



### Welcome to the Webinar

# National Models for Asthma Care: Best Practices From the 2019 Asthma Award Winners

#### **Moderator**

• Tracey Mitchell, RRT, AE-C, U.S. Environmental Protection Agency (EPA)

#### **Presenters**

- Matt Siemer and Amy Bain, MSN, APN, CPNP, Mobile Care Chicago
- Ian Sheets, Omaha Healthy Kids Alliance
- Ashley Fogarty, MPH, Rhode Island Department of Health

#### **Thursday, May 23, 2019**

Webinar: 2:00 p.m. – 3:00 p.m. EDT

Live Online Q&A: 3:00 p.m. – 3:30 p.m. EDT on AsthmaCommunityNetwork.org

Operator-Assisted Toll-Free Dial-In Number: 866-527-8921
Conference ID: 2096399



### **2019 Award Winners**



Mobile C.A.R.E. Foundation (Mobile Care Chicago) Asthma Vans



Omaha Healthy Kids Alliance (OHKA) Asthma In-Home Response (AIR) Program



Rhode Island Department of Health Asthma Control Program Home Asthma Response Program (HARP)



### **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



### **Learning Objectives**

### Participants will share—

- Successful strategies for effective in-home interventions and critical asthma education.
- Innovative and diverse community-based partnerships that can further your program's impact.
- Methods to use data to measure key program outcomes and improve return on investment.
- Models for providing the full continuum of asthma care.



### **About the Award**

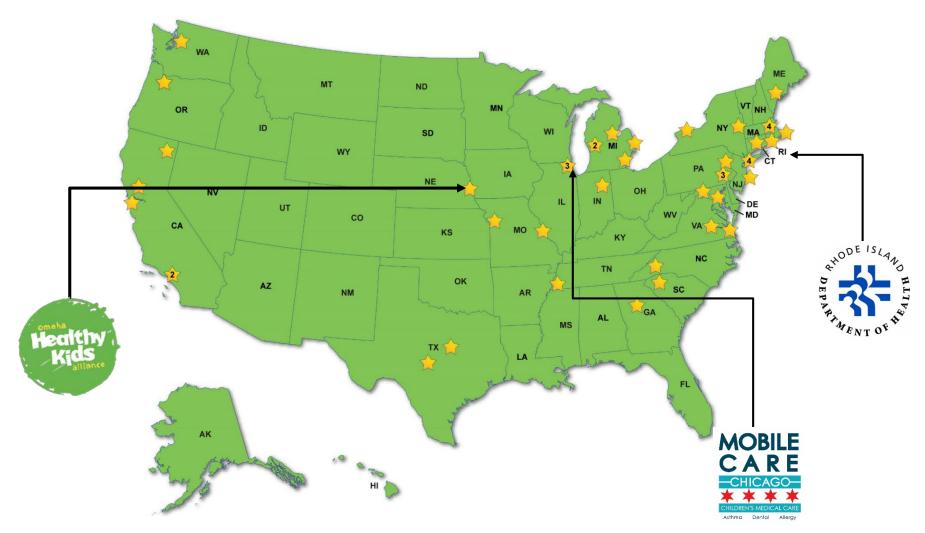


- Nation's highest honor for exceptional asthma management programs
- Showcases best practices in asthma care and management
- Eligible applicants use the National Institutes of Health's (NIH) Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma
- Join the Hall of Fame: Apply in 2020! www.AsthmaCommunityNetwork.org/Awards



### **Awards Hall of Fame**

Since 2005, 46 health plans, health care providers and communities in action have been inducted into the Awards Hall of Fame.





# Asthma Is a Public Health Challenge Characterized by Disparities



children ages 0 to 17 in the United States have asthma.



That's 8.3% or

in12 children.

**15.7**%

of black, non-Hispanic children have asthma

**COMPARED TO** 

of white, non-Hispanic children.

CHILDHOOD ASTHMA in the UNITED STATES

An Important Public Health Challenge

Poor and minority children are disproportionately affected.<sup>‡</sup>

**POVERTY LEVEL** 

**10.5**%

of children living in poverty<sup>^</sup> suffer from asthma.

Children below the poverty level have more ED visits, missed school days, and hospitalizations.

<sup>‡</sup>Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities.
www.epa.gov/sites/production/files/2014-08/documents/federal\_asthma\_disparities\_action\_plan.pdf
^Defined as living at or below 100% of the federal poverty level

CDC. Vital Signs. Asthma in the U.S. 2018. www.cdc/gov/vitalsigns/childhood-asthma/



### **Environment Plays a Critical Role** in Asthma Control

- Federal asthma guidelines recognize environmental trigger reduction as a critical component of comprehensive asthma care.\*
- The evidence base demonstrates that in-home environmental interventions are effective at improving asthma control in children and adolescents.<sup>†</sup>

EPA is a federal lead for integration of environmental risk reduction into standards of care.

#### EFFECTIVE IN-HOME ENVIRONMENTAL INTERVENTIONS

#### Home-Based

- Includes at least one home visit by trained personnel to improve the home environment
- Examples: community health workers, clinicians, health care providers

#### **Multi-Component**

- Includes at least two components, including at least one environmental component
- Activities may include asthma-related education, self-management training, environmental assessment and remediation, social services, coordinated care

#### **Multi-Trigger**

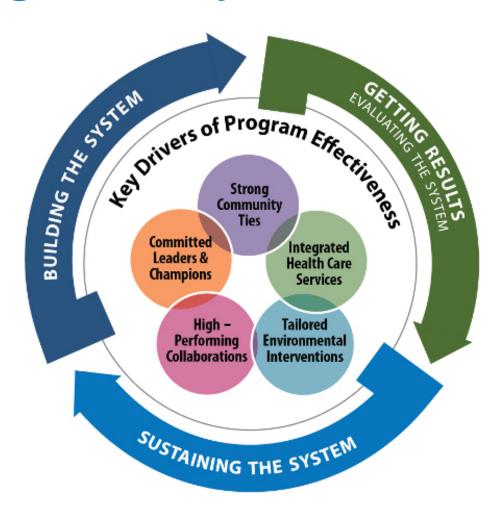
 Targets two or more potential asthma triggers, including mice, cockroaches, dust mites, excess moisture and mold, household pets, tobacco smoke

