2020 FOCUSED UPDATES TO THE
Asthma Management Guidelines

December 3, 2020

2020 Focused Updates to the Asthma Management Guidelines
A Report from the National Asthma Education and Prevention Program
Coordinating Committee Expert Panel Working Group

nhlbi.nih.gov/AsthmaGuidelines
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Focused Updates, Not Complete Revision of 2007 Guidelines

• Intended to improve asthma management and support informed, shared decision making between patients and their providers.

• Offer new guidance in **six key areas** of asthma diagnosis, management, and treatment, selected through a comprehensive literature review, consultation with experts, and soliciting comments from the public.

• Updates offer **19 recommendations** and include new features to help clinicians engage with patients.
GRADE Methodology

Grading of Recommendations Assessment, Development and Evaluation (GRADE):

• Internationally accepted framework to determine quality or certainty of evidence and direction and strength of a recommendation.
• Used patient-centered outcomes to make judgments:
  – Critical outcomes: exacerbations, asthma control, asthma-related quality of life
  – Important outcomes: asthma symptoms, others by topic
• 2 main components to GRADE:
  – Creation of Evidence Profiles based upon each critical and important outcome.
  – Development of an Evidence to Decision Table for each recommendation.
Evidence-to-Decision (EtD) tables determined direction of each recommendation (for or against intervention) and its strength (strong or conditional).

<table>
<thead>
<tr>
<th>Implications</th>
<th>Strong Recommendation</th>
<th>Conditional Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>For patients</td>
<td>Most would want; only small proportion would not.</td>
<td>Most would want, but many would not.</td>
</tr>
<tr>
<td>For clinicians</td>
<td>Most patients should receive intervention. Formal decision aids likely unnecessary.</td>
<td>Different choices appropriate based on individual values and preferences. Decision aids may be helpful.</td>
</tr>
<tr>
<td>For policy makers</td>
<td>Recommendation can be adapted as policy or performance measure.</td>
<td>Will require substantial debate and involvement of stakeholders.</td>
</tr>
<tr>
<td>For researchers</td>
<td>Supported by credible research. For low/very low certainty of evidence, new research may provide evidence to alter recommendation.</td>
<td>Likely to be strengthened by additional research.</td>
</tr>
</tbody>
</table>
Michelle M. Cloutier, M.D.
Chair of the NAEPPCC Expert Panel Working Group; Professor Emerita, UCONN School of Medicine
Topic Areas

1. Intermittent Inhaled Corticosteroids
2. Long-Acting Muscarinic Antagonists
3. Indoor Allergen Mitigation
4. Immunotherapy in the Treatment of Allergic Asthma
5. Fractional Exhaled Nitric Oxide Testing
6. Bronchial Thermoplasty
Intermittent Use of Inhaled Corticosteroids (ICS)

- For children ages 0–4 years with recurrent wheezing triggered by respiratory tract infections only and no wheezing between infections, the Expert Panel conditionally recommends
  - a short course of daily ICS at the onset of a respiratory tract infection
  - with an inhaled short-acting beta$_2$-agonist (SABA) as-needed for quick-relief therapy.

*(Conditional recommendation, high certainty evidence)*
Intermittent ICS in Individuals 12 Years and Older

• For individuals with **mild persistent asthma**, either of the following two treatments are recommended as part of Step 2 therapy:
  – a daily low-dose ICS and as-needed SABA for quick-relief therapy, or
  – intermittent as-needed ICS and SABA used one after the other for worsening asthma.

*(Conditional recommendation, moderate certainty evidence.)*
Individuals with Persistent Asthma

- For individuals ages **4 years or older with moderate to severe persistent asthma**, preferred treatment is a single inhaler with ICS-formoterol (referred to as single maintenance and reliever therapy, or “SMART”) used both daily and as-needed.

  *(Strong recommendation, high certainty evidence for ages > 12 years, moderate certainty evidence for ages 4–11 years.)*

- For individuals ages **12 years or older with moderate to severe persistent asthma**, preferred treatment is a single inhaler with ICS-formoterol (SMART therapy) used both daily and as-needed compared to daily higher dose ICS-long-acting bronchodilator combination with as-needed SABA.

