

# Technical Brief Summary

## Technical Brief No. 35, Characteristics of Existing Asthma Self-Management Education Packages

### What is the purpose of this Technical Brief?

To examine key components of asthma self-management education (AS-ME) packages, evaluate available research on AS-ME effectiveness, and improve understanding of current practice and future needs.

### What is the rationale behind this Technical Brief?

AS-ME packages are a collection of materials designed to educate and train asthma patients and families. They help to improve knowledge and self-care for asthma patients and families. Many packages are widely studied, but uncertainty remains about how they should be designed and implemented. Organizations that develop AS-ME packages have found it challenging to identify best practices because of differences in format, delivery mechanisms, target audiences, and other features. This Technical Brief reviewed 14 packages and 40 published studies to map the ecosystem of existing AS-ME.

### What are the characteristics of AS-ME packages?

- We reviewed 14 AS-ME packages intended for use by adults, adolescents, children, and parents (Table 1).
- Packages were designed for use in schools, community-based sites, healthcare facilities, or patient homes.
- Most packages facilitate in-person education, but a few are designed for completion at home at one's own pace.
- Most packages use paper-based learning materials with some interactive components; online content is rare.
- Packages address asthma knowledge, medication and device use, symptom management, and asthma triggers.
- Many packages include useful tools such as Asthma Action Plans, symptom or medication logs, and checklists to monitor exposure to asthma symptom triggers.
- Most packages were produced or updated between 2010 and 2019.
- Most packages are free and accessible online.
- All packages are published in English, and many are available in Spanish. We found no packages in any other language.

Table 1. AS-ME Packages Reviewed

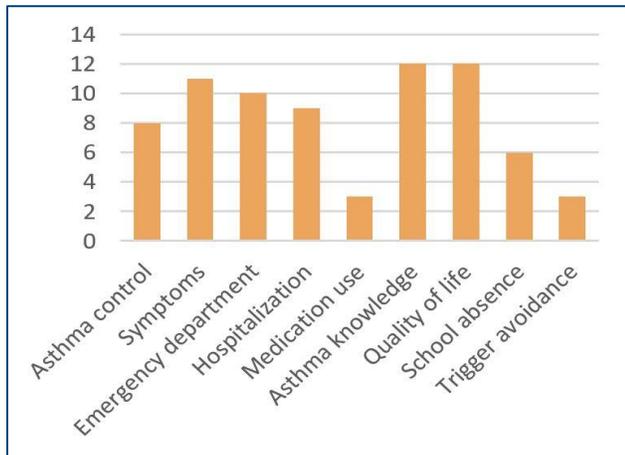
AS-ME Package	Developer
• A Breath of Life	National Heart, Lung, and Blood Institute <a href="http://www.nhlbi.nih.gov">www.nhlbi.nih.gov</a>
• Asthma 101 • Breathe Well, Live Well • Kickin' Asthma • Open Airways for Schools	American Lung Association <a href="http://www.lung.org">www.lung.org</a>
• Asthma Basics for Children • Asthma Care for Adults • Severe Asthma Care for Adults • Wee Breathers • You Can Control Asthma	Asthma and Allergy Foundation of America <a href="http://www.aafa.org">www.aafa.org</a>
• Asthma Workbook • Women Breathe Free	University of Michigan <a href="http://www.med.umich.edu">www.med.umich.edu</a>
• Creating Asthma-Friendly Environments and Promoting Access to Guidelines-Based Care for Children with Asthma	National Environmental Education Foundation & National Association of School Nurses <a href="http://www.pathlms.com/nasn">www.pathlms.com/nasn</a>
• Pediatric Asthma Initiative	National Environmental Education Foundation & National Association of School Nurses <a href="http://www.neefusa.org">www.neefusa.org</a>



## What are the main results from the literature review?

- We identified 7 systematic reviews and 33 primary studies published between 2007 and 2019.
- Half of studies evaluated school-based packages; most studied children or adolescents.
- Frequently reported outcomes were asthma control, asthma knowledge, symptoms, quality of life, hospitalizations, and emergency department use (Figure 1).
- AS-ME packages generally improved asthma control, reduced symptom frequency, increased asthma knowledge, and reduced school absences.
- Results were mixed for hospitalizations, emergency department visits, and quality of life.

Figure 1. Outcomes Reported in Published Studies

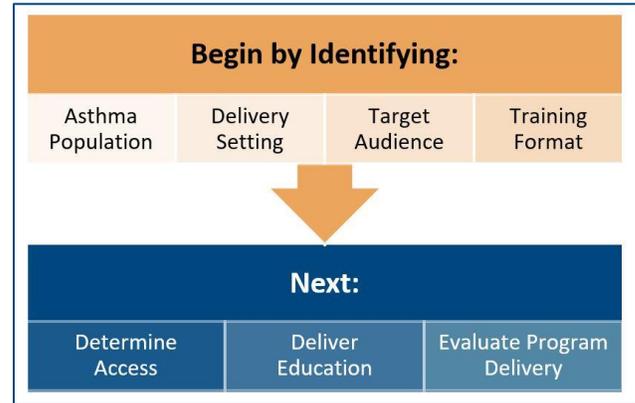


## How are AS-ME packages implemented?

Typical steps needed to implement AS-ME include identifying the asthma population, delivery setting,

and target audience, and training educators to deliver material. End-users also need to determine package accessibility (e.g., fee, downloadable), then deliver education and evaluate program delivery (Figure 2).

Figure 2. Factors To Consider for AS-ME Implementation



## What are the barriers to implementing AS-ME packages?

Few details are publicly available about the cost of developing and disseminating AS-ME packages, and funding to train AS-ME educators is limited. End-users may need to adapt packages to a local program or setting. Patient beliefs may conflict with recommended practices; also, patients face challenges in navigating different settings (e.g., home, school, work, recreation), and understanding how these settings can affect asthma. In addition, poor coordination between providers, patients, families, teachers, and other caregivers creates asthma management challenges.

This Technical Brief Summary is based on a Technical Brief that is current as of April 2020 and located at:

<https://effectivehealthcare.ahrq.gov/products/asthma-education/technical-brief>. The report is based on research conducted by the ECRI Institute – Penn Medicine Evidence-based Practice Center (EPC) under contract to the Agency for Healthcare Research and Quality (AHRQ), Rockville, MD. The Centers for Disease Control and Prevention (CDC) provided funding support for the report. Its findings and conclusions are those of the authors, who are responsible for its contents, and do not necessarily represent the views of AHRQ or CDC. Therefore, no statement in the report should be construed as an official position of AHRQ, CDC, or of the U.S. Department of Health and Human Services.

