

Housing as a Social Determinant of Health

BRETT BYERLY

EXECUTIVE DIRECTOR

GREENSBORO HOUSING COALITION

“A child’s health and wellbeing should not be determined by their zip code”

Former HUD Deputy Secretary Ron Sims

Greensboro Housing Coalition Healthy Homes Team Activities:

- Asthma Demonstration Project
- GIS mapping (UNCG and various data sources)
- Home Assessments through referral and self referral. (Environmental Justice, Kresge, CFGG)
- Invest Health (RWJF and Reinvestment fund)
- Cottage Grove Community Centered Health (BCBSNC Foundation)
- Greensboro Housing Bond (2016 November Ballot @\$25 Million)
- Policy Advocacy around code enforcement (Changes to chapter 11 post RUCO)
- Landlord Tenant Partnership (Community Foundation of Greater Greensboro donor advised fund)

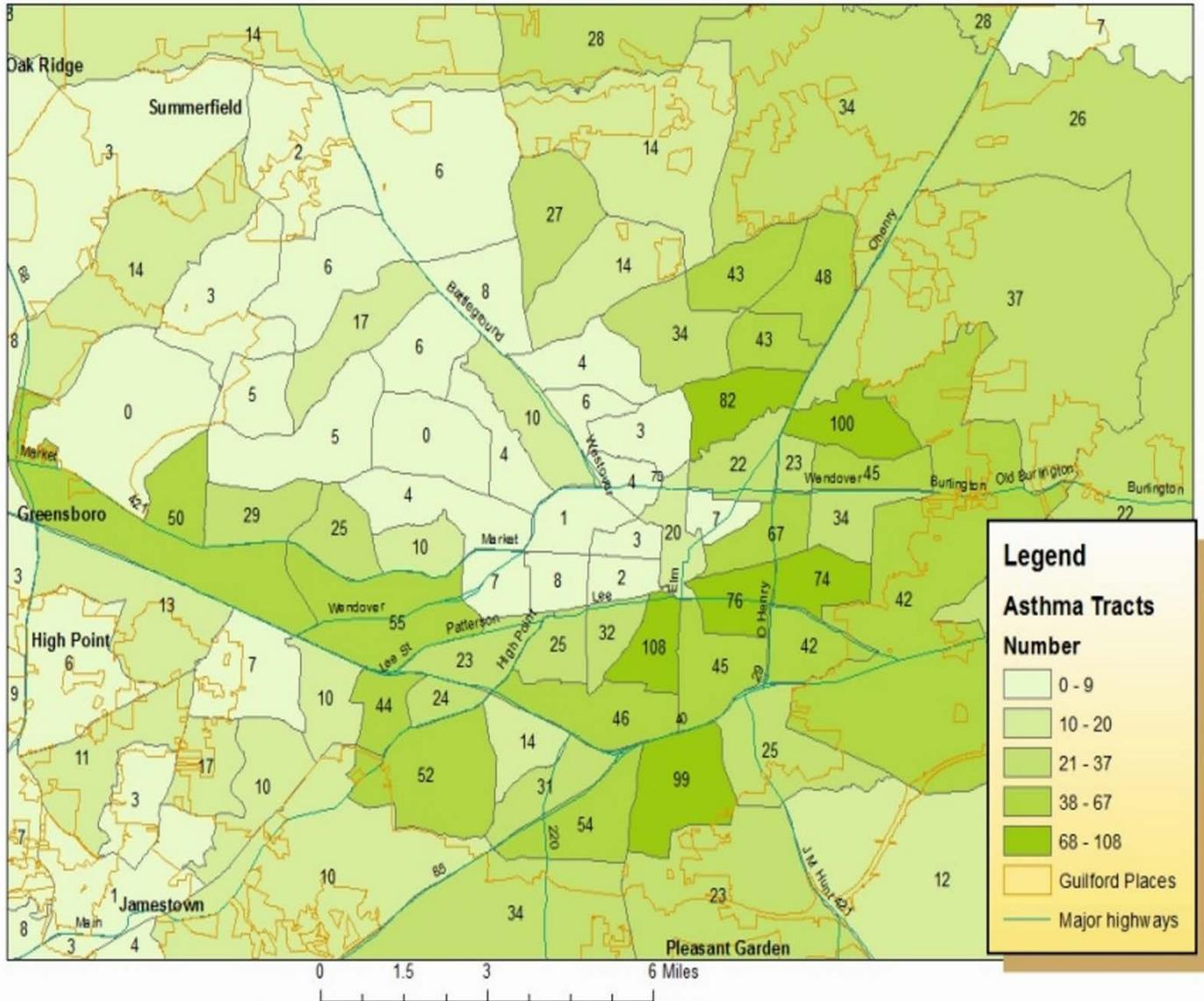
Asthma Mapping

When we map various problems issues facing Greensboro and overlap them, the same areas show up nearly every single time.

For example: Code enforcement cases, Evictions, Crime, Poverty, Life expectancy, wages, healthcare outcomes, educational outcomes.....

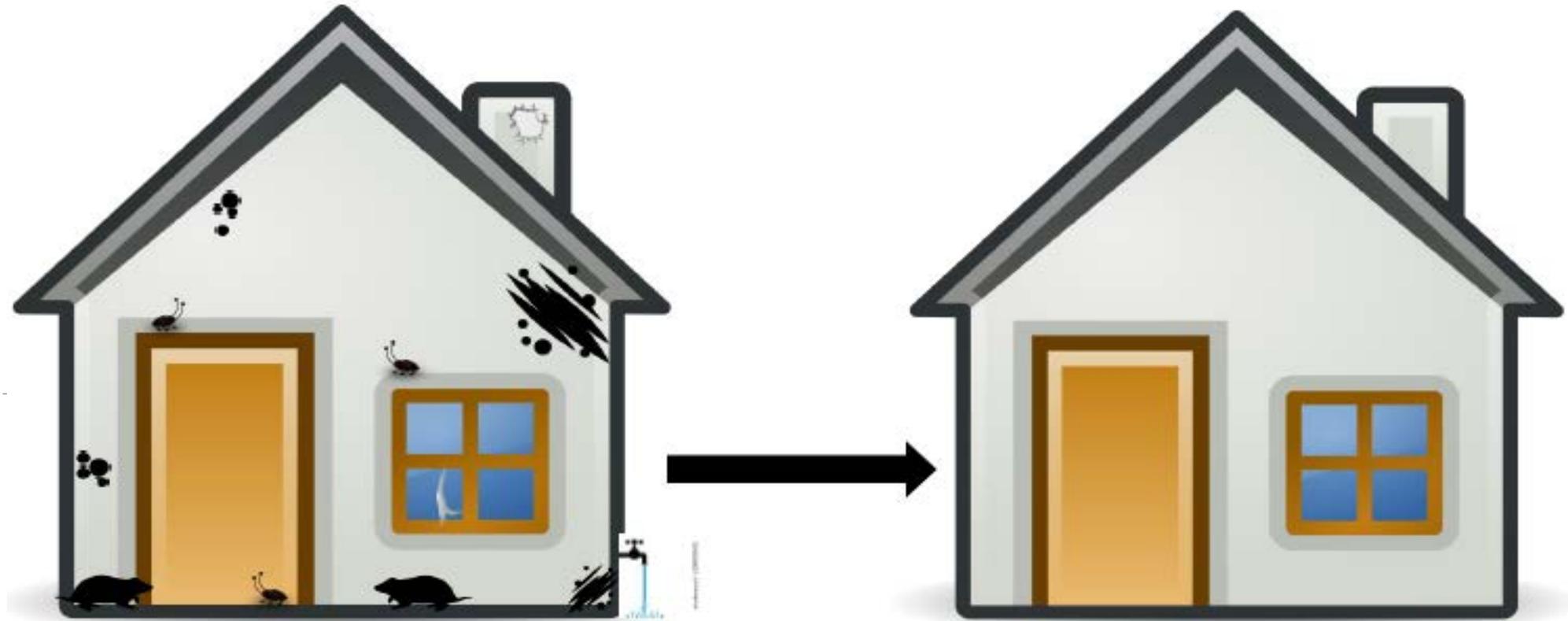
Who Pays?