  *(Conditional recommendation, high certainty evidence.)*
Expert Panel: No Short-Term Increase in ICS

- For children ages 4 years and older and adults with mild to moderate persistent asthma who are likely to be adherent to daily ICS treatment, the Expert Panel conditionally recommends against a short-term increase in the ICS dose for increased symptoms or decreased peak flow.

*(Conditional recommendation, low certainty evidence.*)
LAMA Recommendations

• In individuals > 12 years of age with asthma not controlled by ICS therapy alone, adding a LABA rather than a LAMA to an ICS is recommended. (Conditional recommendation, moderate certainty.)

• If a LABA cannot be used (unable to tolerate, contraindication, inability to use device, unavailability) adding a LAMA to an ICS is an acceptable alternative. (Conditional recommendation, moderate certainty.)

• If asthma is not controlled with ICS-LABA, adding a LAMA is recommended for many people because it offers a small potential benefit. (Conditional recommendation, moderate certainty.)
Allergen Mitigation Recommendations

• For individuals with asthma with no history of exposure and no allergies (IgE or sensitization) or symptoms after exposure to indoor allergens, environmental interventions in the home are not recommended.

  (Conditional recommendation, low certainty evidence.)

• For individuals with asthma who are exposed and allergic to a specific indoor substance using multiple strategies to reduce the allergen is recommended—using only one strategy often does not improve asthma outcomes.

  (Conditional recommendation, low certainty evidence.)

• For individuals with asthma who are sensitive to dust mites, impermeable pillow/mattress covers are recommended only as part of a multicomponent intervention.

  (Conditional recommendation, moderate certainty of evidence.)

• Integrated pest management in the home is recommended for individuals with asthma who are allergic and exposed to cockroaches, mice, or rats.

  (Conditional recommendation, low certainty evidence.)
Immunotherapy Recommendations

- Immunotherapy (aka allergy shots) are **recommended as an adjunct treatment to standard pharmacotherapy** for individuals with mild-moderate allergic asthma who have demonstrated allergic sensitization and evidence of worsening asthma symptoms after exposure to relevant antigen(s).
  
  *(Conditional recommendation, moderate certainty evidence.)*

- Evidence reviewed **did not support** using sublingual immunotherapy to specifically treat allergic asthma.
  
  *(Conditional recommendation, moderate certainty evidence.)*
FeNO Recommendations: Ages 5 Years and Older

• FeNO measurement **may support a diagnosis of asthma in individuals** for whom the diagnosis is uncertain even after a complete history, physical examination, and spirometry testing including bronchodilator responsiveness.  
  *(Conditional recommendation, moderate certainty evidence.)*

• **May be used as part of ongoing asthma monitoring and management** when there is uncertainty in adjusting therapy using clinical and laboratory assessment. 
  *(Conditional recommendation, low certainty evidence.)*
FeNO Recommendations: Ages 5 Years and Older

• **Should not be used in isolation** to assess asthma control, predict a future asthma exacerbation, or assess the severity of an exacerbation.
  
  *(Strong recommendation, low certainty evidence.)*

• In children ages 4 years and younger who have recurrent episodes of wheezing, **FeNO measurement does not predict the future development of asthma.**
  
  *(Strong recommendation, low certainty evidence.)*
Bronchial Thermoplasty Recommendations

• Most individuals 18 years and older with uncontrolled asthma should **not undergo** bronchial thermoplasty because benefits are small, risks are moderate, and long-term outcomes are uncertain. *(Conditional recommendation, low certainty evidence.)*

• Some individuals with persistent asthma **may be willing** to accept the risks of bronchial thermoplasty and, therefore, might choose this intervention after shared decision making with their health care provider.
New Features to Enable Implementation

• **Implementation guidance** sections to quickly assist clinicians
  – Provides expanded summaries for each recommendation
  – Indicates to whom the guidance applies
  – Shows how to use it in patient care
  – Lists important areas to discuss with patients to assist in deciding whether to implement the course of action

• **Updated treatment tables**
George A. Mensah, M.D., FACC
Director of the Center for Translation Research and Implementation Science
National Heart, Lung, and Blood Institute
Turning Recommendations Into Practice

• It will take all of us to turn these recommendations into clinical practice for the approximately 25 million people in the U.S. living with asthma.

