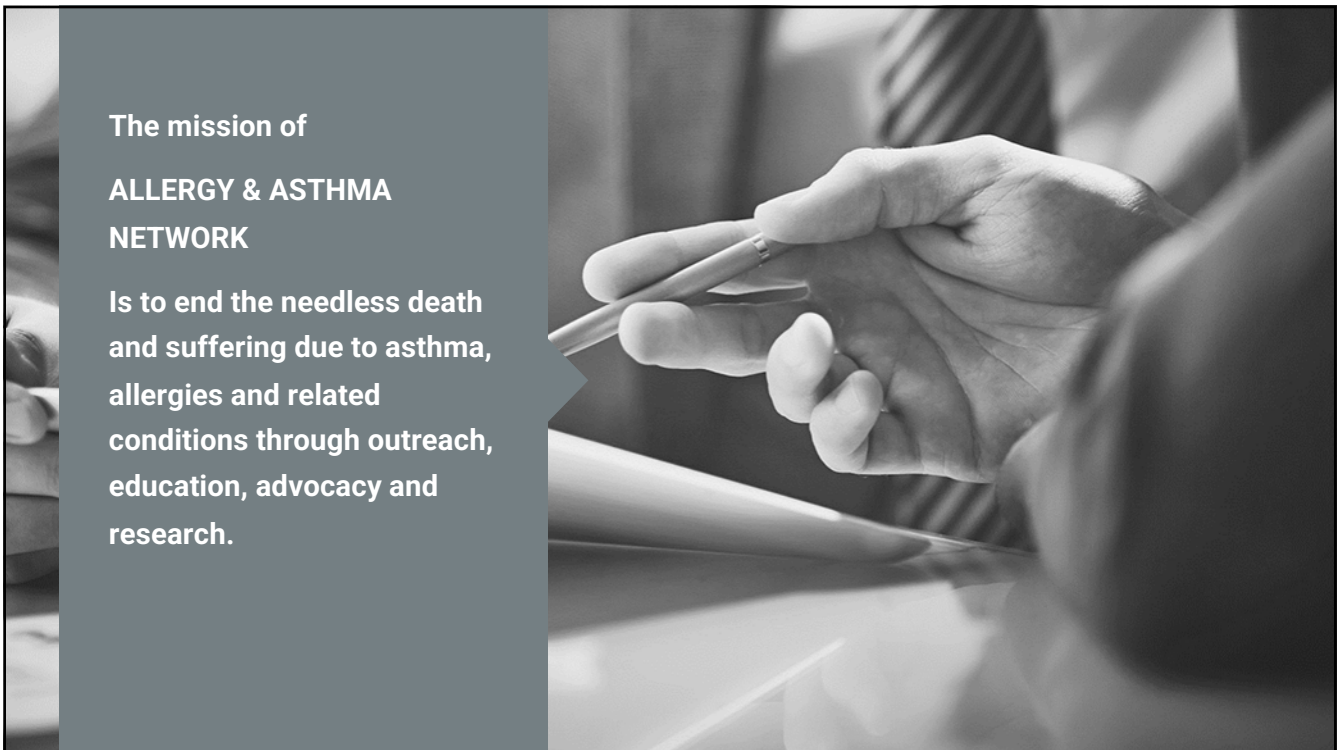




# ASTHMA HOME VISITS: IMPROVING QUALITY OF LIFE

FEBRUARY 2, 2022

1



The mission of  
**ALLERGY & ASTHMA  
NETWORK**

Is to end the needless death  
and suffering due to asthma,  
allergies and related  
conditions through outreach,  
education, advocacy and  
research.

2

## Meet Our Speakers



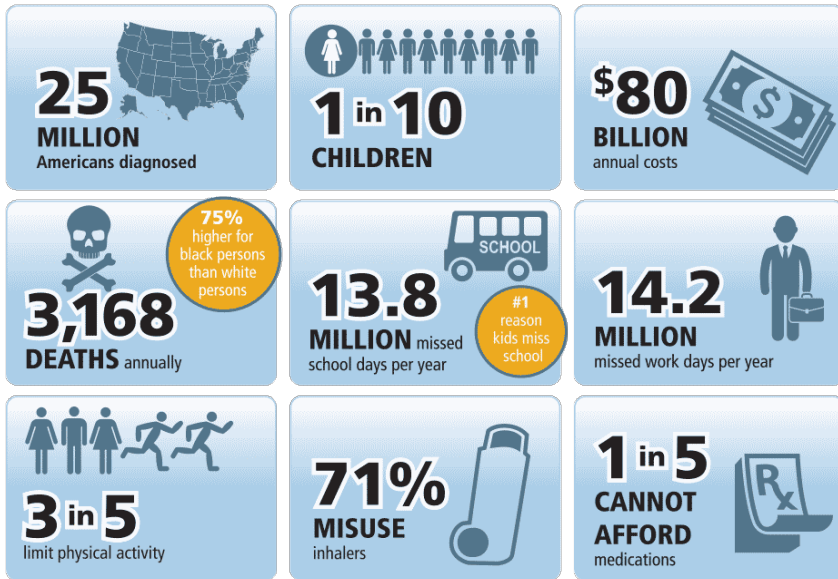
**Andrea M. Jensen, CHES®, AE-C**  
 Asthma Program Coordinator  
 Utah County Department of Health  
 Provo, Utah