CDC. The Guide to Community Preventive Services. 2005. https://www.thecommunityguide.org/

NHLBI. Guidelines for the Diagnosis and Management of Asthma (EPR-3). 2007. https://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines



# The System for Delivering High-Quality Asthma Care





### **Polling Question 2**

# Which of the following best practices are you currently employing in your work?

- 1. Strong community ties
- 2. Integrated health care services
- 3. Tailored environmental interventions
- 4. High-performing collaborations
- 5. Committed leaders and champions







Now we have two vans with 2,700 patient visits per year and 47 partner school sites.



2013: Our home assessment program piloted in the Roseland neighborhood and reduced pediatric asthma emergency department visits by 84% in that local hospital.

### **Programs**

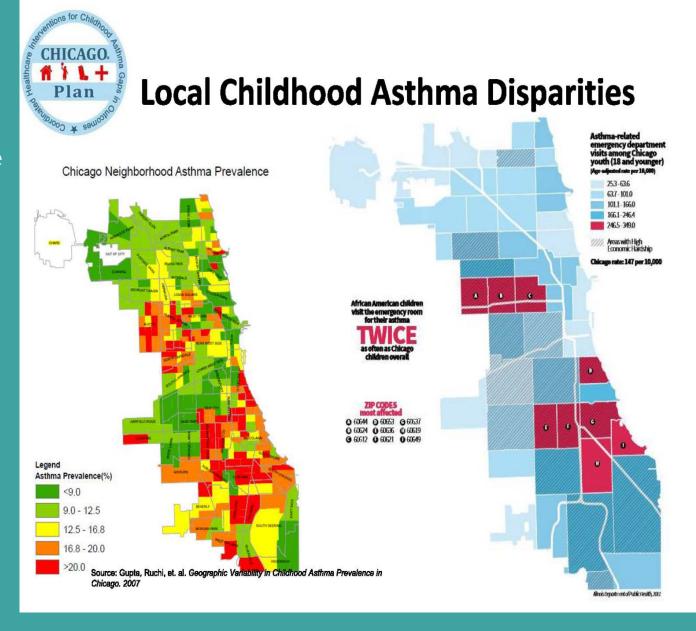
Asthma Vans
Dental Van
Portable Dental Clinic
Home Assessments



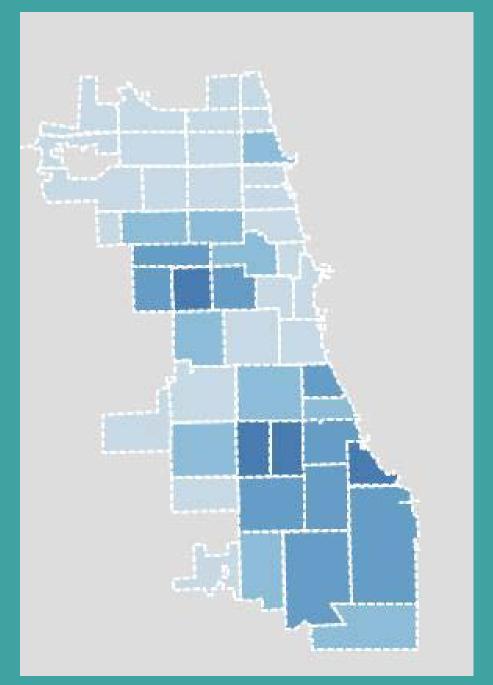
25% of low-income children have asthma

#1 cause of pediatric emergency room use

#1 cause of school absenteeism



#2 in asthma fatalities in the nation



#### Limited Asthma Specialist Access Necessitates Need for Mobile Intervention

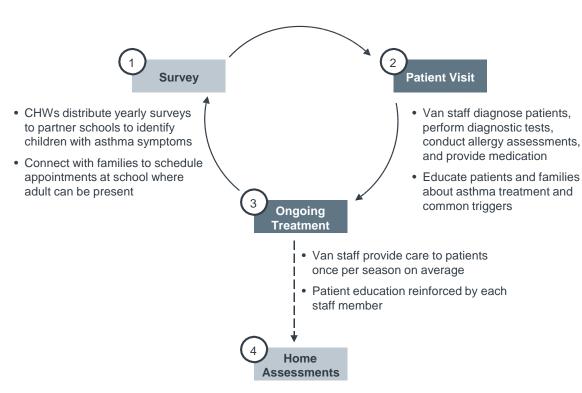
CHWs Oversee Relationships with Partner Schools and Patient Families, Offer Home Assessments



#### **Mobile Care Chicago**

- Non-profit organization in Chicago, IL
- In response to the high volume of asthma-related ED visits and deaths in Chicago, offer free medical and preventive care, education and support to lowincome children in partnership with local schools
- Community Health Workers (CHWs) distribute surveys to identify patients with asthma symptoms and conduct home visits when necessary
- Van staff (three Nurse Practitioners, two Medical Assistants, one Clinic Technician) travel to 47 partner schools approximately once per month to conduct allergy assessments and provide education and ongoing treatment
- The percentage of children who had to visit the hospital or ED for asthma symptoms dropped from 36% to 3% within 1 year of treatment, which saved the local health care system an estimated \$6.7 million

#### **Interdisciplinary Team Offers Ongoing Specialty Asthma Care**



- CHWs conduct home assessments for approximately one-third of patients to address asthma triggers
- Target patients who follow treatment plan but are not improving

"Exemplary Programs Making Services Easier to Use," National Center for Ease of Use of Community-Based Services, http://www.communitybasedservices.org/sites/communitybasedservices.org/files/files/Mobile%20C\_A\_R\_E\_%20Foun dation.pdf; Pooulation Health Advisor research and analysis.

