

# Community Asthma Prevention Program

*Improving Asthma Outcomes Through  
Evidence-Based Interventions in the Community*



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# Location and Target Population

- Philadelphia: Population of 1.4 million with asthma prevalence of 22–26%
- Target Population: Children with asthma who live in disadvantaged neighborhoods with high asthma prevalence
  - West, Southwest, South, and North Philadelphia



# Bold Goals

CAPP will reduce asthma hospitalizations, emergency visits and school absenteeism by 50% within in 1 year of participation in our Home Visit Program for inner-city children with asthma who live in disadvantaged neighborhoods in Philadelphia.

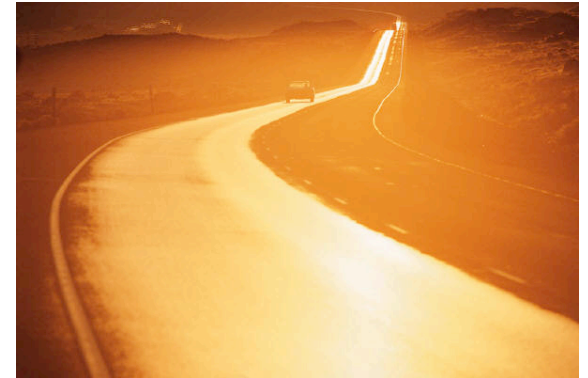
# CAPP Overall Goals

- To increase asthma knowledge and improve asthma self-management behavior
- To improve quality of life for children with asthma
- To equip members of the community to become neighborhood asthma experts
- To promote asthma-safe home and school/child care environments;
- To reduce burden of asthma on disparate populations.



# Long Term Impacts and Outcomes

- Patient level
  - Improved knowledge
  - Reduction of asthma triggers
  - Reduced symptom days
  - Reduced missed school days and parent work days
  - Reduced emergency visits and hospitalizations
- Practice level
  - Improved use of asthma guidelines in practice
  - Change in physician behavior



# Long Term Impacts and Outcomes

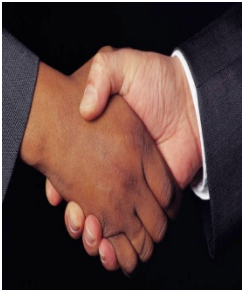
- Community Level
  - Asthma knowledge and awareness
  - Asthma prevalence
- School Level
  - Student knowledge
  - School professional knowledge
  - Health visits data
  - Asthma prevalence



# Interventions/Activities over 14 years

- Clinical and Care Coordination
  - Asthma navigators
  - Primary care provider education
- Environmental Activity
  - Home Education and environmental remediation
- Care Coordination
  - Asthma Navigators
  - Letters to PCP's
  - PI calls to PCP's
  - PCP office visits
- Community Activities
  - Community asthma self-management education
  - School student education
  - School professional education
  - School screening
  - Door-to-door screening





# CAPP Collaborative Partners

## Community Groups

- Philadelphia Allies Against Asthma
- Germantown Settlement
- Congreso de los Latinos Unidos
- Beloved St John Evangelistic Church
- YMCA- Columbia North
- Casa Del Carmen

## Hospitals

- Children's Hospital of Philadelphia
- Temple Childrens Hospital
- Thomas Jefferson Hospital
- Albert Einstein Hospital

## Managed Care Organizations

- Health Partners
- Keystone Mercy Health Plan
- The School District of Philadelphia
- US EPA, Region 3
- Health Promotions Council
- Philadelphia Health Management Corp

## HealthCare Providers

- Temple Health Connections
- Philadelphia Department of Health
- Maria de los Santos
- Fairmount Health Center



