

# Sustainable Strategies for Asthma Care:

*Best Practices From the 2018 Asthma Award Winners*





# Welcome to the Webinar

## Sustainable Strategies for Asthma Care: Best Practices From the 2018 Asthma Award Winners

### Moderator

- **Tracey Mitchell**, U.S. Environmental Protection Agency (EPA)

### Presenters

- **Kimberlee Honda**, Clinic Director, The Pediatric Asthma and Allergy Clinic at Zuckerberg San Francisco General Hospital
- **Tyra Bryant-Stephens**, Medical Director, The Community Asthma Prevention Program at the Children's Hospital of Philadelphia

**Tuesday, May 22, 2018**

Webinar: 1:00 p.m. – 2:00 p.m. EDT

Live Online Q&A: 2:00 p.m. – 2:30 p.m. EDT on [AsthmaCommunityNetwork.org](https://AsthmaCommunityNetwork.org)

**Operator-Assisted Toll-Free Dial-In Number: 866-527-8921**

**Conference ID: 5258357**

## Polling Question 1

**What type of organization do you represent?**

1. Government agency
2. Health care provider
3. Health plan
4. Community-based program
5. Other

## Polling Question 2

**What actions are you already taking to pursue sustainable financing?**

1. Researching sustainable financing opportunities in my state.
2. Exploring partnerships with programs in my community.
3. Reaching out to state/local agencies to begin a dialogue.
4. Reviewing the resources on [AsthmaCommunityNetwork.org](http://AsthmaCommunityNetwork.org).
5. None of the above.

# Agenda

1. EPA's National Environmental Leadership Award in Asthma Management
2. Hear From Speakers
  - **Kimberlee Honda**, Clinic Director, The Pediatric Asthma and Allergy Clinic at Zuckerberg San Francisco General Hospital
  - **Tyra Bryant-Stephens**, Medical Director, The Community Asthma Prevention Program at the Children's Hospital of Philadelphia
3. Join the Q&A Session in the [AsthmaCommunityNetwork.org](https://www.AsthmaCommunityNetwork.org) Discussion Forum



## Question & Answer Session on AsthmaCommunityNetwork.org Discussion Forum

Immediately after the webinar, join us in the [AsthmaCommunityNetwork.org](https://AsthmaCommunityNetwork.org)  
**Discussion Forum** for a live online Q&A Session:  
2:00 p.m. – 2:30 p.m. EDT

To post a question in the **Discussion Forum**, follow these directions:

1. If you are a Network member, log in to your [AsthmaCommunityNetwork.org](https://AsthmaCommunityNetwork.org) account.

***Not a member?** Create an account at [AsthmaCommunityNetwork.org](https://AsthmaCommunityNetwork.org) by clicking the “**Join Now**” link at the top of the page. Your account will be approved momentarily and you can begin posting questions.*

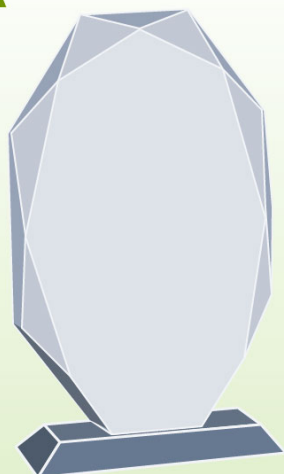
2. Click on the “**Discussion Forum**” button on the home page.
3. Click on the “**Live Online Q&A for 5/22/18 Webinar**” link.
4. Click on the “**Post to the Forum**” link to post your question.
5. Enter your question and click the “**Save**” button at the bottom of the page.

# Learning Objectives

## **Participants will—**

- Hear successful strategies from winners of the 2018 National Environmental Leadership Award in Asthma Management for addressing asthma triggers, engaging CHWs and pursuing program sustainability.
- Learn how building partnerships with community organizations, including with local school districts, strengthens community ties and improves comprehensive asthma care.
- Understand how to effectively track data to measure key program outcomes and cost savings.
- Discover strategies for pursuing reimbursement through Medicaid and from health plans.

# About the Award

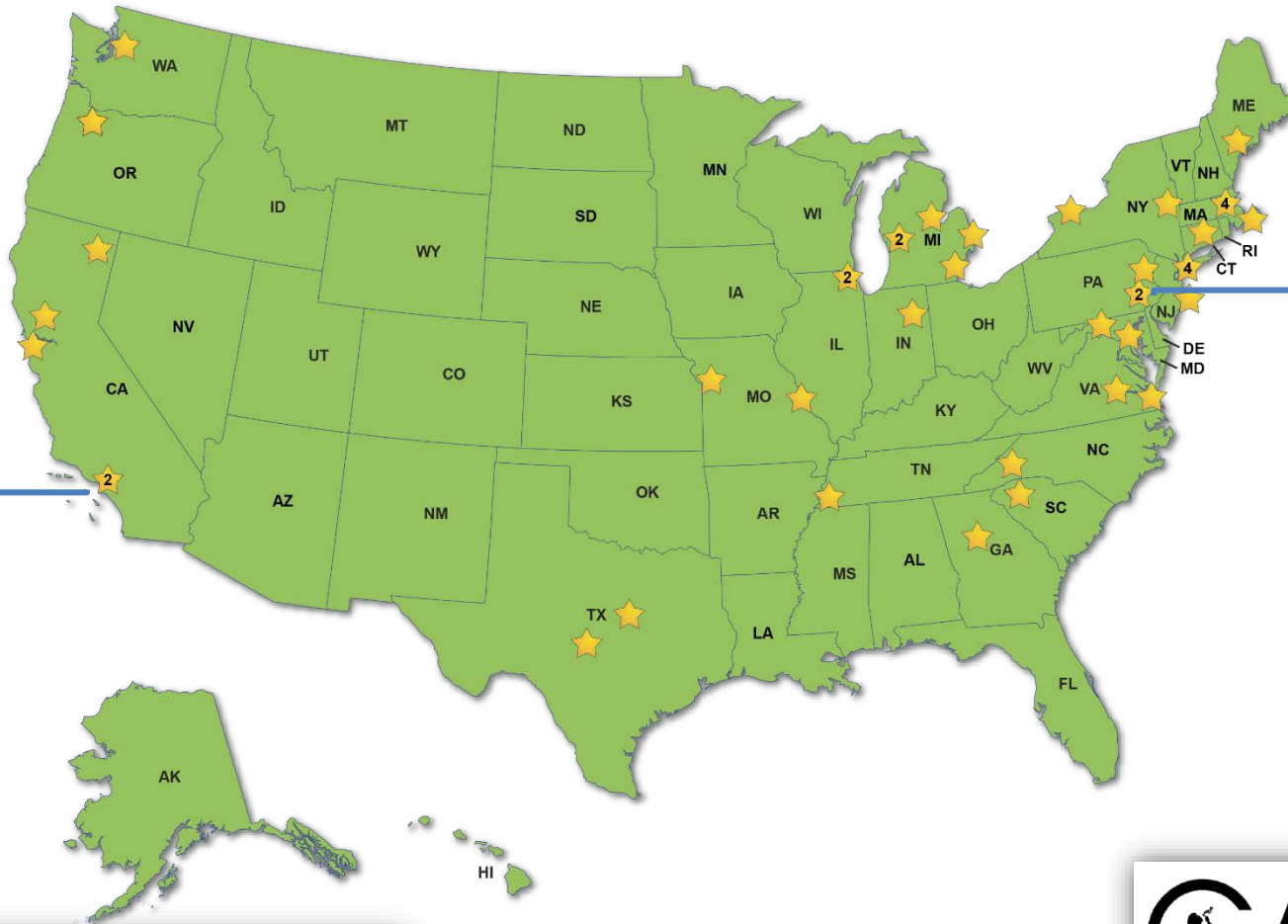


**NATIONAL  
ENVIRONMENTAL  
LEADERSHIP AWARD  
IN ASTHMA  
MANAGEMENT**

1. It is the nation's highest honor for exceptional asthma management programs.
2. The goal of the Awards program is to showcase best practices in asthma care and management.
3. To be eligible, applicants must use the National Institutes of Health (NIH) *Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma*.
4. Join the Hall of Fame: Apply in 2019!  
[www.AsthmaCommunityNetwork.org/Awards](http://www.AsthmaCommunityNetwork.org/Awards)



# Hall of Fame



# 2018 Awards Ceremony



The Pediatric Asthma and Allergy Clinic at  
Zuckerberg San Francisco General  
Hospital

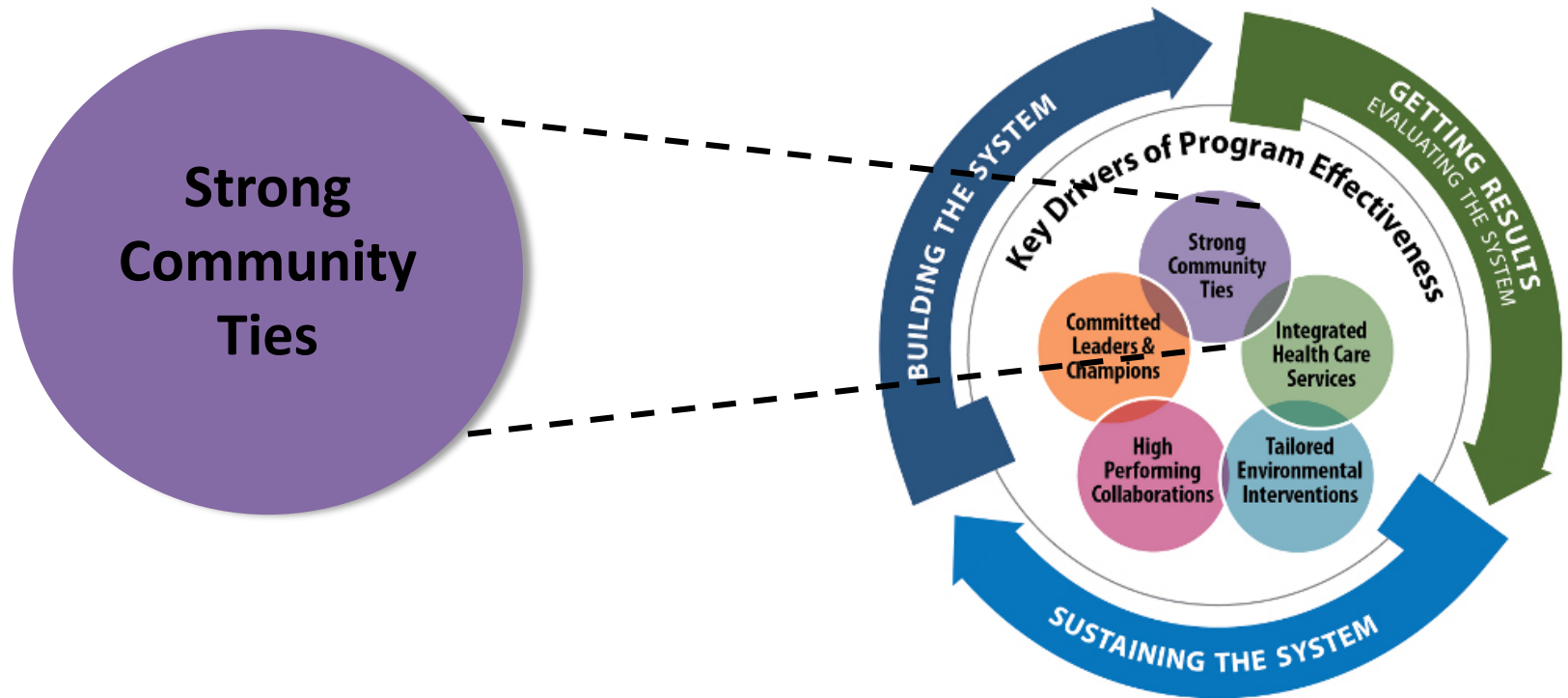


The Community Asthma Prevention  
Program at the Children's Hospital of  
Philadelphia