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## Obtaining Patients

- Survey all enrolled students at participating school sites
- Form relationships with 47 volunteer staff, "point person"—one per school site
- Referrals from community
- Siblings of patients



Comprehensive Care for Chicagoland's

#### RESPIRATORY HEALTH SURVEY

Please print

|   | Last  | 1  | First  |                                   |
|---|---|--|--|-----------------------------------|
| chool   | <u>;</u>  | Date of Birth  | Today's Date   |                                   |
|   | d EVER been diag<br>are provider as hav   | mosed <u>by a doctor or</u><br>ving asthma?  | No   | Yes                               |
|   | your child had episodes of wheezing (whistling in chest) in the last 12 months?                             |  | No   | Yes                               |
| In the <u>last 12 months</u> , have you heard your child wheeze or cough during or after active play? |   | No   | Yes  |                                   |
|   | cold, in the last 12<br>y cough at night?   | months, has your   | No   | Yes                               |
|   |   |  |  |                                   |
| an emergency  | room or a hospita   | · ·  | No<br>your child may have sy   | Yes<br>vmptoms of asthm           |
| an emergency If you answer Yes, I wo evaluation   | room or a hospita ed "yes" to any of uld like a call with   | Il for wheezing?  f the above questions,  h more information al                        |  | mptoms of asthm                   |
| an emergency If you answer Yes, I wo evaluation   | room or a hospita ed "yes" to any of uld like a call with   | Il for wheezing?  f the above questions,  h more information al                        | your child may have sy<br>yout how to receive a m                        | mptoms of asthm                   |
| an emergency If you answer Yes, I wo evaluation Parent name   | v room or a hospita<br>ed "yes" to any of<br>uld like a call with<br>n and ongoing tre                      | Il for wheezing?  If the above questions,  In more information aleatment for asthma at | your child may have sy<br>yout how to receive a m                        | rmptoms of asthm<br>nedical<br>d. |
| If you answer   | r room or a hospita ed "yes" to any of uld like a call with n and ongoing tre                               | Il for wheezing?  If the above questions,  In more information aleatment for asthma at | your child may have sy<br>out how to receive a n<br>NO COST for my chile | rmptoms of asthm<br>nedical<br>d. |
| an emergency If you answer Yes, I wo evaluatio  Parent name  Home address                             | v room or a hospita ed "yes" to any of uld like a call with n and ongoing tre  Last  Street  City/State/Zip | Il for wheezing?  If the above questions,  In more information aleatment for asthma at | your child may have sy<br>out how to receive a m<br>NO COST for my child | rmptoms of asthm<br>nedical<br>d. |

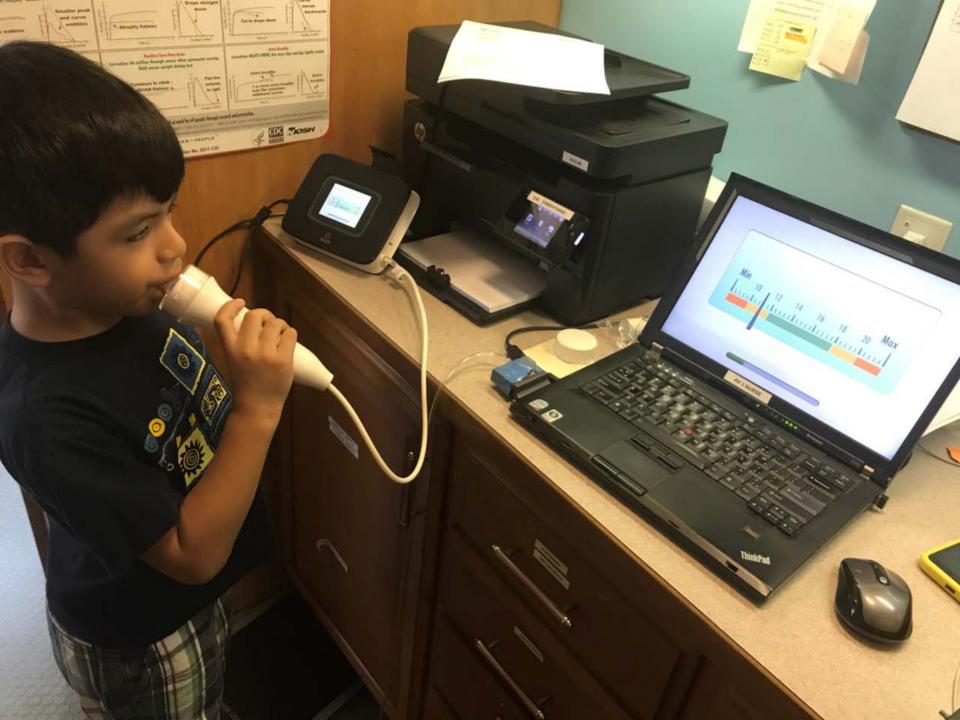
Thank you very much for taking time to complete this survey.

