SARS Preparedness
Revisiting the Procedures to Protect Staff and Help Prevent or Contain an Outbreak

Summary. Last year, more than 8,000 people worldwide contracted severe acute respiratory syndrome (SARS), leading to 774 deaths. Although transmission of the disease was quickly controlled, with the outbreak declared over by July, there is concern that SARS could in fact be a seasonal disease and that another outbreak could occur in 2004. In early January, Chinese health officials confirmed the first non-laboratory-related SARS case since the initial outbreak was contained.

The threat of another outbreak underscores the importance of having a response plan in place to safeguard the health of your community and your staff. In this article, we discuss the latest information on the risks of acquiring SARS, review recent recommendations from the U.S. Centers for Disease Control and Prevention (CDC), discuss the role of hospital facility and clinical engineers in SARS preparations, and update ECRI’s recommendations for infection control procedures during equipment servicing. (ECRI first addressed this issue in two June 2003 Health Devices Guidance Articles.) In two appendixes to the current article, we present CDC guidance on patient isolation in an airborne infection isolation room and offer a navigational guide to CDC’s SARS Web site.

Introduction
Severe acute respiratory syndrome (SARS) became a major health concern in 2003. Through rapid action of government agencies, researchers, hospitals, and clinicians, transmission of the disease was controlled, and by July the outbreak was declared over. During the outbreak, more than 8,000 people worldwide contracted SARS, and 774 of these people died (WHO 2003). In the United States, 161 cases of SARS were reported, but no deaths (CDC 2003).

Because SARS is similar to other seasonal diseases, there is concern that another outbreak could occur this winter or spring. In early January, the first SARS case in 2004 was confirmed in a 32-year-old man in China. According to the U.S. Centers for Disease Control and Prevention (CDC), this is the “first case not linked to a laboratory accident that has occurred since the initial outbreak of SARS was declared contained on 5 July 2003” (CDC 2004, CDC health update). (Laboratory-related cases had also occurred in Singapore and in Taiwan, China.) However, whether there will be widespread recurrence of the disease is unknown.

Latest Information on SARS Risk
SARS is a respiratory illness that usually begins with a fever. Other symptoms may include chills, headache, a general feeling of discomfort, body aches, and mild respiratory symptoms. SARS patients may develop a dry cough, and most develop pneumonia.
TRANSMISSION

Although the mechanism of SARS virus transmission is not completely understood, infectious disease authorities such as those from the World Health Organization (WHO) and CDC note that the most significant route of transmission is associated with close contact* with a SARS-infected person or exposure to large-droplet secretions from an infected person's cough or sneeze.

In addition, there is some evidence of SARS transmission occurring during certain medical procedures likely to produce aerosols. Clinicians need to be aware that these procedures increase the risk of contracting infectious respiratory diseases, including SARS. However, it is uncertain whether the transmission risk is associated with aerosol generation or contact with patient sputum or secretions. Such procedures include the use of mechanical and manual ventilators, nebulized bronchodilators, cardiopulmonary resuscitation, positive-pressure airway devices, bronchoscopy, endotracheal intubation, airway suction, and sputum suction.

Studies documenting the stability of the virus for days in the environment suggest that fomites (objects that may be contaminated with infectious organisms) are another potential — though not as significant — route of transmission. Clinicians risk transferring the SARS coronavirus (SARS-CoV) to their mucous membranes (e.g., eyes, nose, mouth) if they touch the surfaces of medical devices and furniture in a SARS patient’s room or if they touch personal protective equipment (PPE), respiratory protective equipment, or a person’s skin that has been contaminated by SARS-CoV-laden droplets. This is the same way colds and influenza are transmitted.

Outside the body, SARS-CoV is reported to be stable in the feces and urine at room temperature for at least one or two days and for as long as four days in diarrhea. The virus has survived for up to 48 hours after drying on a plastic surface.

IDENTIFICATION

There are still no clinical findings or laboratory tests that can reliably identify SARS at the time of presentation. The symptoms are similar to those of many other common respiratory diseases. Laboratory tests exist but are not sensitive to SARS in the early stages of the disease and/or may be unreliable (e.g., may falsely indicate that SARS-CoV is present). Diagnosis for patients with SARS-like symptoms is based on a history suggesting potential exposure to SARS, such as the following:

- Recent travel to a previously SARS-affected area or close contact with ill people with a history of travel to such areas
- Employment as a healthcare worker with recent direct patient contact, employment in a laboratory with live SARS-CoV, or employment in another occupation associated with SARS-CoV exposure
- Recent exposure to people with unexplained pneumonia

There is currently no vaccine or proven effective therapy for SARS, though research is under way.