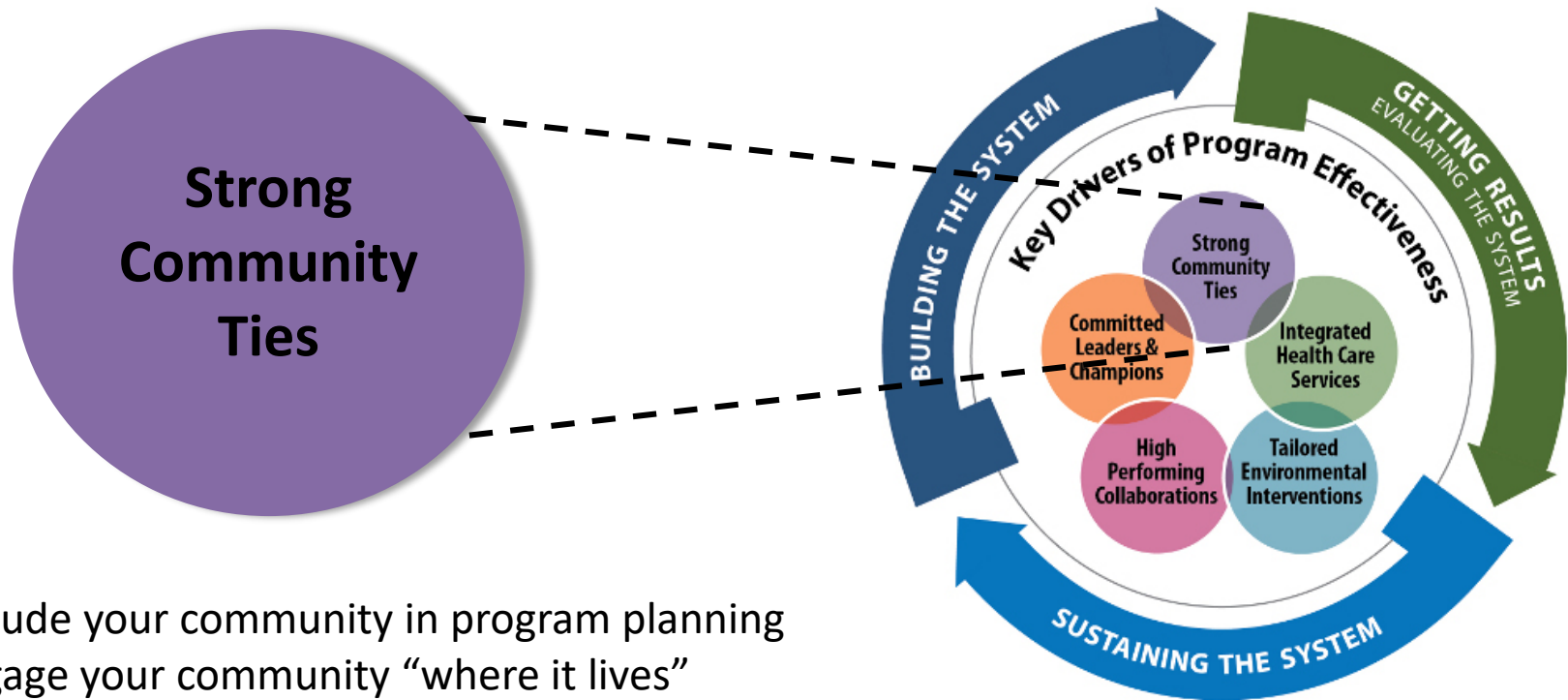
# The System for Delivering High-Quality Asthma Care



# Connecting to the System

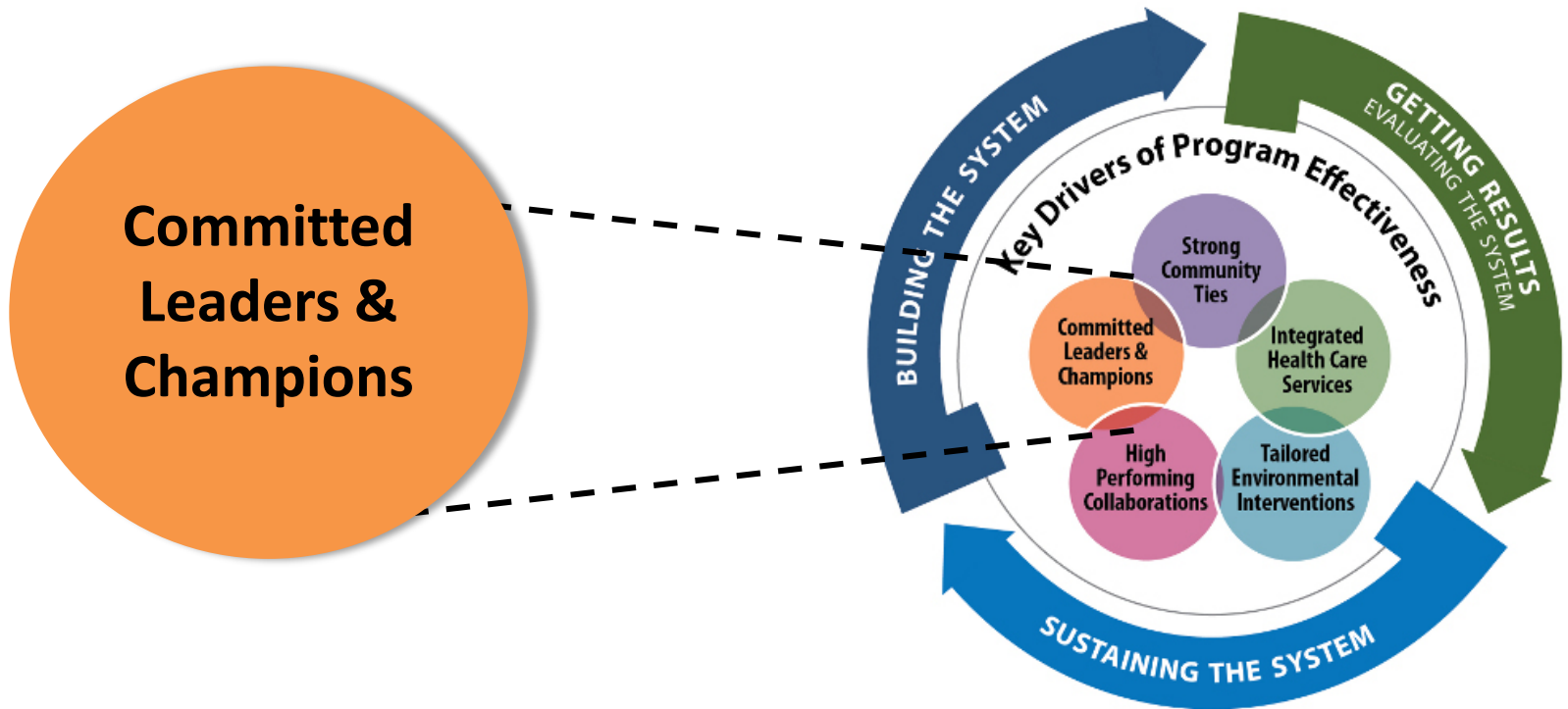


# Connecting to the System



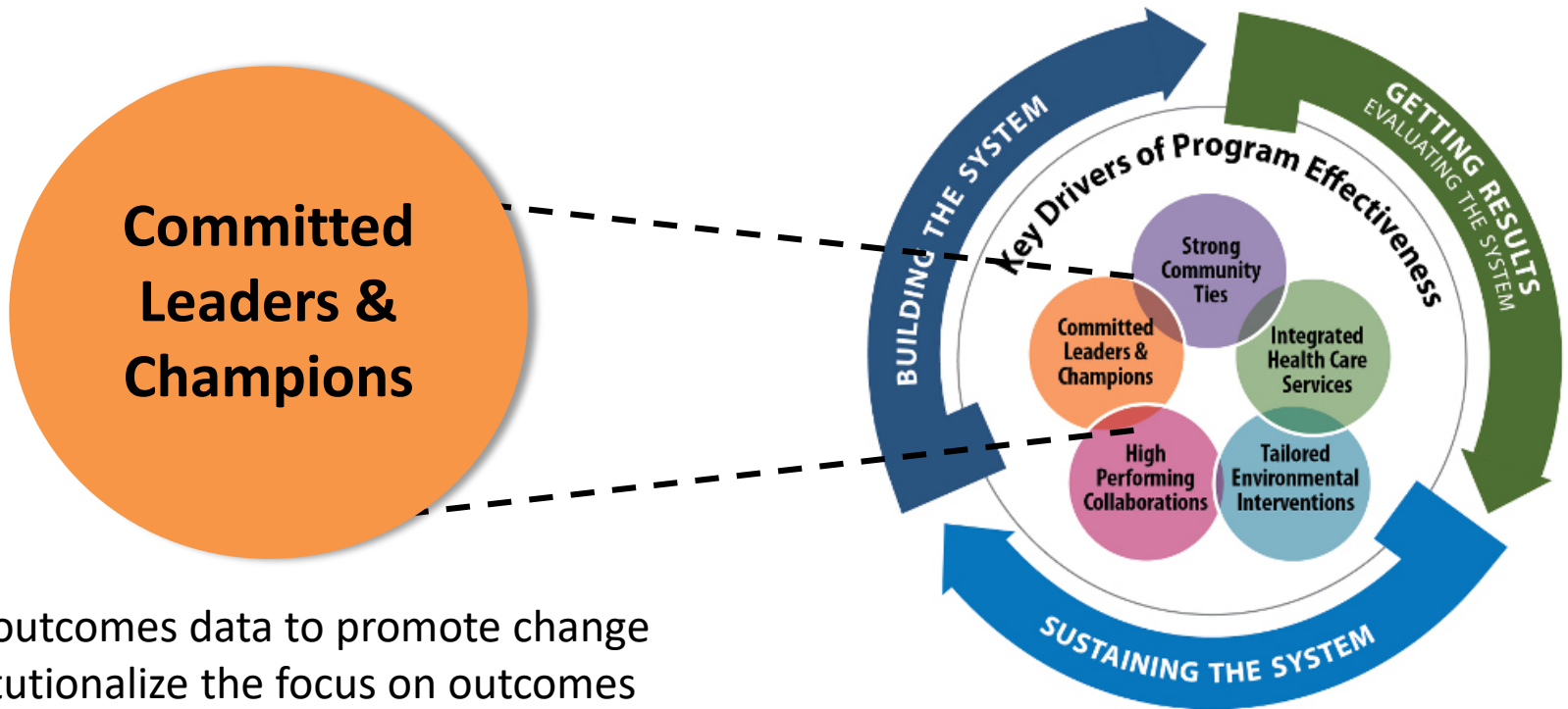
- Include your community in program planning
- Engage your community “where it lives”
- Make it easy to accept services

# Connecting to the System





# Connecting to the System



- Use outcomes data to promote change
- Institutionalize the focus on outcomes
- Create program champions

# Pediatric Asthma and Allergy Clinic at the Children's Health Center, Zuckerberg San Francisco General Hospital

Kimberlee Honda



University of California  
San Francisco



PRISCILLA CHAN AND MARK ZUCKERBERG  
SAN FRANCISCO GENERAL  
Hospital and Trauma Center



# Pediatric Asthma and Allergy Clinic



Kimberlee Honda, FNP  
Andrea Marmor, MD  
Children's Health Center  
Zuckerberg San Francisco General Hospital



