

3 Commercial Care

SARS - Environmental Control Measures for Healthcare Settings

What is SARS? Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a previously unrecognized coronavirus, called SARS-CoV. Coronaviruses are a group of viruses that cause respiratory illness in humans and cause respiratory, gastrointestinal, liver and neurological disease in animals. SARS was first reported in Asia in Feb. 2003.

What are the signs and symptoms of SARS?

The illness usually begins with a high fever $\geq 100.4^{\circ}$ F. Other symptoms may include chills, headache and body aches. Some people have mild respiratory symptoms and diarrhea. After 2-7 days, some people with SARS develop a dry cough and most develop pneumonia.

How is SARS spread?

The main way that SARS seems to spread is by "close" person-to-person contact. The virus is spread by respiratory droplets produced when an infected person coughs or sneezes. Droplet spread happens when droplets from a cough or sneeze are propelled a short distance (≤ 3 feet) through the air and are deposited on the mouth, nose, or eyes or persons who are nearby. 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). It is also possible that SARS can be spread through the air or by other ways that are currently not known.

What does "close contact" mean?

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 person with SARS e.g. kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet, and touching someone directly.

If you are exposed to SARS, how long does it take to become sick (incubation period)?

The time between exposure to SARS and onset of symptoms is called the "incubation period". For SARS, the incubation period is typically 2-7 days and may be up to 10 days.

How long is a person with SARS infectious to others?

People are most likely to be infectious when they have symptoms, such as fever or cough and are most infectious during their second week of illness. However, it is not known how long before or after their symptoms begin that people with SARS might be able to spread the disease to others.

What is the treatment for SARS?

Patients with SARS receive the same treatment that would be used for any patient with a serious atypical pneumonia.

What is the role of the environment in the spread of SARS?

Preliminary studies suggest that the SARS virus may survive in the environment for several days. The length of time that the virus survives may depend on the type of material or body fluid containing the virus and environmental conditions such as temperature or humidity. Although environmental surfaces (e.g., floors, table tops) are generally not involved in the spread of microorganisms, some surfaces, especially those that are touched frequently (e.g., bed rails, door knobs, lavatory surfaces) may be an important sources of contamination. When these surfaces

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are touched, the SARS virus may be transferred to the nose, mouth, eyes or to other environmental surfaces.

What environmental disinfectants are effective against SARS?

Right now, there are no disinfectant products registered by the EPA for use on environmental surfaces that are specifically listed as having the ability to kill the SARS virus. However, related viruses that have similar physical and biochemical properties can be killed with bleach, ammonium chloride or alcohol, or cleaning agents containing any of these disinfectants. Any EPA-registered hospital detergent-disinfectant currently used in healthcare facilities for environmental cleaning may be used. Follow the manufacturer's recommendations for use.

What are the recommendations for Cleaning and Disinfection of the SARS Patient Environment?

Follow the control measures put forth by facility Infection Control and/or Safety officers and public health authorities. Recommendations may change as more information becomes available. For the latest information on cleaning and disinfection of SARS Patient Care Environments go to <http://www.cdc.gov/ncidod/sars/guidance/1/healthcare.htm#3d10>

Cleaning and disinfection of environmental surfaces are important components of routine infection control in healthcare facilities. Although little is known about the extent of environmental contamination in SARS patients' rooms, evidence suggests that the environment could play a role in transmission. Therefore, cleaning and disinfection are critical to control SARS. Environmental cleaning and disinfection for SARS follows the same principles generally used in healthcare settings.

Personal Protective Equipment

Wear gloves, gown, respiratory protection (N-95 respiratory or equivalent) plus eye protection if the patient is in the room. If the patient has been transferred or discharged, wear gown and gloves for terminal cleaning.

Environmental Cleaning and Disinfection SARS Patient Care Environments

Cleaning Occupied Patient Rooms

- Designate specific, well-trained personal for cleaning; this includes housekeeping personnel as well as others responsible for cleaning patient-care equipment (e.g. ventilators, IV pumps).
- Wear personal protective equipment as described above.
- Keep cleaning supplies outside the patient room (e.g. in anteroom or storage room).
- Minimize unnecessary patient-care supplies and equipment to facilitate cleaning.
- Use any EPA-registered hospital detergent-disinfectant. Follow manufacturer's recommendations for use-dilution, contact time and handling.
- Clean and disinfect rooms at least daily, when visibly soiled and/or contamination occurs. Pay special attention to frequently touched surfaces (e.g. bedrails, bedside and over-bed tables, telephone, doorknobs, commodes, ventilator surfaces). Also clean floors and other horizontal surfaces daily and when soiled/contaminated.
- After an aerosol-generating procedure (e.g. intubation), clean and disinfect horizontal surfaces around the patient as soon as possible after the procedure.
- Avoid admitting patients to carpeted rooms. If this is not possible, vacuum daily.
- Clean and disinfect body fluid spills following standard procedures.

Terminal Cleaning Patient Rooms

- Clean and disinfect all surfaces that were in contact with the patient or may have become contaminated during patient care.
- Wipe down mattresses and headboards.
- Remove privacy curtains, bag in the room and transport to laundry.
- No special treatment is necessary for window curtains, ceilings and walls unless visibly soiled.

Do not spray rooms with disinfectant. This has no proven benefit and is potentially hazardous.

Laundry and Linens

Store clean linen outside patient rooms, taking into the room only linen needed for use during the shift.

Contact with textiles has not spread SARS, therefore no special handling procedures are necessary for SARS contaminated textiles. Wear gloves and gown when handling soiled linen and laundry as per Standard and Contact Precautions; wear gloves when transporting soiled linen. Place soiled linens directly into a laundry bag in the patient room. Contain linen in a manner that prevents the linen bag from opening or busting during transport and while in the soiled linen area. Do not shake or handle soiled linen in a manner that might aerosolize infectious particles. Decontaminate hands after removing gloves. Wash and dry linen according to standard procedures.

Medical Waste

Medical waste has not spread SARS therefore, no special handling procedures are necessary for SARS-contaminated medical waste. Contain and dispose of SARS-contaminated medical waste per facility-specific procedures and/or local regulations.

Patient-care Equipment

Dedicate patient-care equipment (e.g. commodes). Use an EPA-registered hospital disinfectant to clean and disinfect patient-care equipment between use by different patients using standard cleaning procedures. Wear gloves when handling and transporting used patient-care equipment.

Hand Hygiene

Hand hygiene is an important measure to prevent the spread of SARS. Wash hands with an antimicrobial soap and water or an alcohol-based hand rub (if hands are not visibly soiled) after contact with the patient, the patient's environment (medical equipment/supplies/linen/waste) and after glove removal. The use of gloves does not eliminate the need for hand hygiene. Instruct personnel to avoid touching their face until after hand hygiene. More information on hand hygiene can be found at <http://www.cdc.gov/handhygiene/>

References for SARS

Centers for Disease Control (CDC) Official SARS Web site www.cdc.gov/ncidod/sars

SARS Supplement I: Infection Control in Healthcare Settings, Jan. 04.
<http://www.cdc.gov/ncidod/sars/guidance/I/healthcare.htm#3d10>

Frequently Asked Questions about SARS. April, 04
<http://www.cdc.gov/ncidod/sars/faq.htm>