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## United States national asthma guidelines receive first update since 2007

The United States national guidelines for prescribing, testing and management of asthma have been updated for the first time since 2007 by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee, coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the United States National Institutes of Health (NIH).

A news release from the American Academy of Allergy, Asthma & Immunology (AAAAI) announced that the document titled, "2020 Focused Updates to the Asthma Management Guidelines: A Report from the NAEPP Coordinating Committee Expert Panel Working Group," was published in the December 2020 issue of *The Journal of Allergy and Clinical Immunology (JACI)*. The updated guidelines can also be found on the National Heart, Lung, and Blood Institute (NHLBI) website.

The update is not a complete revision of the prior guidelines but instead focuses on the following six topics that were chosen by a needs assessment committee. Within the six topics, the expert panel made 19 recommendations.

- Inhaled corticosteroids (ICS)
- Long-acting muscarinic antagonist (LAMA)
- Immunotherapy
- Bronchial thermoplasty (BT)
- Fractional exhaled nitric oxide (FeNO) test
- Allergen mitigation

The updated guidance also explained that "several new features in this update were designed to aid providers and clinicians in addressing these topics with their patients. The biggest of these changes is the addition of an Implementation Guidance section for each recommendation."

### Substantial progress in 13 years

"The last [US] national guidance on asthma care was published 13 years ago, and since then we've made substantial progress in understanding how to treat asthma in children and adults," said Michelle Cloutier, MD, Professor Emerita, University of Connecticut School of Medicine, and Chair of the National Asthma Education Prevention Program Coordinating Committee Expert Panel Working Group, in a statement that was quoted by the *American Journal of Managed Care (AJMC)*. "In addition to asthma management varying by age group and disease severity, the preferences and values that individuals with asthma place on different therapies must be considered. The new guidelines reflect some of these new approaches," she continued.

According to the *AJMC*, Cloutier's foreword to the guidelines indicated "there is an 'absence of many strong recommendations,' which are those recommendations that clinicians should adhere to almost all the time as standard of care. 'This is not, however, surprising given the variations in asthma phenotypes and endotypes and in the outcomes used in the studies reviewed to develop the recommendations,' she wrote."

The AAAAI also quoted James P. Kiley, PhD, Director of the Division of Lung Diseases, of the NHLBI who explained, "From the beginning, the "2020 Focused Updates to the Asthma Management Guidelines" was designed to help primary care providers, specialists, and patients work together to make decisions about asthma care. Our goal was to provide clear summaries about each of the new recommendations, information to share with patients, and updated treatment diagrams."

The AAAAI noted the updated recommendations are based on systemic reviews by the Agency for Healthcare Research and Quality from research published before October 2018. Their news release briefly described the 19 recommendations within the six focus topics, as follows:

### Inhaled corticosteroids (ICS)

5 recommendations

- Low-dose ICS is recommended for individuals 12 and older with mild persistent asthma, either daily or as needed along with short-acting beta-agonists (SABA).
- For patients 4 years and older with mild to moderate persistent asthma who adhere to daily ICS treatment, no short-term increase in dosing is recommended for increased symptoms.
- For moderate to severe persistent asthma, the updated guidelines recommended use of ICS-formoterol in a single inhaler for daily asthma control and as reliever therapy, however, the

recommendation varies slightly depending on the age group. In patients 4 to 11 years, a single inhaler is recommended compared to using a higher-dose ICS for daily controller therapy and SABA for quick relief. It is also recommended over same-dose ICS-long-acting beta agonists (LABA) as a daily therapy with SABA for quick relief.

- For those 12 and older, the single inhaler is recommended compared to a higher-dose ICS-LABA for daily therapy and SABA for quick relief.
- For children aged 0-4 who have recurrent wheezing due to respiratory tract infections but no wheezing between infections, a short course of daily ICS and as-needed SABA for quick-relief is recommended compared to SABA as-needed only.

*Everyday Health* discussed this portion of the updated guidelines, calling it a "significant change for adults and children ages 4 or older with moderate to severe persistent asthma who are using daily controller inhalers." They explained that many of these patients "are prescribed one inhaler containing corticosteroids to be used daily to control inflammation and another inhaler containing bronchodilators to be used as a rescue inhaler to provide quick relief during an asthma attack." However, the new guidelines recommend such patients "use a combination inhaler (with a corticosteroid and a bronchodilator) as a daily controller medication and as a quick-relief medication in the event of an asthma attack."