# The Challenge:

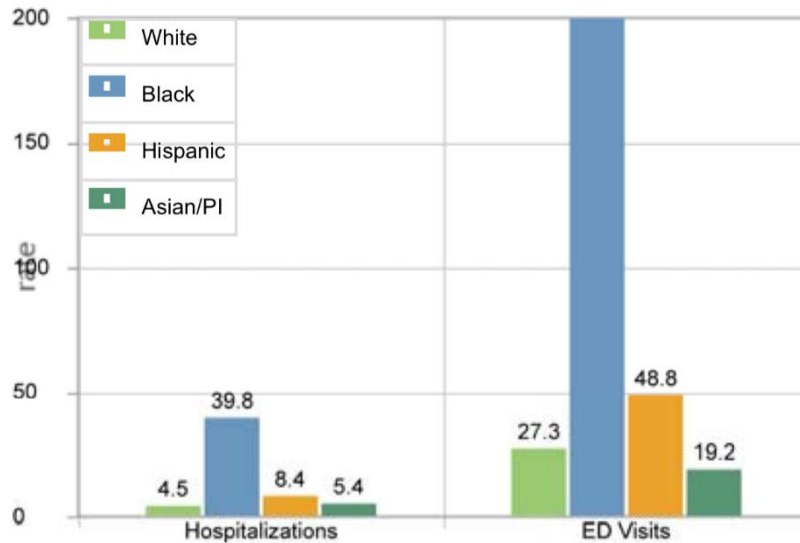
## Asthma in San Francisco

- Childhood prevalence (0-14 yo) ~**13.8%**
  - Lifetime prevalence 23%
  - At ZSFG, asthma remains the **top admitting pediatric diagnosis** and among top 5 reasons for seeking emergency care
- Disproportionally affects low income, ethnic minority, inner-city children
  - Few specialty services exist, gaps in service for under/uninsured pediatric population

# Local Morbidity

## ASTHMA DISPARITIES

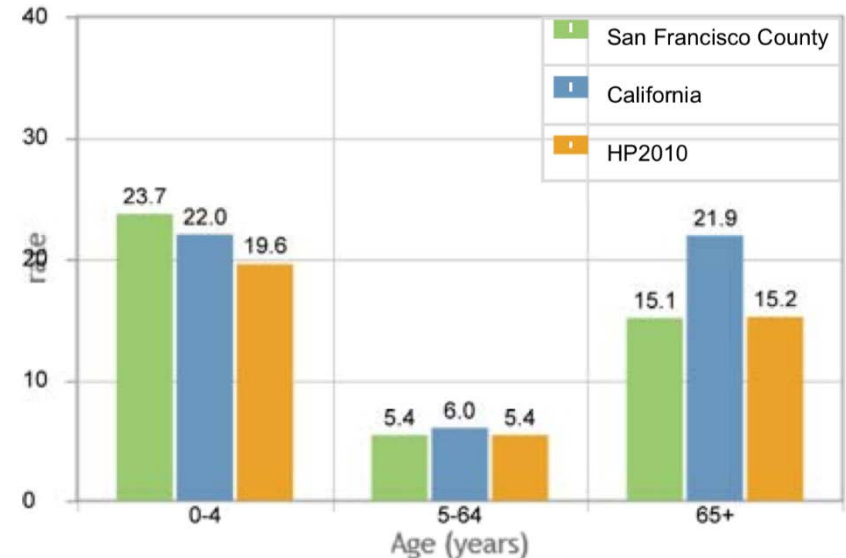
Age-Adjusted Asthma Hospitalizations and ED Visits per 10,000 San Francisco County Residents by Race/Ethnicity, 2014



Data Source: datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

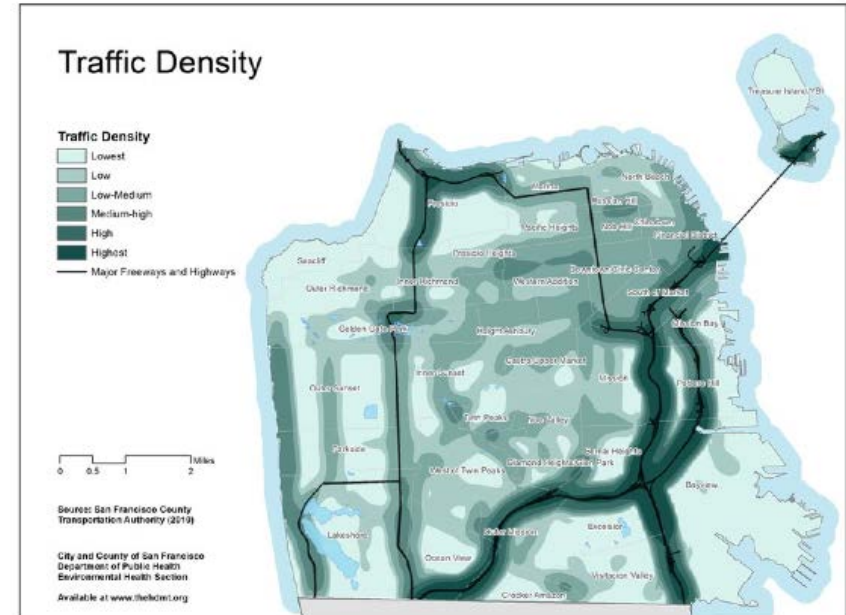
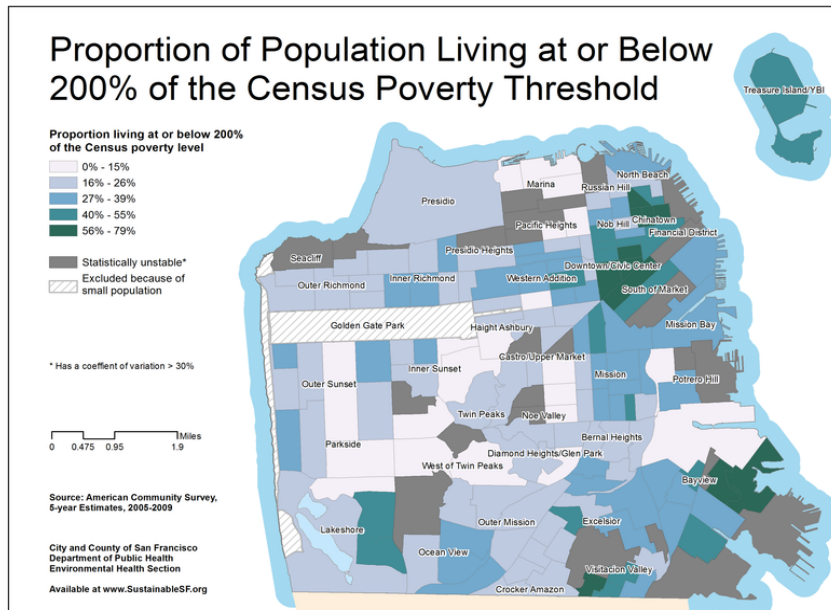
## HEALTHY PEOPLE 2010<sup>14</sup>

Asthma Hospitalizations per 10,000 Residents by Age, Compared to HP2020 Targets, California and San Francisco County, 2014



Data Source: datasource: Office of Statewide Health Planning and Development (OSHPD), 2014 .

# Zip Code Matters



# CLINIC HISTORY AND STRUCTURE

# Clinic History

- Established in 1999 to address high rates of asthma among children in San Francisco county
  - Aim to establish a comprehensive model for treatment of inner-city kids with asthma
  - Incorporated in to “safety net” hospital serving medicaid population
- Medical-social model of care
  - Introduced the Community Health Worker (CHW) in to the clinical setting
- Community Partnership/Funding
  - Early partnership with “Yes We Can” program at SF State University provided grant funded CHW positions from 1999-2003

# **“Yes We Can” Urban Asthma Partnership**



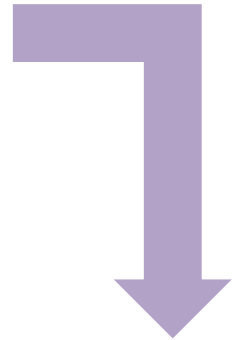
Develop a comprehensive medical/social model for pediatric asthma care.



Promote policy and system changes in asthma care on local and regional levels.



Apply the medical/social model to other chronic diseases.



Allow program replication.

# Why CHW?

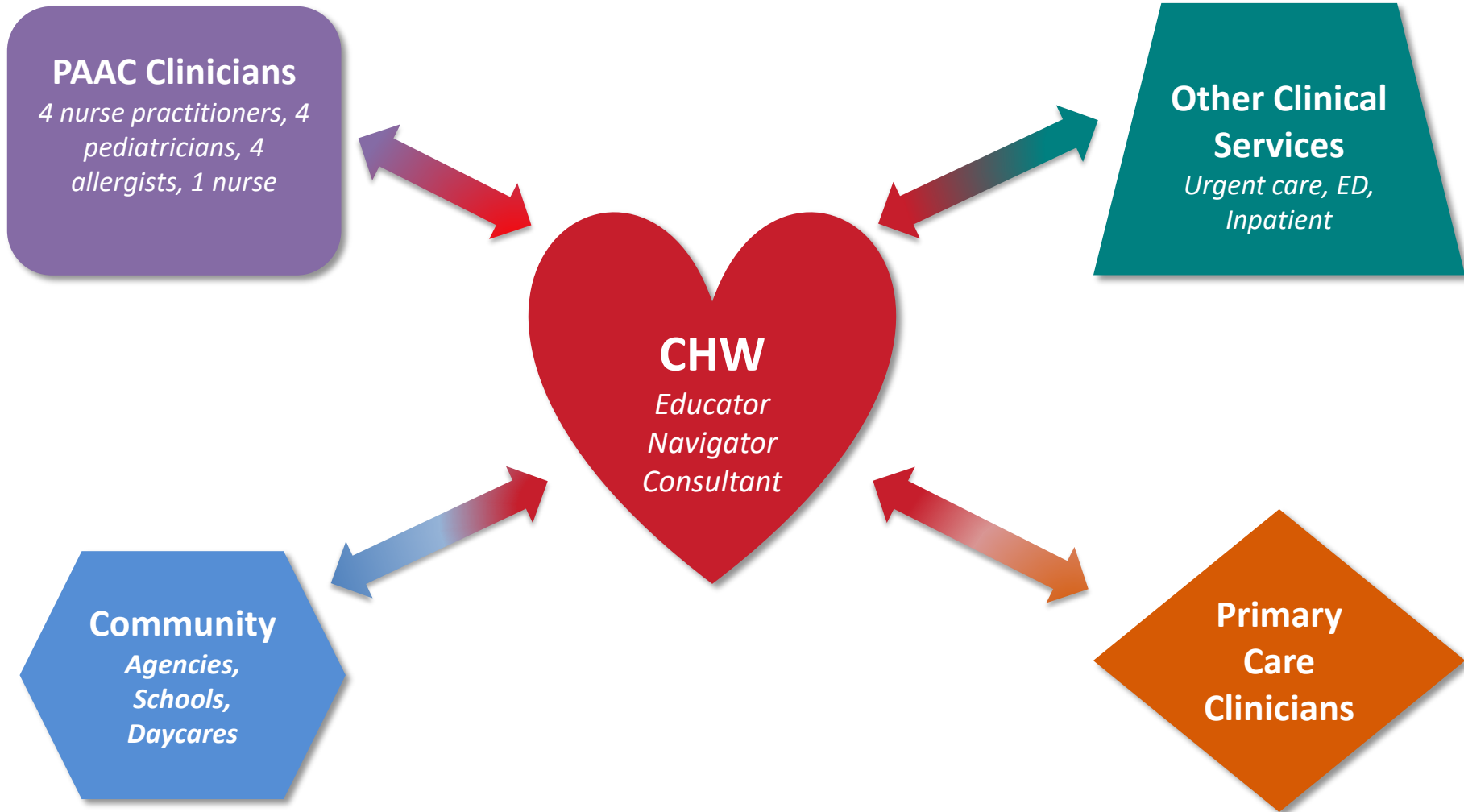
- Uniquely positioned to liaison between clinic setting and community
- Provides support, case management, resource coordination, advocacy
- Trained in health promotion: individual and environment