CDC: Preparation Is the Best Protection

CDC points out that the key to minimizing the risk of another outbreak is early detection and isolation of the first cases. The best way to achieve this is by preparing now. CDC has presented several teleconferences, issued a draft guideline, and updated the information on its Web site to provide the most current information and recommendations (see Appendix B on page 52). CDC’s efforts have included guidance for individual practitioners; for national, state, and local government agencies and communities; and for hospitals and healthcare organizations.

Individual practitioners must be alert for patients presenting with possible SARS and must know how to prevent SARS transmission and whom to inform if a suspected case of SARS is discovered.

Government agencies and communities need to
- implement surveillance measures to quickly identify a new outbreak;

---

* CDC’s definition of someone in “close contact” with a SARS patient is as follows: “A person who has cared for or lived with a person with SARS or had a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS either during the period the person was clinically ill or within 10 days of resolution of symptoms. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, talking within 3 feet, physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or briefly sitting across a waiting room or office” (CDC 2004 Jan 8 [I]).
establish rapid and effective communication among agencies, healthcare facilities, and the public; and
prepare for possible community quarantine measures.
At the hospital level, the emphasis should be on quickly identifying and isolating possible SARS cases to minimize the risk of transmission to other patients and healthcare workers. To help facilities achieve these goals, CDC has issued a series of objectives and recommended activities (CDC 2004 Jan 8 [II]):

- Develop or improve the planning and decision-making structure for SARS detection and response.
- If one is not already in place, develop a written SARS preparedness and response plan.
- Assess the facility’s ability to respond to SARS.
- Establish an effective surveillance, triage, and clinical evaluation system.
- Reinforce basic infection control practices.
- Train staff to recognize potential SARS patients, know what actions to take when SARS is suspected, proficiently don and use PPE, and recognize and apply precautions during aerosol-generating procedures.
- Reinforce the use of “respiratory hygiene/cough etiquette,” including educating patients on respiratory hygiene (such as using hand-hygiene solutions and facial tissues and properly disposing of expended tissues) and providing surgical masks and/or tissues to patients to minimize droplet generation.
- Use engineering controls (e.g., designated waiting rooms for patients with respiratory symptoms and/or Plexiglas barriers at the point of triage) and administrative controls and work practices (e.g., droplet precautions) to manage patients until the cause of their respiratory symptoms is determined.
- Develop a patient transport and isolation plan.
- Implement the proper design, operation, and maintenance of isolation rooms that will house SARS patients.
- Implement a mechanism to report and evaluate exposures and apparent healthcare illness caused by SARS-CoV.
- Have a strategy to meet increased staffing needs and clinical and protective equipment and supplies needs (e.g., ventilators for SARS patients) in the event of a SARS outbreak.
- Develop strategies to limit access to the hospital.
- Have a mechanism to ensure effective communication with public health departments and the public.

CDC recommends that SARS-specific activities be integrated into existing preparedness plans and protocols where possible.

**The Role of Facility and Clinical Engineering**

Facility and clinical engineering should be involved in several aspects of SARS preparedness, including the following:

**Establishment of adequate airborne infection isolation facilities.** While the role of airborne transmission of SARS has not been fully established, CDC recommends that healthcare facilities admit patients with possible SARS to airborne infection isolation rooms (AIIRs) or specially adapted SARS units or wards, where patients can be safely managed (see Appendix A on page 50 for an excerpt from CDC on AIIRs). An AIIR minimizes the risk of airborne infectious agents entering surrounding areas and reduces the concentration of airborne contaminants in the room by using negative pressure relative to the surrounding area as well as airflow and exhaust provisions (e.g., exhaust to the outside, filtration, adequate ventilation rates). Facility engineers are likely to be called on to verify performance of existing AIIRs, to implement new AIIRs, and/or to consider what building modifications might be possible to provide a location for a SARS unit.