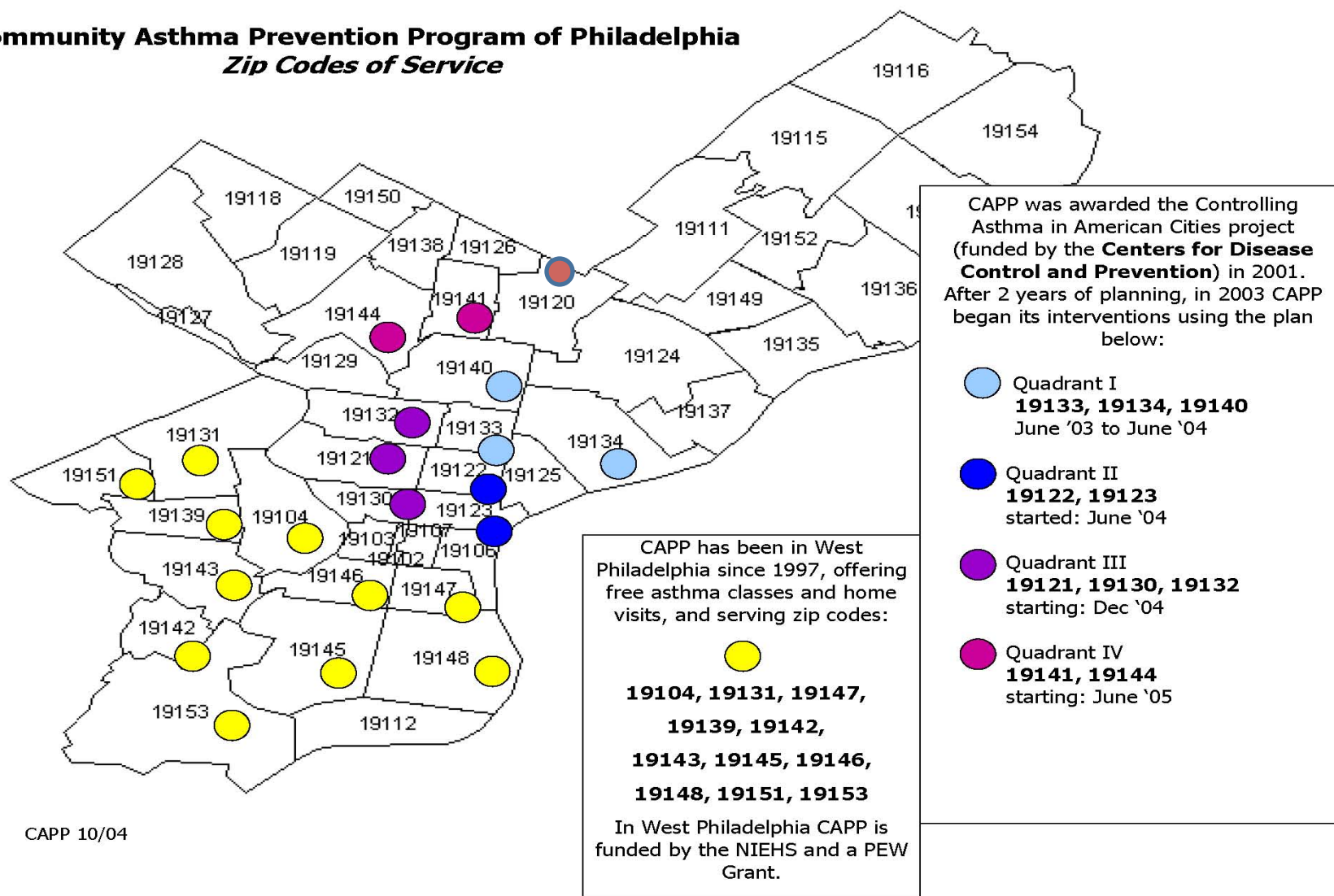
# Evaluation and Results

- Outcomes Tracked

- Fidelity to Protocol for Intervention (observation, chart audits)
- Completion of Intervention (written form)
- Patient characteristics (demographics, education, etc)
- Home environment assessment (pre/post)
- Asthma knowledge change (pre/post)
- Asthma symptoms (biweekly diary by caregiver or child)
- Asthma-related emergency room and hospital visits (EMR or self-report biweekly)
- Satisfaction of caregiver, patient or physician