- Builds trust, consistency, engagement
- Develops expertise in asthma education
- Cost-effective



# Structuring The Clinic



# Patient Enrollment

Referral  
from DPH  
system-wide  
clinics



Initial visit/intake  
*Comprehensive History,  
Referrals*

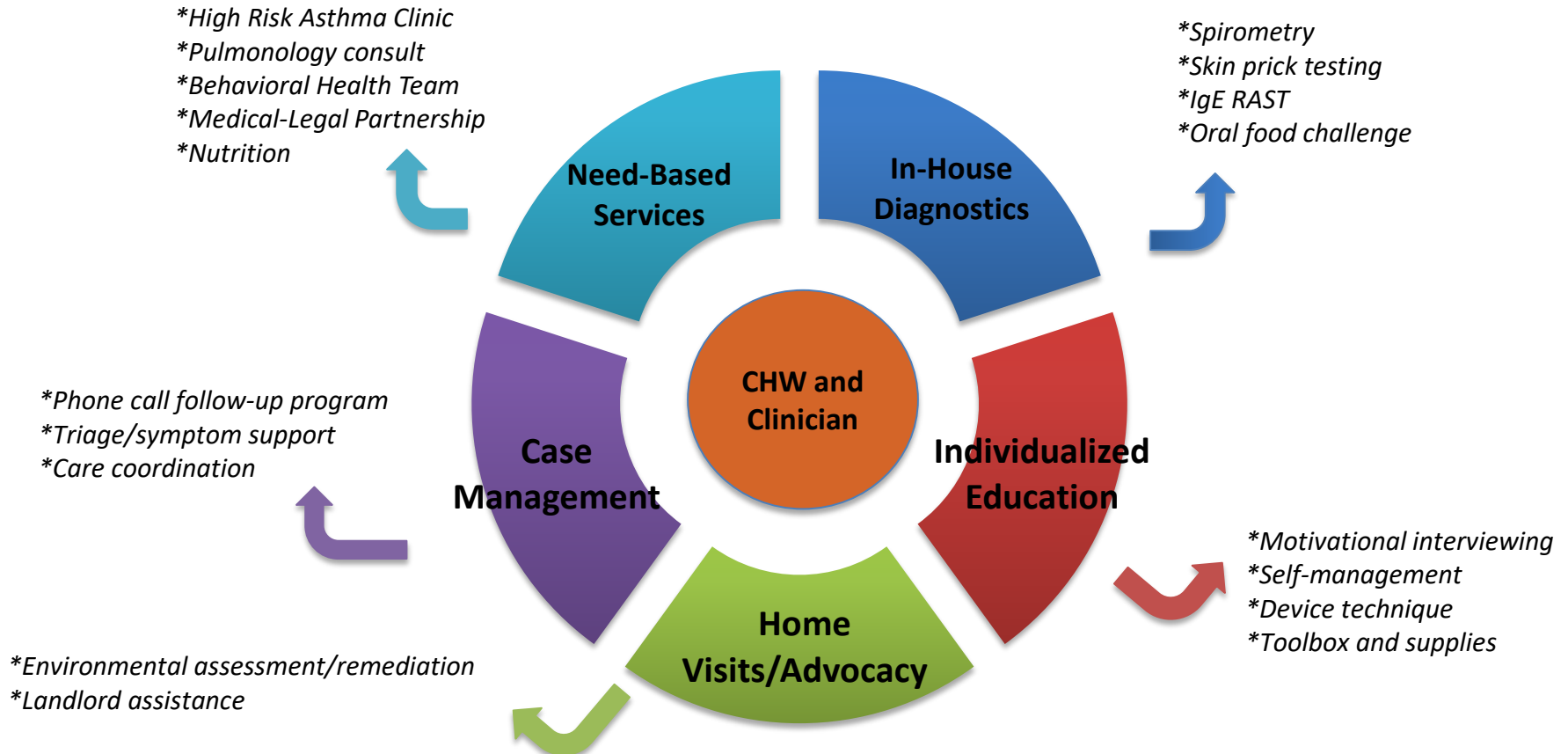
Enroll in Registry,  
Engage with CHW

Ongoing follow  
up/medication  
management

Once stable,  
may  
graduate  
back to PCP  
care

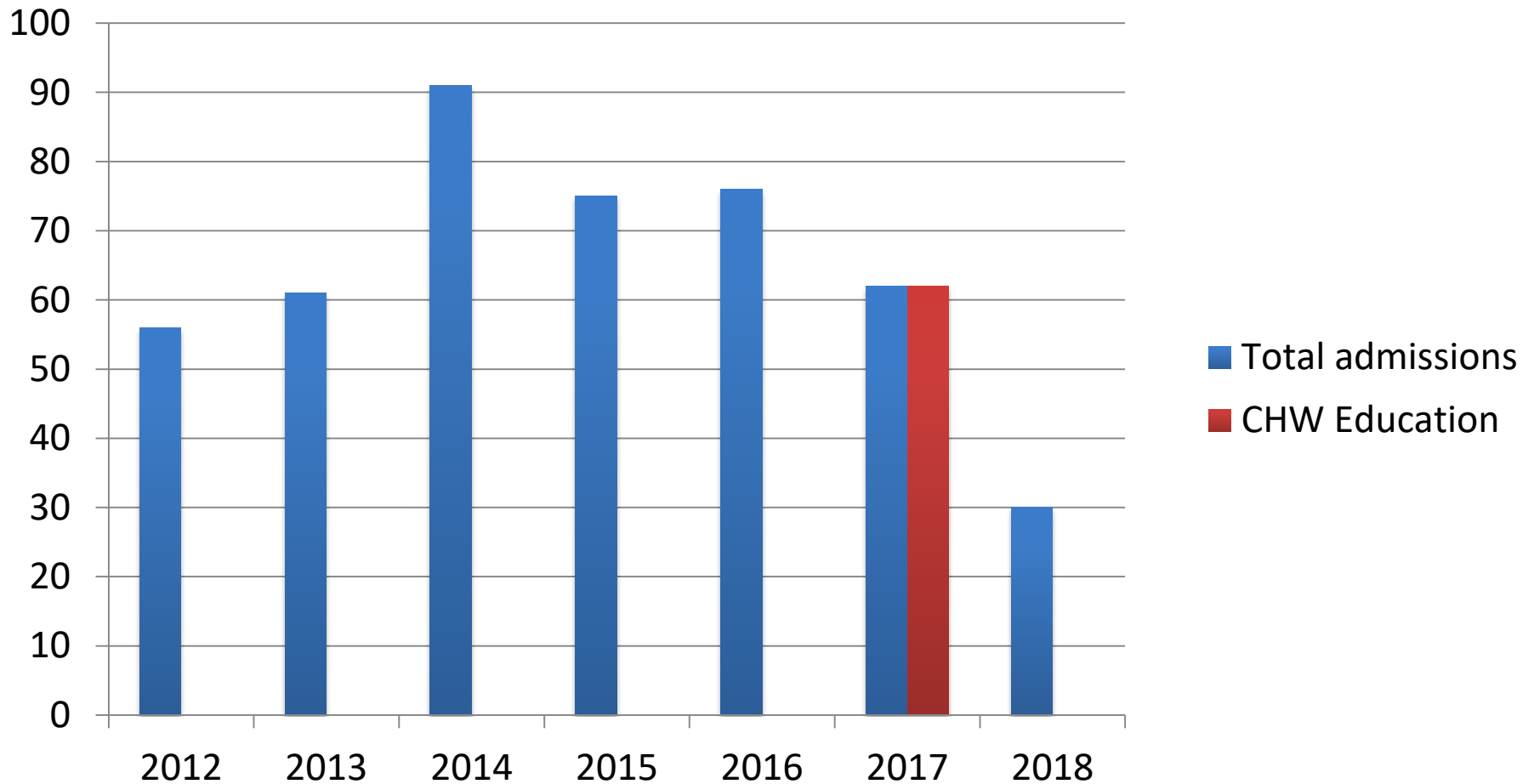


# Services Offered



# INTERVENTIONS AND OUTCOMES

# Hospital Admissions



# Dashboard Data - 2017 Metrics

Outpatient quality measures across pediatric subspecialty clinics:  
Safety, Quality, Care Experience

**96%** of referrals processed  
within 72 hours

Wait time for new appointments:

**↓ 20%**

**165** new patient  
visits

**924** follow up visits

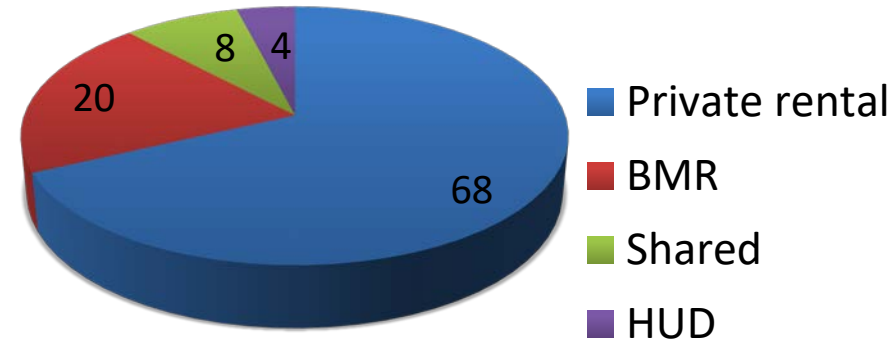
Average visit cycle time:

**96 min**

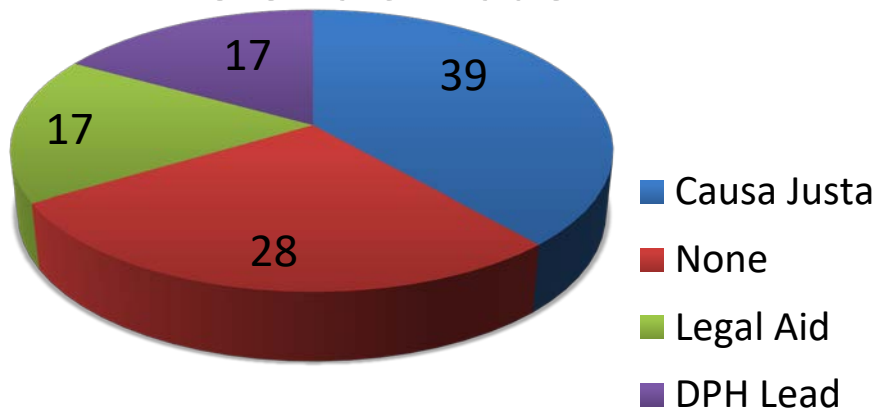
# Habitability

- Total cases closed/repairs completed: 43%
- Open cases: 38%
- No intervention needed: 19%

