

Healthy Homes In Seattle/King County

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September 21, 2012



Healthy Homes /

Seattle-King County



Healthy Homes Project

Healthy Homes I

- In-home environmental assessment and education by community health workers
- Comparison of **single visit model** to more intensive **multi-visit model**
- RCT of 274 low-income households with children with asthma
- Published in American Journal of Public Health, April 2005



Community Health Workers

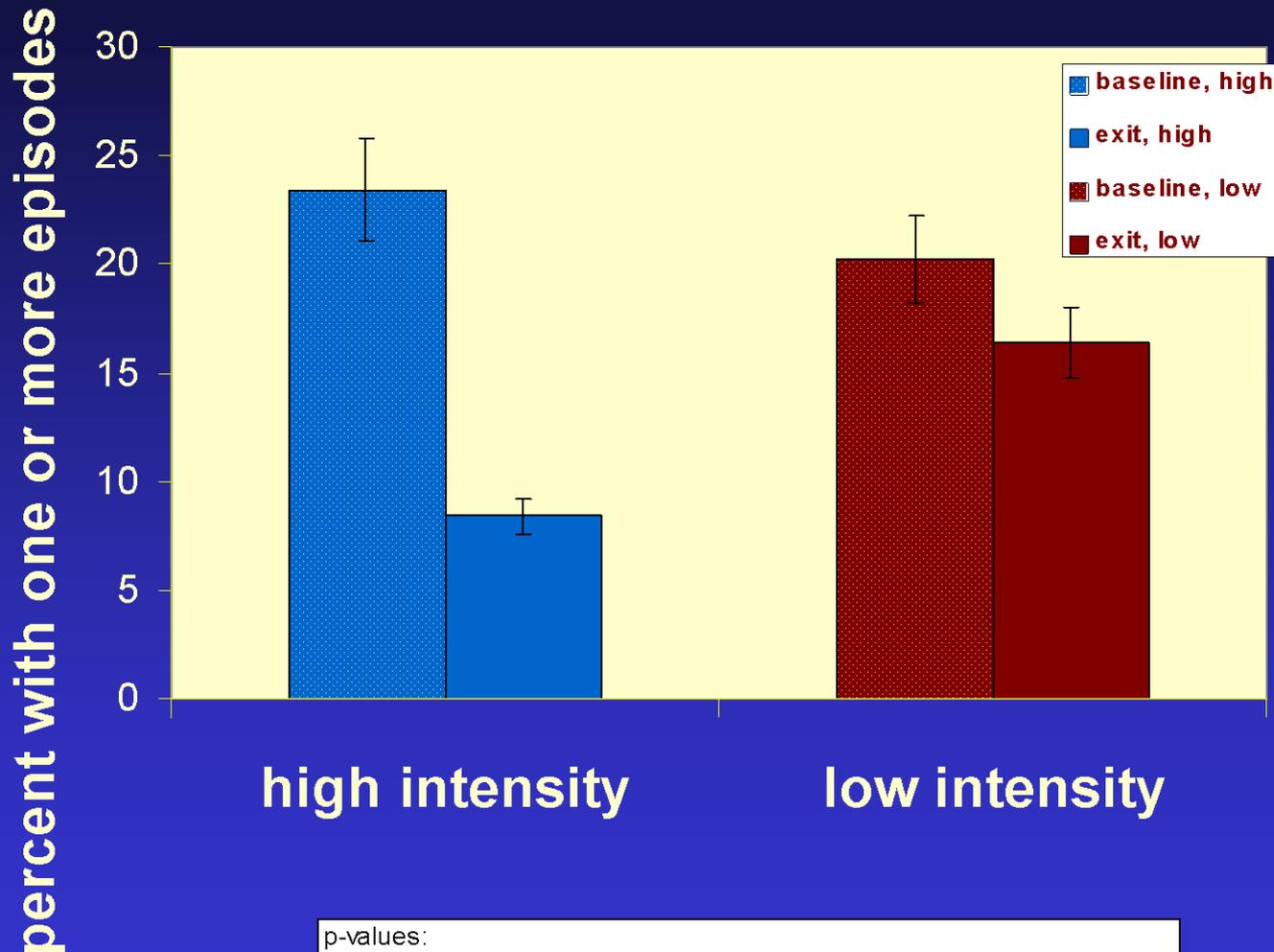
- Lay people from the community
- Share culture, language and life experiences with clients
- Personal experience with asthma
- Skilled at building trusting and supportive relationships with clients
- Bridge between community and service providers
- Receive rigorous and standardized training



