

GP judgement not enough to accurately diagnose cases of pneumonia

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Pneumonia cannot be accurately diagnosed solely on a doctor's analysis of symptoms and patient history, according to new findings.

A new study, published online today ahead of print in the [European Respiratory Journal](#), found that a majority of [pneumonia](#) cases could not be accurately diagnosed by a doctor's judgement alone, compared to a chest radiograph.

The major symptoms of pneumonia include acute cough and other [lower respiratory tract](#) symptoms, such as [shortness of breath](#). Most people showing these symptoms are diagnosed with acute bronchitis, and only a minority with pneumonia. These conditions are treated very differently; pneumonia usually requires [antibiotic treatment](#), whereas acute bronchitis does not. An accurate diagnosis is therefore essential.

Most doctors are required to diagnose pneumonia based on a patient's [medical history](#) and [physical examination](#), as a chest radiograph is not feasible for every patient who displays these symptoms. However, it is largely unknown how accurate this method of diagnosis is.

To test this method, researchers analysed 2,810 patients across 12 European countries. Each patient had an acute cough and their attending doctor was asked whether pneumonia was present after looking at the patient's signs and symptoms. All patients then received a chest radiograph by a different medical professional.

Out of the total study, 140 patients were diagnosed with pneumonia after a chest radiograph. Out of this group, 29% had been correctly diagnosed by their doctor as having pneumonia. Only 31 patients (1%) were incorrectly diagnosed as having pneumonia from an initial assessment that was later disproved by the chest radiograph. In patients without a doctor's diagnosis of pneumonia, 96% indeed had no pneumonia after chest radiography.

The researchers concluded that doctors accurately excluded pneumonia. However, the majority of radiographically confirmed [cases of pneumonia](#) were not identified.

Lead researcher, Saskia van Vugt, from Utrecht Julius Center for Health Sciences and Primary Care, in the Netherlands, said: "The results of the study are encouraging to some extent as the findings might support physicians to rely more on their ability to correctly exclude pneumonia which might result in better targeted antibiotic prescriptions. However, a majority of the pneumonia cases in this study were not picked up by an initial assessment alone.

"Tests that could support a doctor's ability to detect or exclude pneumonia are urgently needed. We should also remember that GPs tell patients to revisit them if symptoms get worse or persist, as a 'safety net' for initially missed cases.

More information: Diagnosing pneumonia in patients with acute cough: clinical judgment compared to chest radiography, SF van Vugt, Th JM Verheij, PA de Jong, CC Butler, K Hood, S Coenen, H Goossens, P Little, BDL Broekhuizen, on behalf of the GRACE Project Group, [DOI: 10.1183/09031936.00111012](https://doi.org/10.1183/09031936.00111012)

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