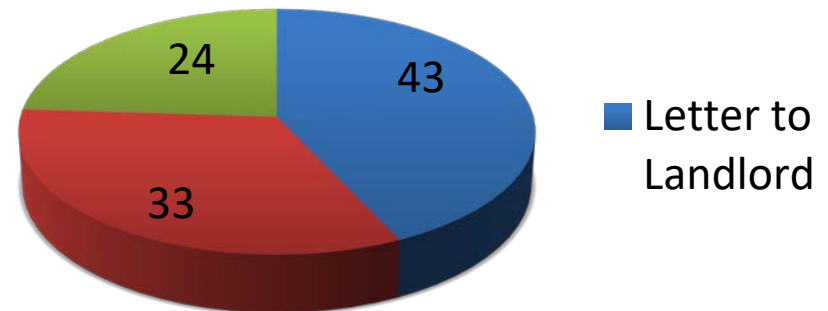
## Housing Type



## Referrals Made

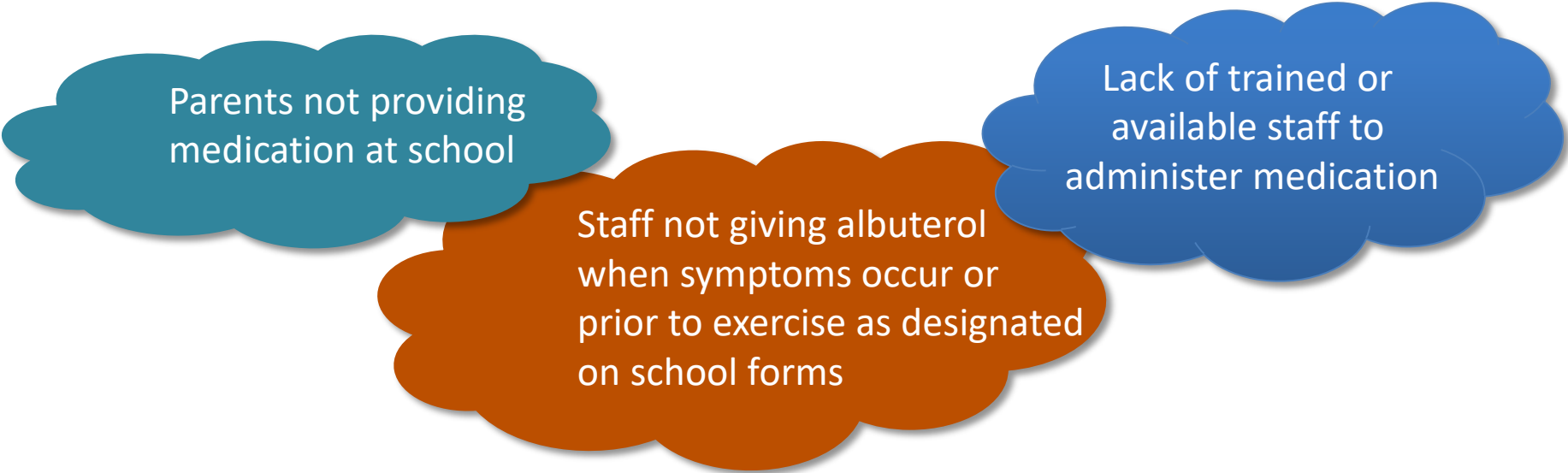


## Actions Taken



# School Advocacy

- Created database of local schools; identified areas of concern (parental report)



Parents not providing medication at school

Staff not giving albuterol when symptoms occur or prior to exercise as designated on school forms

Lack of trained or available staff to administer medication

- Established communication with nurses/staff to address concerns around asthma medications



# Secondhand Smoke Exposure



- Piloted the Clinical Effort Against Secondhand Smoke Exposure (CEASE) Program
  - Intervention includes brief counseling, NRT prescribing, referral to quit line

62

**referrals made**



67%

**completed counseling**

- Based on pilot success, CEASE was rolled out to all pediatric clinics (in-patient/outpatient and nursery)

# Patient Feedback

Silvia (CHW) has been such a blessing. Besides the wealth of knowledge she has helped me with, it has been a pleasure to have someone on my son's health team who is kind, speaks Spanish, and most importantly, makes me feel respected and valued.

I am so thankful for the entire team at the clinic. I can tell they truly care about us because they call to check up on my family.

Before today, I was so worried. He was waking up at night all the time. I've never learned any of this before. Today is the first time I can feel more relaxed.

I no longer need to return to the ER as often because I know how to care for his asthma.

# **SUSTAINABILITY AND NEXT STEPS**



## Obstacles



## Opportunities

Physical space/resources

Staffing (inconsistent, volunteers)

CHWs (funding, pay and retention)

Billing (capitated billing, unbilled services)

Patients (no shows, declining services)

Service vs. education

Utilization of hospital infrastructure

- Reduced dependence on volunteers
- High risk clinic run by faculty

- CHW's now fully funded
- Continuing education for CHWs

- Medicaid/insurance reimbursement
- Additional funds, donors and grants

- Case finding, patient engagement

- Academic partners (UCSF, etc)
- Teaching enhances care

# Action and Advocacy

- Collaborated toward standardized training curriculum for CHWs
- Legislative support for:
  - Flavored tobacco sales ban
  - Smoking ban in public housing
  - Reimbursement for non-licensed CHW education (AB 391)



“The CHW’s assistance has helped me feel empowered and confident in my ability to control my son’s asthma. I believe no parent, regardless of what language they speak, should ever feel like they are unable to properly care for their children, and for this reason, I fully support AB 391.”

# Future Directions

- Group based visits
- Enhanced allergy services
- Ongoing QI development (UCSF, SFDPH)
- Continued support for CHW reimbursement
- Further replication of model
- Increased collaboration with community partners
  - Children's Environmental Health Promotion Program
  - Regional Asthma Management Program (RAMP)
  - Asthma Task Force
  - Asthma Community Network



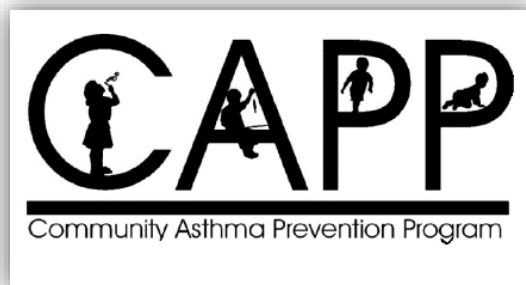
# THANK YOU!





# The Community Asthma Prevention Program at the Children's Hospital of Philadelphia

Dr. Tyra Bryant-Stephens





**COMMUNITY ASTHMA PREVENTION  
PROGRAM:  
CLOSING THE CIRCLE OF CARE**



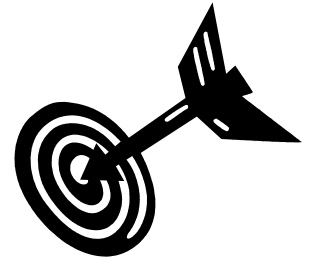
Community Asthma Prevention Program

Tyra Bryant-Stephens, MD, Founder and  
Director, Community Asthma Prevention  
Program, Professor of Pediatrics





- Founded in 1997
- Premise: Despite medical advancements, children in West Philadelphia urban primary care practice continued to go to the ED and hospital for asthma exacerbations
- Clearly a gap existed between medical management and self-management behavior



# Community Asthma Prevention Program 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

# Local Asthma Prevalence

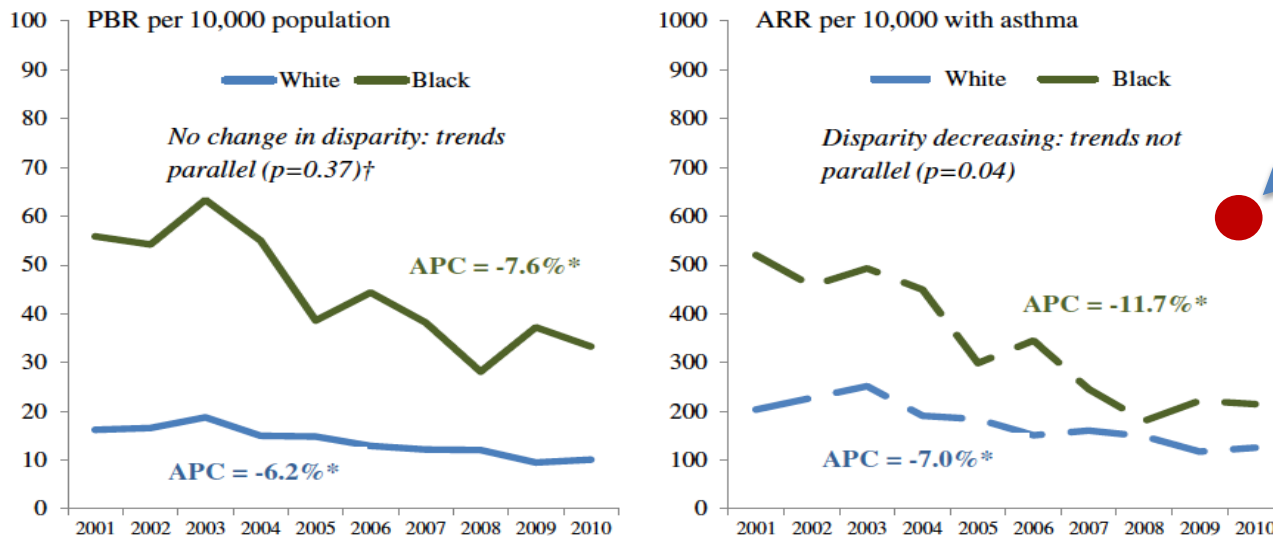
TABLE 2.—Results of screening by zip code (door to door).

Zip code	Positive (%)	Probable (%)	N	African-American (%)	Hispanic (%)	Children below poverty (%)
19104	47.3	0.0	91	50.3	4.0	48.1
19120	22.2	7.4	609	46.8	26.9	28.5
19129	18.4	7.7	207	38.5	3.0	25.9
19131	23.6	2.0	243	78.7	2.2	30.3
19139	40.2	2.0	199	93.4	1.6	42.7
19141	29.7	1.6	185	82.2	3.2	30.6
19143	22.1	2.7	294	91.5	1.8	36.0
19144	20.4	11.2	294	82.5	2.2	31.0
19151	22.9	0.6	171	77.2	2.5	17.3
Total	21.7	4.9	2368	72.6	6.8	32.8

Bryant-Stephens, T. *J Asthma*. 2012.

- For CHOP practices in Philadelphia county:
  - **26%** (16,165/61,478) with Asthma dx in last year
  - **19%** (11,668/61,478) with Active asthma

# National and Local Morbidity (Hospitalizations)



IP asthma stay in  
2016: **7%**  
(940/13,408)

**FIG 4.** PBRs and ARRs for asthma hospitalizations, and average APC among children aged 0 to 17 years. Source: NHDS. \*APC is significantly different than zero. †The combined APC for black and white children was 6.8%.

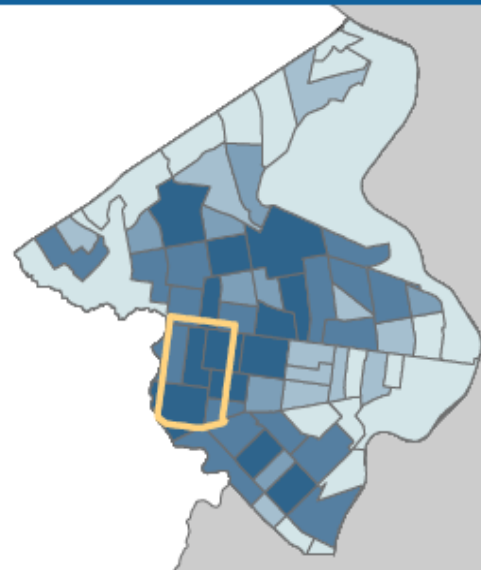
Akinbami, L. *JACI*. 2014.