Research Design

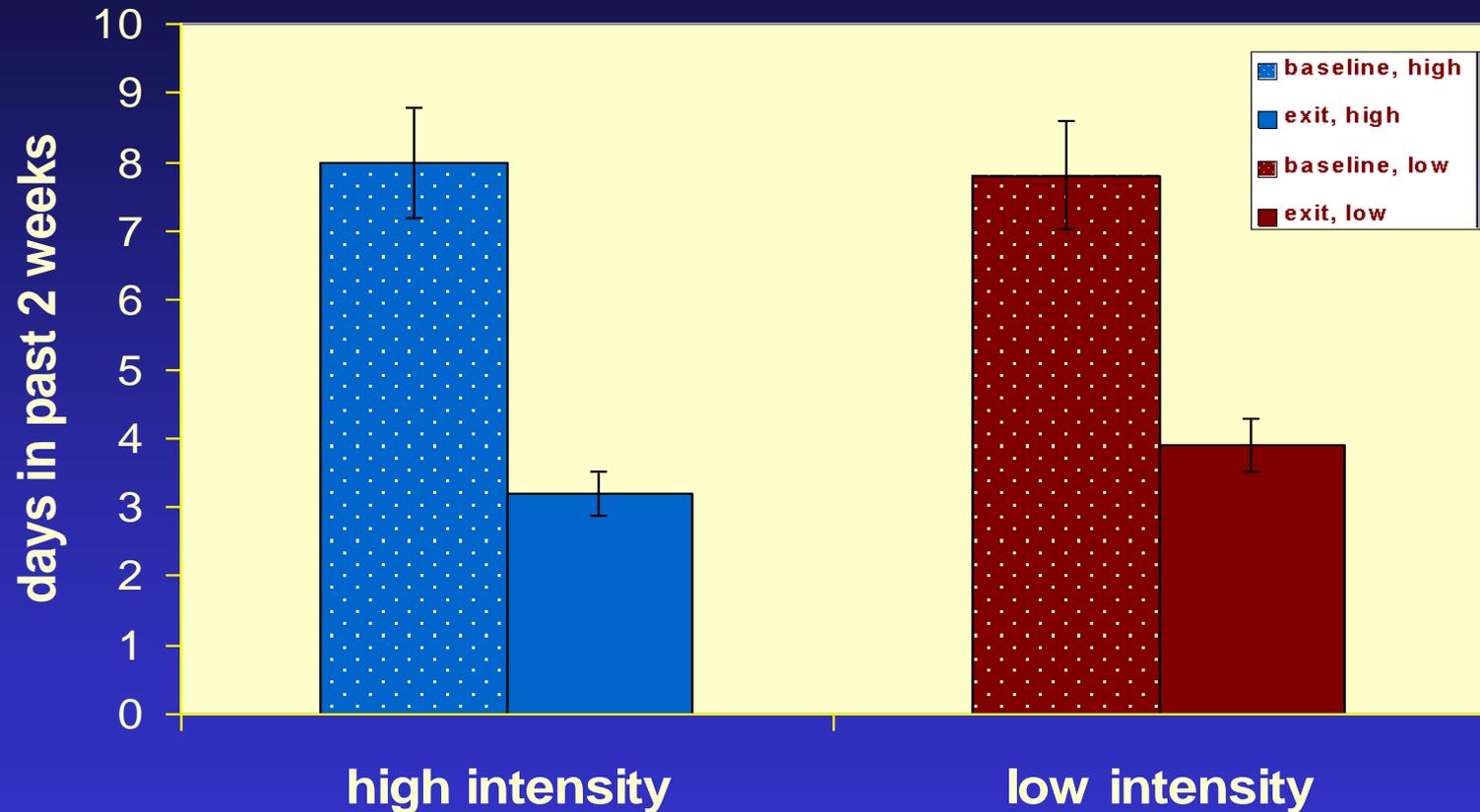
- **Eligibility**
 - Household income below 200% poverty
 - Child age 4-12 with asthma
- **Randomized controlled design**
- **High intensity group**
 - N = 138
 - full intervention
- **Low intensity group**
 - N = 136
 - One visit, follow-up call, bedding covers only

Outcome: Urgent Health Services



p-values:
0.000 (high intensity, baseline vs. exit, chi-square)
0.414 (low intensity, baseline vs. exit, chi-square)
0.041 (exit, low vs. high intensity, regression adjusted for baseline score)

