

News Release



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MDH project to reduce environmental triggers of asthma shows significant cost savings and quality improvement

Reducing Environmental Triggers of Asthma Home Intervention Project received national award last week

A project developed to minimize or eliminate exposures to environmental allergens and triggers of asthma has been shown to dramatically improve health outcomes and reduce health care costs by almost \$2,000 per child with asthma. The Reducing Environmental Triggers of Asthma Home Intervention Project (RETA) received this year's Program Delivery Award from the National Association of Chronic Disease Directors (NACDD) at its annual meeting in Denver, Colorado, on Feb. 21.

"Replicating this program throughout the chronic disease community has the potential for saving millions of dollars in health costs annually *and* improving health and quality of life," said Minnesota Commissioner of Health Dr. Sanne Magnan. "An investment of only \$468 per child yields savings of almost \$2,000. If we used this approach with 1,000 children with moderate to severe asthma, we would save about \$2 million."

In 2006 and 2007, the Minnesota Department of Health's Asthma Program partnered with Pediatric Home Service (PHS), an independent health care organization, to conduct the project. Funded by the U.S. Environmental Protection Agency, RETA was designed to reduce environmental triggers of asthma 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.

Laura Oatman, research scientist for the MDH Asthma Program, said that 64 families received family-specific education and appropriate treatment products. During the initial home visit, information was collected about 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 certified asthma educator, with the total average cost of these visits being \$468.

Commissioner Magnan emphasized that the key to project success was the certified asthma educator who provided education about medications and asthma management, ensured an asthma action plan, and assessed the environment for asthma triggers. Prior to RETA, the use of services such as hospitalizations and emergency department visits was substantial. Each child had, on average, one hospital visit, one emergency department visit, two unscheduled office visits, and one use of oral prednisone during the three months prior to the project.

According to urgent care claims data from the Minnesota Council of Health Plans, an average unscheduled asthma office visit (urgent care) costs \$84. Using hospital discharge data from the Minnesota Hospital Association, the MDH Asthma Program has estimated that the average hospitalization for pediatric asthma in the Twin Cities metropolitan area costs \$2,260.

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Health outcomes showed dramatic improvements after participation in the project. At the 12-month follow-up visit, reports showed that unscheduled office visits declined by approximately two office visits. Hospital visits declined by approximately one visit. These visits would have cost \$2,428. Since the average cost of treatment was \$468, the cost savings were approximately \$1,960 per child.

Prior to RETA, children had missed significant amounts of school. During a three-month period, the average number of school days missed was seven. Several children missed more school—up to four weeks. After participating in the project, the number of missed school days declined from seven days to less than one day.

Three-quarters of the children participating in the project had moderate persistent or severe asthma. The most commonly identified asthma trigger was viral infections (98%), followed by weather (80%), exercise (69%), secondhand smoke (67%) and allergies (66%). The most common environmental concern was secondhand smoke, with nearly half the children (48%) regularly exposed to secondhand smoke.

“This innovative approach to asthma care would be difficult to implement widely under our current health care payment system because too often the system does not reimburse for things such as in-home visits by health care professionals,” Magnan said. “That is why it is so important that we move forward with the kinds of health care reforms that will provide incentives for the system to innovate and reward health care outcomes, not just specific services.”

More information about the RETA project is available at <http://www.health.state.mn.us/asthma/documents/07retafactsheet.pdf>

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