

What happens between first symptoms and first acute exacerbation of COPD – observational study of routine data and patient survey

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Plain language summary

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Chronic obstructive pulmonary disease is often caused by smoking and affects over 1 million people in the United Kingdom. While there are well-established treatments, less is known on where and when patients get the diagnosis, how general practitioners investigate their symptoms and to what extent the first major flare-up ('acute exacerbation') can be predicted and prevented.

Using a research database of general practitioner consultation records linked to hospital admissions and the national death register, we described patient characteristics, general practitioner actions before and following diagnosis, and, with statistical models, predictors of the first exacerbation. We looked at three time periods according to the date of diagnosis: April 2006–March 2007 (cohort 1), April 2016–March 2017 (cohort 2) and March–August 2020 (cohort 3). We sent patients a questionnaire asking about their experiences of developing symptoms, seeking medical help and getting diagnosed.

We analysed records of over 70,000 patients in total. The majority were diagnosed by their general practitioner. In cohorts 2 and 3, general practitioners did the recommended tests more than in cohort 1, though in the year before diagnosis, only 10% of patients had all four done. Our survey found that many people were unaware of chronic obstructive pulmonary disease and its symptoms before their diagnosis but also that some felt they were not taken seriously by the medical team and that their diagnosis was delayed. There were improvements over time in prescribing. Most patients were offered the flu jab. Older patients, current smokers and those with other conditions such as heart failure had higher risk of an acute exacerbation. The statistical models did not perform well enough to be used to guide decision-making.

Despite some improvements over time, there remain opportunities for better recognition of the condition among patients and general practitioners alike. Future work should more fully assess the impact of COVID-19.

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