Fever or Respiratory Illness\(^1\)

- Recent close contact with persons suspected to have SARS-CoV disease or recent exposure to locations with suspected or documented SARS-CoV\(^2\)
  - Yes: Begin SARS isolation precautions, initiate preliminary workup\(^3\), treat as clinically indicated, and notify health department
  - No: Follow algorithm for no SARS in the world (see figure 1)

Radiographic evidence of pneumonia

- No radiographic evidence of pneumonia (or not done)
  - No alternative diagnosis
    - Discontinue SARS isolation precautions after 10 days following resolution of fever and or radiographic evidence of pneumonia
  - Alternative diagnosis confirmed\(^4\)
    - Continue SARS isolation precautions and re-evaluate 72 hours after initial evaluation
    - Perform SARS-CoV testing
    - Continue SARS isolation precautions for additional 72 hrs. At the end of 72 hrs., repeat clinical evaluation including CXR
    - No radiographic evidence of pneumonia\(^5\)
      - Consider D/C SARS isolation precautions\(^6\)
    - Persistent fever or unresolved respiratory symptoms
      - Hemodynamic instability
        - No: Radiographic evaluation of pneumonia
          - No: Consider D/C SARS isolation precautions\(^6\)
          - Yes: Radiographic evidence of pneumonia
            - Yes: Treat as clinically indicated
            - No: Hospitalized with radiographic evidence of pneumonia
              - No: Treat as clinically indicated

Laboratory evidence of SARS-CoV or no alternative diagnosis

- Alternative diagnosis confirmed\(^4\)
  - Consider D/C SARS isolation precautions\(^6\)

Symptoms improve or resolve

- Discontinue SARS isolation precautions

Alt. diagnosis indicated, and notify health department

- Follow algorithm for no SARS in the world (see figure 1)

1 Clinical description of SARS-CoV disease and approach to treatment: Clinical judgment should be used to determine when symptoms trigger initiation of the algorithm in Figure 2. The earliest symptoms of SARS-CoV disease usually include fever, chills, rigor, myalgia, and headache. In some patients, myalgia and headache may precede the onset of fever by 12–24 hours. Diaphoresis may also be an early manifestation. Respiratory symptoms often do not appear until 2–7 days after the onset of illness, and most often include shortness of breath and/or dry cough. Although not diagnostic, the following laboratory abnormalities have been seen in some patients with laboratory-confirmed SARS-CoV disease:

- Persistent fever or respiratory symptoms
  - No radiographic evidence of pneumonia
    - No alternative diagnosis
      - Discontinue SARS isolation precautions after 10 days following resolution of fever and or radiographic evidence of pneumonia
  - Alternative diagnosis confirmed\(^4\)
    - Continue SARS isolation precautions and re-evaluate 72 hours after initial evaluation
    - Perform SARS-CoV testing
    - Continue SARS isolation precautions for additional 72 hrs. At the end of 72 hrs., repeat clinical evaluation including CXR
    - No radiographic evidence of pneumonia\(^5\)
      - Consider D/C SARS isolation precautions\(^6\)
    - Persistent fever or unresolved respiratory symptoms
      - Hemodynamic instability
        - No: Radiographic evaluation of pneumonia
          - No: Consider D/C SARS isolation precautions\(^6\)
          - Yes: Radiographic evidence of pneumonia
            - Yes: Treat as clinically indicated
            - No: Hospitalized with radiographic evidence of pneumonia
              - No: Treat as clinically indicated

Alternative diagnosis:

- An alternative diagnosis should be based only on laboratory tests with high positive-predictive value (e.g., blood culture, viral culture, Legionella urinary antigen, pleural fluid culture, transthoracic aspirate). In some settings, PCR testing for bacterial and viral pathogens can also be used to help establish alternative diagnoses. The presence of an alternative diagnosis does not necessarily rule out co-infection with SARS-CoV.

2 Radiographic testing: Chest CT may show evidence of an infiltrate before a chest radiograph (CXR). Therefore, a chest CT should be considered in patients with a strong epidemiologic link to a known case of SARS-CoV disease and a negative CXR 6 days after onset of symptoms. Alternatively, the patient should remain in SARS isolation, and the CXR should be repeated on day 9 after symptom onset.

3 Discontinuation of SARS Isolation precautions: SARS isolation precautions should be discontinued only after consultation with the local public health authorities and the evaluating clinician. Factors that might be considered include the strength of the epidemiologic exposure to SARS-CoV, the nature of contact with others in the residential or work setting, the strength of evidence for an alternative diagnosis, and evidence for clustering of pneumonia among close contacts. Isolation precautions should be discontinued on the basis of an alternative diagnosis only when the following criteria are met:

- Absence of strong epidemiologic link to a known case of SARS-CoV disease
- Alternative diagnosis confirmed using a test with a high positive-predictive value
- Clinical manifestations entirely explained by the alternative diagnosis
- No evidence of clustering of pneumonia cases among close contacts (unless >1 case in the cluster is confirmed to have the same alternative diagnosis)
- All cases of presumed SARS-CoV disease identified in the surrounding community can be epidemiologically linked to known cases or locations in which transmission is known to have occurred.

4 Exposure history for SARS-CoV disease: Once SARS-CoV transmission is documented in the world:

- In settings of no or limited local secondary transmission of SARS-CoV, patients are considered exposed to SARS if, within 10 days of symptom onset, the patient has:
  - Close contact with someone suspected of having SARS-CoV disease, OR
  - A history of foreign travel (or close contact with an ill person with a history of travel) to a location with documented or suspected SARS-CoV, OR
  - Exposure to a domestic location with documented or suspected SARS-CoV (including a laboratory that contains live SARS-CoV), or close contact with an ill person with such an exposure history.

- In settings with more extensive transmission, all patients with fever or respiratory symptoms should be evaluated for possible SARS-CoV disease, since the ability to determine epidemiologic links will be lost. For up-to-date information on where recent SARS-CoV transmission is suspected or documented, see the CDC and WHO websites: www.cdc.gov/ncidod/sars and www.who.int.

5 Clinical work-up: Clinicians should work up patients as clinically indicated. Depending on symptoms and exposure history, initial diagnostic testing for patients with suspected SARS-CoV disease may include:

- Complete blood count (CBC) with differential
- Chest radiograph
- Pulse oximetry
- Blood cultures
- Sputum Gram’s stain and culture
- Testing for viral respiratory pathogens, notably influenza A and B and respiratory syncytial virus
- Legionella and pneumococcal urinary antigen testing if radiographic evidence of pneumonia (adults only)

An acute serum sample and other available clinical specimens (respiratory, blood, and stool) should be saved for additional testing until a specific diagnosis is made. SARS-CoV testing may be considered as part of the initial work-up if there is a high level of suspicion for SARS-CoV disease based on exposure history. For additional details on specialized laboratory testing options available through the health department and the Laboratory Response Network (LRN), see CDC’s SARS website (http://www.cdc.gov/ncidod/sars).

6 Alternative diagnosis: An alternative diagnosis should be based only on laboratory tests with high positive-predictive value (e.g., blood culture, viral culture, Legionella urinary antigen, pleural fluid culture, transthoracic aspirate). In some settings, PCR testing for bacterial and viral pathogens can also be used to help establish alternative diagnoses. The presence of an alternative diagnosis does not necessarily rule out co-infection with SARS-CoV.