# Long-Term Care Survey Alert

## Best practices: Let The Evidence Be Your Guide For Diagnosing, Managing Pneumonia

**Breathe easier with a best-practice plan for tackling this serious condition.**

Talk about walking a survey and compliance tightrope: Under-diagnose pneumonia or fail to provide proper treatment, and residents will suffer avoidable negative outcomes. But over-diagnose and code pneumonia on the MDS, and you'll have the payment police on your doorstep.

**The solution:** The care team should sit down with the medical director to look at available evidence-based guidelines for diagnosing not only pneumonia but other conditions, says **Nathan Lake, RN**, a long-term care specialist in Seattle. "But pneumonia is a good place to focus because diagnosing pneumonia requires a certain threshold of symptoms and tests," he says.

**Consider This Evidence-Based Approach**

You can nail down a diagnosis of probable pneumonia based on symptoms alone. Guidelines for treating nursing home-acquired pneumonia published in the August 2002 Journal of Family Practice provide a definition of probable pneumonia, which is two or more symptoms out of a category that includes respiratory and systemic symptoms, according to **Evelyn Hutt, MD**, co-author of the study and one of the researchers who helped develop the guidelines. Hutt is director of research in long-term care at the **Denver VA Medical Center** and associate professor of medicine in geriatrics at the **University of Colorado at Denver and Health Sciences Center.**

The panel reasoned that you need to see at least one respiratory symptom to know the resident's systemic symptoms aren't due to a UTI or another non-pneumonia issues, Hutt explains. The pulmonary symptoms include the following:

• Increased respirations (greater than 25/min.)
• New or worsening cough
• Newly purulent sputum
• Dyspnea
• Pleuritic chest pain
• New or worsening hypoxemia
• New rales or rhonchi on chest exam.

The systemic symptoms can include either fever of 100.5 or two degrees above the person's baseline -- or hypothermia (less than 96 F), tachycardia and a decline in cognitive or functional status, says Hutt.

**Remember:** You can't go by absence of fever as a sign an elderly person doesn't have pneumonia, reminds Hutt.

**To Hospitalize or Not to Hospitalize**

Once the physician determines the nursing home resident has probable pneumonia, then the staff has to decide whether to hospitalize the person, according to the guidelines published in the August 2002 Journal of Family Practice.

The guidelines developed by the panel suggest patients with two or more of the following symptoms should be hospitalized:

• Oxygen saturation < 90% on room air at sea level
• Systolic blood pressure < 90 mm Hg or 20 mm Hg less than baseline
• Respiratory rate > 30 breaths per minute or 10 breaths per minute more than baseline

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- Requiring 3 liters per minute of oxygen more than baseline
- Uncontrolled chronic obstructive pulmonary disease, congestive heart failure, or diabetes mellitus
- Unarousable if previously  conscious
- New or increased agitation

**Good question:** What if the patient just has one of the symptoms above? "If the nursing home cannot provide vital sign assessment every four hours, laboratory access, parenteral hydration, and two licensed nurses per shift in the facility," it should seriously consider hospitalizing the patient, states the article. Patients who don't have any of the aforementioned symptoms should be treated in the nursing home "unless the patient or proxy insists on hospitalization," states the article.

**Know the Limits of Chest X-Rays**

The practice guidelines recommend facilities that will manage a resident's probable pneumonia obtain a chest x-ray as part of the evaluation. A chest x-ray that shows an infiltrate or pulmonary edema can help the physician make a diagnosis, says Hutt.

"The problem is that chest x-rays are portable and late," Hutt says, and the person reading them often doesn't know the patient.

Relying on a portable chest x-ray taken in the nursing home to distinguish between pneumonia and lower respiratory tract infections is somewhat unreliable, agrees **Paul Drinka, MD, CMD**, medical director for **Wisconsin Veterans Home** in King, WI. He notes that researchers in one study compared PA and lateral chest x-rays taken on-site in a hospital to chest CT scans. They found the "plain radiograph picked up only 70 percent of the infiltrates seen on CT scans," says Drinka.

Also, "early in the course of a pneumonia, an x-ray may be normal -- particularly if the resident is dehydrated," adds **David Mehr,** MD, in Columbus, MO, who has done research on evaluating the severity of pneumonia in nursing homes. In his view, if the "suspicion for pneumonia is high" and the physician plans to treat the person for pneumonia anyway, "an x-ray is optional.

"The counter argument would be that the physician might miss an effusion or an empyema," Mehr says. But if the resident didn't respond to treatment, then an "x-ray would be mandatory and those findings would be apparent," he adds.

**Develop Nursing Guidelines**

The clinical team can work with the medical director to "draw up parameters for daily nursing monitor" for pneumonia care, suggests **Sheryl Rosenfield, RN,** a consultant with **Zimmet Healthcare Group** in Morganville, NJ.

The "guidelines should also define key factors that would help the team to determine when a resident is stable and no longer requires daily skilled nursing assessment, interventions and monitoring [post-pneumonia]," says Rosenfield.

**Free resource:** The article, "Evidence-based guidelines for management of nursing home-acquired pneumonia," in the Journal of Family Practice (August 2002) includes evidence-based guidelines for taking care of patients with pneumonia. Access the article at www.jfponline.com/Pages.asp?AID=1275&UID.

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