Outcome: Symptom Days



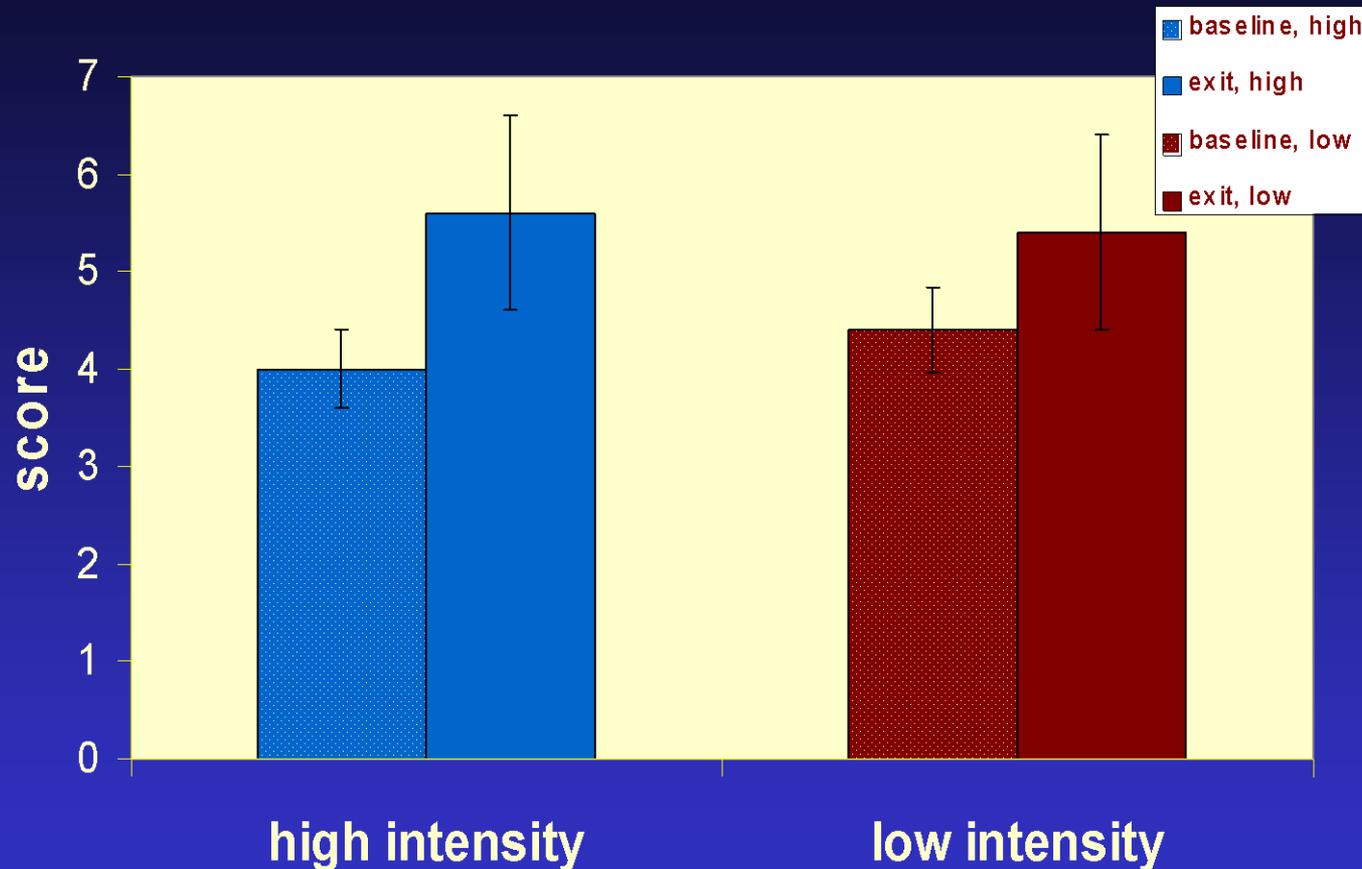
p-values:

0.000 (high intensity, baseline vs. exit, chi-square)

0.000 (low intensity, baseline vs. exit, chi-square)

0.123 (exit, low vs. high intensity, regression adjusted for baseline score)

Outcome: Caregiver Quality of Life



p-values:

0.000 (high intensity, baseline vs. exit, chi-square)

0.006 (low intensity, baseline vs. exit, chi-square)

0.001 (exit, low vs. high intensity, regression adjusted for baseline score)