# CAPP's Outreach from 1997- present

## Community Asthma Prevention Program of Philadelphia *Zip Codes of Service*



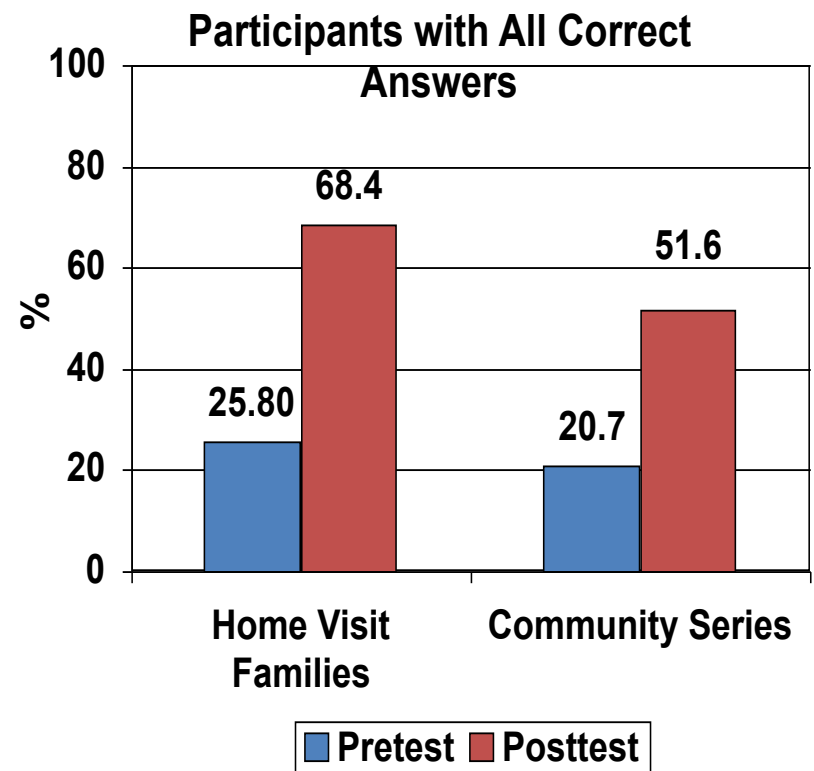
## Results so far....

- >3000 caregivers and children attended classes
- >2000 children received home visits intervention
- 600+ school professionals trained
- 600+ students attended classes
- >200 physicians and nurses trained

# Results- Knowledge

Table 1. *You Can Control Asthma* Knowledge Scores

	Correct Responses		
	Pre	Post	Change
Classes with Home Visiting Families n=187	81.9%	94.2%	+12.3%
Classes in the Community n=104	71.1%	90.6%	+19.5%