### Initial Patient Visit

- Parent/guardian is required to be present
- 45-minute appointment
- Bilingual staff
- No copays or costs to the family

### Initial Patient Visit

- Diagnostic tests performed on children 5 years and older
  - Spirometry
  - Fractional exhaled nitric oxide (FeNO)
- Administer Asthma Control Test (ACT)
   (> 4 years old)
- Full medical history and physical obtained
- Asthma 101/Asthma Action Plan
- Correct spacer/device technique
- Individualized treatment plan discussed





#### Limited Asthma Specialist Access Necessitates Need for Mobile Intervention

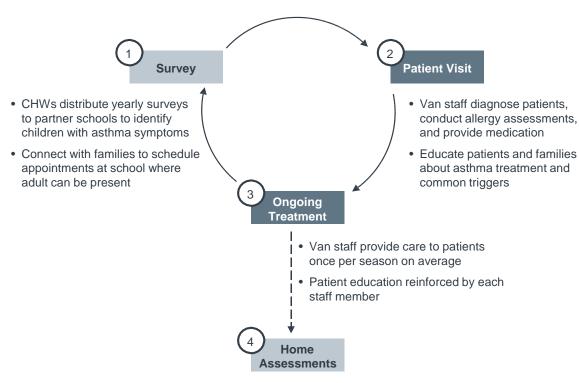
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"Exemplary Programs Making Services Easier to Use," National Center for Ease of Use of Community-Based Services, http://www.communitybasedservices.org/sites/communitybasedservices.org/files/files/Mobile%20C\_A\_R\_E\_%20Foun dation.pdf; Pooulation Health Advisor research and analysis.

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# Ongoing Treatment

- 30- to 45-minute appointment
- Virtual visit capability
- Treat asthma exacerbations/sick visits

# Ongoing Treatment

- Repeat diagnostic tests and ACT at each visit
- Allergy skin test typically performed at 2nd visit
  - Discuss individualized triggers and allergens
- Review medications and correct spacer/device technique at every visit
- Review asthma action plan
- Recommend home assessment





### Telemedicine

- Follow-up phone calls
  - 1–2 weeks after initial visit
  - After missed appointments, cancellations, no-shows
  - 2–3 days after sick visit or as needed
  - Frequent albuterol refills

### Home Assessments

- Performed in combination with the American Lung Association
- Recommended for the following patients:
  - Uncontrolled asthmatics (Mild-Moderate Persistent Asthma)
  - Asthmatics with multiple allergies and risk for flares
  - Severe Persistent Asthma diagnosis
- Community health worker assesses home and allergen risks and provides remediation and supplies to families

Prior to the home assessment, these boys were sleeping on an air mattress on the living room floor.

They were ecstatic to receive their new beds!







# Community Partnerships

- American Lung Association
- University of Illinois at Chicago
- Partnering schools and sites
- Chicago Asthma Consortium







Perfect Aire donated 60 air conditioners and dehumidifiers to Mobile Care Chicago.

We gave 8 air conditioning units to one of our partner schools, Visitation, a Catholic school that does not have air conditioning.



### Before Enrollment

| Fewer than 5 school absences   | 75% |
|--------------------------------|-----|
| No emergency department visits | 45% |
| No asthma<br>hospitalizations  | 81% |
| ACT score 19 or above          | 42% |

### After Enrollment

|                                | After<br>Enrollment | Before<br>Enrollment |
|--------------------------------|---------------------|----------------------|
| Fewer than 5 school absences   | 97%                 | 75%                  |
| No emergency department visits | 94%                 | 45%                  |
| No asthma<br>hospitalizations  | 98%                 | 81%                  |
| ACT score 19 or above          | 75%                 | 42%                  |

Asthma vans prevent \$3.00 in emergency room and hospital costs for every dollar spent.



# Summary

20,000 families reached annually100+ school partners each year\$100 per family reached

Comprehensive care to alleviate the number 1 driver of health care costs for children and the number 1 cause of school absenteeism





# ASTHMA IN-HOME RESPONSE (PROJECT AIR)

Presented by Ian Sheets, Grants Manager
Omaha Healthy Kids Alliance

### INTRODUCTION

- Ian Sheets, Grants Manager at Omaha Healthy Kids Alliance (OHKA)
- OHKA is a children's environmental health nonprofit
- Started out of Omaha's Superfund Site in 2006
- Lead poisoning prevention efforts until 2010—pivot to Healthy Housing
- Focus on in-home education and supply provision
- Provide community-wide education through public service announcements, video games, outreach



## ASTHMA IN-HOME RESPONSE (AIR)

- Started in 2015
- Multi-layer, multi-trigger in-home interventions
  - Behavior
  - Education
  - Supplies
  - Construction
  - Triage/referrals
- Serve ~50 kids a year





### **AIR—INTERVENTION BREAKDOWN**

- Referral to program
- Intake
- Initial visit
  - Education
  - Environmental evaluation
  - Question-AIR
- Supply drop-off
- Construction
- Follow-ups







### **VISIT**

- Full-scale environmental assessment
  - Start outside, work inside
  - Look at everything, but focus on indoor air quality hazards in AIR homes
- Meanwhile, education and Question-AIR
  - Collect baseline info on child's asthma
  - Educate client on asthma best practices
  - Build rapport with client
  - Start establishing potential referrals





Both staff meet at end with client and go over findings

### **SUPPLIES**

- Personalized, free supply kit based on:
  - Client's triggers
  - Family's needs
  - Home's health and safety
- Additional round of education based on supplies
- Specific cost tracking to help establish return on investment





### **EVALUATING THE PROGRAM**

- Asthma severity
  - Symptomatic days
  - Medication usage
  - Emergency room visits
  - Hospitalizations
  - Asthma attacks
- Behavior
  - Vacuuming
  - Dusting
  - Furnace filter
  - Smoking in home
  - Asthma Action Plan

- Quality of life
  - General fear/helplessness
  - Fear of medication side effects
  - Concern with asthma's effects on grades
  - Concern with asthma's effects on day-to-day life



- Moisture
- Cleanliness
- Maintenance
- Pests

Safety

- Energy efficiency
- Contaminants
   Ventilation





### **INTERNAL MEASURES**

- Dual enrollment rates
- Cost per intervention
- Cost of supplies
- Follow-up rate
- Time spent in program
- Time of construction projects
- Referrals made
- Referral sources





