CENTER ON
HEALTH EQUITY ACTION
FOR SYSTEM TRANSFORMATION
AT FAMILIESUSA

Advancing Health Equity through Better Evidence for Asthma Care

April 30, 2019

Speakers

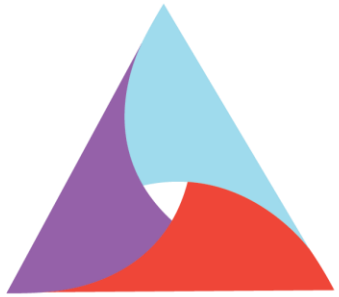
- Denisse Sanchez, Policy Analyst, Families USA
- Emmett Ruff, Policy Analyst, Families USA
- Jerry Krishnan, MD, PhD, Professor of Medicine and Public Health, The University of Illinois at Chicago
- Stacey Chacker, Director, Policy and Practice, Health Resources in Action

FAMILIESUSA

Agenda

I. What is Patient-Centered Outcomes Research and Why Does It Matter to Health Equity?
II. Asthma Inequities
III. Presentation of Patient-Centered Outcomes Asthma Research
IV. Policy Implications
V. Sustainable Financing for Asthma Services Outside Clinical Settings

FAMILIESUSA



CENTER ON

HEALTH EQUITY ACTION

FOR SYSTEM TRANSFORMATION

AT FAMILIESUSA


Evidence
for Equity
Initiative

Limitations of Our Current Evidence Base

1. Research subjects have mostly been young white males, but results are generally assumed to apply to everyone, defaulting into a “one-size-fits-all” approach.
2. Research generally focuses on what scientists, providers, and payers want to know, and rarely on what matters most to people.
3. Even when subjects are more diverse, researchers don’t always stratify data.

FAMILIESUSA

Patient-Centered Outcomes Research Advances Health Equity

Comparative Effectiveness Research (CER):

- Interested in subgroups variation
- Uses real-world populations and real-world settings

Patient-Centered Outcomes Research (PCOR):

- CER with a patient perspective
- Meaningfully involves patients throughout research stages

FAMILIESUSA

Patient-Centered Outcomes Research Institute (PCORI)

"[A]ssist patients, clinicians, purchasers, and policymakers in making informed health decisions by advancing the quality and relevance of evidence concerning the manner in which diseases, disorders, and other health conditions can effectively and appropriately be prevented, diagnosed, treated, monitored, and **managed through research and evidence synthesis that considers variations in patient subpopulations,** and the dissemination of research findings…"

FAMILIESUSA

For More Information

- The Role of Patient-Centered Outcomes Research in Improving Evidence and Advancing Health Equity (Report)

- Advancing Health Equity through System Transformation: Strengthening the Evidence Base to Achieve Health Equity (Webinar)

- **Evidence for Equity Initiative website:**

https://familiesusa.org/initiatives/evidence-equity-initiative

FAMILIESUSA

Asthma Inequities

Uneven Distribution of Asthma and Asthma Outcomes

When compared to their white classmates:

Prevalence

- Black children are 2 times as likely to have asthma
- Puerto Rican are 82% more likely to have asthma

Mortality

- Black children are 10x as likely to die from asthma
- Hispanic children are 2x as likely to die from asthma

