

Editorials

Asthma Management Guidelines: Focused Updates for 2020

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See related Practice Guideline on page 531.

The 2020 Focused Updates to the asthma management guidelines represent the first revision of the National Asthma Education and Prevention Program guidelines in more than 10 years.¹ The report differs from the Global Initiative for Asthma (GINA) recommendations because of the focused number of issues addressed and the nature of the evidence review.²

Whereas the GINA guidelines are an ongoing series of revisions on a broad range of asthma topics, the 2020 Focused Updates targeted six key areas of asthma care for which there was strong interest and sufficient evidence to influence patient care. In addition, it used Agency for Healthcare Research and Quality systematic reviews and the rigorous GRADE methodology to assess study design and relevance of the current evidence.³ Other strengths include attention to the perspective of primary care and participation by primary care representatives in leadership roles on the panel.

Inhaled Corticosteroids

INTERMITTENT ASTHMA

GINA recommends treating patients with mild intermittent asthma with as-needed inhaled corticosteroids (ICS) with short-acting beta₂ agonists (SABAs) for children six to 11 years of age and as-needed ICS/formoterol in adults.⁴ However, the Focused Updates panel did not address this topic and carried forward its previous recommendation for as-needed SABA use. The panel identified limitations in the literature describing the risks of albuterol but chose to emphasize the importance of patient education with SABA use instead of discouraging its use. Switching rescue therapy from a SABA to ICS/formoterol for intermittent asthma would also incur a significant additional cost.

PERSISTENT ASTHMA

For patients with mild persistent asthma, the Focused Updates recommend either of the

following: daily low-dose ICS with as-needed SABA or as-needed ICS with SABA (used one after the other) for worsening asthma.

For mild to moderate persistent asthma, single maintenance and reliever therapy (SMART) is preferred. This approach reduces the potential adverse effects of chronic steroid use, lowers emergency department visits and hospitalizations, and simplifies patients' medication regimens.¹

For patients four years or older with moderate to severe persistent asthma, SMART with ICS/formoterol, used daily and as needed, is preferred. For patients 12 years or older with moderate to severe persistent asthma, a single ICS/formoterol inhaler (i.e., SMART), used daily and as needed, is conditionally preferred.⁵ GINA recommends daily moderate-dose ICS or ICS/long-acting beta₂ agonist (LABA) with as-needed ICS/formoterol as equivalent options; however, the Focused Updates panel found the evidence for ICS/formoterol daily and as-needed (SMART) to be more compelling.

SMART carries several caveats. Budesonide/formoterol is not approved by the U.S. Food and Drug Administration for use as a quick relief agent. The device most studied was the dry-powder Symbicort Turbohaler; however, in the United States, only the metered-dose device is available. Studies suggest that salmeterol (the LABA in Advair) is less effective, and it is not recommended as an alternative to formoterol. As of September 30, 2021, studies of as-needed use of vilanterol (the LABA in Breo Ellipta) or mometasone/formoterol (Dulera) have not been published.

ACUTE ASTHMA EXACERBATIONS

The use of ICS for acute asthma without the concomitant use of oral steroids was previously discouraged. However, for patients from birth to four years of age with recurrent wheezing triggered by respiratory tract infections only and no wheezing between infections, the Focused Updates now conditionally recommend a short

course of ICS at the onset of an upper respiratory tract infection with an inhaled SABA as needed.⁵ This strategy lowers the use of systemic steroids and lowers the number of emergency department visits and hospitalizations.

The Focused Updates and the GINA guidelines do not address patients who do well most of the year but have flare-ups that require intervention during certain situations or seasons. SMART may be a useful approach for these patients and lowers the overall use of steroids vs. year-round treatment with ICS/LABA. The choice to use SMART or a traditional oral steroid burst depends on how accurately patients can perceive symptoms and successfully use multiple doses of ICS/formoterol daily. The cost is also a factor.

Allergen Mitigation

For patients with asthma who are exposed and allergic to a specific indoor substance, the use of multiple strategies to reduce allergen exposure is conditionally recommended.

Immunotherapy

Immunotherapy is conditionally recommended as an adjunct treatment for patients with mild to moderate allergic asthma who have demonstrated allergic sensitization and evidence of worsening asthma symptoms after exposure. However, unlike GINA, the panel's evidence review did not support using sublingual immunotherapy to treat allergic asthma.

Fractional Excretion of Nitric Oxide

The utility of fractional excretion of nitric oxide (FeNO) measurements to guide asthma care in a primary care setting is extremely limited. The literature does not support using FeNO to diagnose or predict the development of asthma in patients from birth to four years of age.

Bronchothermoplasty

The Focused Updates recommendation for bronchothermoplasty differs from GINA. Evidence found by the panel suggests that most patients 18 years and older with uncontrolled asthma should not have bronchothermoplasty performed because of its limited benefits, moderate risks, and uncertain long-term outcomes.

Long-Acting Muscarinic Agents

In patients 12 years or older with asthma not controlled by ICS alone, adding a LABA instead of

a long-acting muscarinic agent to the ICS is recommended unless LABA therapy cannot be tolerated. If control is inadequate with ICS/LABA, then the addition of a long-acting muscarinic agent is recommended.

Limitations of 2020 Focused Updates

The expert panel kept its focus on asthma. The immunotherapy recommendations apply only to their role in asthma and not other elements of allergy care. The updates do not address biologics because the evidence for biologics was limited when topics were selected. Cost of care was acknowledged, but it was out of scope to address the complex nature of health care payment and insurance coverage. The updates did note the potential impact on disparities for recommended tests and treatments within each topic area.

These Focused Updates are an important resource for navigating the increasingly complex care options for asthma. The expert panel invites feedback from family physicians on these recommendations and other areas where significant clinical questions persist (email: nhlbiinfo@nhlbi.nih.gov).

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