Number of Inpatient and Outpatient Hospital Visits with Asthma as the Primary Diagnosis, by Census Tract, Cone Health, 2013



Source: Cone Health System hospital discharge data; Map prepared by the Guilford County Department of Public Health

Removing Asthma Triggers and Improving Children's Health



The Asthma Partnership Demonstration Project

Support Partners

The Kresge Foundation

The Community Foundation of Greater Greensboro

Action Partners

Greensboro Housing Coalition

Cone Health, and Triad Healthcare Network

University of North Carolina at Greensboro

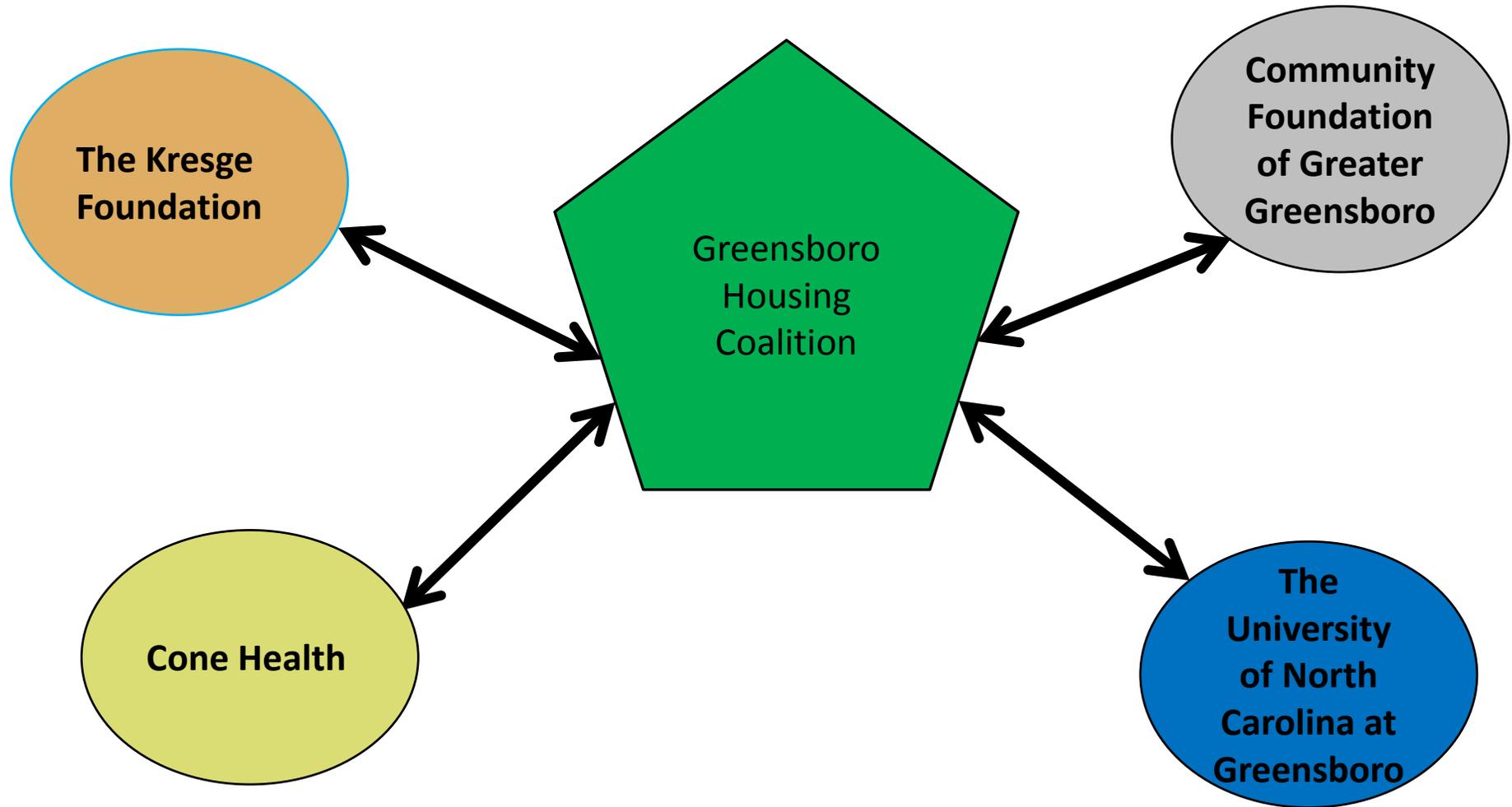
Beth McKee-Huger, MSW, April Richard, MPH, Brett Byerly, BA,
Jana L. Raczkowski, MPA - Greensboro Housing Coalition