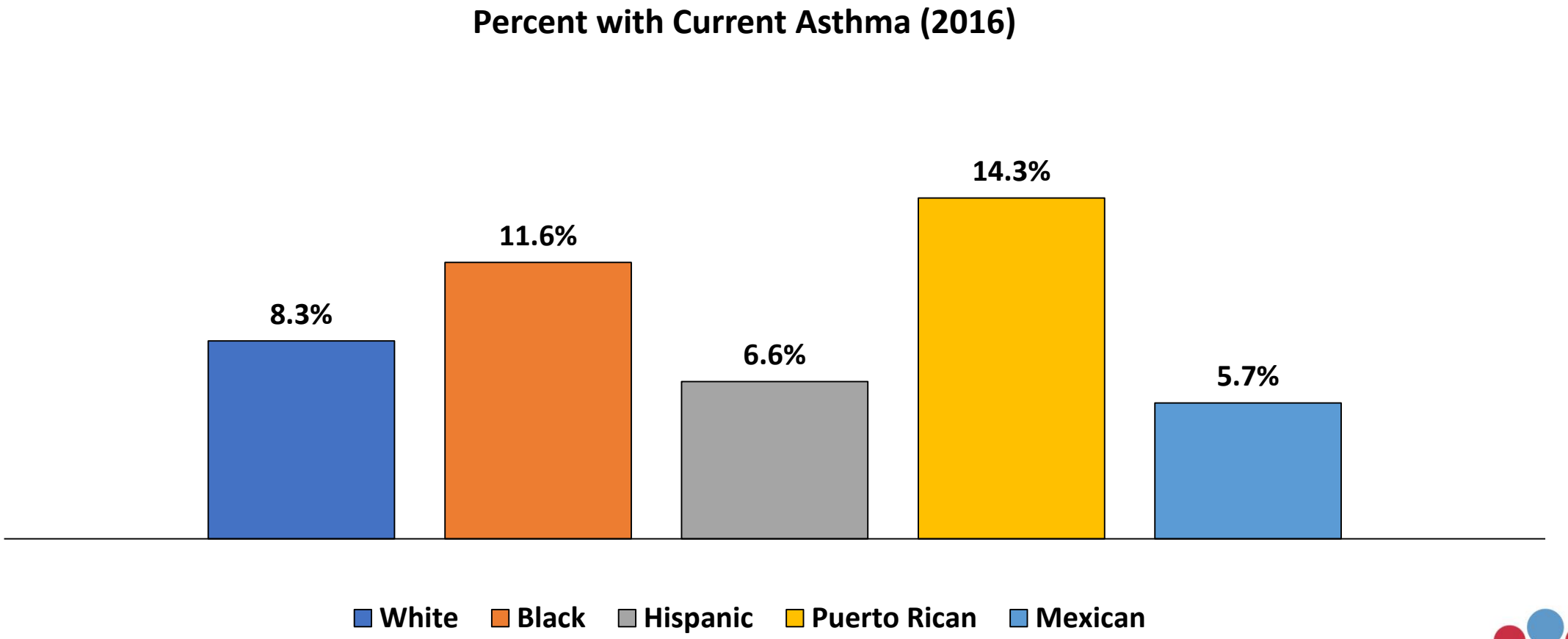
Hospital Admissions

- Black children are 4.5x as likely to be hospitalized due to asthma
- Hispanic children are 70% more likely to be hospitalized due to asthma

SOURCE: CDC, Most Recent Asthma. Retrieved from https://www.cdc.gov/asthma/most_recent_data.htm
U.S Department of Health and Human Services Office of Minority Health, Asthma and African Americans retrieved from https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=15 and Asthma and Hispanics Americans retrieved from https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=60

FAMILIESUSA

Asthma Inequities and Significance of Subgroup Analysis



Centers for Disease Control and Prevention. (n.d.) *Most Recent Asthma Data.* Retrieved February 19, 2019.

FAMILIESUSA

The Asthma Portfolio

Six Research Studies

- Funded by the Patient-Centered Outcomes Research Institute (PCORI)
- Use Patient-Centered Outcomes Research (PCOR) techniques
- Use Comparative Effectiveness Research (CER) techniques
- Measured the effects of interventions on asthma-related outcomes

FAMILIESUSA

Availability of Results

- PCORI awarded funding in 2013 and 2014
- Abstracts are available
- Five of the six studies have completed their research
- Four studies have completed peer reviews
- Two studies have published results
- Final research reports to be released later this year

FAMILIESUSA

Does a Stress Management Program for African-American Parents Increase Asthma Symptom-Free Days for Their Children? — The BEAMS Study

Participants:

- African American parent-child pairs from Washington, D.C.

Interventions Tested:

- Group 1: Parents participated in a stress management program
- Group 2: Usual care. (Did not participate in the program)

Outcomes Measured:

- Number of days without asthma symptoms

Limitations:

- No direct evidence of a relationship between parent stress level and child asthma symptoms

Evidence Generated:

- Stress management classes for Black parents of children with asthma can reduce their children's asthma symptoms after 12 months

FAMILIESUSA

Guidelines to Practice (G2P): Reducing Asthma Health Disparities through Guideline Implementation

Participants:

- Patients from six community health centers in Seattle and King County, WA

Interventions Tested:

- Treatment from providers implementing clinic improvements
- CHW home visits
- Health plan interventions
- Provider education

Outcomes Measured:

- 13 different measures of asthma-related control and quality of life

Limitations:

- Data on effectiveness of interventions are not stratified by patients' race or ethnicity.

