

Asthma Patient Education: Partnership in Care

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Background: Asthma education is a necessary and critical component of asthma management.

Methods: A review of the most-to-date global and national (US) guidelines and standards provides the basis for this concise asthma education primer.

Results: Effective asthma education that yields enhanced long-term health outcomes is accomplished by the proper patient-specific knowledge and behavior change tools. Communication technique (quality) as well as asthma education content (quantity) should receive recurrent assessment by all healthcare team members.

Conclusion: Asthma education delivery can be easily planned for and routinely delivered, keeping the shared goals of patient and healthcare team in mind. © 2015 ARS-AAOA, LLC.

Key Words:

asthma; education; behavior; quality improvement; asthma guidelines; clinician adherence

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Asthma education is a critical component of successful asthma management. Although a coherent asthma control strategy for an individual or population of people with asthma certainly involves medical care, a comprehensive plan involves impacting multiple stakeholders across several circles of influence—starting with the education of the patient.

Every clinical office that manages the asthma patient should provide verbal, written, and schematic explanations of asthma that best suit the language and health literacy of the learner. Simple descriptions and use of analogies are important, along with a resource list of where patients can find more information for later learning and for family and friends who support them at home. Although patients and families must have awareness of the potential seriousness of the disease, emphasis on positive outcomes—such as the

abundance of Olympic and professional athletes who successfully manage asthma while succeeding in their chosen physical activity—is often welcome news.

Given the variety of (good and bad) information available via the Internet, it is recommended to seek out a pre-reviewed list of quality websites (such as the Allergy and Asthma Network; <http://www.allergyasthmanetwork.org/main>) that can support with words, pictures, and resources the evidenced-based clinical recommendations of national and international asthma guidelines. Encourage the patient to share questions and concerns regarding asthma at every visit. Because no one test uniformly guides disease management, even a review of frequently asked asthma questions can be of paramount importance to new and old patients alike. Patients often internalize the respiratory symptoms of asthma (cough, wheeze, shortness of breath, and/or chest tightness); therefore, this disease is easily considered a disease of communication as much as it is one of airway inflammation. Effective patient education and communication improve outcomes, augment adherence, and are critical at all stages of managing the asthma patient.

Consider having at least one member of the clinical office staff serve as an internal asthma champion. This individual (RN, MA, NP, PA, RT, and/or MD/DO) is assigned to keep the clinical staff abreast of newest strategies for best diagnosing and managing asthma, including interdisciplinary understanding of medications, devices, and resources. National asthma educator certification (National Asthma Educator Certification Board [NAECB]; <https://www.naecb.com>) is now available and has been

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achieved by over 3000 clinical educators in the United States.

Any complete asthma education program should include some or all of the following, as needed by the patient/family learner:^{1,2}

1. The recognition that asthma is a chronic disease;
2. A practical understanding of the concept of inflammation, hyperreactivity, bronchoconstriction, airflow obstruction, and airway remodeling;
3. An acceptance of the need to prevent these by controlling various factors that contribute to asthma severity through medical therapy and environmental control;
4. Respiratory medication delivery skills (effective delivery of medication to the lungs);
5. Skills assessing airflow obstruction;
6. The ability to follow a written management plan and make adjustments in treatment in response to changing circumstances;
7. The ability to recognize early warning signs and signs that emergency medical care is needed;
8. Decrease in frequency and severity of symptoms;
9. Improved quality of life owing to asthma control;
10. Decrease in emergency department visits and/or hospital admissions;
11. Decrease in days missed from school and/or work.

At the core of effective asthma self-management is not only education but also the patient's ability to self-regulate their chronic disease.² Self-regulation describes that the degree to which people acquire skills (education) depends upon a complex range of interpersonal factors as well as the external factors (eg, medical care and asthma education) that are often acted upon in isolation. These interpersonal characteristics include personality, motives, fears, past experiences, and range of other psychosocial attributes. For example, a clinician may identify improvement in a clinical parameter (eg, forced expiratory volume in 1 second [FEV1] obtained via spirometry) as a key goal; whereas, for patients, the asthma improvement outcome target is almost always personal (eg, greater participation in an activity/sporting/social event, lessening missed days of work or school).

Many asthma education programs fail because they do not develop patients' self-regulation skills.¹⁻⁶ Knowledge does not equal behavior change, nor does the writing of a prescription. The specific steps clinicians can use to encourage better self-regulation in their patients include:

1. Using open-ended questions, reviewing means by which patients observe themselves and their conditions. Also, use of validated review measures (eg, the Asthma Control Test, Asthma Control Questionnaire) and/or symptom or clinical scoring (eg, peak flow) diaries are effective methods to supplement this goal.

2. Encouraging patients to observe whether specific clinical recommendations (eg, trigger avoidance, medications) actually reduce symptoms.
3. Enabling outcome expectations; namely helping patients connect actions and results (eg, via review of an asthma action plan).
4. Providing patients with benchmarks of asthma management success.
5. Giving reassuring messages about patient ability to control disease via their positive asthma management actions.