Thomas C. Wall, MD. - Triad Healthcare Network, Cone Health

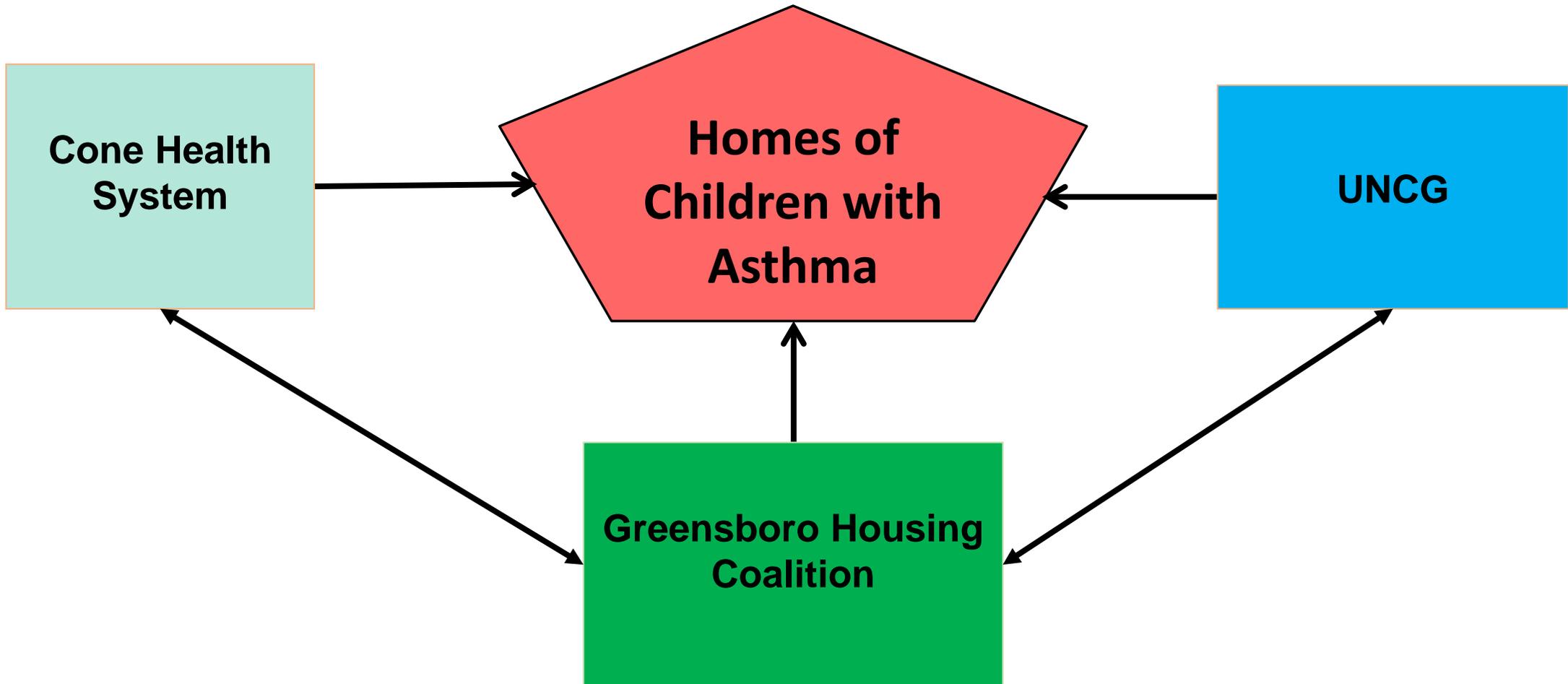
Kenneth J. Gruber, PhD. - University of North Carolina at Greensboro

Janice Gasaway, Rhonda Rumble, Elvin Perkins III - Cone Health

The Partnership



The Intervention Team



Demonstration Project Results

Reductions in frequency of negative effects of their children's asthma on:

- Sleeping
- Job or work around the house
- Family activity plans

Fewer worries or concerns about their child getting enough sleep and performing normal daily activities

Fewer side effects of their children's asthma medications were reported.