Evidence Generated:

- CHWs can improve asthma-related quality of life
- Integration of CHWs into clinics and provider teams as part of a Medicaid Section 1115 waiver has resulted in improved quality of care

FAMILIESUSA

Using a Home- or Clinic-Based Program to Help Older Adults Manage Their Asthma — The SAMBA Study

Participants:

- Older adults from nine clinics in New York City

Interventions Tested:

- Group 1: Patients received the SAMBA asthma self-management program at home through CHWs
- Group 2: Patients received SAMBA asthma self-management program at a clinic through Asthma Care Coaches (ACCs)
- Group 3: Usual care

Outcomes Measured:

- Five measures of asthma-related control and quality of life

Limitations:

- The lack of uniform criteria for selecting and training ACCs and CHWs limited understanding of what characteristics made them more or less effective for specific populations.

Evidence Generated:

- The SAMBA asthma self-management program can improve quality of life and asthma management for Black and Latino adults over the age of 60

FAMILIESUSA

Improving Youth Question-Asking and Provider Education During Pediatric Asthma Visits

Participants:

- Youth from four pediatric practices in North Carolina

Interventions Tested:

- Group 1: Patients watched a short educational video and completed an asthma question prompt list
- Group 2: Usual care

Outcomes Measured:

- Number of questions youth asked
- Whether providers educated youth

Limitations:

- Published results do not include data related to health outcomes.
- Data on effectiveness of intervention is not stratified by patients' race or ethnicity.

Evidence Generated:

- Completing a question prompt list and watching an educational video prior to receiving treatment can make patients more likely to ask questions and get educated by their providers

FAMILIESUSA

Training Staff at Doctors' Offices to Use Shared Decision Making with Patients Choosing Asthma Treatments

Participants:

- Primary care practices in North Carolina.

Interventions Tested:

- Group 1: 12-week, facilitator-led shared decision-making (SDM) training program that was customized for each doctor's office
- Group 2: Single 1-hour SDM training program that was not customized for each doctor's office
- Group 3: No training program

Outcomes Measured:

- Patients' perceptions of shared decision-making in their treatment
- Asthma-related hospitalizations and emergency department visits
- Oral steroid prescription orders

Limitations:

- Data on effectiveness of intervention is not stratified by patients' race or ethnicity.

Evidence Generated:

- A customized 12-week, facilitator-led training in doctors' offices is an effective strategy for implementing asthma interventions in primary care practices.

FAMILIESUSA

Comparing Three Ways to Prepare Children and Caregivers to Manage Asthma after an Emergency Department Visit — The CHICAGO Plan

Participants:

- Children from six hospitals in Chicago, high proportion were Black and Latino Children
- Collaboration with Chicago DPH

Interventions:

- **Group 1:** Clinicians, children and caregivers completed **culturally tailored paper decision support tool** in the emergency room
- **Group 2:** Clinicians, children and caregivers completed culturally tailored paper decision support tool in the emergency room **plus 5 home visits from CHWs over 6 month period**
- **Group 3:** Usual care

Outcomes:

- Quality of ED care (vs. guidelines)
- Self-management after ED
- Survey responses from children and caregivers on how asthma affected their lives

Limitations:

- Fewer children participated in the study than the researchers anticipated.
- Due to its modest size (~350 children enrolled vs. target 640 children), the study did not measure the interventions' impacts on clinical outcomes or utilization of the emergency room.

Evidence Generated:

- Paper decision support tool **improved quality of asthma care in the emergency department** (meds prescribed, follow-up arranged)
- Paper decision support tool combined with home visits by CHWs **improved patient self-management behaviors** (filling prescriptions, attending follow-up appointments)
- Programs across care continuum are needed

FAMILIESUSA

More Information on Research Studies

- Does a Stress Management Program for African-American Parents Increase Asthma Symptom-Free Days for Their Children? — The BEAMS Study: www.pcori.org/Teach190
- Guidelines to Practice (G2P): Reducing Asthma Health Disparities through Guideline Implementation: https://www.pcori.org/research-results/2013/guidelines-practice-g2p-reducing-asthma-health-disparities-through-guideline
- Using a Home- or Clinic-Based Program to Help Older Adults Manage Their Asthma — The SAMBA Study: http://www.pcori.org/Federman201
- Improving Youth Question-Asking and Provider Education During Pediatric Asthma Visits: http://www.pcori.org/research-results/2014/using-question-prompt-lists-during-pediatric-asthma-visits-increase-adolescent
- Training Staff at Doctors' Offices to Use Shared Decision Making with Patients Choosing Asthma Treatments: http://www.pcori.org/Tapp165
- Comparing Three Ways to Prepare Children and Caregivers to Manage Asthma after an Emergency Room Visit — The CHICAGO Plan: http://www.pcori.org/Krishnan184

FAMILIESUSA

Policy Recommendations

Researchers should stratify the results of their studies by race, ethnicity, and gender.

