

Alaska Native Tribal Health Consortium

Air and Healthy Homes Program

In 2008, the Alaska Native Tribal Health Consortium (ANTHC) Environmental Health Services Department received a request from a pediatric pulmonologist at the Alaska Native Medical Center to investigate the home environments of children experiencing chronic respiratory illness. ANTHC developed an Air and Healthy Homes Program with the primary aim of determining if home modification activities reduce the need for respiratory medical care among a high-risk group of Alaska Native children. A secondary aim is to develop a model for addressing respiratory disease through home modification that can be replicated in other regions of Alaska, as well as on Tribal lands throughout the United States.

Each year, ANTHC has worked with regional/local Tribal housing authorities, regional Tribal health organizations and local Tribes to determine which communities have a combination of housing with potential for poor indoor air quality and children who have frequent and/or severe respiratory illness. For the purpose of this project, a child with frequent and/or severe respiratory illness is defined as a child who has been hospitalized at least once during the past 12 months or has visited the clinic at least four times in the previous 12 months for respiratory conditions. ANTHC has partnered with Tribal housing authorities to make low-cost improvements to selected homes with the goal of improving their indoor air quality. The program has been

funded by the Commission for Environmental Cooperation (CEC) and the U.S. Department of Housing and Urban Development (HUD).

The selected homes were monitored and assessed for air quality baselines, and then modifications were made. Homes with leaky wood stoves received new replacement EPA-certified wood stoves, and homeowners were educated on how to properly use them. A combination of mechanical and/or passive vents also were installed in homes, and homeowners were provided with education about how



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and when to use these vents. Residents also received education about removing chemicals and cigarette smoke from indoors and proper wood burning practices. Over the course of the project, the residents received check-up phone calls, reminder post cards, and educational visits from ANTHC staff members, which all served as tools to maintain and track progress. Along with education about effective lifestyle changes and how best to utilize the modifications, residents also were provided with report cards of the results of the indoor air monitoring, carbon dioxide monitors to self-check the adequacy of their ventilation, and mold and moisture booklets.

Initial results show an improvement in air quality with regard to volatile organic compounds, particulate matter and carbon dioxide. Lung health questionnaires completed with the families, to be verified by medical chart reviews, suggest fewer missed days of school, fewer hospitalizations and fewer clinic visits for respiratory illness. ANTHC staff members will incorporate the principles and methods from

this program's work into a permanent program that will use home modifications and education to improve the respiratory health of children in Alaska and throughout the United States.

For more information, visit the ANTHC's Air and Healthy Homes program website at www.anthc.org/what-we-do/community-environment-and-health/healthy-homes/.