Healthy Homes II



Funding source: NIEHS

Overview

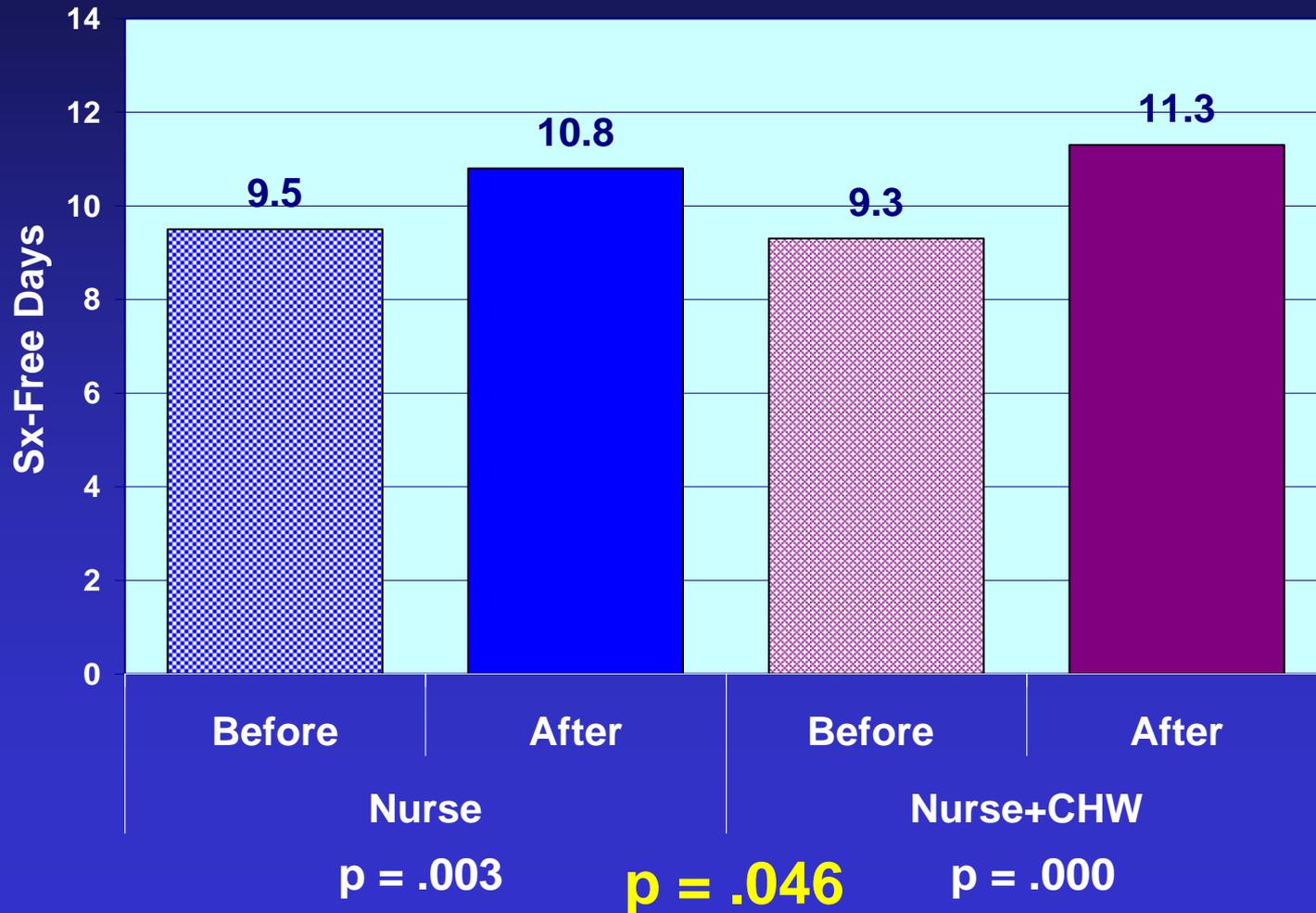
- Home visits by Community Health Workers
- Address reduction of **indoor triggers** and **improving self-management skills**
- Comparison of addition of CHW in-home asthma support to clinic-based nurse-provided education
- RCT of 309 low-income households with children age 3-13 with persistent/poorly controlled asthma
- Published in Archives of Peds and Adol Med 2009



