

Care transition interventions for children with asthma in the emergency department



Molly A. Martin, MD, MAPP,^a Valerie G. Press, MD, MPH,^b Sharmilee M. Nyenhuis, MD,^a Jerry A. Krishnan, MD, PhD,^a Kim Erwin, MDes,^c Giselle Mosnaim, MD,^d Helen Margellos-Anast, MPH,^e S. Margaret Paik, MD,^b Stacy Ignoffo, MSW,^f and Michael McDermott, MD,^g for the CHICAGO Plan Consortium *Chicago, Ill*

The emergency department (ED) is a critical point of identification and treatment for some of the most high-risk children with asthma. This review summarizes the evidence regarding care transition interventions originating in the ED for children with uncontrolled asthma, with a focus on care coordination and self-management education. Although many interventions on care transition for pediatric asthma have been tested, only a few were actually conducted in the ED setting.

Most of these targeted both care coordination and self-management education but ultimately did not improve attendance at follow-up appointments with primary care providers, improve asthma control, or reduce health care utilization. Conducting any ED-based intervention in the current environment is challenging because of the many demands on ED providers and staff, poor communication within and outside of the medical sector, and caregiver/patient burden. The evidence to date suggests that ED care transition interventions should consider expanding beyond the ED to bridge the multiple sectors children with asthma navigate, including health care settings, homes, schools, and community spaces. Patient-centered approaches may also be important to ensure adequate intervention design, enrollment, retention, and evaluation of outcomes important to children and their families. (*J Allergy Clin Immunol* 2016;138:1518-25.)

From ^athe University of Illinois at Chicago, ^bthe University of Chicago, ^cIllinois Institute of Technology Institute of Design, ^dRush University Health Center, ^eSinai Health System, ^fChicago Asthma Consortium, and ^gIllinois Emergency Department Asthma Surveillance Project for the CHICAGO Plan Consortium.

Research reported in this report was partially funded through a Patient-Centered Outcomes Research Institute (PCORI) award (AS-1307-05420, "Coordinated Healthcare Interventions for Childhood Asthma Gaps in Outcomes (CHICAGO) Trial") and a National Heart, Lung, and Blood Institute/National Institutes of Health grant (grant no. U34 HL130787, "Coordinated Healthcare Interventions for Childhood Asthma Gaps in Outcomes (CHICAGO) Collaboration II"). The statements in this report are solely the responsibility of the authors and do not necessarily represent the views of the PCORI, its Board of Governors, or the Methodology Committee, or the National Institutes of Health.

Disclosure of potential conflict of interest: M. A. Martin has received grants from the National Institutes of Health and the Patient-Centered Outcomes Research Institute. V. G. Press has received a grant from the Patient-Centered Outcomes Research Institute and the National Heart, Lung, and Blood Institute and has consultant arrangements with Seattle VA, the University of Illinois at Chicago, and the Society of Hospital Medicine COPD Expert Panel. S. M. Nyenhuis has received grants from the Patient-Centered Outcomes Research Institute and the National Heart, Lung, and Blood Institute and is a board member for the Chicago Asthma Consortium. J. A. Krishnan has received a grant and travel support from the Patient-Centered Outcomes Research Institute and has consultant arrangements with Sanofi and the National Heart, Lung, and Blood Institute. K. Erwin has received grants from the Patient-Centered Outcomes Research Institute, the National Institutes of Health, the Knight Foundation, and the Robert Wood Johnson Foundation; has received payment for lectures from Integrated Michigan Patient-centered Alliance for Care Transitions, Western North Carolina Health Network, and OSF Healthcare; has received royalties from Wiley & Sons; and has received travel support from Forechange. G. Mosnaim has received grants from the Patient-Centered Outcomes Research Institute and the National Heart, Lung, and Blood Institute; is a board member for the American Academy of Allergy, Asthma, and Immunology; has consultant arrangements with Teva, GlaxoSmithKline, Boehringer-Ingelheim, and Electrocore, LLC; and has received stock/stock options from Electrocore, LLC. H. Margellos-Anast has received a grant from the Patient-Centered Outcomes Research Institute. S. Ignoffo has received a grant to Chicago Asthma Consortium from the University of Illinois. M. McDermott has received a grant from the Patient-Centered Outcomes Research Institute and has received travel support from the University of Illinois. S. M. Paik declares no relevant conflicts of interest.