Even if all SARS patients are not placed in AIIRs, an AIIR may be preferred for patients known to have transmitted SARS-CoV, for patients being assessed for SARS, and for patients undergoing aerosol-generating procedures, including intubation and tracheal suctioning. Noninvasive ventilation (delivered via a mask) and nebulizer and aerosol respiratory therapies are discouraged for SARS patients; however, if these therapies are used, they preferably should be performed in an AIIR.

**Equipment procurement and training.** Hospitals need to assess availability and anticipated need for consumable and durable medical equipment resources. “SARS patient care requires both consumable (e.g., PPE) and durable (e.g., ventilators) supplies. Experience in other countries indicates that a SARS outbreak not only can strain a facility’s supply of these resources but also can affect the ability to order replacement supplies” (CDC 2004 Jan 8 [III]).

Consumable supplies mentioned by CDC include hand-hygiene supplies (antimicrobial soap and alcohol-based, waterless hand-hygiene products), disposable particulate respirators (N95 or higher), powered air-purifying respiratory (PAPR) hoods and battery packs (if applicable),
goggles and face shields (disposable or reusable), gowns, gloves, and surgical masks. Durable equipment includes ventilators, portable high-efficiency particulate-air (HEPA) filtration units, and portable x-ray units.

ECRI recommends that clinical engineering personnel assist in these preparations, especially for durable equipment, by doing the following:

- Locating and approving suppliers (preferably those suppliers that can reliably provide the models that staff are familiar with) and obtaining guarantees that supplies will be available.
- Making sure that users receive training on models that are new to staff (and that user manuals are available).
- Developing procedures that ensure that rental or other temporary devices are logged in and are safe and functional before clinical use. Clinical engineering personnel should be prepared to conduct safety and functionality checks (including 24-hour on-call availability), should arrange with the device supplier (e.g., rental agency) to inspect devices according to an agreed-upon protocol, or should assist clinical staff in preparing an inspection protocol that they will use before using the devices.

In particular, breathing-circuit filters may need to be added to ventilators. We discuss this topic in the Guidance Article “Mechanical Ventilation of SARS Patients: Safety Issues Involving Breathing-Circuit Filters” in the June 2003 Health Devices.

RISKS OF INFECTION

The risks of SARS infection during equipment servicing are likely to be very low, except when maintenance must be performed inside a SARS patient’s room. We are not aware of any cases of infection associated with handling of equipment or supplies outside patient rooms.

ECRI has established the following levels of concern related to the risks of infection associated with the circumstances described:

- **No infection concern.** There is no concern about infection from external surfaces that have been cleaned and disinfected.
- **Minimal infection concern.** If the interior of a device is exposed to SARS-CoV from room air — most likely air drawn into the device by a cooling fan — there may be some concern about contamination. Until more is known about the transmission of SARS, we suggest that hospitals err on the side of caution and use simple protective measures for even such minimal-risk situations. These measures are readily implemented (see Specific Protective Steps, below). Note, however, that the warm air that is generally circulating inside a device with a cooling fan promotes drying and dilution of contaminants, reducing the viability of a virus.
- **Higher infection concern.** Surfaces that have been in contact with the patient’s oral secretions or other excretions and cannot be readily disinfected pose a bigger concern. This is because, although the infection risk is still likely to be extremely low on these surfaces, there is a greater probability that the virus has remained viable. Such surfaces include the following:
  - Breathing circuits (including ventilator accessories and any portions of the breathing circuit inside ventilators), suction devices and systems, or any other devices that are exposed to the patient’s oral secretions (including contaminated condensate), urine, feces, and other excretions
  - HEPA filtration systems, which are installed systems or portable systems (i.e., mobile high-efficiency-filter air cleaners [MHEFACs]) used to control room-air contamination levels and ensure negative pressure in isolation rooms
  - Any handheld items or other items that can be found in beds, including nurse call buttons, remote controls for televisions, pillow speakers, blood pressure cuffs, and telemetry transmitters
- **Highest infection concern.** The highest level of concern is posed by entering the room of a SARS patient

Protecting against SARS during Equipment Maintenance

Considerable attention has been given to the risks faced by healthcare workers who treat SARS patients. However, we are not aware of any available analysis of the risks of SARS transmission to personnel maintaining or servicing medical equipment that has been potentially exposed to SARS other than ECRI’s Guidance Article “Protecting against SARS during Equipment Maintenance,” published in the June 2003 Health Devices. That article provides guidance for clinical engineering, respiratory therapy, and other personnel involved in maintaining this equipment.

