

# Inappropriate diagnosis of pneumonia common in hospitalized adults

March 27 2024, by Elana Gotkine

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Inappropriate diagnosis of community-acquired pneumonia (CAP) in hospitalized adults is common, especially among older adults and those with dementia, according to a study [published](#) online March 25 in *JAMA*

*Internal Medicine.*

Ashwin B. Gupta, M.D., from the VA Ann Arbor Healthcare System in Michigan, and colleagues conducted a [prospective cohort study](#) to characterize inappropriate diagnosis of CAP in [hospitalized patients](#) across 48 Michigan hospitals. Hospitalized patients treated for CAP between July 1, 2017, and March 31, 2020, were retrospectively assessed.

The researchers found that 12.0% of the 17,290 hospitalized patients treated for CAP met criteria for inappropriate diagnosis, and of these, 87.6% received full antibiotic courses. Patients inappropriately diagnosed were older (adjusted odds ratio, 1.08 per decade) and were more likely to have dementia or altered mental status on presentation (adjusted odds ratios, 1.79 and 1.75, respectively) compared with patients with CAP.

The 30-day composite outcomes for full versus brief antibiotic treatment did not differ among those inappropriately diagnosed. Compared with brief duration of antibiotic treatment (no more than three days), full antibiotic treatment was associated with antibiotic-associated adverse events (2.1 versus 0.4%).

"Risks of inappropriate diagnosis are not uniform across populations—already highly [vulnerable groups](#) are at highest risk of inappropriate diagnosis. These same vulnerable populations are also most likely to be affected by antibiotic-associated adverse events and resulting morbidity," the authors write. "Thus, balancing harms of underdiagnosis and overdiagnosis of CAP remains essential."

**More information:** Ashwin B. Gupta et al, Inappropriate Diagnosis of

Pneumonia Among Hospitalized Adults, *JAMA Internal Medicine* (2024). [DOI: 10.1001/jamainternmed.2024.0077](https://doi.org/10.1001/jamainternmed.2024.0077)

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