Healthcare-Associated Pneumonia

Pneumonia is a serious lung infection. It’s caused by germs, such as bacteria and viruses, and by certain types of fungi. Some people come in contact with pneumonia germs in the course of daily life, such as at school, work, or the gym. But others become infected during a stay in a hospital or long-term care facility. Though pneumonia can be dangerous for anyone, it’s a special concern for people in healthcare settings. This sheet tells you more about healthcare-associated pneumonia and what hospitals are doing to control it.

What Are the Risk Factors for Healthcare-Associated Pneumonia?

The risk is greatest for people who:

- Have been in intensive care or on a breathing machine.
- Have trouble swallowing, coughing, or clearing mucus from the throat or lungs.
- Have an immune system weakened by disease or medications.
- Have another serious illness such as diabetes, heart disease, or emphysema (an illness that damages the lungs).
- Are 50 years of age or older.
- Have recently taken antibiotics for more than a few days.
- Find it hard to breathe deeply (for instance, a person with broken ribs or an incision in the abdomen).

How Does Healthcare-Associated Pneumonia Spread?

- Mechanical respirators (breathing machines): These machines help patients breathe when they aren’t able to breathe on their own. A person is usually connected to a breathing machine by a tube that carries air into the lungs. Having this tube increases the risk of pneumonia.
- Aspiration: Germs from the mouth or throat can cause pneumonia when they enter the airways of the lungs. This is most likely to happen if a person is not fully conscious, must lie flat, or can’t swallow or cough up mucus in the throat.
- Hand-to-hand contact: The germs that cause pneumonia can spread from patient to patient on the hands of healthcare workers.

What Are the Symptoms of Healthcare-Associated Pneumonia?

Pneumonia often begins without warning. At first, it can seem like a cold or the flu, but symptoms can quickly become worse. Symptoms include:

- Severe cough, which may bring up greenish or yellow mucus, or blood
• Fever and shaking chills
• Shortness of breath
• Chest pain when breathing or coughing
• Confusion

How Is Healthcare-Associated Pneumonia Diagnosed?
Pneumonia can be hard to detect in people who are already ill. To help find the cause of symptoms, a doctor listens to the patient’s chest with a stethoscope. Blood tests and a chest x-ray or CT scan (a computer-enhanced x-ray) may also be done. Other tests may be needed if symptoms don’t improve with treatment.

How Is Healthcare-Associated Pneumonia Treated?
Pneumonia caused by bacteria is treated with antibiotics. People who are at risk of complications or are very ill may receive more than one medication. Many people also receive supportive therapy, including oxygen and treatments that loosen and drain thick mucus from the lungs.

Complications of Healthcare-Associated Pneumonia
• Bacteremia (bacteria in the bloodstream): Germs from the infection in the lungs enter the bloodstream, damaging the liver, kidneys, heart, and other organs.
• Pleural effusion: Infected fluid builds up in the space between the lungs and chest wall, making it hard to breathe.
• Lung abscess: A pocket of pus forms where lung tissue has been destroyed. This can cause bleeding in the lung. In some cases, the infection spreads to other parts of the body.
• Respiratory failure: The lungs are no longer able to provide the body with enough oxygen. Respiratory failure can be fatal.

Preventing Healthcare-Associated Pneumonia: What Hospitals and Long-Term Care Facilities Are Doing
Many hospitals and nursing homes take these steps to help prevent healthcare-associated pneumonia:
• Limited use of breathing machines: Face or nose masks that aid breathing may be used instead of breathing machines. A breathing tube is removed as soon as it is no longer needed.
• Raising heads of beds: The heads of beds are kept raised to help prevent bacteria or food from entering the lungs.
• Careful use of antibiotics: Antibiotics are used only when needed and for the shortest time possible. This helps prevent the growth of germs that are more harmful and harder to kill.
• Handwashing: This is the single most important way to prevent the spread of germs. Healthcare workers wash their hands or use an alcohol-based hand cleaner before and after treating each patient. They also clean their hands after touching any surface that may be contaminated.
• Sterile devices: All devices that aid breathing are carefully cleaned and disinfected.
• Careful monitoring: Patients who have a feeding tube are closely monitored.

Preventing Healthcare-Associated Pneumonia: What Patients Can Do
• Ask all hospital staff to wash their hands before touching you. Don’t be afraid to speak up!
• Wash your own hands often with soap and water. Or use an alcohol-based hand gel containing at least 60 percent alcohol.
• Keep the head of your bed raised at least 30 degrees, especially during meals or if you have a breathing tube.
• Do any breathing exercises your doctor suggests. A simple breathing device called a spirometer can help keep your lungs clear. Walk if you can. Walking helps your lungs stay clear.
• Ask your doctor if you should receive the pneumonia vaccine to reduce your risk of infection.

**Tips for Good Handwashing**

• Use warm water and plenty of soap. Work up a good lather.
• Clean the whole hand, under your nails, between your fingers, and up the wrists.
• Wash for at least 15 seconds. Don’t just wipe. Scrub well.
• Rinse, letting the water run down your fingers, not up your wrists.
• Dry your hands well. Use a paper towel to turn off the faucet and open the door.

**Using Alcohol-Based Hand Gels**

Alcohol-based hand gels are also a good choice for cleaning your hands. Use them when you don’t have access to soap and water or your hands aren’t visibly dirty. Follow these steps:

• Spread about a tablespoon of gel in the palm of one hand.
• Rub your hands together briskly, cleaning the backs of your hands, the palms, between your fingers, and up the wrists.
• Rub until the gel is gone and your hands are completely dry.

**When to Call the Doctor**

Healthcare-associated pneumonia may come back. Call your doctor right away if you have any of the following:

• Chills or a fever
• Cough
• Trouble breathing

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