Below, we summarize the major points addressed in our June 2003 article, updating the information where warranted to reflect the current understanding of SARS transmission. For additional details, see the original article.
without appropriate PPE. This is because of the close proximity to the patient, the potential risk of exposure to droplet secretions from coughs and sneezes, exposure to contaminated surfaces, and possible exposure associated with aerosol-generating procedures.

Keep in mind that even the highest level of risk is not a serious concern as long as servicing personnel take the protective steps listed in the next section.

**SPECIFIC PROTECTIVE STEPS**

The following practices should be implemented to protect personnel while they are maintaining and repairing equipment that has been used on — or that has been in the same room as — patients who have or who are suspected of having SARS. For the most part, these represent good infection control practices that should be followed when servicing any device, independent of SARS concerns.

1. **Do not enter the room of a SARS patient.** Access to such rooms should be restricted to essential personnel only. This is to ensure the safety of personnel and to minimize disease transmission. However, if you must enter the room, follow relevant hospital procedures to minimize the exposure risks.

2. **Minimize exposure of medical equipment to SARS.** Before a patient with SARS is brought into a room, remove any unessential equipment. Use breathing-circuit filters to protect exhalation valves and other ventilation components from contamination (for more on this topic, see the Guidance Article “Mechanical Ventilation of SARS Patients” in the June 2003 *Health Devices*). Use disposable devices or accessories for SARS patients whenever possible.

3. **Observe proper hand hygiene.** Frequent and thorough handwashing with soap and water is essential. Alcohol-based handrubs can be used when hands are not visibly soiled and handwashing facilities are not immediately available. Personnel should not rub their eyes or touch their mouth, nose, or other mucous membranes while working on exposed equipment. While wearing gloves, personnel should also avoid touching other surfaces in the room that are not involved in the equipment repair (e.g., doorknobs, telephones, test equipment, computer terminals, keyboards, manuals). In addition, personnel should not eat, drink, chew gum, smoke, or apply cosmetics until they have removed all protective wear and washed their hands.

4. **Use proper decontamination and transport procedures.** Equipment should not be transported until it has been cleaned and disinfected and disposables have been removed by housekeeping, central processing, or other appropriate personnel. (Note that commonly used disinfectants are effective against the virus. For more information about disinfection procedures for potentially contaminated surfaces, refer to the June 2003 article.) If equipment from the room of a SARS patient must be removed before the exterior can be cleaned and disinfected, follow any hospital policies on transporting contaminated devices.

5. **Choose an appropriate work area.** Equipment that poses particular infection concerns should be worked on in designated areas where servicing can be performed without the risk of infecting patients or other employees. These areas should not be near any patient care areas, food preparation or storage areas, medication areas, or other clean areas.

6. **Wear protective equipment when appropriate.** For personnel working on minimal-risk surfaces, we recommend using the following PPE:

- Gloves
- Clean, nonsterile gown, apron, or laboratory coat
- Goggles

   **Note:** In June 2003, we also listed the use of a face shield as an alternative form of eye protection. Although a face shield should provide adequate protection against an occasional minor splatter that may occur during servicing, the U.S. Occupational Safety and Health Administration (OSHA) requires the use of goggles (or special protective eyeglasses) when eye protection is used. CDC, on the other hand, recommends goggles or a face shield for protection against a splash or spray of body fluids.

   For personnel working on higher-risk surfaces, we believe that in addition to the above PPE, the use of a surgical mask would be prudent. The primary reason for wearing a mask is that it helps to prevent contaminated gloves or hands from coming in contact with the mouth and nose.

   **Note:** In June 2003, we recommended the use of N95 respirators or similar respiratory protection. We have changed our recommendation because there is no significant benefit of using such protection in this application (in light of the reduced concern about airborne transmission, as noted earlier) and because implementation of such respiratory protection entails...
considerable time and effort. (For more details about respirators, see “Selecting Respiratory Protection” on page 216 of the June 2003 issue).

