

CHANGING THE TRAJECTORY OF ASTHMA MORBIDITY THROUGH AN EARLY CHILDHOOD ASTHMA INITIATIVE IN MISSOURI

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Background: Asthma is a leading cause of health care utilization in Missouri with the highest rates of asthma emergency room (ER) visits and hospitalizations consistently among preschool children ages 1 to 4 years. The *Childhood Asthma Initiative (CAI)* provided training, tools, and equipment to Environmental Specialists (ES) and Childcare Health Consultants (CCHC) in Local Public Health Agencies (LPHA) statewide. The ESs provided childcare centers with indoor air quality assessments and information on asthma triggers. The CCHCs provided education to families on in-home air quality and asthma management in pre-school children.

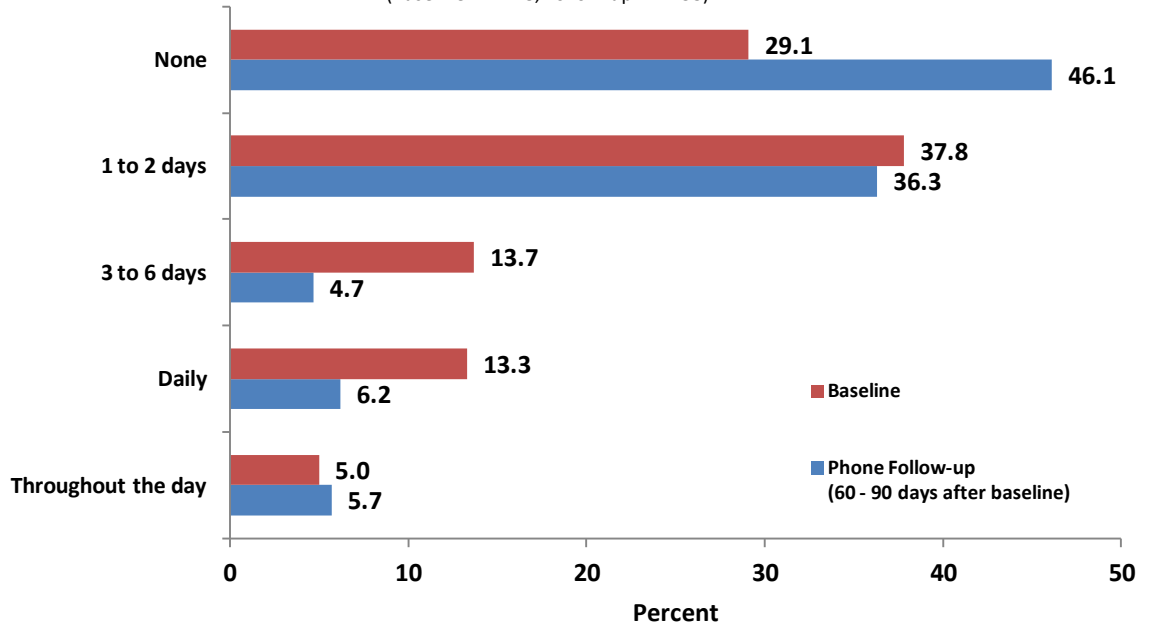
Method: On-line asthma management training was provided to ESs and CCHCs with pre- and post- knowledge testing and analyzed using paired t-test. Education to the families was delivered as self-study material, individually or as a group. Individually educated participants were invited to complete an assessment of their child's asthma before the education and by phone follow-up, 60 to 90 days later. Data were scanned and analyzed using Chi-Square test to assess the intervention effect on asthma symptoms and control practices. Follow-up of randomly selected child care facilities assessed the impact of the environmental assessments.

Results: A total of 106 ESs and CCHCs completed one or more of the three CAI training courses and participants' knowledge scores significantly increased pre- to post-test for all courses ($p < .001$). About 900 childcare facilities had initial environmental assessments and of those completing follow-up 45% had made changes to improve the environment. The parent-caregiver assessments (N=278 baseline, N=193 follow-up) revealed children had significant declines in asthma severity, days of disruption in routines, nights of being awakened by asthma symptoms and days of albuterol use, and increased daily inhaled corticosteroids and written asthma plans ($p < .001$).

Conclusions: The CAI increased asthma knowledge, supported healthy environments and provides evidence that the program effectively reduced parent-reported asthma morbidity (i.e., symptoms) in children with asthma.

Parent/caregiver report of days per week asthma symptoms (coughing, trouble breathing, or wheezing) disrupt child's routines

(Baseline N = 278; Follow-up N = 193)*



*Missing at baseline, 1.1% and follow-up, 1.0%