• Today’s release of these 2020 Focused Updates starts a comprehensive effort to make this information available to health providers and patients alike.
• NHLBI will disseminate the guidelines through our channels and will work closely with partners who we expect will do the same.
  – Federal agency partners, including many NIH Institutes and Centers, CDC, EPA, HUD, and more.
  – Non-federal representatives from scientific, professional and voluntary health organizations.
2020 FOCUSED UPDATES TO THE Asthma Management Guidelines

CLINICIAN’S GUIDE

PURPOSE

This Clinician’s Guide summarizes the 2020 Focused Updates to the Asthma Management Guidelines: 2020 Report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group to help clinicians integrate the new recommendations into clinical care. The full 2020 Report, which is focused on selected topics rather than a complete revision of the 2007 Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3), can be found at NHLBI.gov/guidelines/asthma. This summary guide should be used in conjunction with the full report. The guide is organized by the following topics:

- Interventions Related to Corticosteroids
- Long-Acting Muscarinic Antagonists
- Indoor Allergy Mitigation
- Immuno-modulation in the Treatment of Allergic Asthma
- Fractional Exhaled Nitric Oxide Testing
- Bronchial Thermoplasty

Multiple stakeholders contributed to the selection of topics for this update. The Agency for Healthcare Research and Quality’s (AHRQ) Guideline-Related Practice Centers conducted systematic reviews on these topics, which were subsequently published in peer-reviewed journals and used by the Expert Panel working group (the Expert Panel) of the National Asthma Education and Prevention Program Coordinating Committee (NAEPPCP), coordinated by the National Heart, Lung, and Blood Institute, as a basis for the updates. The Expert Panel used GRADE (Grading of Recommendations Assessment, Development, and Evaluation), an internationally accepted framework, for determining the certainty of evidence and the direction and strength of recommendations based on the evidence. Each recommendation is described as either strong or weak. A strong recommendation is one for which the panel was confident that the evidence is sufficient to make decisions that are consistent with their values, and preferences; this is especially important for conditional recommendations. Diagrams showing the recommended approaches to care, including the new recommendations, for individuals with asthma based on age have been updated from EPR-3. Within a given step, the preferred options are the best management choices supported by the evidence reviewed by the Expert Panel. When the available options are equivalent in terms of clinical outcomes, a list of equivalent options is provided. The preferred options are not all inclusive and are intended to guide clinical practice. A more detailed explanation of the preferred options from EPR-3 are also provided. The diagrams are intended to assist, and not replace, clinical judgment or decision making required for individual patient management with input from individuals with asthma about their preferences.

AT-A-GLANCE GUIDE

This AT-A-GLANCE Guide describes a simplification approach based on recommendations from the 2020 Focused Updates to the Asthma Management Guidelines: 2020 Report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. This strategy is from the 2007 Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3) were updated with the new recommendations. The experts planned to help clinicians integrate the new recommendations into standard care. This approach focuses on the most important decisions for individual patient management, with input from individuals with asthma about their preferences.

AGES 0–4 YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

- Treatment
  - Step 1: Avoidance
  - Step 2: Keep away from environmental triggers
  - Step 3: Use oral corticosteroids (with inhaler or oral route)
  - Step 4: Use leukotriene modifiers
  - Step 5: Use inhaled corticosteroids
  - Step 6: Use beta-agonists

- Preferred
  - Use oral corticosteroids
  - Use leukotriene modifiers
  - Use beta-agonists

- Alternative
  - Use oral corticosteroids
  - Use leukotriene modifiers
  - Use beta-agonists

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nhlbi.nih.gov/AsthmaGuidelines
Patient/Caregiver Resources

Downloadable fact sheets

nhlbi.nih.gov/BreatheBetter
Patient/Caregiver Resources

Educational videos

Social media

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Potential Activities

Decision support tool (in progress)

Implementation grants program

Organizational support

More materials for key audiences

Social media and podcasts

Journal articles

Media coverage

CMEs across medical specialties

Stakeholder meetings and webinars
Most Important of All

Support from all of you!!!
For More Information

NHLBI Asthma Guidelines Info:
https://www.nhlbi.nih.gov/asthmaguidelines

JACI December 3 Issue:
https://www.jacionline.org/article/S0091-6749(20)31404-4/fulltext