7. Before starting work... If there is any question about whether the exterior surfaces of the equipment were adequately disinfected, including the bottom and back, disinfect those surfaces immediately. Also, if disposable components have not already been discarded, do that right away as well. If the equipment is not needed immediately, ECRI suggests allowing time — several hours to overnight — for viruses to die before servicing is carried out. (Note, however, that this waiting period should not be seen as a substitute for other infection control procedures.)

8. If the interior of the equipment is dusty... Use a vacuum cleaner with a HEPA filter to remove dust as soon as adequate access is gained during disassembly and before working on the interior. Never blow on the equipment or use compressed air to remove dust or other particulates.

9. Clean up when done. Clean and disinfect the work area after servicing is complete.

10. If an exposure occurs... If you believe you have been exposed to SARS-CoV while unprotected, consult with the hospital’s infection control practitioner, epidemiologist, or employee health staff for the procedures to follow.

Conclusions

Hospitals should be taking action now to prepare for possible SARS patients. If preparedness plans and protocols are not already in place, start implementing them. Make sure that facility and clinical engineering personnel play a role in these preparations. In addition, clinical engineers, respiratory therapists, and others servicing medical equipment should be taking appropriate infection control precautions regardless of whether the patient has or is suspected of having SARS. Take time to review your general infection control policy and practices.

New information continues to be discovered about SARS and the measures for preventing it. For the latest facts, check the CDC SARS home page (www.cdc.gov/ncidod/sars), which has links to a wide range of CDC resources for clinicians, patients, travelers, and others. For help in navigating the Web site, see Appendix B on page 52.

Bibliography


Centers for Disease Control and Prevention (CDC):


I. Core document.

II. Supplement C: Preparedness and response in healthcare facilities.

III. Supplement I: Infection control in healthcare, home, and community settings.


Appendix A

Patient Isolation in an Airborne Infection Isolation Room

The following is an excerpt from the Centers for Disease Control and Prevention’s (CDC) Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS).* We have reprinted it here for your convenience.

**D. Patient Placement, Isolation, and Cohorting**

Appropriate patient placement is a significant component of effective SARS control. Each healthcare facility should develop a strategy and procedures to: 1) quickly separate potential SARS patients from other patients, and 2) implement appropriate isolation precautions.

**Objective 1:** Develop strategies for triage and admission that minimize the risk of transmission to staff, patients, and visitors.

**Activities**

- Determine where and how possible SARS patients will be triaged, evaluated, diagnosed, and isolated.
- Admit patients only when medically indicated or if appropriate isolation in the community is not possible.
- If a patient with SARS symptoms and risk factors does not meet the criteria for admission and is to be sent home, discuss the case with the health department to ensure adequate home isolation and follow-up (See Supplement D).
- Review admission procedures, and determine how they can be streamlined to limit the number of patient encounters for healthcare personnel.
- Determine a method for tracking and monitoring all SARS patients in the facility.

**Objective 2:** Develop a patient transport plan to safely move SARS patients within the facility.

**Activities**

- Identify appropriate paths, separated from main traffic routes as much as possible, for entry and movement of SARS patients in the facility, and determine how these pathways will be controlled (e.g., dedicated SARS patient corridors, elevators).
- Optimize necessary patient transport (see Supplement I).

**Objective 3:** Ensure optimal strategies for isolation of possible SARS patients in the healthcare facility.

Although most SARS-CoV transmission appears to occur through droplet and contact exposures, transmission by fomites and by the airborne route remain possibilities. Therefore, patients who require hospitalization should be admitted to an Airborne Infection Isolation room (AIIR) or specially adapted SARS unit or ward where they can be managed safely. In some settings, a lack of AIIRs and/or a need to concentrate infection control efforts and resources within the facility may lead to a strategy of cohorting patients in individual rooms on the same floor, rather than placing them in AIIRs throughout the hospital. This strategy physically isolates SARS patients from non-SARS patients and also makes it possible to dedicate resources and appropriately trained staff to their care. Experience in some settings in Taiwan and Toronto demonstrated that cohorting SARS patients, without use of AIIRs, effectively interrupted transmission. Thus, although single AIIRs are recommended for SARS isolation, other strategies may provide effective overall infection control.