# HEALTH/ QUALITY OF LIFE OUTCOMES (STUDY OF 55 CLIENTS)

| Metric                              | Pre-Intervention | Post-Intervention |  |
|-------------------------------------|------------------|-------------------|--|
| Symptomatic Days                    | 131              | 11                |  |
| Missed School Days                  | 171              | 51                |  |
| Missed Work Days                    | 52               | 17                |  |
| Collective<br>Emergency Room Visits | 17               | 4                 |  |
| Collective<br>Hospitalizations      | 7                | 2                 |  |



Return on investment: \$1.83 for every \$1 invested

### **BEHAVIORAL OUTCOMES**

### Significant increases in:

- Dusting frequency
- Vacuuming frequency
- Furnace filter changing frequency

### Significant decreases in:

- Smoking indoors
- Using harsh cleaning chemicals
- Using candles and air fresheners





# PHOTOS OF WORK







### PHOTOS OF WORK







### **PARTNERSHIPS**

- Children's Hospital Direct reimbursement for interventions on their patients
- WellCare of Nebraska Partial reimbursement for interventions on their patients and sharing of claims-data
- Nebraska Asthma Coalition Network of Nebraska-based asthma stakeholders
- Awair Corporation piloting in-home IAQ monitors with OHKA
- City of Omaha Healthy Homes construction partnership
- Children's Hospital of Missouri Equipment and training trading



- Boys Town Pediatrics Referrals and case management
- University of Nebraska Medical Center Peer-reviewed research

### **NEXT STEPS FOR AIR**

- Duplication of model in other locales
- Continued expansion of reimbursement model
- Continued formalization of claims-sharing data
- Scaling up individual services
- Establishing an automated, community-wide referral system





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# Rhode Island Department of Health: Asthma Control Program

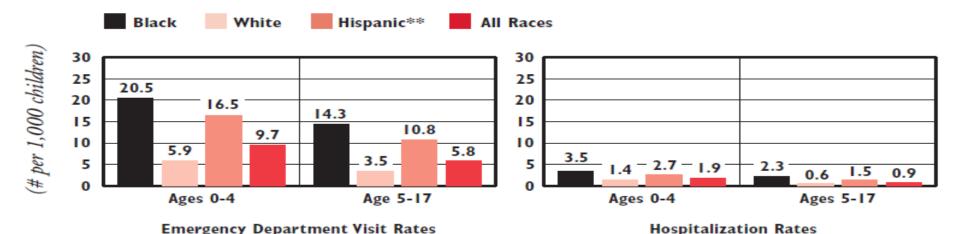
2019 National Environmental Leadership Award in Asthma Management Webinar Thursday, May 23, 2019 Ashley Fogarty, MPH

# Asthma Data: Health Inequities



#### Children with Asthma

Asthma\* Emergency Department and Hospitalization Rates, by Age and Race/Ethnicity, Rhode Island Children, 2013-2017



| CITY/TOWN        | ESTIMATED # OF CHILDREN UNDER AGE 18 | # OF CHILD EMERGENCY DEPT. VISITS WITH PRIMARY ASTHMA DIAGNOSIS | RATE OF CHILD<br>EMERGENCY DEPT.<br>VISITS WITH PRIMARY<br>ASTHMA DIAGNOSIS,<br>PER 1,000 CHILDREN |
|------------------|--------------------------------------|---|--|
| Four Core Cities | 73,741                               | 4,438   | 12.0   |
| Remainder State  | 150,215                              | 3,205   | 4.3  |
| Rhode Island     | 223.956                              | 7.643   | 6.8  |

# Asthma Data: Health Inequities



### **Key points:**

- Asthma is the most common chronic condition in children.
- Nationally, 8.5% of children have asthma.
- In Rhode Island, 9.8% of children have asthma.
- Black children and Hispanic children are more likely to visit the emergency room or be hospitalized due to asthma.
- Over 70% of pediatric asthma emergency department (ED) visits in Rhode Island are children on Medicaid.

#### RI asthma emergency department rates (per 1,000):

1. Providence: 13.3

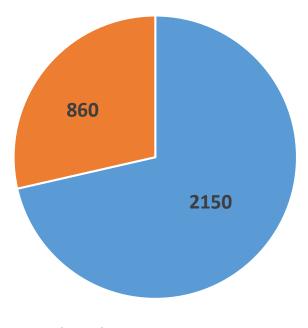
2. Central Falls: 12.3

3. Newport: 10.0

4. Woonsocket: 10.9

Pawtucket: 9.3

Asthma Emergency Department Visits, 2016–2017



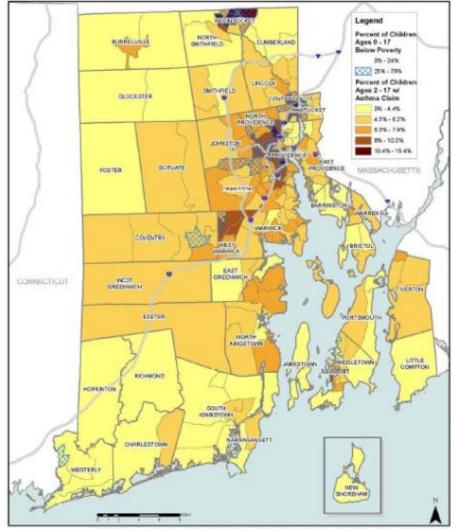
Medicaid

■ Commercial, self-pay or unknown

# Claims Data: Children With Asthma

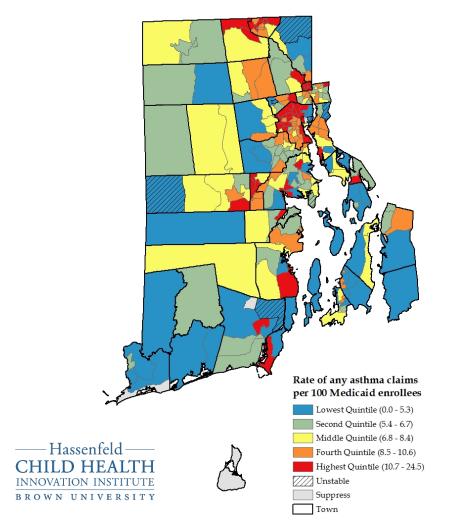


Percent of Children Ages 2-17 with an Asthma Claim\*, 2010-2012, Three-Year Average, with Percent of Children Under 18 Living Below Poverty



