

# Stepping-down asthma medication may reduce costs without worsening health out

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International guidelines for asthma treatment recommend clinicians find the minimum effective dose that can control symptoms, yet asthma patients are increasingly prescribed high doses of medication. A study published in *PLOS Medicine* by Dr. Chloe Bloom at Imperial College London, United Kingdom and colleagues found that stepping-down medication doses did not increase asthma exacerbations and could significantly reduce medication costs.

Over 5.4 million people receive [asthma treatment](#) in the UK and asthma medication comprises 13% of total primary care prescribing costs. Additionally, prolonged use and higher doses of asthma medications are associated with a higher risk for systemic adverse effects and high medication costs. To understand the symptoms, diagnoses, and prescription patterns, the researchers conducted a population-based observational study, accessing primary care electronic health records of 508,459 asthma patients treated in the UK between 2001-2017. Using clinical asthma codes, researchers then evaluated a cohort of regular asthma preventer users, analyzing changes in prescribed asthma medications and subsequent health outcomes for 31,379 patients who were stepped down in their asthma medicine prescriptions. The cost impact of medication step-down was then calculated for the cohort using 2019 drug costs.

Inhaled corticosteroids (ICS) are the second most prescribed medication, suggesting the potential to reduce costs considerably with appropriate stepping-down among [asthma patients](#). Additionally, stepping-down just half of all suitable patients on long-acting  $\beta$  agonist (LABA) [medication](#) could save around £17 million, equivalent to 2% of the UK's [asthma](#) budget. This research is only the second real-world study to compare stepped-down patients to controls and one of the major strengths is inclusion of a nationally representative study population and large sample size. However, the researchers were limited in their ability to track which prescribed medications were dispensed and adhered to, a

question that may be important for future studies.

According to the authors, "Although stepping-down of treatment is recommended by clinical guidelines, we found that it happened infrequently. Stepping down ICS or add-on therapy did not appear to worsen health outcomes but did appear to result in significant cost savings."

**More information:** Health and cost impact of stepping down asthma medication for UK patients, 2001-2017: A population-based observational study, *PLOS Medicine* (2020). [DOI: 10.1371/journal.pmed.1003145](https://doi.org/10.1371/journal.pmed.1003145)

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