Received for publication August 9, 2016; revised October 20, 2016; accepted for publication October 20, 2016.

Corresponding author: Molly A. Martin, MD, MAPP, Department of Pediatrics, University of Illinois at Chicago, 840 South Wood St, M/C 856, Chicago, IL 60612. E-mail: mollyma@uic.edu.

The CrossMark symbol notifies online readers when updates have been made to the article such as errata or minor corrections

0091-6749/\$36.00

© 2016 American Academy of Allergy, Asthma & Immunology
<http://dx.doi.org/10.1016/j.jaci.2016.10.012>

Key words: Asthma, patient-centered, pediatric, emergency department, care transitions, disparities, care coordination, education

Discuss this article on the JACI Journal Club blog: www.jaci-online.blogspot.com.

Asthma is one of the most common chronic diseases among children in the United States, affecting more than 7 million children and costing more than 50 billion in direct health care costs annually.¹⁻³ Not all children with asthma are affected equally. The health burden from asthma is disproportionately high among non-Hispanic black and Puerto Rican children, who have substantially higher prevalence of asthma (13.4% and 23.5%, respectively, vs 7.6% for non-Hispanic white).³ The risk of hospitalizations is also higher for non-Hispanic black (12.9%) versus non-Hispanic white (3.4%) children.⁴ These disparities exist despite decades of research to develop and implement strategies that target health disparities in asthma.⁵⁻⁷

The emergency department (ED) is where many patients with asthma seek and receive care.⁸ Respiratory disorders are the most common reason for ED visits in children after injuries and poisonings.⁹ In 2010, children with asthma in the United States experienced more than 900,000 asthma-related ED visits.⁹ Asthma disparities are obvious in the ED¹⁰⁻¹²; non-Hispanic black children have been shown to have an ED visit rate more than 4 times higher than the rate for non-Hispanic white children.¹³ Medicaid recipients also have a greater number of asthma-related ED visits when compared with non-Medicaid insured recipients.^{10,14} Because most patients receiving ED care experience symptoms of uncontrolled asthma in the weeks and months before their ED visit, ED utilization rates for asthma can be attributed to patient-level issues such as underrecognition of symptoms or challenges implementing treatment plans.¹⁵ On a

Abbreviations used

CAPE: CHICAGO Action Plan after Emergency department discharge
CHICAGO: Coordinated Healthcare Interventions for Childhood Asthma Gaps in Outcomes
CHW: Community health worker
ED: Emergency department
PCP: Primary care provider

system level, these rates serve as a barometer for inaccessible, and perhaps lower quality, ambulatory care options for asthma care.

Caring for asthma in EDs is costly for both families and the health care system.¹⁶ Some children who present to the ED for asthma care have severe asthma that is difficult to control under the best of circumstances, whereas other children have uncontrolled asthma due to improper management at home or in the ambulatory setting.^{8,10} In all situations, families require education and support while in the ED to safely and effectively transition their care to the ambulatory setting and home.¹⁴ With the shift from volume to value-based payment models for health care in the United States, there is increasing interest among health systems to identify and adopt strategies that improve the quality and outcomes of care transitions following ED discharge for asthma. The objective of this review was therefore to summarize the evidence regarding care transition interventions originating in the ED for children with uncontrolled asthma.