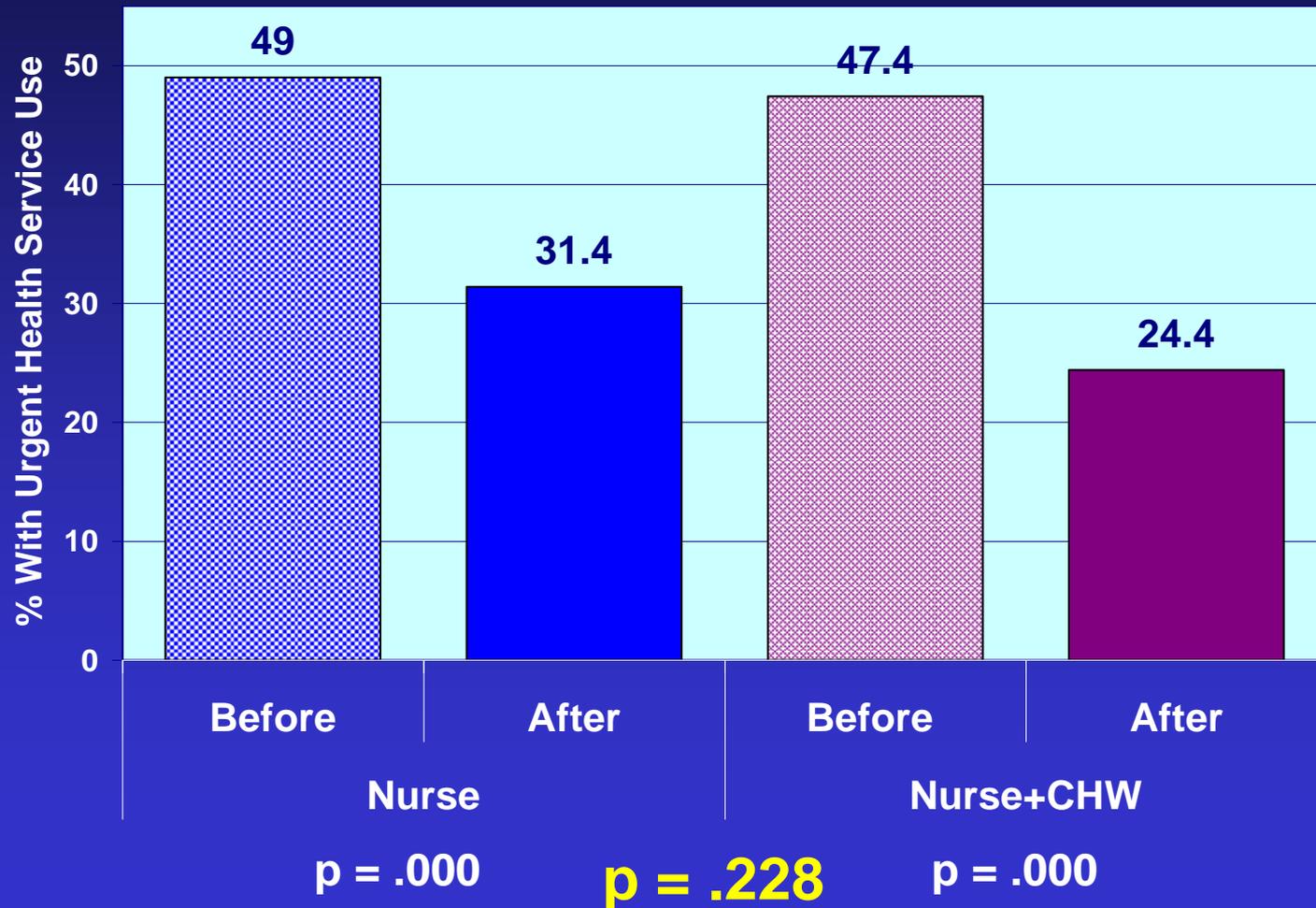
Research Design

- **Eligibility**
 - Household income below 200% poverty
 - Child age 3-13 with asthma
- **Randomized controlled design**
 - Clinic asthma nurse only (153)
 - Clinic asthma nurse + CHW home visits (156)
- **Compare outcomes at enrollment and one year later**
- **Community-based participatory research methods**