Limitation in generating equity-focused evidence: Data on effectiveness of interventions are not stratified by patients' race or ethnicity.

Without disaggregated data on the effectiveness of an intervention, there is no evidence that the intervention addresses the health inequities experienced by specific populations that require tailored attention.

FAMILIESUSA

Research on children of color should include qualitative data from parents

Two studies focused on managing and reducing asthma symptoms in children of color.

Chicago Plan:

- Intervention measurably improved asthma management
- Intervention made no difference in the outcomes **reported by patients and their parents**

BEAMS study:

- Intervention measurably reduced asthma symptoms
- Intervention's perceived effectiveness was **not measured**

FAMILIESUSA

CHWs should be funded as valuable health interventions that address inequities and improve health outcomes

Three studies tested home based interventions with CHWs.

Chicago Plan: Home visits from CHWs improved asthma management

G2P Study: Home visits from CHWs reduced asthma symptoms and improved quality of life

SAMBA Study: Home visits from CHWs improved asthma management and reduced asthma symptoms.

FAMILIESUSA

CENTER ON HEALTH EQUITY ACTION FOR SYSTEM TRANSFORMATION AT FAMILIESUSA

Sustainable Financing for Asthma Services Outside Clinical Settings - CHWs

Stacey Chacker, Director, Policy and Practice

April 30, 2019

Health Resources in Action
Advancing Public Health and Medical Research

CHWs and Asthma Home Visiting Services

New England Asthma Innovation Collaborative

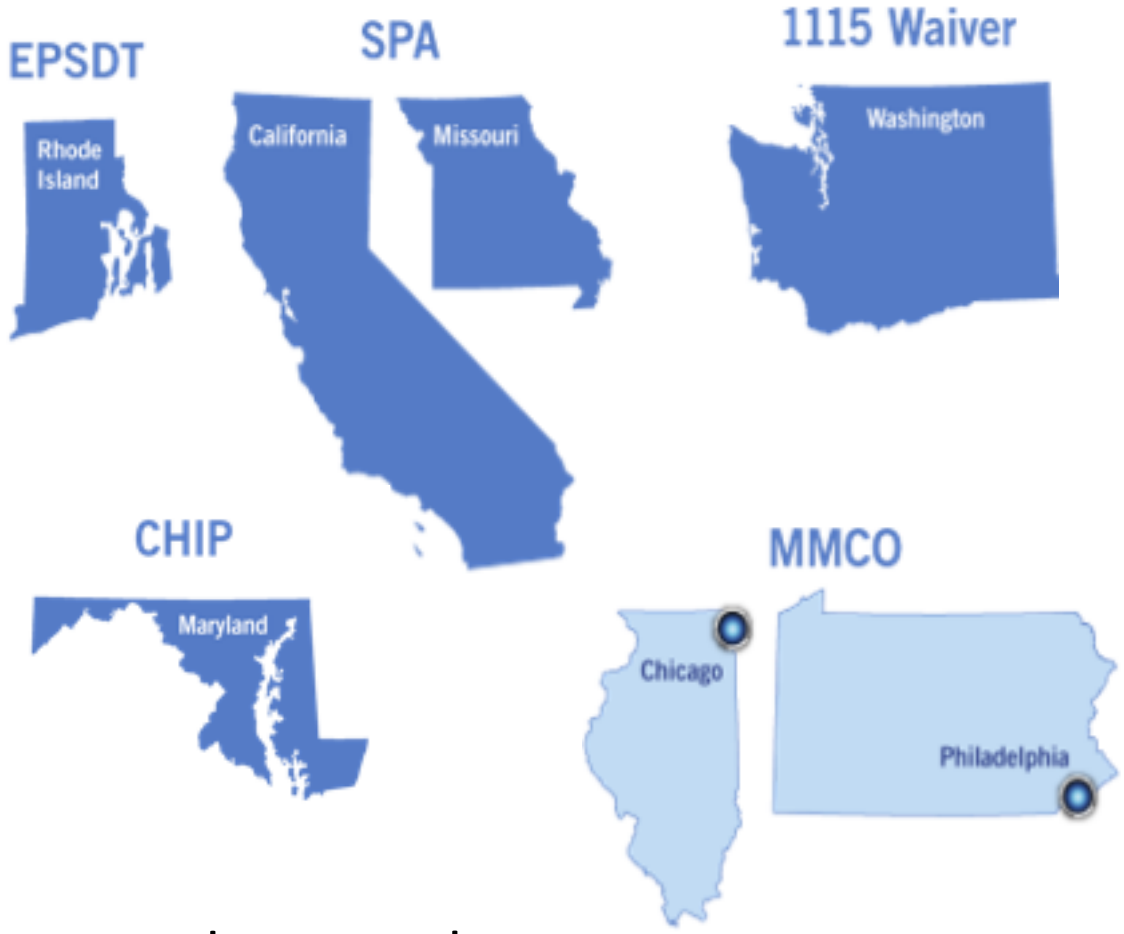
- Funded 2012 – 2016 with a $4.2 million CMMI HCIA
- Nine sites served over 1100 children.