CARE TRANSITIONS FROM THE ED TO HOME AND AMBULATORY SETTINGS

Care transitions are defined as the movement of patients between health care practitioners, settings, and home as their need for health care evolves over time.¹⁷ The primary barriers to effective care transitions are inadequate communication, patient education, and accountability.¹⁷⁻¹⁹ ED providers frequently do not have access to ambulatory health records and cannot effectively coordinate management or arrange follow-up care. Patients and their caregivers often receive incomplete, confusing, or conflicting recommendations regarding care plans during health care transitions. This becomes even more challenging when patients lack a sufficient understanding of the disease or how to care for it. Accountability for the disease management falls either on the ambulatory provider or the patient/caregiver, both of whom often have incomplete information, limited resources to coordinate care, and may not communicate effectively with each other.

Although chronic diseases such as asthma are influenced by many factors within the health care system and the communities where patients live,²⁰ approaches to care transitions from the ED can be grouped into 2 domains: *care coordination* and *self-management education*. *Care coordination* is defined as “the deliberate organization of patient care activities between 2 or more participants (including the patient) to facilitate the appropriate delivery of health care services.”²¹ Care coordination can be achieved through a range of modalities including designated care coordination staff, written materials, emails, phone calls, text messages, and open access scheduling. The goal is to address access and resource gaps through communication processes. Self-management education targets the skills that patients and

caregivers require to monitor, treat, and control asthma.²² This education can happen in many different environments and can be delivered using various modalities.

CARE TRANSITION INTERVENTIONS IN THE ED FOR PEDIATRIC ASTHMA

Care coordination is usually not a typical part of ED services, yet many patients in the ED are there primarily because of failures in coordinating quality care in the ambulatory setting.^{8,10} Incomplete access to patients’ full health information in the ED coupled with limited skills training and general capacity for care coordination has motivated the development of interventions to transition patients out of the ED and link them back into primary care. In 2012, Katz et al²³ published a review of care coordination interventions in the ED. Of the 14 randomized controlled trials identified, 4 targeted pediatric asthma interventions that were delivered in the ED²⁴⁻²⁷ (Table I). Another review of ED-based care transition interventions for pediatric patients published by Abraham et al³³ in 2016 identified 9 care coordination interventions for children with asthma, but only 5 of these were actually conducted in the ED.^{24,26,27,30,31}

Three of the 6 interventions identified in these reviews demonstrated improvements in follow-up with primary care providers, mainly using strategies that focused on patient reminders and appointment scheduling.^{24,25,30} One study achieved improvements in care coordination by providing families with allergen skin testing in the ED as a way to generate tailored asthma management plans and encourage families to seek follow-up care.³⁰ Care coordination can also be achieved through decision support tools. A randomized controlled trial in Canada provides an example of a provider-level intervention that achieved improvements in care coordination by aiming to reduce practice variation.²⁸ The study tested the effects of a structured paper template to promote guideline-consistent ED discharge practices versus usual care. The treating ED physicians completed the paper template at ED discharge and made all decisions about the dosage and duration of medications prescribed, verbal instructions, and recommendations for medical follow-up. Results indicated that the intervention significantly increased ED physician adherence to guideline recommendations for arranging follow-up visits with medical providers and that caregivers were also more likely to attend a follow-up visit with a medical provider.²⁸

Self-management education for asthma has been shown to improve patient outcomes and be a cost-effective component of asthma care in various settings.^{22,34,35} However, studies of asthma self-management education interventions in the ED are limited. In an Agency for Healthcare Research and Quality review of self-management interventions for pediatric asthma through 2006, none of the 75 interventions identified in the review that directly targeted self-management and patient education were conducted in the ED.³⁶ A Cochrane review of educational interventions for pediatric asthma in the ED included 38 studies but only 4 of these interventions actually occurred in the ED^{26,29,31,32,37} (Table I). Although the Cochrane review reported that educational intervention was strongly associated with a reduced risk for subsequent ED visits,³⁷ only 1 of the 4 studies that delivered the educational intervention in the ED setting reported some improvements in health care utilization.³²

Download English Version:

<https://daneshyari.com/en/article/5646400>

Download Persian Version:

<https://daneshyari.com/article/5646400>

[Daneshyari.com](https://daneshyari.com)