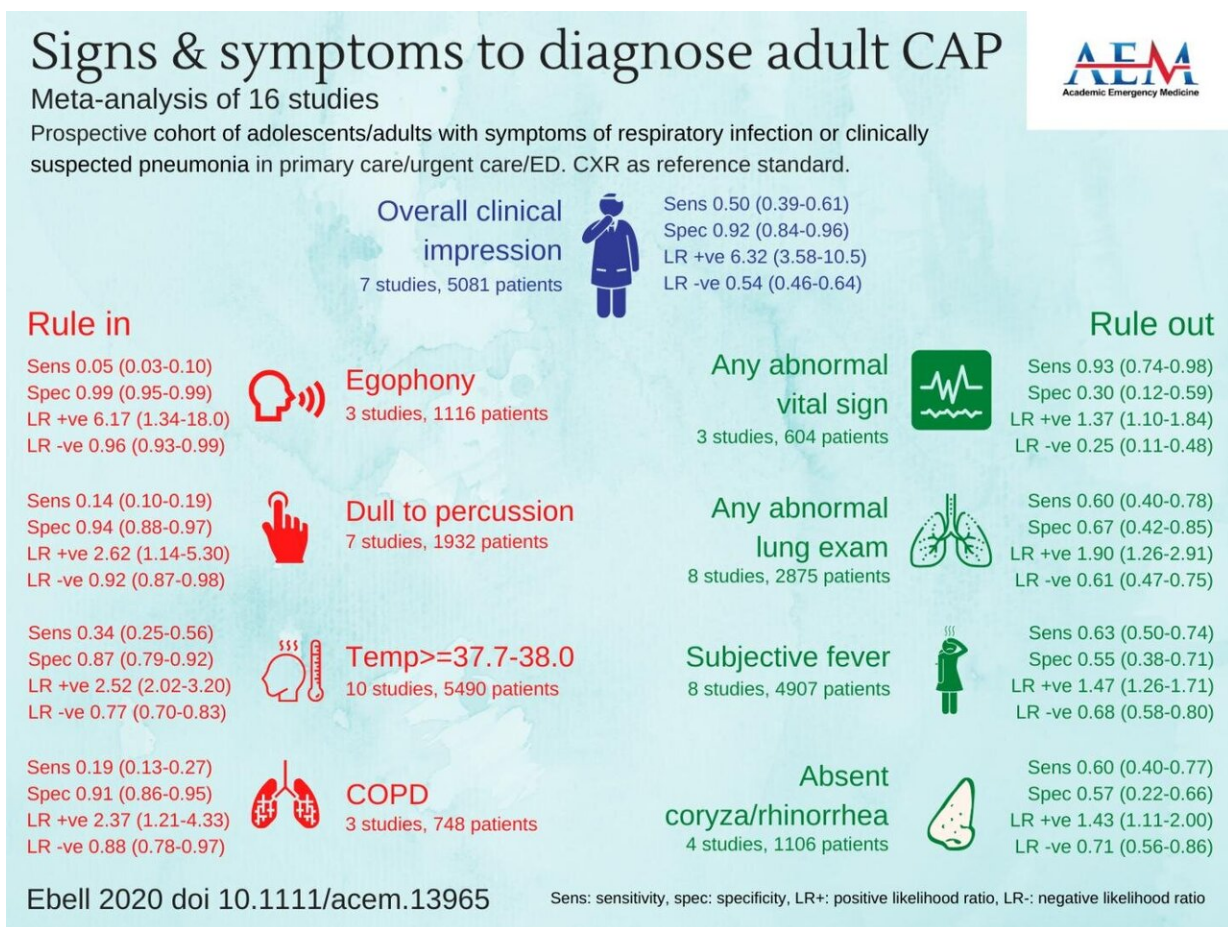


# No single sign or symptom is sufficient to rule in or rule out community-acquired pneumonia

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Meta-analysis of 16 studies. Prospective cohort of adolescents/adults with symptoms of respiratory infection or clinically suspected pneumonia in primary care/urgent care/emergency department. Chest x-ray as reference standard. Credit: Kirsty Challen, Lancashire Teaching Hospitals, United Kingdom

While the history and physical examination is important, only a few key signs and symptoms significantly change the underlying likelihood of community-acquired pneumonia (CAP). That is the conclusion of a study published in the July 2020 issue of *Academic Emergency Medicine* (AEM), a journal of the Society for Academic Emergency Medicine (SAEM).

The lead author of the study is Mark H. Ebell MD, MS, assistant professor in the department of emergency [medicine](#) at the University of Massachusetts Medical School-Baystate. The findings of the study are discussed with the author in a recent AEM podcast, "[What's the Signs and Symptoms of Pneumonia?](#)"

The history and physical examination is a critical component of the evaluation of patients with acute cough; however, many individual signs and symptoms have limited value (especially when absent) and only a few key signs and symptoms significantly change the underlying likelihood of community-acquired [pneumonia](#).

The study suggests that knowledge of the signs and symptoms most predictive of CAP can help physicians focus their evaluation and avoid inappropriate antibiotic use. The authors suggest that teaching and performing these high value elements of the [physical examination](#) be prioritized, with the goal of better targeting chest radiographs and ultimately antibiotics.

The authors further recommend that future research should be performed to validate promising clinical prediction rules and to integrate signs, symptoms, and point-of-care tests such as C-reactive protein and to explore novel approaches to the development and validation of these rules.

**More information:** Mark H. Ebell et al, Accuracy of Signs and Symptoms for the Diagnosis of Community-acquired Pneumonia: A Meta-analysis, *Academic Emergency Medicine* (2020). [DOI: 10.1111/acem.13965](https://doi.org/10.1111/acem.13965)

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