**Gayle Higgins, MSN, PNP-BC, AE-C**  
 Pediatric Nurse Practitioner  
 Education Plus  
 Philadelphia, PA

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### Asthma



AllergyAsthmaNetwork.org



4

# Social Determinants of Health



5

## Disparities in Asthma

**CHEST FOUNDATION** Allergy & Asthma NETWORK

### ASTHMA: TAKE ACTION, TAKE CONTROL

asthma.chestnet.org

#### ASTHMA HEALTH DISPARITIES

Asthma crosses all racial, ethnic and socioeconomic groups. It is more common among African-American, Hispanic, and Native American populations, particularly those living in poor urban areas.

	ER VISITS	DEATHS
African-American children:	<b>4.5X</b> HIGHER	<b>7X</b> HIGHER
African-American adults:	<b>2.8X</b> HIGHER	<b>3X</b> HIGHER
Hispanic children:	<b>2.1X</b> HIGHER	<b>2X</b> HIGHER

**Native Americans**  
30% MORE LIKELY to have asthma (Native American population)

**Minority children**  
LESS LIKELY to take daily asthma medication

**Puerto Ricans**  
2X GREATER (Puerto Rican population)

#### INCOME LEVEL AND EDUCATION PLAY A SIGNIFICANT ROLE IN ASTHMA PREVALENCE

Adults with an annual income of <b>&lt;\$75,000</b> are <b>MORE LIKELY</b> to have asthma	Adults who didn't finish high school are <b>MORE LIKELY</b> to have asthma
People with asthma who earn <b>&lt;\$50,000</b> per year are <b>twice as likely</b> to have an asthma flare	ADULTS WHO CANNOT AFFORD THEIR ASTHMA MEDICATION: <b>1 in 4</b> African-Americans <b>1 in 5</b> Hispanics

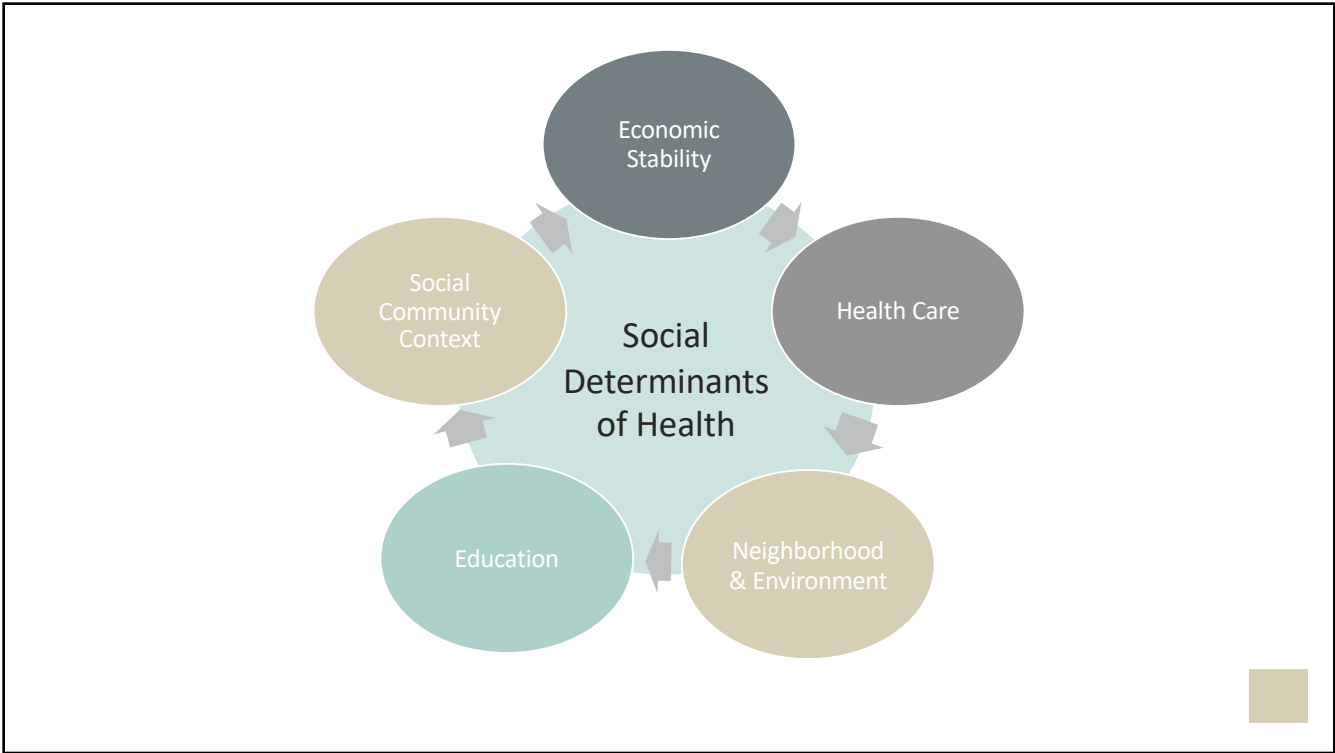
#### FACTORS THAT CAN LEAD TO ASTHMA DISPARITIES

