international travel to 29 countries worldwide causing large outbreaks in Hong Kong; Taiwan; Singapore; Hanoi, Vietnam; and Toronto, Canada. According to the World Health Organization (WHO), from November 2002 to July 31, 2003, there were 8,098 cases of SARS; of these, 774 died. On October 1, 2003, the Centers for Disease Control and Prevention (CDC), reported that there were 164 probable and suspect SARS cases in the United States, of which only eight had laboratory evidence of SARS. There were no deaths due to SARS in the US. Most of the U.S. SARS cases were among travelers returning from other parts of the world with SARS. There were 11 suspect and probable SARS cases investigated by the Minnesota Department of Health; many of these individuals had an alternative diagnosis that could explain their symptoms.

## What causes SARS?

SARS is caused by a virus called the SARSassociated coronavirus (SARS-CoV). It was first identified in April 2003 and is a member of the Coronaviridae family, which also includes many of the viruses that cause the common cold. Coronaviruses have been found in many different animal species including birds and mammals. SARS-CoV is thought to have passed from animals to humans through close contact, butchering or eating undercooked meat in parts of Southern China.

## How does SARS spread?

SARS is spread primarily by close person-toperson contact. In the context of SARS, close contact means having cared for or lived with someone with SARS or having direct contact with respiratory secretions or body fluids of a patient with SARS. (Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet, and touching someone directly. Close contact does not include activities like walking by a person or sitting across a waiting room or office for a brief time.) The virus that causes SARS is transmitted by the spread of respiratory droplets produced when an infected person coughs or sneezes. When a person coughs or sneezes, small amounts of fluid are propelled for about 3 feet through the air and land on the mouth, nose or eyes of persons who are near by. The virus also can spread when a person touches a surface or object contaminated with these infectious droplets and then touches his or her mouth, nose, or eyes. It is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not now known.

## Symptoms of SARS

For a severe respiratory illness to be SARS, there has to be a history of travel to a SARS affected area or close personal contact with a person with SARS, within ten days before symptoms start, this is called the epidemiological link. In general, SARS beginswith a high fever (temperature greater than 100.4°F [>38.0°C]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10% to 20% of patients have diarrhea. After 2 to 7 days, patients develop a dry cough, shortness of breath, and pneumonia.

## How is SARS diagnosed?

Doctors suspect SARS if a patient has a fever of 38.0C or 100.4F, respiratory symptoms and history of travel to a SARS affected area or close contact with a known SARS patient within 10 days before the fever or respiratory symptoms started. Since the initial symptoms of SARS are similar to influenza or other respiratory illnesses, a high level of suspicion and an accurate history is needed to differentiate SARS from other illnesses. There are several laboratory tests used to detect SARS-CoV and other causes of respiratory illness. In some persons it may take as long as 28 days after the start of symptoms to have a definite laboratory diagnosis.



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## How do we protect ourselves from SARS?

If there are no known SARS cases in the world, we protect ourselves and others by following the usual infection control precautions. If you have a respiratory illness, with fever and cough, consider staying home, away from school or work to prevent giving it to others. If you are out in public, cover your mouth and nose with tissues when coughing or sneezing. Frequently wash your hands with soap or use alcohol hand sanitizers. If you are at a clinic or hospital inform the receptionist that you have a respiratory illness. Clinics may have a designated area for respiratory illness and may ask you to wear a mask to protect other patients and clinic staff. Talk to your doctor about a Flu shot which can protect you against influenza, another respiratory illness. If there is community transmission of SARS in any city in the world, the MDH will issue recommendations regarding precautions in Minnesota. We have learned that transmission of SARS was mainly among close personal contacts of ill persons and health care workers caring for them. It is unlikely that SARS can be acquired by walking or sitting across from a person with SARS. However, persons with SARS are advised to isolate themselves at home for 10 days after the resolution of fever, provided that their respiratory symptoms are improvina.

In caring for a SARS patient at home strict infection control precautions should be followed.

- All persons in the household should carefully wash their hands frequently with soap or alcohol hand sanitizers, this should always be done after touching body fluids.
- Gloves can be used for direct contact with the patient or body fluids but should not replace hand washing.
- SARS patients should cover their mouth and nose when coughing or sneezing or if possible wear a surgical mask when in close contact with others. If the patient can not wear a mask, caretakers should wear a surgical mask or an N95 mask if available, when in close contact with the patient.
- Sharing of eating utensils, towels and bedding between the SARS patients and others should be avoided. The items can be used by others after routine washingwith soap and hot water. Surfaces soiled with

body fluids should be cleaned with household disinfectants and gloves should be worn to clean these surfaces. Hands should be washed after removal and disposal of gloves.

- Household waste soiled with body fluids of SARS patients, including masks and tissues, may be discarded as normal waste.
- Household members and other close contacts of SARS patients should be watched for symptoms. Household members and other close contacts of SARS patients should measure their temperature twice daily. If fever or respiratory symptoms(cough, shortness of breath or difficulty breathing) develop they should seek medical care. Notify healthcare provider that a close contact of a SARS patient will be arriving for evaluation. Health care providers will need to make arrangements to prevent transmission to other patients and health care workers.
- In the absence of fever or respiratory symptoms, household members or other close contacts of SARS patients need not limit their activities outside the home.

If you have questions, please call MDH at 651-201-5414 (toll free 1-877-676-5414).

This fact sheet gives information about SARS and important instructions for preventing its spread. Information may be updated periodically.

To find out more about SARS visit: the Minnesota Department of Health SARS webpage www.health.state.mn.us/divs/idepc/diseases/sars/

SARS information is available in other languages from the CDC http://www.cdc.gov/ncidod/sars/