Clinicians often have doubts about asthma education and counseling effectiveness and/or carry insufficient skills to provide it. During the delivery of the education, the clinician and educator can use specific techniques that allow the patients to get the most from the exchange. These skills, although easily learned, are vastly underutilized. Specifically, clinicians should: (1) show nonverbal attentiveness; (2) give nonverbal encouragement; (3) give verbal praise for things well done; (4) maintain interactive conversation; (5) unearth underlying worries or concerns; (6) give reassuring information; (7) tailor the regimen to fit the routine of the patient or family; (8) reach agreement with the patient on a short-term goal; (9) review with the patient the long-term therapeutic plan; and (10) help the patient use specific criteria for making decisions about asthma management.²

Although guidelines are recommended, they are frequently not practiced by clinicians. The described barriers to asthma education delivery supported by national guidelines include low levels of self-efficacy or self-confidence among physicians and/or staff. Aside from acquiring medical knowledge, clinicians should seek to enhance their own ability to counsel and advise patients and family members by using communication and educational techniques associated with positive patient behavior and long-term improvement in asthma outcomes.⁷

Because asthma is frequently managed by alternate caregivers directly or via phone within an office practice, the creation of a comprehensive plan for asthma management and education is wise. Consistency of communication and care is paramount and should be proactively decided upon during staff meetings or quality improvement sessions. Further, work with non-clinician staff and/or non-staff educators can reinforce the goals of asthma education within a community. The increasing role of the pharmacy, as an example, in the realm of the asthma patient clinical exchange, mandates that asthma management conversation and consistency are a priority.²⁻⁷


The latest U.S. National Institutes of Health (Expert Panel Report 3 [EPR-3]) recommendations suggest the following asthma education steps be reinforced at every point along the continuum of care:³

1. Basic facts about asthma:

- (a) Contrast between airways of a person who has asthma and a person who does not have asthma;
 - (b) What is airflow obstruction and how it happens;
 - (c) Role of inflammation in asthma;
 - (d) What happens to airways in an asthma attack;
 - (e) Understanding that the absence of symptoms does not mean the absence of disease.
2. Roles of medications: understanding the difference among:
 - (a) Long-term control medication;
 - (b) Quick-relief medications;
 - (c) Intended role of all other medications.
 3. Patient skills:
 - (a) Medication skills: correct performance of various inhaler techniques (demonstration and return demonstration);
 - (b) Device usage: such as review of prescribed valved-holding chamber, spacer, nebulizer, and (if prescribed) peak flow meter;
 - (c) Environmental control measures: identifying and avoiding environmental exposures that worsen the patient's asthma (eg, allergens, irritants, tobacco smoke):
 - i. Teach patients how environmental allergens and irritants can make the patient's asthma worse at home, school, or work and how to recognize immediate and delayed reactions.
 - ii. Teach patients strategies for removing or decreasing exposure to allergens and irritants to which they are sensitive from their living spaces.
 - iii. When possible, refer for evaluation and direct toward effective home-based education programs for allergen and irritant control.
 - iv. Advise all patients not to smoke tobacco and to avoid secondhand tobacco smoke and emphasize the importance of not smoking for women who are pregnant and for parents around their children.
 - v. Provide resources for smoking cessation for smoking patients and avoidance strategies to adults who smoke around their children.
4. Self-monitoring to:
 - (a) Assess level of asthma control and goals for improvement;
 - (b) Monitor symptoms and, if prescribed, peak flow;
 - (c) Recognize early symptoms of worsening asthma.
 5. Using the written action plan to know when and how to:
 - (a) Take daily actions to control asthma;
 - (b) Adjust medication in response to signs of worsening asthma;
 - (c) Seek medical care as appropriate.

Education is one of the key components of asthma care as addressed by national and international guideline and standards.^{3,8} Appropriately, reimbursement to healthcare teams for their asthma educational efforts is planned in the United States in 2015.¹ The essentials of successful management involve not only knowledge acquisition, but also recognition that disease control and therapeutic plan adherence involves need for effective communication and behavior change modeling. To improve long-term asthma outcomes, clinicians should take steps to enhance comprehensive asthma disease understanding and the management process delivered by an entire medical team.

Conclusion

Effective asthma education is a critical cornerstone of successful asthma management. It should be planned for and delivered with the shared goals of the patient and healthcare team in mind. Utilizing the above evidence-based health behavior change strategies and education tools will assist primary or speciality care asthma clinical care. 

References

1. Gardner A, Kaplan B, Brown W, et al. National standards for asthma self-management education. *Ann Allergy Asthma Immunol.* 2015;114:178-186.
2. Clark NM, Partridge MR. Strengthening asthma education to enhance disease control. *Chest.* 2002;121:1661-1669.
3. National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. Expert Panel Report 3. *Guidelines for the Diagnosis and Management of Asthma. Full Report.* NIH publication 10e4051. Bethesda, MD: U.S. Department of Health and Human Services; National Institutes of Health; National Heart, Lung, and Blood Institute; National Asthma Education and Prevention Program; 2007. <http://www.nhlbi.nih.gov/files/docs/guidelines/asthgdln.pdf>. Accessed June 28, 2015.
4. Clark NM, Cabana MD, Nan B, et al. The clinician-patient partnership paradigm: outcomes associated with physician communication behavior. *Clin Pediatr.* 2008;47:49-57.
5. Clark NM, Cabana MD, Nan B, Gong ZM, Slish KK, Kaciroti N. Long term change in patient outcomes from an intervention from their physicians. *Clin Pediatr.* 2008;47:883-890.
6. Cabana MD, Slish KK, Evans D, et al. Impact of physician asthma care education on patient outcomes. *Pediatrics.* 2006;117:2149-2157.
7. Cabana MD, Rand CS, Powe NR, et al. Why don't physicians follow clinical practice guidelines? A framework for improvement. *JAMA.* 1999;282:1458-1465.
8. Global Initiative for Asthma (GINA). Global Strategy for Asthma Management and Prevention. Updated 2015. http://www.ginasthma.org/local/uploads/files/GINA_Report_2015_May19.pdf. Accessed June 28, 2015.