Figure 1. WePACC Neighborhood Pediatric Asthma Measures

## WePACC Neighborhood Pediatric Asthma Measures

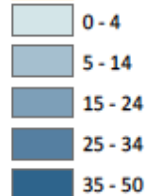
### Number of Children Hospitalized due to Asthma 2014-2015



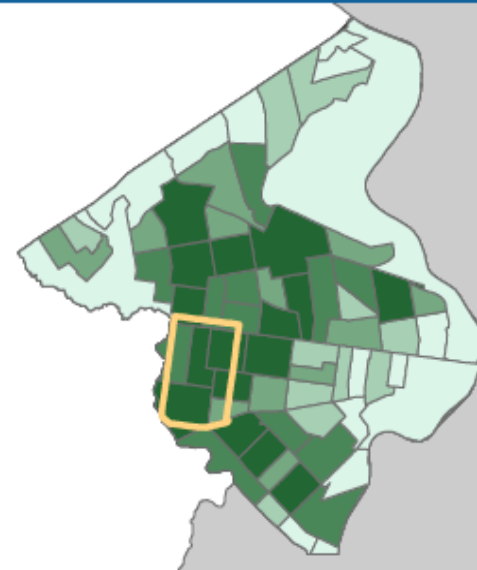
Pilot Area

#### Number of Patients by Census Tract

Data include the number of children who live in the WePACC service area and were hospitalized due to asthma in 2014 and 2015. This includes a total of 1,353 children.



### Number of Children Admitted to the Emergency Room due to Asthma 2014-2015



Pilot Area

#### Number of Patients by Census Tract

Data include the number of children who live in the WePACC service area and were admitted to the ER due to asthma in 2014 and 2015. This includes a total of 3,186 children.

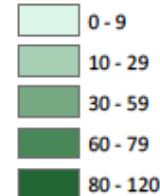
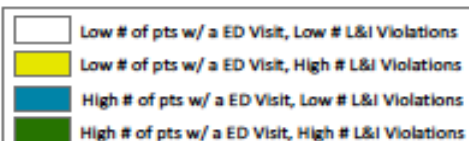
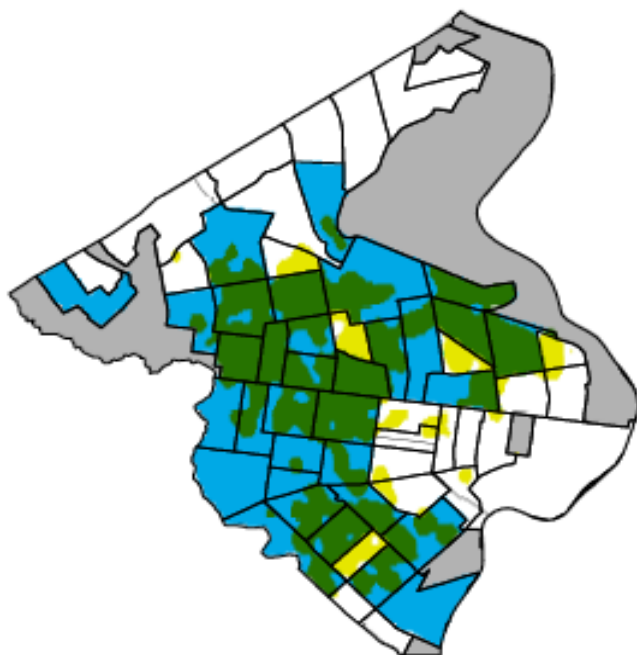


Figure 2. Overlap of High and Low Densities of L&I Violations and Pediatric ED Visits due to Asthma

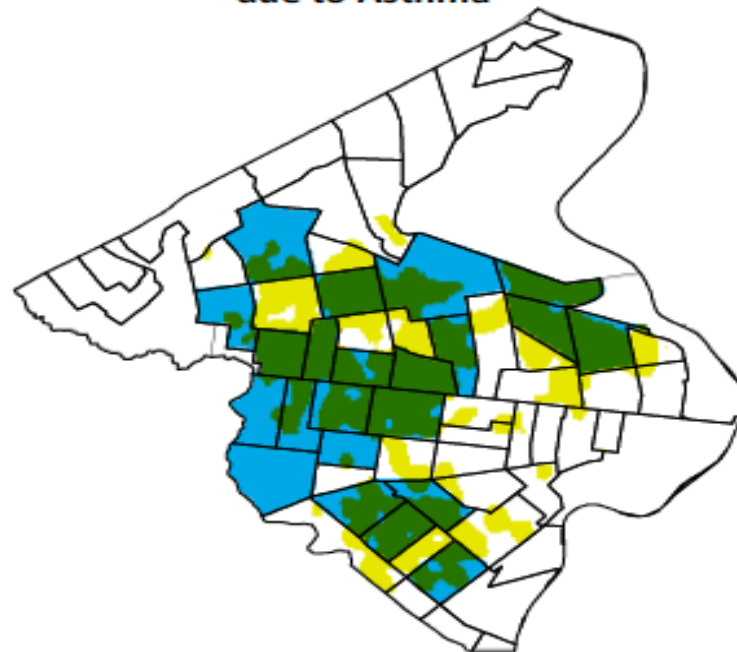
## WePACC Intervention Mapping

### Overlap of High and Low Densities of L&I Violations & Pediatric ED Visits due to Asthma



## WePACC Intervention Mapping

### Overlap of High and Low Densities of L&I Violations & Pediatric Hospitalizations due to Asthma



\*High density of hospitalizations are tracts with at least 30 patients with a hospitalization



# CAPP BUILDING BLOCKS TO REDUCE ASTHMA DISPARITIES



Community  
Outreach

Optimized  
Asthma Care



Research

Advocacy





## Community Outreach/Partnerships

- ✓ **Employ** community members (CHW) to implement asthma evidence-based interventions in underserved communities
- ✓ **Partner** with other community groups such as schools, faith-based organizations, daycares and primary care centers to **identify children at risk** and to provide **educational** opportunities
- ✓ **Engages community members** to translate and adapt evidence-based studies

## Optimized Asthma Care

- ✓ Provide asthma **self-management education** to caregivers and children in **the home, schools** and **primary care** office utilizing **low-literacy** educational materials
- ✓ Promote **guideline-based asthma** care in the **home, school** and the **primary care** office
- ✓ Provides **patient-centered care coordination** that facilitates **high quality** asthma care in the home, school and in primary care office
- ✓ Connect families with community resources such as **housing** and **transportation and scheduling appointments**

## Research

- ✓ Applies **principles of community-based participatory research** to implement evidence based interventions in underserved communities
- ✓ **Utilizes principles of implementation** science to understand effectiveness of asthma interventions in low-income communities
- ✓ **Seeks cost-effective methods** to implement interventions in order to promote **sustainability**

## Advocacy

- ✓ Participates in **national organizations** that promote housing renovations assistance in low-income communities
- ✓ Participates in **state and city-wide efforts** to provide home asthma education and asthma trigger reduction for high risk children with asthma
- ✓ Promotes **caregiver/patient engagement to advocate** for their needs in providing care for children with asthma

# Core Interventions by the Community Asthma Prevention Program:



- ✓ Conducts community home visits – asthma-related
- ✓ Organizes and facilitates community asthma classes
- ✓ Trains parent educators
- ✓ Provides asthma education in Philadelphia schools
- ✓ Educates primary care physicians to integrate asthma guidelines into practice



# Community of Stakeholders

- Parents and Caregivers
- Children with Asthma dx
- Clinicians
- School District
- Community Agencies
- Faith-based Organizations
- Housing Agencies



# Current CAPP staffing

- Nine Community Health Workers
  - Asthma navigators- Integrated into primary care health team at CHOP inner-city practices
  - Home Visitors- Community-based and serve all children in Philadelphia (outside of CHOP and within CHOP)
- CAPP Program Coordinator
- CAPP Research Project Manager
- RN Asthma Care Coordinator
- Research Assistant
- Medical Director





# CAPP Community-Based Interventions over 20 years

- Community asthma self-management education ( Pediatric Nursing, JNMA 2004)
- Individual home asthma self-management education (J Asthma 2012)
- Home environmental remediation (AJPH 2009)
- Primary provider education (PAS 2007)
- School professional education
- School student education
- School screening (J Asthma 2012)
- Door-to-door screening J Asthma 2012)
- Community evaluation (J Urban Health 2011)
- Asthma navigators (ATS 2015)
- Adult asthmatics home visits (JACI 2016)
- Smoking cessation/ secondhand tobacco reduction (Pediatrics 2016, AJPH 2017)
- Major home repairs- BUILD Health Challenge



# Community Feedback

"Since taking CAPP asthma classes, I have learned so much, but the most important thing is that asthma can be controlled."



"I'm telling parents about CAPP. YOU ARE THE BEST kept secret in Philadelphia."

"We do not panic! We have learned to act quickly and calmly before attacks occur."



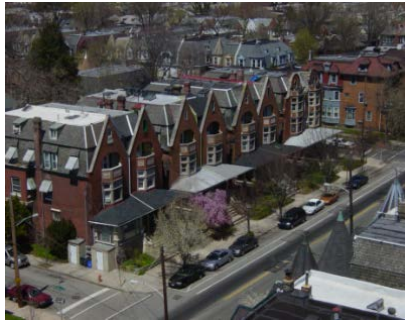
"...since my home visitor has been coming weekly...my children haven't been to E.R. in past year."





# Home Environmental/Educational Interventions

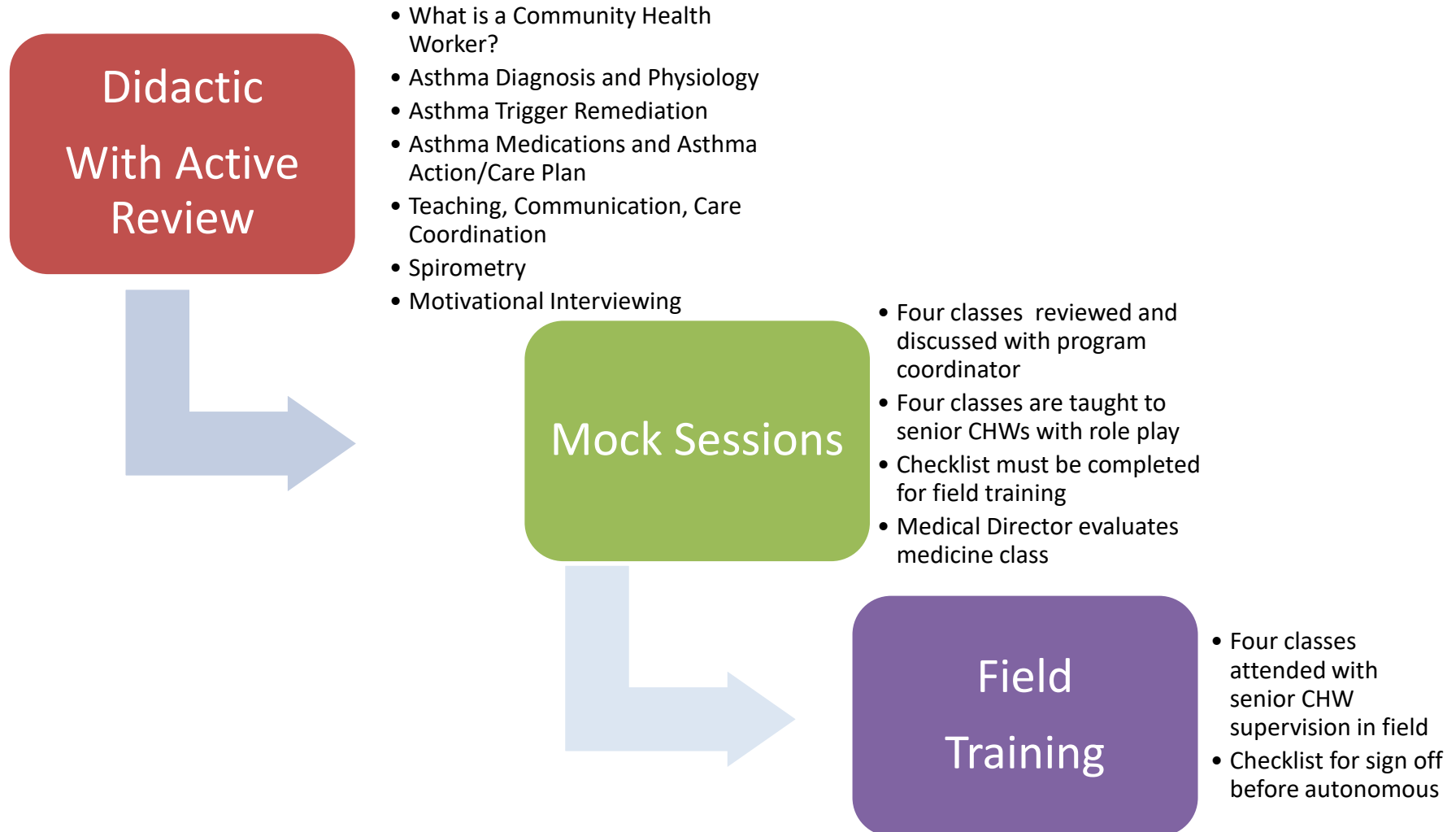
## Methods



- ✓ Community Health Workers- trained lay health educators implement interventions
- ✓ Assessment of child's bedroom and general living areas
- ✓ Parents taught how to make simple environmental interventions in child's bedroom and general living area
- ✓ Supplies given to facilitate interventions
- ✓ Inspection of rooms at f/u visits
- ✓ Education reinforced at each visit with teach back
- ✓ Over 3000 families have received home visits



