PUBLIC HEALTH REFERENCE SHEET
Severe Acute Respiratory Syndrome (SARS)

Name	Common name SARS Includes: SARS-CoV1 Excludes: SARS-CoV-2 (refer to COVID-19)
Reservoir & Transmission	Himalayan masked palm civet Person-to-person by direct contact or respiratory transmission
Incubation Period	2–10 days (average 5–6 days)
Common Symptoms	Fever, chills, headache, myalgia, rigors, diarrhea, sore throat, lower respiratory illness, pneumonia, acute respiratory distress syndrome
Gold Standard Diagnostic Test	A reverse transcription polymerase chain reaction (RT-PCR) test can detect SARS-CoV in clinical specimens such as blood, stool, and nasal secretions. Serologic testing also can be performed to detect SARS-CoV antibodies produced after infection. Cultures
Risk Groups	Those in contact with SARS-CoV infected person, healthcare workers
Geographic Significance	Worldwide

What is SARS?
Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. The illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained.

What is the occurrence of SARS?
According to the World Health Organization (WHO), a total of 8,098 people worldwide became sick with SARS during the 2003 outbreak. Of these, 774 died. In the United States, only eight people had laboratory evidence of SARS-CoV infection. All of these people had traveled to other parts of the world where SARS was spreading. SARS did not spread more widely in the community in the United States. Since 2004, there have not been any known cases of SARS reported anywhere in the world.

How is SARS transmitted?
The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets produced when an infected person coughs or sneezes. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eye(s). In addition, 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.

Who is at risk of SARS?
Healthcare workers, as well as first responders, are potentially at increased risk of infection, especially before the diagnosis of SARS is suspected and when involved in aerosol-generating procedures such as intubation, manual ventilation before intubation, tracheotomy, noninvasive ventilation, and/or other resuscitation methods.

What are the signs and symptoms of SARS?
SARS is characterized by severity of illness as follows:

- Early illness: Two or more of the following:
  - Fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, or rhinorrhea.

PUBLIC HEALTH REFERENCE SHEET
Severe Acute Respiratory Syndrome (SARS)

- Mild-to-moderate respiratory illness: Temperature of > 100.4°F (> 38°C) and one or more clinical findings of lower respiratory illness (example: cough, shortness of breath, or difficulty breathing).
- Severe respiratory illness: Meets clinical description for mild-to-moderate respiratory illness with any of the following:
    - Radiographic evidence of pneumonia, or
    - Acute respiratory distress syndrome

What are the potential complications of SARS?
SARS caused many pulmonary and extrapulmonary complications. A small percentage of patients had long-term effects from their illness, including depression or anxiety, cough, shortness of breath, and/or chronic lung disease or kidney disease. However, most patients fully recovered.

How is SARS diagnosed?
Several laboratory tests can be used to detect SARS-CoV. A reverse transcription polymerase chain reaction (RT-PCR) test can detect SARS-CoV in clinical specimens such as 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.

How is SARS treated?
There is no specific treatment, and supportive care is emphasized. Once suspected of SARS, the patient needs to be quickly identified and placed in isolation with appropriate infection control measures in place to avoid transmission. Triage using a set of clinical criteria and epidemiologic criteria should be in place to allow the rapid identification of suspected patients.

How can SARS be prevented?
If transmission of SARS-CoV occurs, there are some common-sense precautions that individuals can take that apply to many infectious diseases. The most important is frequent handwashing with soap and water or use of an alcohol-based hand sanitizer. Additional protective measures include high quality housekeeping, especially high touch areas/surfaces; wearing a face mask; and staying home when sick. People should also avoid touching their eyes, nose, and mouth with unclean hands and encourage close contacts to cover their nose and mouth with a tissue when coughing or sneezing.

What are some public health considerations?
- When reporting SARS in the Disease Reporting System internet (DRSi), document relevant travel and deployment history occurring within the incubation period.

References:

Defense Health Agency. 2022. *Armed Forces Reportable Medical Events: Guidelines and Case Definitions.* https://www.health.mil/Reference-Center/Publications/2022/11/01/Armed-Forces-Reportable-Medical-Events Guidelines

Heymann, David L. ed. 2022. *Control of Communicable Diseases Manual*. 21st Edition. Washington, DC: APHA Press.

"Severe Acute Respiratory Syndrome," Centers for Disease Control and Prevention (CDC), last reviewed December 6, 2017. https://www.cdc.gov/sars/

Last Updated September 1, 2023