Reduced use of asthma medication, medication applications, and health visits were noted.

Households with return visits had 50% lower hospital bills for childhood asthma treatment

Asthma Triggers Affecting Child

Dust	Mold	Smoke	Scents	Paint	Cooking Odors
64.3%	59.5%	71.4%	47.6%	23.8%	14.3%
Food	Meds	Exercise	Pollution	Pollen	Cold Air
38.1%	14.3%	71.4%	59.5%	92.9%	52.4%
Dust Mites	Roaches	Pets	Any Trigger		All Cases
47.6%	28.6%	35.7%	97.6%		N = 42

Service Costs					
	Number of Homes*		Costs		
Air Flow	5		\$ 3,885		
HVAC	10		\$ 4,263		
Mold Control	5		\$ 1,165		
Plumbing Repairs	3		\$ 460		
Carpet/ Floors	4		\$ 4,619		
Pest Management	8		\$ 2,629		
Organization	7		\$ 750		
Sleep Protection	21		\$ 1,021		
Cleaning	41		\$ 3,831		
Total Charges			\$ 22,623		
Range of Costs		\$30 -	\$4,997		
*One additional home received repair assistance (Air Flow - \$235 and Plumbing Repairs - \$490 - Total \$1,225) but was dropped from the study after it was determined the child was living only occasionally in the home.					

	Full Initial Sample			Matched Initial-Follow-up Sample				
					Initial	Follow-up	Initial	Follow-up
Frequency of Being an Issue	N	Mean Rating	Percent Reporting Most or All of the Time*	N	Mean Rating		Percent Reporting Most or All of the Time	
You experienced trouble sleeping because of your child's asthma?	38	3.50	39.0	21	3.43	3.00	46.4	25.0
Your child's asthma interfered with your job or work around the house?	38	3.21	29.3	21	3.00	2.52	32.1	25.0
Family needed to change plans because your child was irritable due to asthma?	38	3.21	31.7	20	3.35	2.15‡	32.1	7.1
You were upset because of your child's cough, wheeze, or breathlessness?	38	3.13	29.3	21	3.05	2.71	32.1	25.0
Felt frustrated or impatient because your child was irritable due to asthma?	37	2.73	17.1	18	2.83	2.78	17.9	25.0
Felt helpless or frightened when your child experienced coughing, wheezing or breathlessness?	38	2.71	29.3	21	2.90	2.52	28.6	17.9
Your child's asthma interfered with family relationships?	37	1.86	9.8	20	1.80	1.80	7.1	0.0
*Lower ratings associated with impact perceived to be less frequent								
Mean Rating: 5-point scale: None of the Time (1) - All of the Time (5)								
**Percent reporting either Most of the Time or All of the Time								
‡ $p < .05$								

Hospital Charge Data	All Cases		Matched Cases	
	Pre	Post	Pre	Post
	(2012-2013)	(2014-2015)	(2012-2013)	(2014-2015)
	Number of Cases with Pre and Post Intervention Asthma Related Hospital Charges	37	12	11
Total Charges	\$ 320,061	\$ 49,206	\$ 192,142	\$ 33,598
Lowest	\$ 2,098	\$ 1,069	\$ 2,098	\$ 1,069
Highest	\$ 43,685	\$ 15,608	\$ 43,685	\$ 7,616
Median	\$ 5,507	\$ 2,577	\$ 5,198	\$ 2,565
Average	\$ 8,650	\$ 4,100	\$ 7,486	\$ 3,054
Number of Cases with Pre and Post Intervention Asthma Related Hospital Charges Including Cases with No Asthma Related Hospital Charges			20	20
Average			\$ 9,607	\$ 1,680