# Asthma Community Health Worker Training Plan





# Community Health Workers

## A Missing Link for Home/Clinic Connections?

- Tailored asthma interventions that consider the families' psychosocial needs and health beliefs are more likely to reduce utilization than health insurance and access.
- Previous studies find that community health workers (CHW) are effective in delivering tailored interventions and coordinating resources in the home and community in a culturally appropriate manner.
- Recent studies have proven that community health workers integration into the patient-centered medical home is feasible and successful.
- We sought to reduce utilization by expanding the role of the CHW in the medical home while maintaining their visibility and interaction with caregivers in the home and community.

<sup>1</sup>Bryant-Stephens AJPH 2009, <sup>2</sup>Crocker, Am J Prev Med 2011, <sup>3</sup>Nurmagabetov, Am J Prev Med 2011, <sup>4</sup>Findley, J Ambul Care Manage 2014, <sup>5</sup>Wennerstrom, Health Promot Practice 2015

# Asthma Navigator Project: Closing the Circle of Care

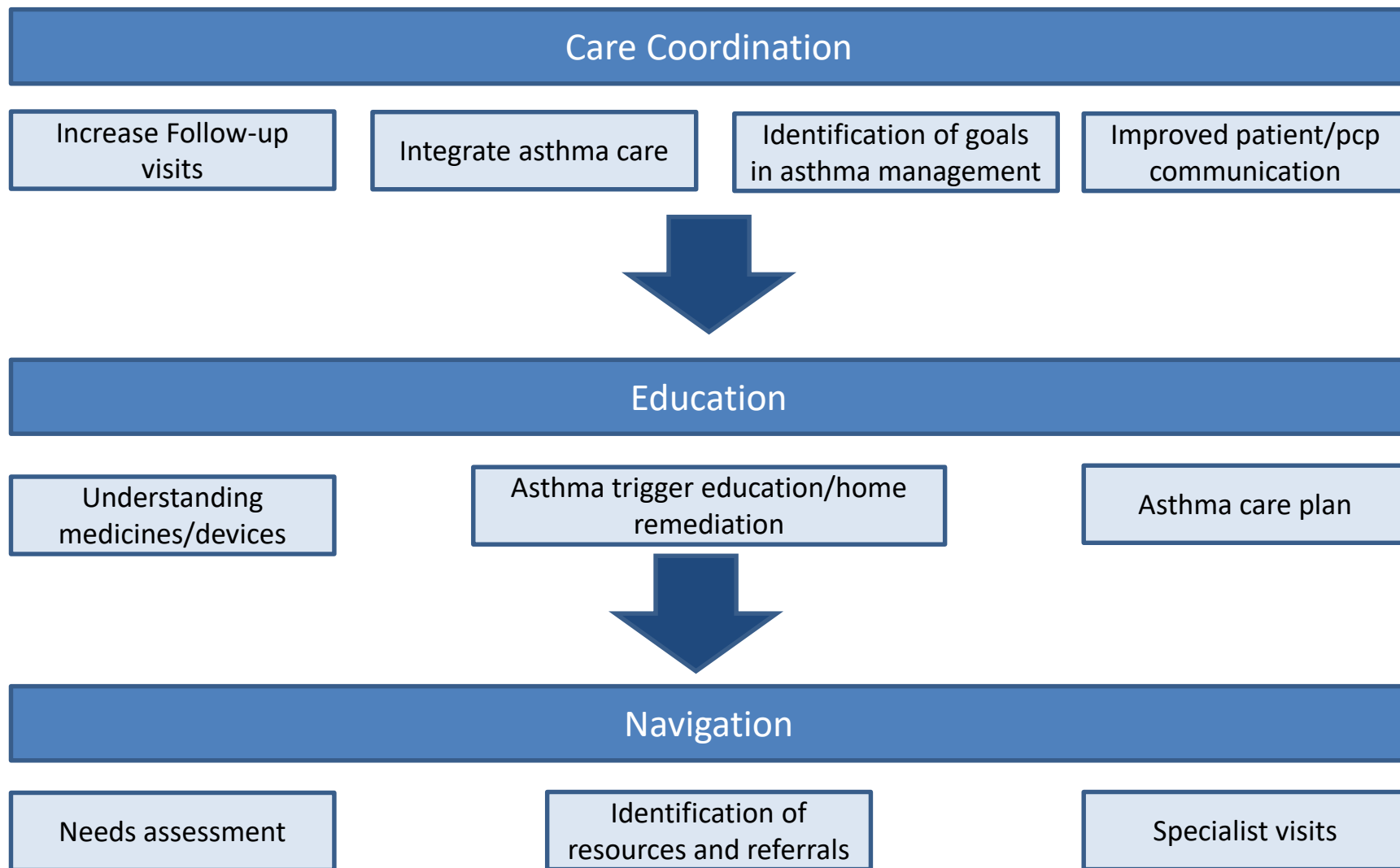
- ✓ Asthma Navigators (CHWs) assigned to primary care office
- ✓ Three components: Care Coordination, Education (home, office), Navigation
- ✓ Home visits made for children with high utilization to provide asthma Education and Environmental Remediation
- ✓ Care coordination goals determined by caregiver with CHW assistance
- ✓ Resources to facilitate care coordination goals given to caregiver
- ✓ Assistance with scheduling for primary care office and specialist
- ✓ Follow up for one year

## **Eligibility Criteria**

- 0-17 years old
- 1 inpatient or 2 ED visits in past year
- On at least two controller medications
- PCP in one of 3 CHOP primary care practices
- Medicaid or CHIP insured



# Components of Asthma Navigator Program



	Education	Environmental Intervention
First Visit	<ul style="list-style-type: none"> <li>• Asthma Physiology and Symptoms</li> <li>• Review of medications in home</li> <li>• Administer Asthma Control Tool</li> <li>• Identify care coordination goals</li> </ul>	<ul style="list-style-type: none"> <li>• Roach &amp; mice bait given with instructions on proper use.</li> <li>• Other methods of pest control discussed.</li> </ul>
Second Visit	<ul style="list-style-type: none"> <li>• Common indoor asthma triggers described</li> <li>• Avoidance techniques described</li> <li>• Environmental Assessment of Home for Asthma Triggers</li> </ul>	<ul style="list-style-type: none"> <li>• Dusters, mattress &amp; pillow covers given with instructions for use.</li> <li>• Demonstration of use of mattress &amp; pillow covers.</li> <li>• Carpet removal or vacuum bags given.</li> </ul>
Third Visit	<ul style="list-style-type: none"> <li>• In-depth review of asthma medications and devices.</li> <li>• Asthma Action/Care Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Cockroach and pet dander avoidance techniques.</li> <li>• Sponge and buckets given. Demonstration on proper method to wash baseboards.</li> </ul>
Fourth Visit	<ul style="list-style-type: none"> <li>• School Concerns</li> <li>• Exercise and Fitness</li> <li>• Care Coordination</li> </ul>	<ul style="list-style-type: none"> <li>• Trash bags, shades and shade brackets given.</li> <li>• Care coordination resources provided</li> </ul>



# Demographic and Socioeconomic Characteristics of Asthma Navigator Study Participants (n=254)

Age, mean (SD)	5.0 (3.5)
Male, %	65.2
African American, %	91.4
Hispanic, %	2.4
Mother main caregiver, %	91.8
>=High School education level, %	97.6
Medicaid insured, %	100.0
In the past 6 months:	
Telephone or utilities turned off , %	4.7
Felt unsafe, %	21.9
Seen violence in neighborhood, %	27.0



# Asthma Symptom and QOL outcomes

	<b>Mean days Baseline n=254</b>	<b>Mean Days 12 months n=254</b>	<b>p-value</b>
<b>Missed daily medicine</b> (in past 2 weeks)	1.48 ( $\pm 3.3$ )	1.20 ( $\pm 2.6$ )	Not significant
<b>Took rescue meds</b> (in past 2 weeks)	5.87 ( $\pm 5.8$ )	2.74 ( $\pm 3.5$ )	.000
<b>Symptom Days</b> (in past 4 weeks)	6.78 ( $\pm 7.9$ )	3.00 ( $\pm 5.2$ )	.000
<b>Symptom Nights</b> (in past 4 weeks)	7.00 ( $\pm 9.3$ )	2.42 ( $\pm 5.2$ )	.000
<b>Slowed Activity</b>	5.50 ( $\pm 8.6$ )	2.51 ( $\pm 5.7$ )	.000
<b>School Days Missed</b>	9.77 ( $\pm 11.5$ )	2.82 ( $\pm 3.3$ )	.000
<b>Work Days Missed</b>	9.16 ( $\pm 16.7$ )	1.52 ( $\pm 3.0$ )	.000

Asthma Triggers and Remediation n=254		Baseline	12 months	p
<b>SMOKING</b>				
Reports smoking with child in the home, %		37.3%	38.9%	ns
<b># Actions taken to remove child from smoke</b>				
Reports smoking at baseline mean(SD) N=94		2.3 (1.8)	3.0 (1.2)	p<.001
No report of smoking at baseline mean(SD) N=161		1.9 (1.2)	2.3 (1.2)	p<.001
<b>COCKROACH</b>				
Reports a roach problem, %		25.7%	11.5%	p<.001
<b># Actions taken to remove remediate roach problem</b>				
Reports roaches at baseline mean(SD) N=65		0.7 (0.9)	1.1 (1.2)	p<.001
No roach problem at baseline mean(SD) N=190		0.3 (0.8)	0.5 (0.8)	p<.001
<b>PETS</b>				
Family has pets, %		39.1%	35.8%	p=.039
Caregiver thinks that furry pets affect child's asthma		68.5%	78.2%	p<.001
<b># Actions taken to remove remediate pet triggers</b>				
Reports pets at home mean(SD) N=99		0.7 (0.8)	1.5 (1.1)	p<.001
No pets reported mean(SD) N=154		0.8 (0.7)	1.1 (0.7)	p<.001
<b>MOLD</b>				
Reports a mold problem, %		13.9%	4.1%	p<.001
<b># Actions taken to remediate mold problem</b>				
Reports mold at baseline mean(SD) N=35		1.7 (1.4)	1.6 (1.4)	ns
No mold problem at baseline mean(SD) N=213		0.3 (0.7)	0.6 (0.9)	p<.001
<b>DUST</b>				
Caregiver thinks that being around dust affect child's asthma, %		92.3%	97.6%	p<.001
<b># Actions taken to remediate dust problem</b>				
mean(SD) N=254		2.6 (2.1)	6.2 (2.0)	p<.001

# Healthcare Utilization (self-reported)

	Mean visits Baseline n=254	Mean visits 12 months n=254	p-value
Unscheduled visits because of asthma (in past 4 months)	1.91 ( $\pm 6.4$ )	0.84 ( $\pm 1.1$ )	.012
Treated in ER (in past 12 months)	3.83 ( $\pm 3.7$ )	1.41 ( $\pm 1.6$ )	.000
Times admitted to hospital (in past 12 months)	1.90 ( $\pm 1.7$ )	0.57 ( $\pm 0.9$ )	.000

# Total Costs per Patient

	Baseline	Follow-up	Change
Medications	\$173	\$179	\$5.46
Physician Visits	\$163	\$90	-\$73
Emergency Visits	\$1,604	\$589	-\$1,015
Hospitalizations	\$13,728	\$4,116	-\$9,612
Total	\$15,668	\$4,974	-10,694

# Case Study – “The Forgetter”

AB is a 12 yo male who has uncontrolled asthma , nonadherent, and several no-show appointments in the office. Also he had many ED and IP visits. At the time of the visit, Mom’s goals were to get AB to take his medicine everyday and to be able to monitor it and to remove asthma triggers in child’s room.