**Basic Activities**

- As possible, admit patients with possible SARS-CoV disease to an AIIR (See Supplement I). An AIIR is a single-patient room in which environmental factors are controlled to minimize the possibility of airborne transmission of infectious agents. These rooms have specific requirements for controlled ventilation, negative pressure, and air filtration and monitoring, which are detailed in the *Guideline for Environmental Infection Control in Health-Care Facilities, 2003* ([www.cdc.gov/ncidod/hip/enviro/guide.htm](http://www.cdc.gov/ncidod/hip/enviro/guide.htm)).

- If there is a lack of AIIRs and/or a need to concentrate infection control resources, or if AIIRs are available only in locations housing immunosuppressed patients (e.g., bone marrow transplant wards), patients may be cohorted in single rooms on nursing units that have been modified to accommodate...
SARS patients (see Section E: Engineering and Environmental Controls, below, and Supplement I).

- Even if a facility has chosen to cohort SARS patients, AIIRs are preferred for: 1) patients who are known to have transmitted SARS-CoV to other persons and 2) patients in whom the risk of SARS is being assessed (to avoid putting non-SARS-CoV-infected patients on a SARS unit).

- Determine where SARS patients will have various procedures (e.g., collection of respiratory specimens) performed. Whenever possible, perform procedures/tests in the patient’s room (see Supplement I).

**Enhanced Activities**

- Determine at what point the facility will designate a special SARS nursing unit, and determine how that unit would be modified to accommodate SARS patients (see Section E: Engineering and Environmental Controls, below).

- In the context of significant SARS-CoV transmission in the facility, high patient volume, or frequent unprotected exposures, devise and implement a plan for cohorting patients and healthcare workers. Patients might be divided into the following cohorts: 1) patients who are exposed and asymptomatic; 2) patients who are exposed and symptomatic but do not meet the SARS case definition; 3) patients who meet the case definition; 4) non-exposed patients.

- Consider the need/practicality of a designated SARS hospital. In some areas during the 2003 outbreak, a logical expansion of a SARS unit was designation of certain facilities as SARS hospitals. This decision facilitated cohorting of staff and focused resources on one or a few hospitals. As shown by the experience in Toronto and Taiwan, however, designation of SARS hospitals is a difficult policy to implement. Hospitals that were not seriously affected did not want to become the repository of all SARS cases for fear of liability, negative public relations and financial impact. Even where this policy was successful, patients with SARS still presented to other facilities. Thus, all hospitals still needed to be vigilant for SARS and able to handle the initial triage, stabilization, and transfer of patients. The decision to create a SARS hospital requires the involvement of hospital leadership, health departments, and other community officials. The ultimate decision-making authority may vary by jurisdiction. The decision must also take into account the availability of specialty services, both at the designated facility and at other facilities in the area.

**E. Engineering and Environmental Controls**

Optimal functioning and maintenance of the facility’s environment are important components of SARS control.

**Objective 1:** Ensure that the capacity of rooms and units that will be used to house SARS patients is adequate for isolation and infection control.

**Activities**

- Determine the current capacity for isolating SARS patients in ICU and non-ICU settings.

- Ensure that AIIRs are functioning properly and are maintained in accordance with current recommendations (see www.cdc.gov/ncidod/hip/enviro/guide.htm).

- Determine how non-AIIR rooms designated for SARS patient care might be modified to achieve appropriate airflow direction and/or air exchanges.

- Determine the best location in the hospital for a SARS unit in which patients and the staff caring for them can be cohorted. Determine how to modify existing rooms/units/floors as needed to meet the engineering requirements for a SARS unit. Ideally this location would have the following characteristics:
  - An air-handling system that allows the unit to be made negative pressure to surrounding areas and allows for a pressure gradient with air flow from the “cleanest” (nurses’ station) to the “least clean” (patient room) area.
  - Rooms that can be converted to negative pressure in relation to the hallway.

- Identify a designated space for a SARS evaluation center, which may be a temporary structure or make use of existing structures. The purpose is to separate potential SARS patients from other patients seeking care at the healthcare facility during triage and initial evaluation.
  - Determine needed ventilation, imaging, laboratory, and restroom facilities, water supply, etc., for the evaluation center.
  - Determine appropriate traffic routes and modes of transport for patients who must be transported from the evaluation center to the healthcare facility.