# Home Education and Environmental Remediation Results

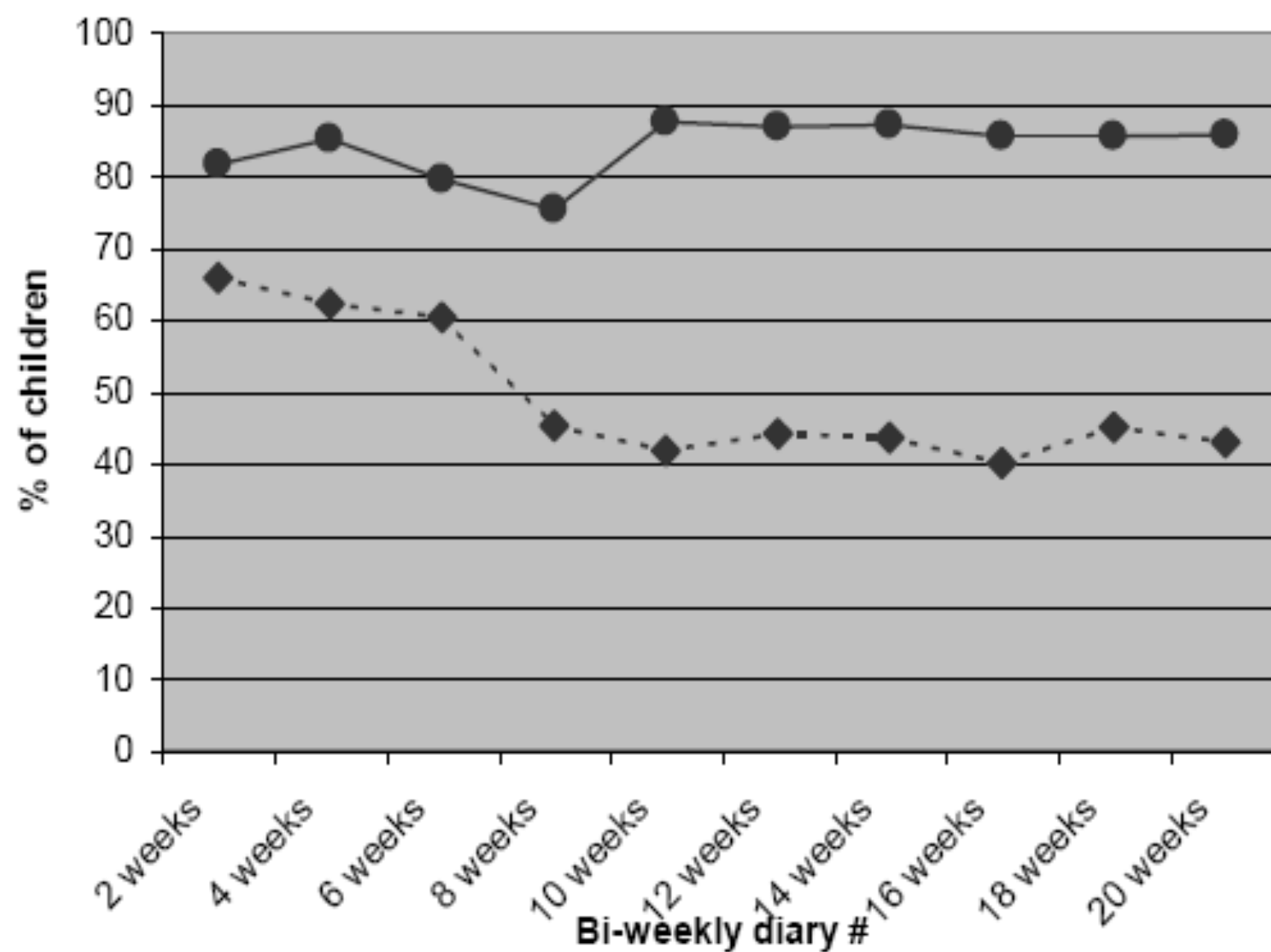
<i>Paired Analysis n=208</i>	Baseline	12 month	p-value
<b>ED visits last 12 months</b>	2.04(±1.43)	1.04(±2.13)	<0.05
<b>Hospitalizations last 12 months</b>	.90(±2.11)	0.39(±1.04)	<0.05
<b>Missed school for any reason</b>	7.13(±11.47)	6.13 (±7.97)	0.49
<b>Missed school for asthma</b>	5.85 (±10.46)	4.02 (±6.44)	<0.05

# Home Asthma Education and Environmental Intervention Results

<i>Paired Analysis n=208</i>	Baseline	12 month	p-value
# of days using rescue meds	3.72 (±4.58)	2.18 (±3.55)	<0.05
# of days with symptoms	3.17(±4.25)	1.71(±2.92)	<0.05
# nights with symptoms	2.82 (±4.22)	1.44 (±3.29)	<0.05
# of days child slowed down because of asthma	2.90 (±4.83)	1.00 (±2.13)	<0.05

**Figure 13. Medication Use**

n=76 children n=847 diaries



**Mean Asthma Symptom Scale Score by  
Month Sequence**





# Program Management

- Participatory Approach to creating Design and Implementation of Interventions
- Identify Asthma Champions
- Meet regularly with staff and partners
  - Review survey documents
  - Review data collection tools
- Peer review of charts
- Quality Data runs on a quarterly basis
- Stay abreast of asthma literature
- Expect and Inspect!