\*Asthma diagnosis in diagnosis fields 1-6 (UHC) or 1-4 (BCBSR) and NFPRI) on any claims form, ICD-9-CM 493.xx

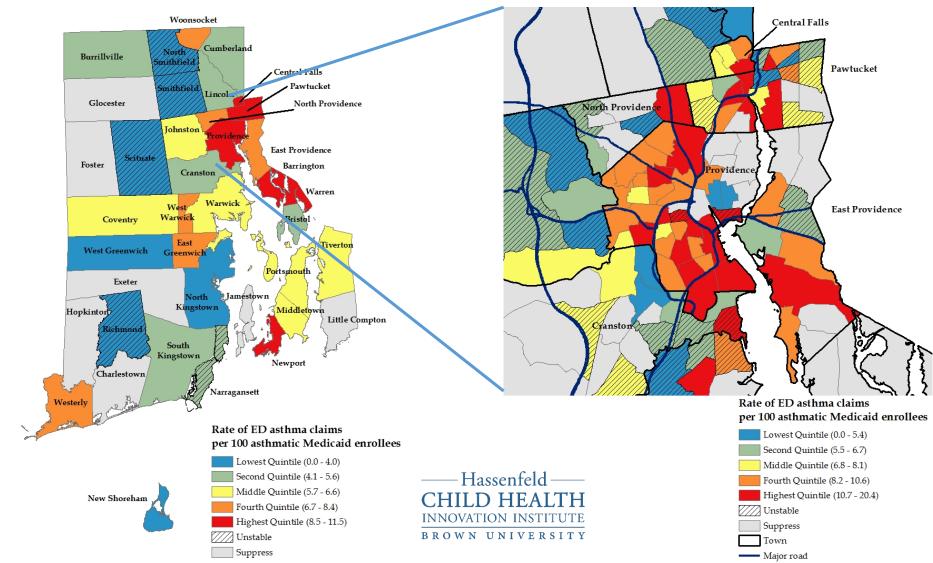
Any Asthma Claims Among Children on Medicaid, 2013–2017 (asthma prevalence)



# Children With Asthma: ED Visits



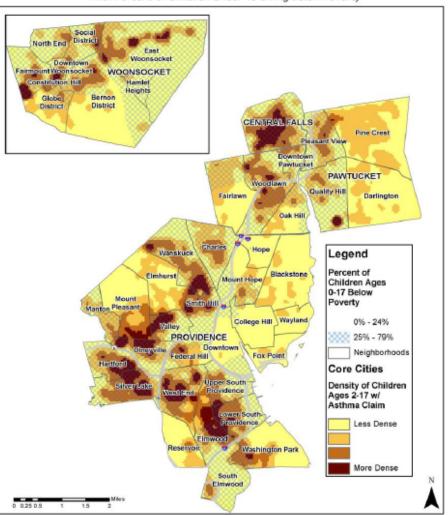
Asthma Emergency Department Visits Among Children on Medicaid with Asthma, 2013–2017



# Asthma, Poverty and Housing



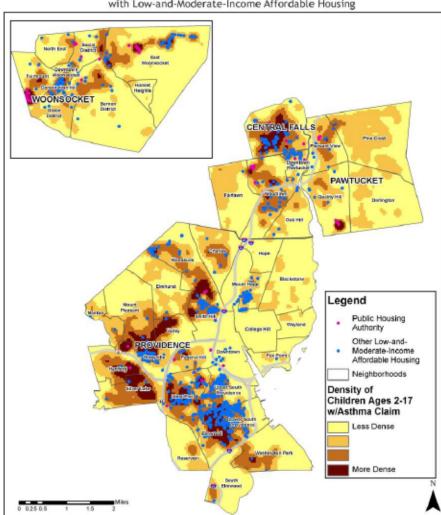
Density of Children Ages 2-17 with an Asthma Claim\*, 2010-2012, with Percent of Children Under 18 Living Below Poverty



\* Asthma diagnosis in diagnosis fields 1-6 (UHC) or 1-4 (BCBSRI and NHPRI) on any claims form, ICD-9-CM 493.xx

brokes island Size in Jane Feet, Johnson Schmunkty Survey 5-year (2007 - 2011), Rhode Island Geographic Information System (RIGIS), Neighborhood Health Plan of Rhode Island, United Healthcare of New England, Blue Cross & Blue Shield of Rhode Island, Rhode Island Department of Health

Map Produced by: The Providence Plan For: Rhode Island Department of Health Density of Children Ages 2-17 with an Asthma Claim\*, 2010-2012, with Low-and-Moderate-Income Affordable Housing



\* Asthma diagnosis in diagnosis fields 1-6 (UHC) or 1-4 (BCBSR) and NHPRI) on any claims form, ICD-9-CM 493.xx

Rhode Island State Plane Feet, NAD83

Deta Sources: Census 2010, American Community Survey 5-year (2007 - 2011), Rhode Island Geographic Information System (RIGIS),