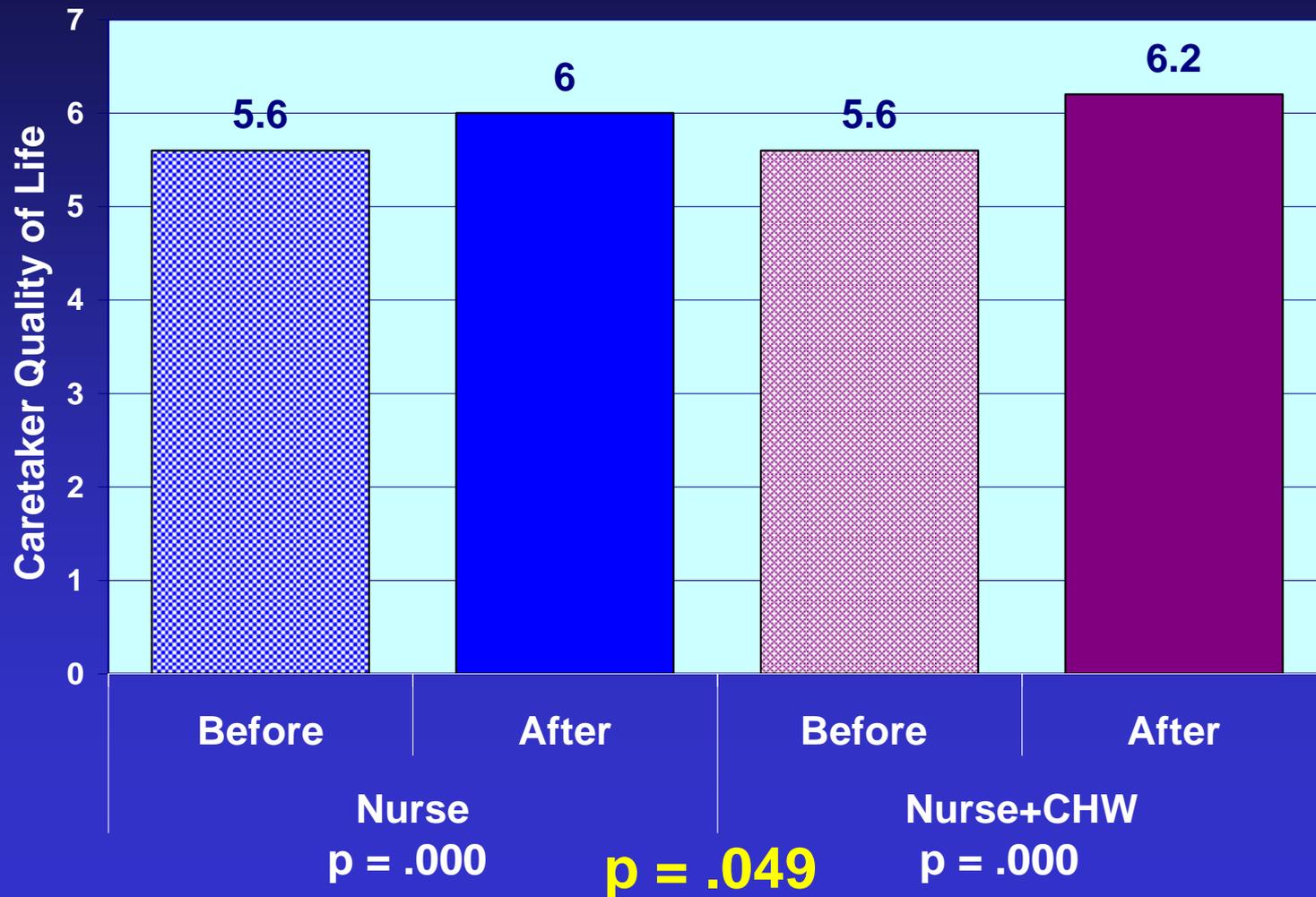
Symptom-Free Days



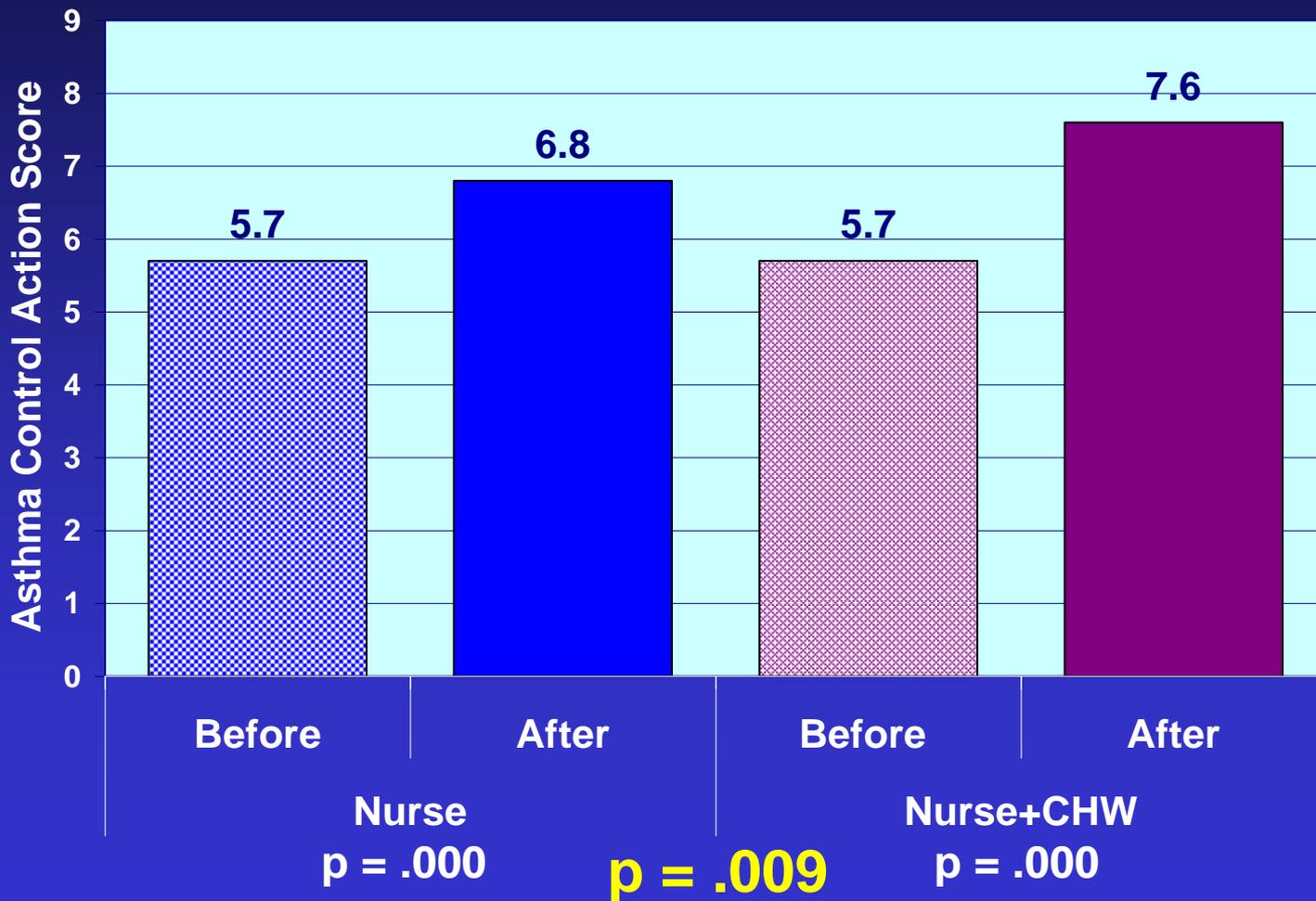
Urgent Health Services Use



Caretaker Quality of Life



Actions to Control Asthma



Home Visits for Adults: HomeBASE

- Randomized controlled trial comparing intervention to usual-care
- 366 participants
 - ◆ Age 18-65
 - ◆ Not well controlled asthma or worse
 - ◆ Speak either English or Spanish
 - ◆ Household income below 250% of federal poverty level
- Intervention
 - ◆ Intake visit and 4 follow-up visits by CHW
 - ◆ Self-management support
 - ◆ Supplies (bedding covers, bedding encasement, cleaning supplies, HEPA air filters, medication boxes)
 - ◆ Coordination with primary care