NJ Asthma In-Home Pilot

- Funded by The Nicholson Foundation - 2018 – 2020
- Four sites serving over 450 children

One Step Forward, Two Steps Back

Seeing efforts to develop sustainable reimbursement policies for in-home asthma visits conducted by licensed, certified, and non-licensed and non-certified professionals, including CHWs.



…and many others

Some Wins and Ongoing Efforts

- State Plan Amendment (SPA) - CHIP Coverage (MD)
- Accountable Care Organization (Pediatric Physicians' Organization at Children's Hospital, Boston) & ACOs
- Medicaid Managed Care (Philadelphia)
- Community Benefits (Rutland Regional Hospital, VT and Boston Children's)
- Medicaid - MoHealthNet

Try Try Again!

- CA –MediCal

https://docs.google.com/forms/d/e/1FAIpQLSfwKzUsMhubJGwr8IweKsEbGESMqRAasM1EdGZR86b1CichSw/viewform

- NC – negotiating SPA
- UT – Designated State Block Funding
- RI – Pilot with MMCO & State Funds (VW Settlement)
- And many more!

How to Get There?

- **Pilot**
- **Evaluate**
  - Race/ethnicity/language data key, and Z-Code (SDOH)
  - Impact on household
- **Improve and target**
- **Business case**
  - Know your audience and be concise!
  - Address Healthcare Quality Measures
- **Relationships are key!**
  - Educate! Advocate! Activate!
- **Success might look different than originally envisioned**
  - No direct path – try multiple approaches, and be flexible

Partnerships and Support, and Many Pathways

The CMS Innovation Center

The Center for Medicare & Medicaid Innovation (the Innovation Center) with CMS supports the development and testing of innovative health care payment and service delivery models.

