



Reducing Environmental Triggers of Asthma Home Intervention Project

MINNESOTA DEPARTMENT OF HEALTH

Purpose

To minimize or eliminate exposures to environmental allergens and triggers of asthma

Target Population

Minnesota children with asthma

Goals

- To reduce environmental triggers through patient-specific asthma education from a certified asthma educator (AE-C) and inexpensive, uncomplicated treatments, such as high-efficiency particulate air (HEPA) cleaners, pillow and mattress dust encasements, and HEPA vacuum cleaners

Years in Operation

2006 – 2008

Results

The project — known as RETA — has shown dramatically improved health outcomes and reduced health care costs. According to urgent care claims data from the Minnesota Council of Health Plans, an average unscheduled asthma office visit (urgent care) costs \$84. Hospital discharge data from the Minnesota Hospital Association estimates that the average hospitalization for pediatric asthma in the Twin Cities metropolitan area costs \$2,260. With the RETA project, unscheduled office visits declined by approximately two office visits, and hospital visits declined by approximately one visit, over the 12-month study period. These visits would have cost \$2,428. Since the average cost of treatment was \$468, the approximate cost savings were \$1,960.

Product interventions also reduced the number of school days missed from seven days to less than one day on average 12 months later. There were improvements in daytime symptoms and functional limitation scores. The post intervention scores were dramatically closer to values generally viewed as moderate-to-no symptom impact on quality of life.³⁸

Funding

Funded by the U.S. Environmental Protection Agency

Key Partners

Pediatric Home Service; Hennepin County Medical Center; Partners In Pediatrics; Children's Respiratory Care and Critical Care; Minneapolis Public School District

What Works and Why

Commissioner Dr. Sanne Magnan attributes the project's success to the following: the project's AE-C who provided education about medications and asthma management, the asthma action plan, and environmental assessments that identified asthma triggers.³⁹

Structure and Operations

Sixty-four families received both family-specific education and appropriate materials to minimize or eliminate exposures to environmental allergens and irritant triggers of asthma. During the initial home visit, information was collected regarding the number of emergency department visits, hospitalizations, missed school days, and unscheduled clinic visits that occurred in the previous three months. Products were delivered in a follow-up visit by the AE-C, with the total average cost of these visits being \$468. Quality of life improvement was measured by responses to questions completed by the child's parent or guardian regarding how the child's life was affected by asthma during the past four weeks.⁴⁰

The Minnesota Department of Health Asthma Program partnered with Pediatric Home Service to conduct RETA, a demonstration project.

Barriers to Success

Barriers to the success of RETA include families failing to be ready and willing to take part in the program in addition to families and children not making lifestyle changes. Without removing environmental allergens and irritant triggers of asthma in the home, asthma conditions will not change and may even worsen.

For More Information

Additional information is available online:

<http://health.state.mn.us/asthma/documents/retafullreport0907.pdf>

