

Research finds few moderate or severe asthma patients prescribed recommended inhaler regimen

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Patients with severe asthma not prescribed recommended treatment. Credit: ATS

Only 14.5% of adult patients with moderate or severe asthma are prescribed the recommended SMART combination inhaler regimen and over 40% of academic pulmonary and allergy clinicians have not adopted this optimal therapy, according to research published at the [ATS 2024 International Conference](#).

By 2021, both the [National Asthma Education and Prevention Program](#) and [Global Initiative for Asthma](#) had updated their guidelines to recommend the use of a single combination corticosteroid (ICS) and formoterol (a long acting beta agonist) [inhaler](#) for both Maintenance And Relief Therapy for moderate to [severe asthma](#), or SMART.

In the United States, ICS-formoterol inhalers include Symbicort (budesonide-formoterol) and Dulera (mometasone-formoterol). Under the SMART guidelines, these inhalers are used as both maintenance, twice every day, and rescue inhalers, used during asthma attacks.

SMART has been shown to significantly reduce asthma exacerbations. Previous guidelines recommended the use of maintenance inhalers such as those that combine ICS and a long-acting beta agonist (LABA), generally used twice a day, in addition to short-acting rescue inhalers (bronchodilators such as albuterol).

"There has been limited data to describe the use of SMART following the update in asthma management guidelines, with no data on the implementation of SMART using administrative or [electronic medical records](#) in the United States to the best of our knowledge," said first author Zoe Zimmerman, BS, [medical student](#) and researcher, Department of Pulmonary, Critical Care, and Sleep Medicine, Yale University School of Medicine.

"Our findings suggest current asthma management guidelines are not being routinely implemented or adopted by clinicians," added senior author Sandra Zaeh, MD MS, a pulmonary and [critical care](#) medicine physician at Yale.

Dr. Zaeh and Ms. Zimmerman noted that past studies have suggested that it can take over 15 years for guidelines to be widely adopted by clinicians. "Our findings reinforce the idea that adoption of guidelines by clinicians takes time."

The researchers' goal was to identify trends in SMART prescription for patients in an academic health care system. They searched electronic medical records to identify patients with at least one visit to a pulmonary or allergy clinic between January 2021 and August 2023, a diagnosis of asthma, no alternative pulmonary diagnoses and a prescription of a maintenance inhaler containing ICS-LABA or ICS alone.

The team reviewed these charts to ensure patients met eligibility criteria. SMART prescription was also examined by looking at provider documentation. Statistical techniques were used to analyze the relationship between patient characteristics and SMART prescriptions.

A total of 2,016 patients were included in the final updated analysis; 87% of patients prescribed SMART were also prescribed a rescue inhaler such as albuterol, even though inhalers used for SMART are intended to be used for rescue therapy. Patients prescribed ICS-formoterol, such as Symbicort or Dulera, as a baseline maintenance inhaler were more likely to be prescribed SMART.

In an updated analysis, the scientists found that older age is associated with not being prescribed SMART. The researchers also found that those who are insured by Medicare are less likely to be given a SMART prescription.

Ms. Zimmerman noted that, possibly, "Providers are less likely to try a new inhaler regimen with older individuals or seniors who are more resistant to changing treatment regimens, especially if they have been using the same inhalers for years."

Dr. Zaeh's ATS 2023 abstract (A6006) demonstrated that 93% of pulmonary clinicians surveyed were aware that SMART was a component of updated asthma management guidelines.

The authors stated that, "While physician education about the benefits of SMART is important, we suspect that other barriers to SMART implementation need to be addressed—for example, insurance formulary coverage, patient education strategies to transition to SMART, and clinician support to assist with SMART adoption (i.e., assistance from a pharmacist to navigate challenges and development of clinical decision support tools)."

They further note, "This discordance (shown in the current study) between guidelines and practice is important to recognize and remedy as use of SMART can improve asthma outcomes by reducing asthma exacerbations. It is important to not only do research to identify the most effective therapies for patients, but also to track implementation and address limitations."

More information: Session: C94 - Asthma Quality Improvement, Health Services Research, and Disparities, Utilization of Single Maintenance and Reliever Therapy (SMART) for Moderate and Severe Asthma

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