Health Resources in Action®
Advancing Public Health and Medical Research

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

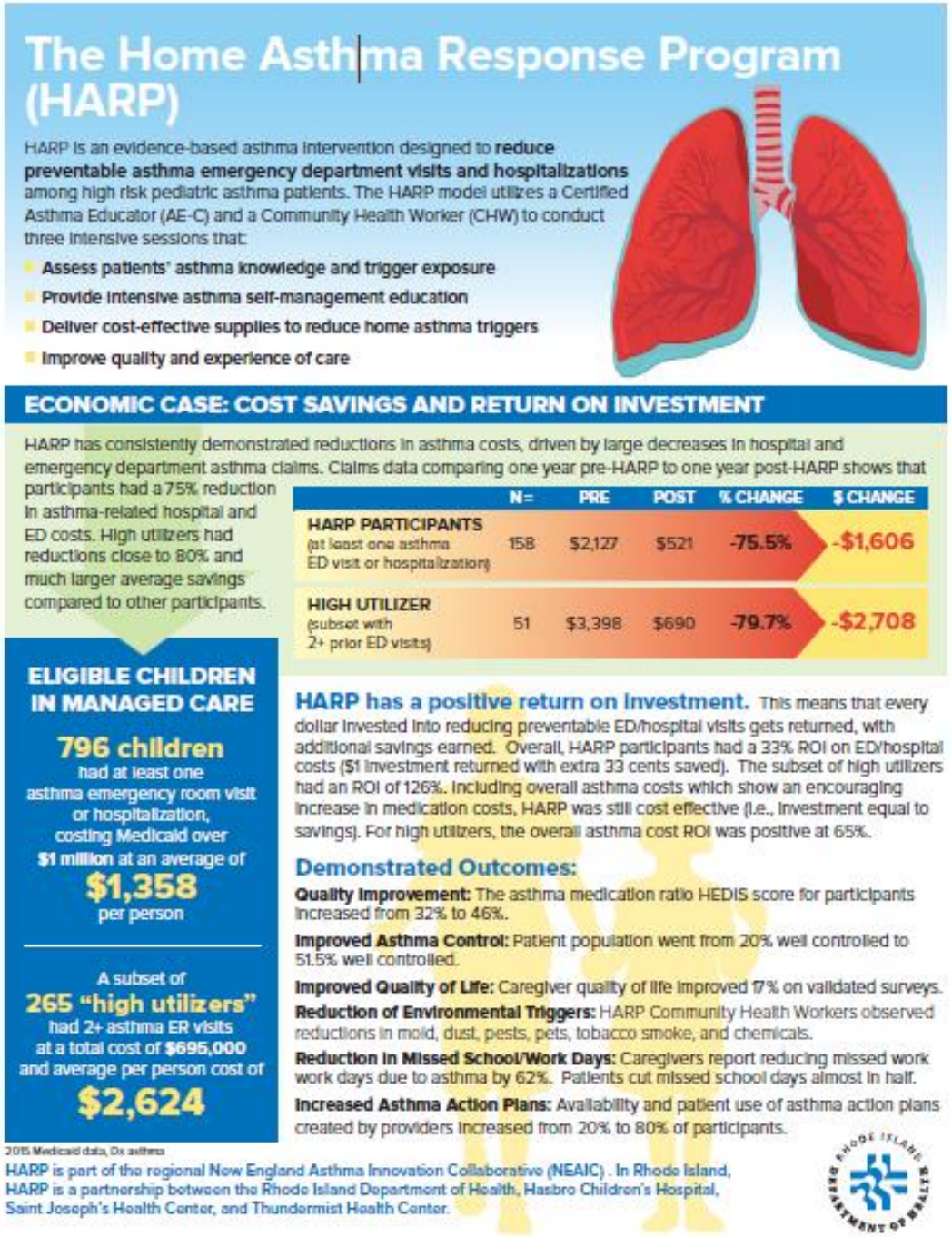
Green & Healthy Homes Initiative®

EPA United States Environmental Protection Agency

Examples - RI

Infographic Business Case

- The Intervention – or the WHAT
- The cost savings
- The impact on Medicaid
- The outcomes



Example – Utah

Utah Asthma Home Visiting Program

UTAH DEPARTMENT OF HEALTH
Utah Asthma Program

The Utah Asthma Home Visiting Program is an evidence-based, targeted, high-risk care management intervention designed to reduce preventable asthma emergency department (ED) visits and hospitalizations and improve asthma control.[1,2] Since the program began in January 2016, 250 patients have entered the program and 205 have completed it.[3] The program is offered by specially trained health educators in Utah and Salt Lake Counties and includes the following:

- Visit 1: Learn about asthma symptoms, triggers, medications, and inhaler technique.
- Visit 2: Identify asthma triggers in the home and set goals to reduce these triggers. Refer to home remediation services as needed.
- Visit 3: Discuss progress on controlling asthma and reducing triggers.

Improves Asthma Control and Quality of Life[3]

- 90% of participants complete the program.[4]
- 80% of participants had improved asthma control test scores from Visit 1 to Visit 3.
- 89% of those who achieved control in the program reported having controlled asthma 12 months after the program.
- 75% of participants started using their controller medication more by Visit 3.
- 68% of participants reported increased confidence managing their asthma six months after the program.

Testimonial

"It used to be a way (of life) for our (daughter) to get sick…But after getting educated on her inhalers and having our home inspected, things changed.

We are happier! Plans happen, dates occur, friends play. Life is different."