Rhode Island Geographic Information System (RidS), Reighborhood Health Plan of Rhode Island, United Healthcare of New England, Blue Cross & Blue Shield of Rhode Island, Rhode Island Department of Health, Rhode Island Housing Map Produced by: The Providence Plan For: Rhode Island Department of Health

# RIDOH Asthma Control Program

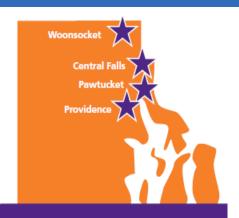




- Housed in Division of Community Health & Equity
- Serves children 0–17 living in high-poverty, urban areas of the state
- Well-known for long-term partnerships with researchers, hospitals, public health, housing, social justice and environmental organizations
- Efforts focused around collaborative approach with linkages between healthy housing, health care and other regional collaborations

# Asthma Program Services





#### **Free Asthma Services**

Families who have children with asthma and live in Providence, Pawtucket, Central Falls, or Woonsocket may qualify for:

 Up to three classes to learn how to manage their child's asthma

 Home visits by a Certified Asthma Educator to help find and fix asthma triggers (things that cause asthma attacks)

 Help coordinating asthma care with primary care providers, school nurses, teachers, and caregivers

 Help getting support for healthy housing, tenant rights, and social services

To see if you qualify, call the Health Information Line: 401-222-5960 / RI Relay 711

#### **Asthma Action Plan**

An Asthma Action
Plan is a written plan. It
lists a person's asthma
triggers, medicines, and
doses. It also tells what
to do in an asthma
emergency.



# Asthma at School

Asthma causes children to miss school, so schools need to be asthma-friendly. Schools in cities with more childhood asthma need this most. Healthy schools are good for all students and staff.

Project CASE (Controlling Asthma in Schools Effectively) works with elementary schools to:

- Offer Hasbro's Draw a Breath classes for students with asthma
- Give training for school staff about asthma needs at school
- Improve the school's indoor and outdoor spaces, asthma-friendly policies, and indoor air quality
- · Promote the use of Asthma Action Plans
- Improve asthma care coordination between school nurses, teachers, healthcare providers, and families

#### **Asthma and Healthcare**

The Asthma Control Program works with healthcare providers, community health centers, and patient-centered medical homes. It helps them offer better asthma care by:

- Encouraging the use of Certified Asthma Educators
- Providing a current Asthma Action Plan for patients
- Teaching families how to use the Asthma Action Plan to manage asthma
- Partnering with community-based public health programs
- Sharing national guidelines that help providers diagnose, monitor, and treat asthma

#### **Asthma at Home**

Clean and healthy homes help reduce asthma. Asthma triggers in the home include dust mites, mold, pets, pests, smoke, and chemical cleaners. The Asthma Control Program offers:

- Breathe Easy at Home (BEAH) If a landlord will not fix a suspected housing code violation that triggers asthma, BEAH helps doctors contact building code officials. BEAH can also help tenants get legal support.
- Asthma Home Visits Families can have up to three visits by a Certified Asthma Educator.
   The Certified Asthma Educator teaches how to get rid of asthma triggers and better manage asthma.





# RIDOH Asthma Home Visiting



The Home Asthma Response Program (HARP)

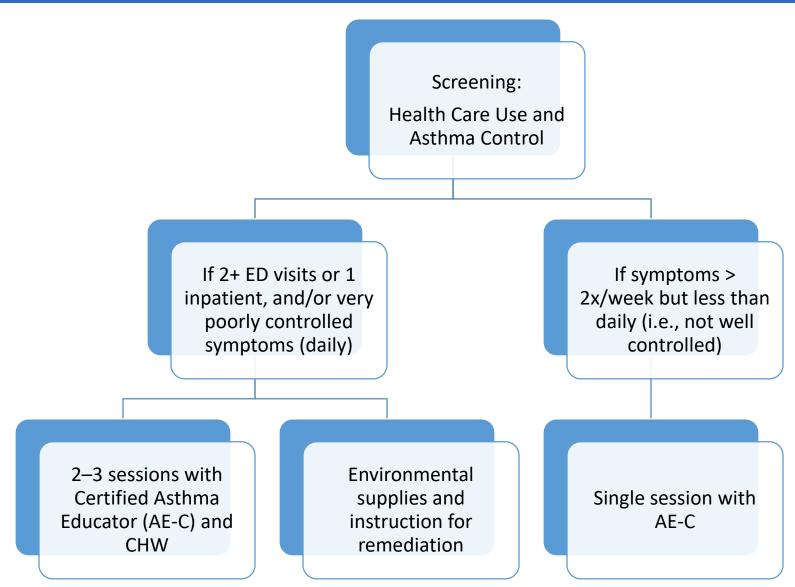
HARP is an evidence-based asthma intervention designed to **reduce preventable asthma emergency department visits and hospitalizations** among high risk pediatric asthma patients. The HARP model utilizes a Certified Asthma Educator (AE-C) and a Community Health Worker (CHW) to conduct three intensive sessions that:

- Assess patients' asthma knowledge and trigger exposure
- Provide intensive asthma self-management education
- Deliver cost-effective supplies to reduce home asthma triggers
- Improve quality and experience of care

Launched in 2011 in collaboration with Hasbro Children's Hospital, St. Joseph Health Center, HARP is an evidence-based intervention with well-defined and tested partnerships, roles and responsibilities, curriculum, service delivery infrastructure, eligibility criteria, and evaluation framework.

