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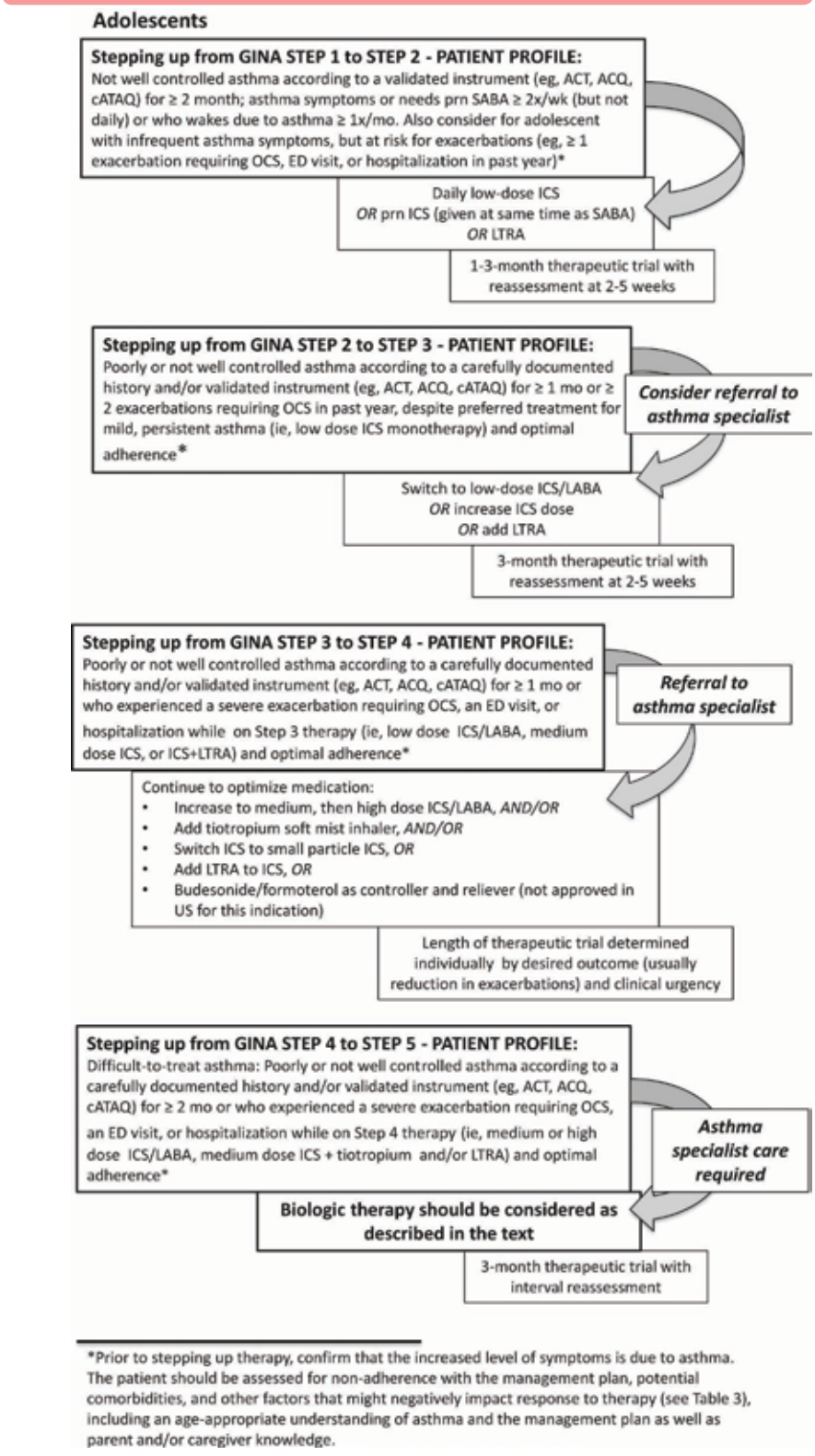
The pediatric asthma yardstick

A new guideline named the "Pediatric Asthma Yardstick" has been published by the American College of Allergy, Asthma and Immunology (ACAAI). It is intended to provide practical and clinically relevant recommendations that advise how and when treatment should be stepped up for children with uncontrolled asthma. "There is nothing like it in the current literature," said allergist Dr. Bradley Chipps, MD, ACAAI president and lead author of the paper, referring to the pediatric asthma yardstick as "a roadmap to know options for increasing pharmacological management of asthma." An asthma yardstick for treatment of adults was published by Chipps, et al. in 2017. Portions of the yardstick's Figure 1 and 2 are shown. Figure 1 illustrates stepping up treatment for adolescents from one GINA (Global Initiative for Asthma) step to another.

"It is a practical resource for identifying children with uncontrolled asthma who need a step-up in controller medicine," explained Chipps. "It describes how to start and/or adjust controller therapy based on the options that are currently available for children, from infants to 18 years of age. The recommendations are presented around patient profiles, by severity and age, and are based on current best practice strategies according to the most recent data and the authors' clinical experience."

The pediatric yardstick is divided into three age groups: adolescents 12-18 years, school age children 6-11 years, and young children under 5 years. It considers factors such as severity of symptoms, frequency of exacerbations, response

Figure 1



to previous therapies and phenotype heterogeneity. Depending on age group, step-up strategies include increasing doses of inhaled corticosteroid and adding leukotriene receptor antagonist, tiotropium and/or biologics.

Age-related differences in asthma treatment

"Differences in diagnosis and management of asthma in children reflect differences in development of their respiratory systems, particularly for younger children," said Leonard Bacharier, MD, coauthor of the pediatric yardstick. An *MD Magazine* article about the pediatric yardstick noted that "the age-related physiological changes considered in the guidelines for their impact on evaluating and treating asthma include bronchial hyperresponsiveness, which decreases during school age but is more severe with asthma. Other described changes include lung compliance decreasing with age, with commensurate increase in elastic recoil pressure; and chest wall compliance, which also decreases with age and is associated with rib cage distortion and unstable functional residual capacity in preschool children."

Chipps and colleagues also studied differences in socio-behavioral factors among children. "Other factors include challenges related to daily activities and emotional and social concerns, particular for adolescents," explained Bacharier. "Comorbid conditions and non-adherence with treatment, for example, due to the stigma of having a chronic condition and taking medicine, can affect outcomes for older children."

Sources for development of the yardstick

In developing the pediatric yardstick, the authors reviewed current data on dosing and combined treatments, and age-related adverse effect profiles. According to *MD Magazine,* they also considered the United States Food and Drug Administration's review of four large clinical safety trials with combinations of inhaled corticosteroids and long acting beta-adrenergic bronchodilators and their resulting removal of a boxed warning.

References

Content for this article was based on and excerpted from:

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Figure 2