

Title of Intervention: Childhood Asthma Prevention Study of Colorado

Intervention Strategies: Environments and Policies, Individual Education, Supportive Relationships

Purpose of the Intervention: To reduce exposure to environmental factors that may cause asthma in infants

Population: Children with asthma from low-income families and their parents/caregivers

Setting: Urban homes in Denver, Colorado; home-based

Partners: None mentioned

Intervention Description:

- **Environments and Policies:** Caregivers were taught how to make changes in the home environment to improve asthma outcomes. Reduction of allergen levels was addressed by using the allergen levels and reported exposure within and outside the home as guides for goal setting. Allergens addressed included pets, cockroaches, smoking and dust mites. Since public housing project administrators conducted regular project wide extermination, families living in those units were helped to gain information about extermination dates and to clean before and after extermination. Caregivers without vacuum cleaners were provided with one.
- **Individual Education:** Caregivers from both groups received an educational videotape at the baseline interview that described their children's risk and actions that could be taken. All subjects received feedback letters regarding trigger levels following the baseline. To intervene with the caregivers' illness related to care giving, the nurses used a second videotape that addressed assessment of respiratory illness symptoms, communication with the medical care professional, action plans, types of medications and effective administration strategies. The videos were in both English and Spanish.
- **Supportive Relationships:** The intervention group received home visits from nurses. The nurse visitors continually assessed caregivers' mental health including mood disorders, relationship difficulties, problems in living and parenting problems. They intervened with problem solving, support and referrals as needed. In addition, nurses addressed well-child care and quality of parent-child interaction, including caregivers' emotional responsiveness and behavior management. Smokers received smoking cessation counseling.

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: Nurse
- Training: Not mentioned
- Technology: Equipment to play the videotapes
- Space: Homes
- Budget: Not mentioned
- Intervention: Video tapes, cleaning materials, traps, vacuum cleaners
- Evaluation: Questionnaire

Evaluation:

- Design: Randomized controlled trial
- Methods and Measures:
 - Interviews and observation assessed family asthma management system, environment inventory and quality of life.

Outcomes:

- **Short Term Impact:** Within the intervention group, cockroach allergen levels were significantly reduced and there was a trend toward reduction in dog dander levels. Asthma knowledge and provider collaboration improved significantly in the intervention group. The nurse home visitor intervention successfully affected several environmental and caregiver variables within the intervention group.
- **Long Term Impact:** Not measured

Maintenance: Not mentioned

Lessons Learned: The Childhood Asthma Prevention Study intervention was effective in reducing several environmental exposures and improving illness management.

Citation(s):

Klennert, M. D., A. H. Liu, et al. (2005). "Short-term impact of a randomized multifaceted intervention for wheezing infants in low-income families." *Arch Pediatr Adolesc Med* 159(1): 75-82.