to increase symptom-free days (SFDs) in children with asthma residing with a smoker.

STUDY POPULATION. The study enrolled children ages 6 to 12 years with a physician diagnosis of persistent asthma who were living with a smoker (>5 cigarettes a day).

METHODS. This was a randomized 3-arm controlled trial. All study groups received asthma education over 4 nurse-home visits. Study groups included (1) the control group (high-efficiency particle air cleaners were placed in the home after the final home-monitoring visit), (2) the air cleaner group (air cleaners were placed in the home for 6 months), and (3) the air cleaner plus health coach group (air cleaners for 6 months and a behavioral intervention). Changes in PM, air nicotine, and urine cotinine concentrations as well as SFDs were measured, and the child’s SHS exposure was evaluated based on the caregiver’s report of smoking frequency.

RESULTS. Changes in mean fine and coarse PM (PM$_{2.5}$ and PM$_{2.5-10}$) concentrations (baseline to 6 months) were significantly lower in both air cleaner groups compared with the control group (mean differences for PM$_{2.5}$ concentrations: control, 3.5 µg/m$^3$; air cleaner only, –19.9 µg/m$^3$; and air cleaner plus health coach, –16.1 µg/m$^3$ [P = .003]; and PM$_{2.5-10}$ concentrations: control, 2.4 µg/m$^3$; air cleaner only, –8.7 µg/m$^3$; air cleaner plus health coach, –10.6 µg/m$^3$ [P = .02]). SFDs were significantly increased in both air cleaner groups compared with the control group (P = .03). No differences were noted in air nicotine, urine cotinine concentrations, or SHS exposure measures. The health coach provided no additional reduction in PM concentrations.

CONCLUSIONS. Use of air cleaners in homes of children with asthma was associated with significant reduction in PM concentrations and increase in SFDs. The reduced PM levels were not sufficiently decreased to meet the US Environmental Protection Agency’s standards for outdoor air quality. Although the use of air cleaners resulted in significant reduction in PM concentrations and an increase in SFDs, it was not enough to decrease exposure to SHS.

REVIEWER COMMENTS. This study suggests that the use of air cleaners may be helpful in the reduction in indoor PM concentrations and in increasing SFDs, which may be a viable intervention suggestion for the homes of urban children with asthma who live in homes with smokers. The authors suggest that use of high-efficiency particle air cleaners is a more cost-effective approach compared with treatment with a leukotriene modifier, which revealed similar increases in SFDs in other studies. However, further studies are needed that take into account adherence to use of air cleaners and for SHS exposures outside the home. Of course, implementing a smoke-free home policy should be first considered ideally, especially in the homes of children with asthma.

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Written Action Plan Use in Inner-City Children: Is It Independently Associated With Improved Asthma Outcomes?

PURPOSE OF THE STUDY. To determine the independent effect of a written action plan (WAP) on asthma outcomes in patients with poorly controlled asthma.

STUDY POPULATION. Study patients were aged 3 to 13 years and were part of the Healthy Homes II study, a randomized controlled cohort trial that enrolled 309 low-income children with poorly controlled or persistent asthma from the Seattle area from 2002 to 2004.

METHODS. Data were collected for primary outcomes, including the control of asthma in the previous 2 weeks and pediatric caregiver quality of life scores. Secondary outcomes measured were unscheduled visits to a clinic, emergency department, or hospital within the last 3 months. Information was gathered about whether they had a WAP available and whether they used the WAP over a year-long period. Patients were classified as users of the WAP if they used it at least once per week.

RESULTS. A total of 251 patients took part in the study; 112 used the WAP. No differences in asthma outcomes were seen between patients who used the WAP and those who did not. No difference was seen in use of urgent health care services or in caregiver quality of life scores.

CONCLUSIONS. In this study, the use of a WAP was not independently associated with improved asthma outcomes in this cohort of low-income children who had poorly controlled asthma.

REVIEWER COMMENTS. Education of patients and families affected by asthma is essential. Use a WAP in the treatment of patients who have asthma is recommended by national guidelines. This study reminds us that the WAP, although important, is only a part of the treatment plan that is given to patients and the families. One of the many assets WAPs have is that they give some control over the treatment to the patients and their families. The response by the caregivers is an essential part, and the need exists to study this factor in a larger population among different socioeconomic groups.

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