

## HOME INTERVENTIONS FOR OLDER ADULTS WITH ASTHMA

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Older asthmatic adults are more likely to experience respiratory failure than younger adults and children with asthma. Older adults spend up to 90% of their time in the home where many allergens are found. While there is sufficient evidence that home interventions improve the health of asthmatic children, there is insufficient evidence for the effectiveness of home interventions with adults. Our research evaluates the hypothesis that multi-trigger, multifaceted home interventions improve respiratory health and reduce home asthma triggers for older adults.

**Methods:** We evaluated the effectiveness of conducting interventions in the homes of 86 diverse, low-income older adults (age 62 or above) diagnosed with asthma, residing in public and private subsidized housing. The two largest populations include Hispanics (45%) and Asians (20%). Data was collected on respiratory health outcomes before and after the home intervention (questionnaires on symptoms, quality of life, medication use, doctor/ER/hospital visits, and exhaled nitric oxide (eNO) a measure of lung inflammation). Asthma trigger activities (ATAs) and exposures were also evaluated before and after the home intervention (questionnaire, home survey, measurement of nitrogen dioxide (NO<sub>2</sub>), dust samples for rodent and cockroach allergens, biomarker for cigarette smoke exposure (urinary cotinine).

Interventions included education on asthma and environmental triggers; environmental remediation including mattress/pillow covers, provision of vacuum with HEPA filters, green cleaning supplies and changes in home as needed (commercial cleaning, integrated pest management, gas stove replacement, mold remediation).

**Results:** Significant health improvements were found in the following areas: number of doctor visits due to asthma, quality of life indicators including symptom and activity levels, and asthma control test.

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