

Primary Care Guideline Nonadherence: Ignorance or Reasonable Doubt?



Bruce G. Bender, PhD *Denver, Colo*

The article by Cloutier et al¹ reveals once again that physicians are not fully adherent to National Asthma Education and Prevention Program (NAEPP) Expert Panel Report 3 asthma guidelines. Guideline nonadherence has been reported before. A 2001 survey of 829 pediatricians indicated that half did not follow many components of national asthma guidelines.² In the same year, a longitudinal study of 433 children seen in the Children's Hospital of Philadelphia's emergency department reported that 71% of patients with asthma did not have a written action plan and 89% did not have a symptom diary despite the fact that 75% had at least 1 additional emergency department visit.² Seven years later, primary care provider (PCP) adherence to NAEPP guidelines had not improved; only 34% of the 202 surveyed urban PCPs reported using peak flow monitoring, only 9% used asthma action plans, and only 10.8% used spirometry testing.³

Fast forward to 2018 and little has changed. Cloutier et al¹ surveyed 1412 PCPs and their report once again revealed that only 16% regularly provide asthma action plans. The report also imparts new insight into the problem. The survey included 233 allergists and pulmonologists, providing an interesting contrast between primary care and specialist asthma care. Not unexpectedly, specialist care was more concordant with most components of the NAEPP guidelines. This outcome might generate training programs that focus on those areas in which PCPs are markedly less guideline adherent than specialists; based on the study by Cloutier et al, this might include detailed symptom inquiry and use of peak flow meters, spirometry, allergy testing, air pollution avoidance, asthma action plans, or controller medication. Beefing up continuing medical education programs in primary care to emphasize these guideline components, however, may not solve the problem. PCPs are not alone in omitting guideline elements. In the survey by Cloutier et al, 18.3% of specialists reported that they did not routinely inquire about nocturnal awakening, 51% infrequently used a standardized control questionnaire, 55.3% did not routinely use spirometry, 32.7% did not standardly perform allergy testing, and 51% reported that they almost never ask about home peak flow

results. In other words, their actions suggest that allergists and pulmonologist have some doubts about the NAEPP guidelines.

Before pressing PCPs to adhere to all elements of the asthma guidelines, it is important to try to understand the underlying reasons for incomplete guideline adherence among PCPs and asthma specialists. Among PCPs, low guideline adherence has been attributed to low outcome expectancy, poor provider self-efficacy, or time constraints.⁴⁻⁶ In other words, many physicians did not believe that they had adequate training and experience, but also were doubtful that some specific elements would ultimately change outcomes in their patients sufficiently to warrant the time required to complete them. The importance of time constraints in primary care cannot be understated. Providers often see large numbers of patients in a single day, with numerous interruptions and patient requests requiring response, growing regulatory requirements, and increasing electronic medical record demands. These demands in turn result in PCPs "triaging" patients to include only those elements of asthma guidelines that they believe to be necessary.⁷

Unfortunately, little is known about guideline rejection among asthma specialists. We can speculate that a collection of studies emerging since the 2007 NAEPP guidelines has drawn some elements into doubt. For example, although the value of controller medications is well established, the importance of action plans is less clear. Several systematic reviews weighted available evidence and found limited proof of the effectiveness of asthma action plans in changing outcomes.^{8,9} In one study, 407 children and adults with asthma were randomized to receive either written instructions or no written instructions for asthma management. Those receiving a written plan over 12 months were no less likely to report daytime symptoms, nighttime symptoms, or beta₂agonist use.⁶ Over the year, both groups demonstrated reductions in emergency department visits and improved quality of life, suggesting that increased discussion of asthma management, with or without written instructions, may be sufficient. Similar absence of evidence of improved outcomes has been reported for use of spirometry.^{10,11} Conclusions about the utility of spirometry or asthma action plans are limited by variations in research quality, design, and subject populations, but collectively such reports create doubts about some elements of the guidelines. Such uncertainties may be redoubled by the passage of more than a decade since release of a full revision of the NAEPP asthma guidelines. More frequent revisions of the Global Initiative for Asthma guidelines may encourage greater adherence, although data are unavailable to put that idea to a test. Release of the NAEPP-version 4 guidelines will help give providers, both PCPs and specialists, a fresh look at the evidence for current best practices in asthma management. Until then, we cannot assume that absence of PCP adherence is simply a function of guideline ignorance.