- Designate an environmental/housekeeping specialist to verify that cleaning and disinfection methods and staff are appropriately prepared to provide SARS patient care at the facility (see Supplement I).
Appendix B
A Navigational Guide to the CDC SARS Web Site

The U.S. Centers for Disease Control and Prevention (CDC) SARS home page, www.cdc.gov/ncidod/sars, has links to a wide range of resources for clinicians, patients, travelers, and others. However, specific information from this page can sometimes be difficult to locate. To help readers navigate the site, we provide the following guide.

BACKGROUND INFORMATION
You can find general SARS information at several links:

- www.cdc.gov/ncidod/sars/factsheet.htm has basic information about SARS, how it’s spread, what CDC is doing about the virus, and CDC’s recommendations for healthcare facilities.
- www.cdc.gov/ncidod/sars/faq.htm has answers to frequently asked questions about SARS, such as “How is the virus spread?” “What is the cause of SARS?” “What are coronaviruses?” and “Is there a laboratory test for SARS?” This page covers more topics than the basic information page, but still presents the information at an introductory level.
- www.cdc.gov/ncidod/sars/isolationquarantine.htm explains the difference between isolation and quarantine and provides links for more information.

PREPARATORY ADVICE
View updated guidance at www.cdc.gov/ncidod/sars/updatedguidance.htm for links to CDC’s latest advice on preparing for another SARS outbreak. At the time of this article’s publication, links were included to the three documents listed below:

  
  This is an updated version of a draft document issued by CDC in November 2003. CDC revised the draft based on comments received from public health partners, healthcare providers, and other parties. CDC will continue to update the document as necessary to incorporate additional comments and to reflect increased understanding of SARS-CoV transmission dynamics and the availability of improved prevention tools. (The January 8 version of the Core Document and Supplement C were the basis of some of the information in our Guidance Article.)

  
  This is an updated version of a document issued by CDC in December 2003. The document provides guidance for surveillance, clinical and laboratory evaluations, and reporting during times when there is no known person-to-person transmission of SARS-CoV occurring in the world.

  
  This is an updated version of a document issued by CDC in December 2003. This document provides guidance on the clinical evaluation and management of patients who present from the community with fever and/or respiratory illnesses.
WEBCASTS

CDC has conducted several Webcasts that are available on its site as audiovisual files and slide presentations. The information in the most recent Webcasts, described below, forms the basis of the three documents above. However, the Webcasts provide some additional background and rationale and may be useful for those wishing to gain a better understanding of the guidance.

- Preparing for the Return of SARS: Are We Ready? Parts 1 and 2. The Webcasts and accompanying slide shows can be viewed or downloaded at www.phppo.cdc.gov/phtn/webcast/sars-return.
  
  Part 1, which aired September 23, 2003, covers the following topics:
  - Infection control for hospitals and other healthcare facilities (Linda Chiarello)
  - Quarantine: community response/community containment (Patricia Simone)
  - Legal challenges of quarantine and isolation (Gene W. Matthews)
  
  Part 2, which aired September 30, 2003, covers the following topics:
  - What every clinician should know about SARS: basic diagnosis and patient management (John Jernigan)
  - What’s new in SARS laboratory diagnostics (Dean J. Erdman)
  - Surveillance: how to prepare the clinician for early recognition and diagnosis (Chris A. Van Beneden)

- SARS: When a Global Outbreak Hits Home. Aired October 23, 2003. The Webcast can be viewed or downloaded at www.phppo.cdc.gov/phtn/webcast/phgr-10-23/default.asp. The following topics are covered:
  - Basic components of the public health response to suspected SARS cases in a community
  - The disease reporting process for when SARS is diagnosed in a community
  - Three strategies to prevent the spread of SARS and similar communicable diseases
  - Three issues that should be considered in a SARS preparedness plan

Audio Conference to Examine Bariatric Surgery

As the number of obese people in the United States continues to rise, hospitals face an increased demand for bariatric procedures, as well as the necessity of performing other surgeries on obese patients. Hospitals must be prepared to address new safety concerns, technology needs, and equipment requirements to safely serve this patient population.

ECRI’s March 10 audio conference, “Bariatric Surgeries on the Obese Patient: Managing Technology Challenges and Risks,” features expert presentations that will guide hospitals in improving patient and staff safety and achieving positive outcomes for bariatric patients. Continuing medical education (CME) credit is available for qualified attendees.

To learn more or to register, contact Pamela Keating at ECRI, +1 (610) 825-6000, ext. 5439, or education@ecri.org.