

Outcomes in Patients Who Acquired Pneumonia in Various Settings

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The full report is titled “Outcomes of Patients Hospitalized With Community-Acquired, Health Care–Associated, and Hospital-Acquired Pneumonia.” It is in the 6 January 2009 issue of *Annals of Internal Medicine* (volume 150, pages 19-26). The authors are M. Venditti, M. Falcone, S. Corrao, G. Licata, P. Serra, and the Study Group of the Italian Society of Internal Medicine.

What is the problem and what is known about it so far?

Pneumonia is an infection of the lungs. Most patients with pneumonia get better with antibiotic treatment, but some patients develop serious complications and some die of the infection. Pneumonias that people get while living in the community are generally less severe and have better outcomes than pneumonias that people get when they are in the hospital for some other health problem. This difference is due to patient factors, such as underlying illness, and to the types of bacteria that cause pneumonia in these 2 settings. Doctors have recently become aware that pneumonia in patients who are not in the hospital, but have had recent contact with a health care setting, have worse outcomes than patients who have not had such contact. The types of health care situations that seem to matter most are having been hospitalized in recent months, living in a nursing home, receiving kidney dialysis, and receiving intravenous cancer chemotherapy. Researchers call this type of pneumonia *health care–associated pneumonia*.

Why did the researchers do this particular study?

To compare how patients did after being hospitalized for pneumonia that was acquired in the community, health care settings, or the hospital.

Who was studied?

362 patients hospitalized at 1 of 55 Italian hospitals during 1 week in January 2007 and 1 week in June 2007.

How was the study done?

The researchers collected information to identify patients with community-acquired, health care–associated, or hospital-acquired pneumonia. They then collected information on antibiotics used for treatment, severity of pneumonia, death rates, and length of hospital stay and compared the 3 groups.

What did the researchers find?

About 62% of the patients had community-acquired pneumonia, about 25% had health care–associated pneumonia, and the rest had hospital-acquired pneumonia. Patients with community-acquired pneumonia had the least complicated course, with the shortest hospital stays and lowest in-hospital death rate (6.7%). Patients with hospital-acquired pneumonia had the most complicated pneumonia, longest hospital stays, and highest in-hospital death rate (18.4%). Patients with health care–associated pneumonia had outcomes that were closer to those in hospital-acquired than community-acquired pneumonia, with an in-hospital death rate of 17.8%. An important and changeable factor related to in-hospital death was treatment with an antibiotic regimen that was not recommended by guidelines.

What were the limitations of the study?

Many patients with pneumonia, especially community-acquired pneumonia, are treated on an outpatient basis. These results might not apply to patients who were not sick enough to require hospitalization.

What are the implications of the study?

Health care–associated pneumonia is more serious than community-acquired pneumonia, with worse outcomes. Doctors should be careful to identify whether patients with pneumonia have health care–associated disease and use recommended antibiotics for the type of pneumonia that the patient has.

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