

Why more effort is needed to improve the use of asthma treatment

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Asthma affects approximately 12% of the UK population and common treatments, such as inhalers and steroids are widely prescribed. However, many people do not use the reliever and preventer inhalers correctly and consistently, which can lead to poor health outcomes.

Some estimates suggest that 60% of the annual 60,000 hospital admissions for asthma are a result of improper use of existing medication, and those who live in the most deprived areas are much more likely to be affected. In addition to the direct impact on patient health, this also gives rise to substantial costs to the NHS and increases health inequalities.

Our research investigated the effects of improved adherence to prescribed medications, using a model to examine the potential health outcomes and NHS costs associated with patients with either controlled, partially controlled or uncontrolled asthma symptoms. Using a range of data sources, we modelled the impact of different degrees of treatment adherence on the worsening of asthma symptoms (exacerbations) and health status and the subsequent use of NHS services, including hospital inpatient and outpatient stays.

We showed that better adherence to medication is associated with reduced asthma exacerbations and better overall health, both in terms of how long people live and the quality of those years, as measured by 'quality adjusted life years' (QALYs). For instance, an educational intervention that increased adherence from 50% to 70% reduced the number of exacerbations by an average of 1.75 per person in total over 20 years, while increasing QALYs by 0.20, and reducing the costs to the NHS of treatment by £1,000.

Our research was particularly focused on informing policy and practices within the Yorkshire & Humber region, and we calculated that the increased adherence could potentially lead to over 100,000 fewer exacerbation events and £59 million of savings in NHS resources for the region. Our research also highlights the need for patients to understand their long term conditions and to receive appropriate information to manage their own health effectively.

Decision makers can use our research to inform strategies to improve asthma medication adherence locally and nationally, to achieve health gains and save healthcare resources.

[Read the full paper, funding sources and disclaimers in NIHR Open Research.](#)

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