-Mother in Utah County

Reduces Unwanted and Costly Events[3]

12 Months After Completing the Program

- 75% decline in average missed work days.
- 53% decline in average missed school days.
- 60% reduction in average unplanned doctor visits.
- 53% reduction in episodes requiring an oral systemic corticosteroid.
- 70% reduction in asthma-related ED visits.
- 82% reduction in asthma-related hospitalizations.

September 2018

Current Referral Sources[5]

- Primary Children's Hospital
- Intermountain Healthcare
- Utah Valley Pediatrics
- Green and Healthy Homes Initiative
- North Valley Pediatrics
- Ratcliffe Clinic
- Word of Mouth
- Alpine Pediatrics
- Timpanogos Hospital
- Kids on the Move
- WIC
- BeWise
- School Nurses
- Orem Pediatrics (IHC)

Utah Program Cost

Visit 1	**$178.65**
Visit 2	**$92.54**
Visit 3	**$82.64**
Total =	**$353.83**

Cost includes miles driven, travel time, staff time for two health educators, paper materials, mattress and pillow cover, and spacer.

The Economic Case: Cost Savings and Return on Investment

Asthma is Common and Costly in Utah

- One in 12 Utah adults have asthma (8.3%).[6]
- One in 17 Utah kids have asthma (5.8%).[6]
- In Utah, about 48% of those with asthma are exposed to two or more triggers at home (i.e. dust or pets) and are more likely to miss school, work, and other usual activities.[7]
- Uncontrolled asthma in Utah is more prevalent among those with less education, low income, and those living in rural areas.[8]

There are on average **6,948**[9] Utah asthma-related ED visits a year.

In 2014, total Utah asthma-related ED visits cost **$28.1 million.**[10]

The Program Saves Money[3,11]

Number of Participants[12]	82
Program Cost per Participant	$353.83
Average Asthma ED Visit Cost[13]	$1,815.73
% Decrease in Total ED Visits	70%
For Every $1 Invested:	**$3.31 saved**

1. Asthma Care Quick Reference: Diagnosing and Managing Asthma. https://www.nhlbi.nih.gov/files/docs/guidelines/asthma_qrg.pdf
2. Asthma: Home-Based Multi-Trigger, Multicomponent Environmental Interventions. The Community Guide. https://www.thecommunityguide.org/findings/asthma-home-based-multi-trigger-multicomponent-environmental-interventions-children-and.
3. Utah Asthma Home Visiting Program Database. 2016-2018. Utah Asthma Program.
4. Program completion is defined as completing two of three visits.
5. Referral sources are ordered by frequency of referrals.
6. 2016 BRFSS data.
7. 2009-2014 BRFSS Asthma Call-Back Survey data.
8. 2018 Asthma in Utah Burden Report. Utah Asthma Program. http://health.utah.gov/asthma/data/reports/BurdenReport/AsthmaBurdenReport2018.pdf
9. 2012-2014 IBIS data.
10. Utah ED Encounter Database 2014-2015 combined. Note: The primary diagnosis code ICD 493 was used to identify ED visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.
11. Hnu J, Wilhelm N, Lewis L, Herman E. Economic Evidence for US Asthma Self-Management Education and Home-Based Interventions. Clinical Commentary Review. J Allergy Clin Immunol Pract 2016; 4:1123-34. https://www.jaci-inpractice.org/article/S2213-2198(16)30151-6/fulltext
12. Data are collected 12 months post completion of Visit 3. These data reflect program completions as of April 15, 2018.
13. 2016 APCD data.

Images courtesy of the Noun Project: School by b farias, Work by Laurin Kraan, Ambulance by icon 54, clinic by Adrien Coquet, Pill by Symbolon, clinic by Adrien Coquet.

September 2018

Some Resources – Asthma Specific

- MA DPH CHW Protocol Manual and videos
- NCHH - Building Systems to Sustain Home-Based Asthma Services
- Families USA CHW Impact Estimator Tool for Asthma
- The 6|18 Initiative Evidence Summary Control Asthma

Thank you and Contact:

Stacey Chacker,
Director, Policy and Practice
Health Resources in Action
schacker@hria.org
617-279-2236

Questions?

CENTER ON
HEALTH EQUITY ACTION
FOR SYSTEM TRANSFORMATION
AT FAMILIESUSA

https://familiesusa.org/initiatives/center-health-equity-action-system-transformation

Sign up for the Health Equity Action for Transformation (HEAT) Network
https://goo.gl/forms/sx7mDPxY73LMMjGt2