# HARP Screening Tool





# CDC's 6 18 Initiative



# The "6 | 18" Initiative

Promote adoption of evidence-based interventions in collaboration with health care purchasers, payers, and providers

High-burden health conditions 6 18

Evidence-based interventions that can improve health and save money



# CDC's 6 18 Initiative



THE 6 18 INITIATIVE

**EVIDENCE SUMMARY: Control Asthma** 

#### PROPOSED PAYER INTERVENTION

4

Expand access to home visits by licensed professionals or qualified lay health workers to improve self-management education and reduce home asthma triggers for individuals whose asthma is not well-controlled with the 2007 National Asthma Education and Prevention Program (NAEPP Guidelines) based medical management and intensive self-management education.



# OPPORTUNITIES FOR PAYERS AND PROVIDERS

Payers can consider expanding patient access to home visits by licensed professionals or qualified lay health workers to improve patients' ability to self-manage their asthma and reduce home asthma triggers.



#### KEY HEALTH AND COST EVIDENCE MESSAGES FOR PAYERS AND PROVIDERS

Home-based educational and environmental intervention delivered by non-physician teams (nurses, certified asthma educators, community health workers) can improve asthma symptom control, particularly in inner-city children with asthma, and may have cost savings for payers.

# Participant Outcome Data



#### **ECONOMIC CASE: COST SAVINGS AND RETURN ON INVESTMENT**

HARP has consistently demonstrated reductions in asthma costs, driven by large decreases in hospital and emergency department asthma claims. Claims data comparing one year pre-HARP to one year post-HARP shows that

participants had a 75% reduction in asthma-related hospital and ED costs. High utilizers had reductions close to 80% and much larger average savings compared to other participants.

|   | , , | '       |       | , ,      |           |
|---|-----|---------|-------|----------|-----------|
|   | N=  | PRE     | POST  | % CHANGE | \$ CHANGE |
| HARP PARTICIPANTS (at least one asthma ED visit or hospitalization) | 158 | \$2,127 | \$521 | -75.5%   | -\$1,606  |
| HIGH UTILIZER<br>(subset with<br>2+ prior ED visits)                | 51  | \$3,398 | \$690 | -79.7%   | -\$2,708  |

### **Insurance Claims Data:**

- With signed consent from participants, negotiated to receive claims data from Medicaid MCOs
- Examined costs for asthma-related hospitalizations, ED visits
- Compared 1 year pre-intervention to 1 year post-intervention
- Subset analysis for higher utilizers

# **Communicating Outcomes**



HARP has a positive return on investment. This means that every dollar invested into reducing preventable ED/hospital visits gets returned, with additional savings earned. Overall, HARP participants had a 33% ROI on ED/hospital costs (\$1 investment returned with extra 30 cents saved). The subset of high utilizers had an ROI of 126%. Including overall asthma costs which showed increased medication costs, HARP was still cost effective (i.e., investment equal to savings) and the high utilizer subgroup still had an overall ROI of 65%.

#### **DEMONSTRATED OUTCOMES:**

Quality Improvement: The asthma medication ratio HEDIS score for participants increased from 32% to 46%.

Improved Asthma Control: Patient population went from 20% well controlled to 51.5% well controlled.

Improved Quality of Life: Caregiver quality of life improved 17% on validated surveys.

**Reduction of Environmental Triggers:** Observed reductions in the presence of mold, dust, pests, pets, tobacco smoke, and chemicals.

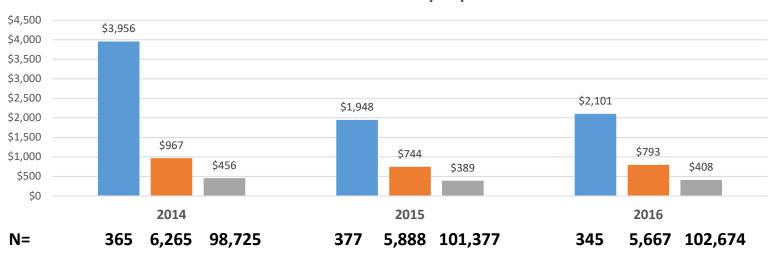
**Reduction in Missed School/Work Days:** Caregivers report reducing missed work work days due to asthma by 62%. Patients cut missed school days almost in half.

Increased Asthma Action Plans: Availability and patient use of asthma action plans created by providers increased from 20% to 80% of participants.

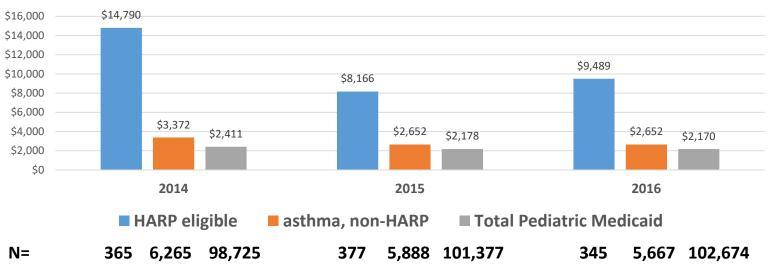
## Asthma Costs in Medicaid



#### **Median Cost of Care by Population**



#### **Average Cost of Care by Population**





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# **Polling Question 3**

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

- Begin investigating potential partnerships with community organizations, schools and other stakeholder groups
- Collect and analyze data to track key program outcomes and return on investment
- Consider ways to add services to my program that move toward providing the full continuum of care
- Develop strategies for effective in-home interventions and critical asthma education.
- 5. Visit the AsthmaCommunityNetwork.org Hall of Fame to learn more about past winners.



## **Thank You to Our Winners**













Post your questions now on www.AsthmaCommunityNetwork.org

### **\$EPA**

# Question & Answer Session on AsthmaCommunityNetwork.org Discussion Forum

Please join us in the AsthmaCommunityNetwork.org Discussion Forum for a live online Q&A Session.

3:00 p.m. - 3:30 p.m. EDT

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

 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 5/23/19 Webinar" link.
- 4. Click on the "Add new Forum topic" link to post your question.
- 5. Enter your question and click the "Save" button at the bottom of the page.