Edward Brooks, MD, Professor of Pediatrics and Chief of Pediatric Immunology and Infectious Disease at University of Texas Health, San Antonio, Texas and a member of the expert panel that developed the new guidelines told *Everyday Health,* "The hope is that more patients will use the inhaler because they'll feel the immediate effect of the bronchodilator, but they're also getting the anti-inflammatory effect that is going to help over the long-term."

*Everyday Health* also stated that "research reviewed in preparation of the new guidelines suggests this change could help patients better manage asthma over the long term and reduce emergency room visits."

## Long-acting muscarinic antagonist (LAMA)

3 recommendations

- For children 12 and over with persistent, uncontrolled asthma, it is not recommended to add LAMA to ICS therapy, compared to adding LABA (long-acting beta-agonist) to ICS therapy.
- In the same population, LAMA is recommended to be added to ICS controller therapy if LABA is not used, compared to continuing the same dose of ICS alone.
- Adding LAMA to ICS-LABA is recommended in this population compared to continuing the same dose of ICS-LABA for uncontrolled asthma.

## Immunotherapy

2 recommendations

- Use of subcutaneous immunotherapy (SCIT) for individuals 5 years and older as an additional treatment to standard medications in individuals whose allergic asthma is controlled at the initiation, build-up and maintenance phases of immunotherapy.
- For those with persistent allergic asthma, the use of sublingual immunotherapy (SLIT) in asthma treatment is not recommended.

## Bronchial thermoplasty (BT)

1 recommendation

*Everyday Health* describes bronchial thermoplasty as an outpatient procedure to treat severe, persistent asthma, in which a thin, tube-like instrument is inserted into the lungs to heat them and reduce inflammation. In the updated guidelines, this procedure is not recommended for patients age 18 and older who have persistent asthma. However, those over 18 who are less concerned about potential harms and more concerned with potential benefits may consider BT.

## Fractional exhaled nitric oxide (FeNO) test

4 recommendations

- In children aged 0-4 who experience recurrent wheezing, FeNO testing to predict the future development of asthma is not recommended.

For anyone 5 years and older:

- FeNO testing in not recommended as the only measurement for asthma control.
- It is recommended for individuals with asthma symptoms if a diagnosis is uncertain using other testing methods such as spirometry and clinical history.
- For those with persistent allergic asthma, if there is uncertainty in choosing, monitoring or adjusting asthma treatment therapies based on other methods, the expert panel conditionally recommends adding FeNO measurement to help monitor and manage asthma.

## Allergen mitigation

4 recommendations

The expert panel indicated that "allergen mitigation interventions are not recommended for individuals with asthma who lack sensitization to specific indoor allergens or who do not have any indoor allergen symptoms. For those who do have confirmed allergies to indoor allergens, multicomponent allergen-specific interventions are recommended." In addition, the updated recommendations also discussed pest management and use of impermeable pillow/mattress covers.

## Additional "important aspects of care"

The original report explained that "important aspects of care, such as asthma education (including inhaler technique) and assessment tools for asthma control, adher-

ence, and other factors, are not covered. Reasons for these limitations included lack of time, lack of resources, and, for some topics, insufficient new evidence."

It also stated that, "Any attempt to include biologic agents in this report at the start of this effort would have delayed the release of these recommendations for another 1 to 2 years, and this was felt to be unacceptable." The *AJMC* article also noted, "At the time the priority topics and key questions were developed for the update to the guidelines, only one biologic agent was available for use in the United States."

However, the report acknowledged the following 11 emerging topics:

- Adherence
- Asthma action plans
- Asthma heterogeneity
- Biologic agents
- Biomarkers other than FeNO
- Classification of asthma severity
- Long-acting beta$_2$-agonist (LABA) safety
- Physiological assessments
- Prevention of asthma onset
- Role of community health workers in asthma management
- Step down from maintenance therapy

## A request for stakeholder assistance

The expert panel concluded its preface to the report by saying, "Ultimately, broad change in clinical practice depends on the uptake, adoption, and implementation of clinical practice recommendations by primary care providers with input from people who have asthma and their families, as well as support from health care systems. This update can serve as a basis to disseminate and facilitate adoption of the asthma recommendations at all levels and to ensure optimal care and equitable outcomes for all individuals with asthma. We ask for the assistance of every stakeholder in reaching our goal: improving asthma care and the quality of life of every person with asthma."

## References

Content for this article was based on and excerpted from:


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