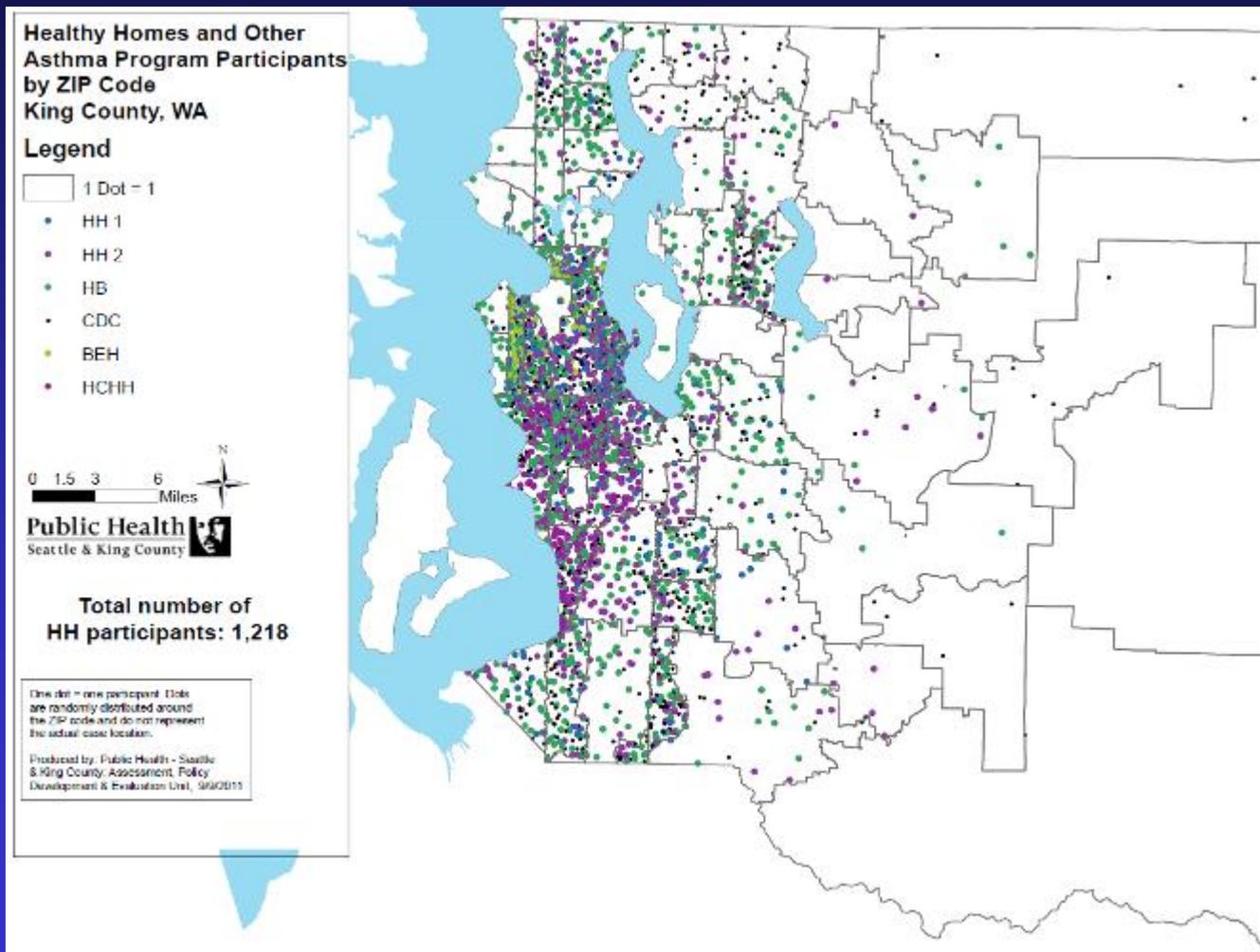
Funding source: NIEHS

HomeBASE

Outcomes

- **Outcomes**
 - ◆ Symptom-free days: 2.1 more per 2 weeks (95% CI = 1.0-3.2, $p < 0.001$)
 - ◆ Quality of Life: 0.5 units more (95% CI = 0.3-0.7, $p < 0.001$)
 - ◆ Urgent care utilization: no difference
 - ◆ ACQ score: 0.56 units better (95% CI = 0.34-0.77, $p < 0.001$)
- **Intermediate mediators**
 - ◆ Better medication use
 - ◆ Dust Control
 - ◆ Fewer pets
 - ◆ Action plan use

Homes We Have Visited 1,218



Conclusions

- **Home visits by CHWs that address self-management support and indoor trigger exposure improve asthma outcomes**
- **Addition of home visits by CHWs to clinic-based education improves asthma outcomes**
- **CHW home visits add 21 more symptom-free days per year in children, 55 in adults**
- **Benefits in quality of life and urgent health service use are more modest**

Conclusions

- **Offering CHW home visits is a promising strategy for reducing asthma disparities**
- **Offering families a choice of options for self-management support may be optimal**
 - ◆ **Home visits**
 - ◆ **1:1 clinic-based education**
 - ◆ **Group activities**

Key Elements of Home Visit Program

- **Visitor: CHW with caseload of 50-60 clients**
- **Client: Poorly controlled asthma**
- **Number of visits: Initial and 3 follow-up**
- **Content**
 - ◆ **Self-management skills**
 - ◆ **Trigger reduction**
 - ◆ **Effective communication with medical provider**
 - ◆ **Coordination with medical home**
- **Approach**
 - ◆ **Client-centered, motivational interviewing**
 - ◆ **Address psychosocial needs and resource barriers**
 - ◆ **Provide social support**

Key Elements of Home Visit Program

- **Supplies**
 - ◆ Vacuum
 - ◆ Bedding encasements
 - ◆ Cleaning kit
 - ◆ HEPA air filter for subset
- **Client tracking and follow-up**
- **Program infrastructure**
 - ◆ Training and continuing education
 - ◆ Supervision of home visitors
 - ◆ Clinical back-up
 - ◆ Quality monitoring
 - ◆ Data system



Implementing Home Visits

- **Cost: \$700-900 per household**
- **Recruitment**
 - ◆ **Plan identifies members with poorly controlled asthma**
 - **Utilization**
 - **Medications**
 - ◆ **Plan invites member to participate**
 - ◆ **Healthy Homes contacts member and enrolls**
- **Coordination**
 - ◆ **Visit encounters shared with plan and provider**
 - ◆ **Phone, email and or fax link between CHW and provider and plan chronic disease care coordinator**

Implementing Home Visits

- **Reimbursement**
 - ◆ Per member served (fixed charge)
- **Evaluation**
 - ◆ Plan tracks utilization, costs, medications
 - ◆ Healthy Homes tracks symptoms, control measures

The End...Thanks