- The ACN enrolled family in the office and made a home visit appointment within 2 weeks of that office visit.
- At the first home visit the AHCN identified carpet in child’s room, clutter and pests as potential triggers
- The ACN then went on a second visit when AB could attend and did the trigger and medication class in the home focusing on the roles of the controller and rescue medicines. She also brought tiles because the caregiver agreed to remove the very worn carpet from AB’s room
- After that visit AB began to take his meds twice a week, but forgot the rest of the time.

## “The Forgetter” (cont)

- On the third visit to the home the tiles had been laid.
  - She brainstormed with AB about another way to remind him to take his controller medicines.
  - AB and Mom decided that he would put a asthma medicine calendar in the bathroom and he would put a check on the calendar every time he took the controller medicine.
  - Mom would then be able to check it as well to remind him if he forgot his medicines.
- AB came back to office one month later and reports that he now remembers to take his medicines five days out of the week but he’s still shooting for everyday...
- Summary- the ACN was able to help mom with removing triggers, making a f/u appointment and able to help AB with adhering to treatment.

# LESSONS LEARNED AND SUSTAINABILITY



# Lessons Learned

- Each community member brings his/her own expertise and it must be valued in order to create a feasible, acceptable and sustainable intervention
- Utilization of a participatory process essential to community engagement
- Identification of community resources establishes where the strengths are in the community
- Sharing outcomes with partners is important for interpretation and application of findings

## Lessons Learned

- Community Health Workers are peers for caregivers and facilitates connection between clinic and home
- Identification of Asthma champions important to clinic integration
- Data integrity must be maintained
- Evaluation of Outcomes essential for stakeholders who may support sustainability

# Sustainability

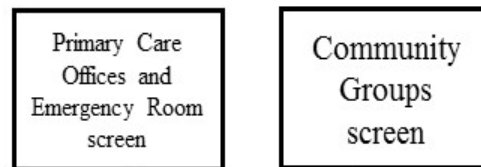
- Build sustainability in your plan using the current infrastructure as much as possible
- Start thinking of sustainability from the beginning
- Encourage/Urge your community partners that they need to think about sustainability with you throughout the process
- Look for partners within your organization with whom you can combine/leverage your strengths and resources
- Remember- It always requires some source of funding

***CELEBRATING 20 YEARS!!***

# Summary

- Integration of CHWs as asthma navigators into the clinical setting provided much-needed support to close the gap of care for children with frequent asthma exacerbations
- Asthma navigators promoted national asthma-guideline based care in the home and in the office which resulted in reduced asthma symptoms and reduced healthcare utilization.
- The value added by this program has been acknowledged by the practices and the insurers evidenced by their willingness to support and sustain these asthma navigators.
- Poor housing is a public health problem that requires all sectors to work together to reduce harmful environmental exposures and to create healthy homes.
- THE FINAL STEP TOWARDS CLOSING THE LOOP IS TO CONNECT ALL FOUR SECTORS: HOME, SCHOOL, HEALTH CARE AND COMMUNITY

## West Philadelphia Controls Asthma Study Design



Primary Care CHW (Asthma navigator) assigned to primary care office  
Caregivers/Children enrolled in primary care office and randomized to navigator (Y or N)

Identification of eligible children

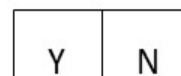
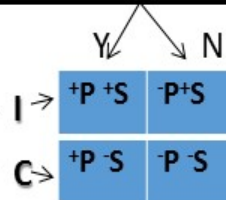
Eligibility: 6-12 yo  
Uncontrolled asthma at time of enrollment  
Lives in West Philadelphia

Randomize children to Primary Care CHW (P+) (Asthma Navigator) or control (P-)

**Asthma Navigator intervention:**  
YES WE CAN  
CAPP HOME VISITS  
CARE COORDINATION  
SCHOOL COORDINATION



**School Ambassador/CHW intervention:**  
OPEN AIRWAYS  
SCHOOL-BASED ASTHMA THERAPY  
CLASSROOM ENVIRONMENTAL REMEDIATION  
CARE COORDINATION



Identify nonparticipating schools for child randomized to navigator (Y/N)

# Thank You!

# Polling Question 3

**Based on what you have learned today, what next steps will you take?**

1. Visit the [AsthmaCommunityNetwork.org](https://AsthmaCommunityNetwork.org) Hall of Fame to learn more from past winners.
2. Begin investigating potential partnerships with community organizations, schools, and other stakeholder groups.
3. Implement data tracking solutions to track key program outcomes and cost savings.
4. Research sustainable financing opportunities in my state, and potential partners to begin a dialogue.

# Sustaining the System





# Financing In-Home Asthma Care

## FINANCING IN-HOME ASTHMA CARE

ou are here: Asthma Community Network Home » Financing In-Home Asthma Care

The Financing In-Home Asthma Care microsite within ACN.org focuses on delivering and paying for in-home asthma care to improve outcomes for children with out of control asthma. Health care policy change is creating new opportunities for financing evidence-based in-home asthma care. This site explores those opportunities and the work required to deliver effective and sustainable in-home asthma care.

U.S. EPA and our partners, the Departments of Health and Human Services (HHS) and Housing and Urban Development (HUD), among others, are coordinating federal efforts on asthma as is described in the Coordinated Federal Action Plan to Reduce Asthma Disparities. This microsite, which consolidates information about financing in-home asthma care in order to deliver effective care, particularly in underserved communities, is one example of our effort.

### New Technical Assistance eLearning Platform

#### Building Systems to Sustain Home-Based Asthma Services

Created by the National Center for Healthy Housing in partnership with EPA, this new eLearning and technical assistance platform equips participants with information about how to build the systems, infrastructure and financing to put home-based asthma services in place in their own states, communities or regions. Click on the icon to access the eLearning modules.

### Value of Asthma Home Visits

In-home care can reduce the costs of care and improve health outcomes for people with poorly controlled asthma.

**Learn More About:**

- Evidence Base
- Program Results
- Asthma Home Visits for Health Plans

[Learn More](#)

The diagram shows a house made of puzzle pieces. The pieces are labeled: 'Evidence Base', 'Program Results', 'Asthma Home Visits for Health Plans', 'Home Visits', and 'COPD Workforce'. A red puzzle piece at the top is labeled 'Making Your Case'.

### Understanding the Options

Health policy change has created many options for financing in-home asthma care.

**Learn More About:**

- Braided Funding
- Medicaid Financing
- Health Plan Financing
- Social Impact Financing
- Housing Financing

[Learn More](#)

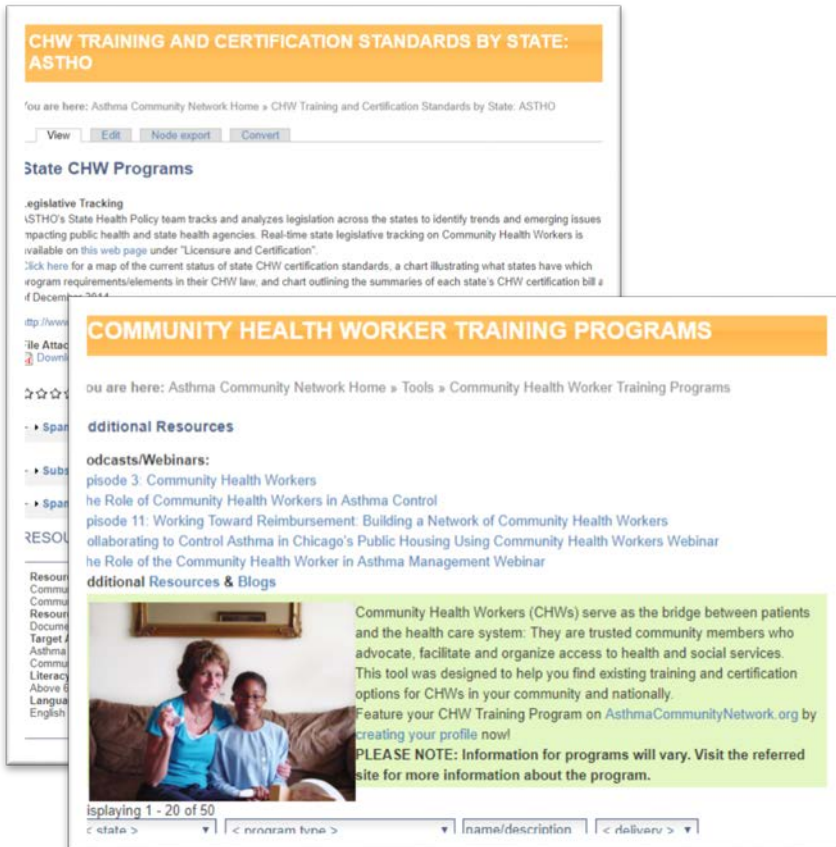
## Learn more about—

- The value of asthma home visits
- Building your workforce
- Effective reimbursement strategies
- Understanding the options
- How to make your case to funders

Visit [www.AsthmaCommunityNetwork.org/Financing](http://www.AsthmaCommunityNetwork.org/Financing)



# Community Health Worker Training Programs



**Includes resources such as—**

- CHW training programs by state
- CHW training and certification standards by state
- Podcasts, webinars and blogs

**Visit [www.AsthmaCommunityNetwork.org/CHW\\_Programs](http://www.AsthmaCommunityNetwork.org/CHW_Programs)**



# Question & Answer Session on AsthmaCommunityNetwork.org Discussion Forum

Immediately after the webinar, join us in the [AsthmaCommunityNetwork.org Discussion Forum](#) for a live online Q&A Session.

2:00 p.m. – 2:30 p.m. EDT

To post a question in the [Discussion Forum](#), follow these directions:

1. If you are a Network member, log in to your [AsthmaCommunityNetwork.org](#) account.

**Not a member?** Create an account at [AsthmaCommunityNetwork.org](#) by clicking the “[Join Now](#)” link at the top of the page. Your account will be approved momentarily and you can begin posting questions.

2. Click on the “[Discussion Forum](#)” button on the home page.
3. Click on the “[Live Online Q&A for 5/22/18 Webinar](#)” link.
4. Click on the “[Post to the Forum](#)” link to post your question.
5. Enter your question and click the “[Save](#)” button at the bottom of the page.