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Attridge RT, Frei CR, Restrepo MI, Lawson KA, Ryan L, Pugh MJV, Anzueto A, Mortensen EM. Guideline-Concordant Therapy and Outcomes in Healthcare-Associated Pneumonia. *E Resp J* Published online before print March 24, 2011, doi: 10.1183/09031936.00141110

The use of guidelines in patient management has not only become standard of care but often the benchmark by which quality of care has been measured. Certain guidelines have shown clear benefit as seen with the management of acute myocardial or stroke. Other guidelines have been met with reluctance given the level of evidence reinforcing them. This study by Attridge *et al.* looks at the effect of implementing and following guidelines in the management of healthcare associated pneumonia (HCAP) within the VA system.

In 2005 a combined effort from the ATS and IDSA created a new clinical entity known as Health Care Associated Pneumonia (HCAP) (1). This entity is believed to be different from community acquired pneumonia based on the pathogens involved, i.e., methicillin resistant *Staphylococcus aureus* and *Pseudomonas* versus *Streptococcus*. The guidelines created in 2005 defined HCAP as an entity in which the patient was hospitalized > 48h within the past 90 days, on dialysis, on home infusions, a current nursing home resident, undergoing home wound care, or in contact with a family member with multi-drug resistant pathogen. The inclusion of any one of these criteria would categorize the patient as having the diagnosis of HCAP and warrant treatment as such.

This study was a large retrospective cohort study done within the VA healthcare system. After inclusion and exclusion criteria, a total of 15071 patients were included and divided into 3 groups. Patients that met HCAP criteria and that were treated as such, patients that met HCAP criteria but that were treated as community acquired pneumonia (CAP) and patients that met HCAP criteria that were treated via a non-guideline approach. The primary outcomes were 30 day mortality and length of stay.

The results of the study are shown below:

	HCAP (n=1211)	CAP (n=11408)	Non-Guideline (n=2452)
30 day mortality	22%	9.9%	20%
90 day mortality	37.8%	19.8%	32%
Length of stay	7 days	4 days	5 days

The data demonstrated that compliance with the guidelines resulted in a higher 30 day mortality without change in length of stay when patients were treated under HCAP guidelines.

The main strengths of the study are the large patient size and relative uniformity in patient characteristics. The study did have several limitations. The main limitation was that the method of sputum collection outlined in original 2005 guideline to guide antibiotic therapy was not met. Only 9% of all patients had a positive culture, this value is lower than prior reported studies. If the premise of HCAP as a separate entity based on the unique pathogens isolated is to hold valid; then an aggressive approach to sampling of the respiratory tract should be made. The study also reinvigorates the debate on implementing guidelines when the data is still sparse. Unfortunately, guidelines often become surrogate benchmarks for quality assurance. If practice measures are based on whether guidelines are followed than we need to do a better job scrutinizing the data before guidelines are set forth.

Manoj Mathew, MD, FCCP, MCCM

### ***References***

**1.** Guidelines for the management of adults with hospital-acquired, ventilator-associated, and healthcare-associated pneumonia. *Am J Respir Crit Care Med* 2005;171: 388-416.