Division of Behavioral Health, Department of Pediatrics, National Jewish Health, Denver, Colo

Conflicts of interest: B. G. Bender declares no relevant conflicts of interest.

Received for publication February 14, 2018; accepted for publication February 15, 2018.

Corresponding author: Bruce G. Bender, PhD, National Jewish Health, 1400 Jackson St, Denver, CO 80206. E-mail: benderb@njhealth.org.

J Allergy Clin Immunol Pract 2018;6:895-6.
2213-2198

© 2018 American Academy of Allergy, Asthma & Immunology
<https://doi.org/10.1016/j.jaip.2018.02.031>

REFERENCES

1. Cloutier MM, Salo PM, Akinbami LJ, Cohn RD, Wilkerson JC, Diette GB, et al. Clinician agreement, self-efficacy, and adherence with the guidelines for the diagnosis and management of asthma. *J Allergy Clin Immunol Pract* 2018;6:886-94.
2. Cabana MD, Rand CS, Becher OJ, Rubin HR. Reasons for pediatrician non-adherence to asthma guidelines. *Arch Pediatr Adolesc Med* 2001;155:1057-62.
3. Scarfone RJ, Zorc JJ, Capraro GA. Patient self-management of acute asthma: adherence to national guidelines a decade later. *Pediatrics* 2001;108:1332-8.
4. Wisnivesky JP, Lorenzo J, Lyn-Cook R, Newman T, Aponte A, Kiefer E, et al. Barriers to adherence to asthma management guidelines among inner-city primary care providers. *Ann Allergy Asthma Immunol* 2008;101:264-70.
5. Cabana MD, Ebel BE, Cooper-Patrick L, Powe NR, Rubin HR, Rand CS. Barriers pediatricians face when using asthma practice guidelines. *Arch Pediatr Adolesc Med* 2000;154:685-93.
6. Sheares BJ, Mellins RB, Dimango E, Serebrisky D, Zhang Y, Bye MR, et al. Do patients of subspecialist physicians benefit from written asthma action plans? *Am J Respir Crit Care Med* 2015;191:1374-83.
7. Cabana MD, Chaffin DC, Jarlsberg LG, Thyne SM, Clark NM. Selective provision of asthma self-management tools to families. *Pediatrics* 2008;121:e900-5.
8. Bhogal S, Zemek R, Ducharme FM. Written action plans for asthma in children. *Cochrane Database Syst Rev* 2006;CD005306. <https://doi.org/10.1002/14651858.CD005306.pub2>.
9. Gatheral TL, Rushton A, Evans DJ, Mulvaney CA, Halcovitch NR, Whiteley G, et al. Personalised asthma action plans for adults with asthma. *Cochrane Database Syst Rev* 2017;4:CD011859. <https://doi.org/10.1002/14651858.CD011859.pub2>.
10. Abramson MJ, Schattner RL, Sulaiman ND, Birch KE, Simpson PP, Del Colle EA, et al. Do spirometry and regular follow-up improve health outcomes in general practice patients with asthma or COPD? A cluster randomised controlled trial. *Med J Aust* 2010;193:104-9.
11. Abramson MJ, Schattner RL, Holton C, Simpson P, Briggs N, Beilby J, et al. Spirometry and regular follow-up do not improve quality of life in children or adolescents with asthma: cluster randomized controlled trials. *Pediatr Pulmonol* 2015;50:947-54.

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.