- ACCESS TO CARE** - Limited or lack of transportation can limit a patient's ability to reach their doctor, pharmacist and/or get proper medication refills.
- INCOME** - There are often access to health care and health insurance, low to low income patients are not able to receive care, including necessary medications.
- ENVIRONMENTAL ALLERGENS AND IRRITANTS** - People who live in low-income areas with overcrowded housing are exposed to mold and pests, including cockroaches, mice, and bedbugs. They also live in old buildings with poor ventilation, high humidity, and poor lighting.
- EDUCATION INEQUALITY** - A lack of knowledge and understanding of the disease can lead to poor management of the disease and a lack of ability to follow the doctor's instructions.
- LANGUAGE AND CULTURAL DIFFERENCES** - People who speak a language other than English may have difficulty understanding their doctor's instructions.

TALK WITH YOUR LEGISLATORS ABOUT POLICIES THAT IMPACT COMMUNITIES EXPERIENCING A GREATER BURDEN OF ASTHMA.

© 2019 CHEST FOUNDATION. CHEST FOUNDATION IS AN EQUAL OPPORTUNITY ORGANIZATION. CHEST FOUNDATION IS AN AFFILIATE OF THE AMERICAN BRONCHITIS AND ASTHMA SOCIETY.

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Imagine....

No Health Insurance

No family support

Worried about money

The slide features the text "Imagine...." on the left. To its right is a photograph of a young woman with dark curly hair, looking down with a thoughtful or concerned expression, resting her chin on her hand. To the right of the photograph are three stacked rectangular boxes, each with a grey arrow pointing left towards the photo. The top box is dark grey and labeled "No Health Insurance". The middle box is a medium grey and labeled "No family support". The bottom box is a dark tan and labeled "Worried about money".

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## Add to those worries a child with asthma . . .

Do they have their inhaler?

Do they need to go to the ER?

Why do they ALWAYS get sick?

Can I find a babysitter?

Will they be ok at school?

Should I go to work?

Why does this keep happening?

Are they breathing ok?

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### Asthma Visit Today

- Vital signs
- Meet with HCP
- Asthma assessment
- Refills (if needed)
- Written asthma action plan
- Sent to schedule follow up
- Lasts approximately 15 minutes



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## What the Provider Sees and Hears

A healthy looking child

Everything is fine at home

He takes his medicine every day

Is anyone smoking at home? - No

Is he coughing at night - Yes every night

How often is he using his albuterol inhaler - Every day

Is he using a spacer? - What's that?

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## Limits of Health Care Provider

- Time limit on visits
- RVU's – need to see so many patients a day
- COVID has limited staff in office
- No time to provide education

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# What is Missing?

- Time for education
- Time to review asthma triggers
- Time to ask what is happening in the home
- Address other issues that may be affecting the family



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# Who Can Do That?

- Team member:
  - HCP
  - Office nurse
  - Medical assistant
  - Social work



- Community Health Worker
- Home Health Educator

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## What an Ideal Visit Can Do

Help family with other issues that can impede caring for the child

Empowering the family through education

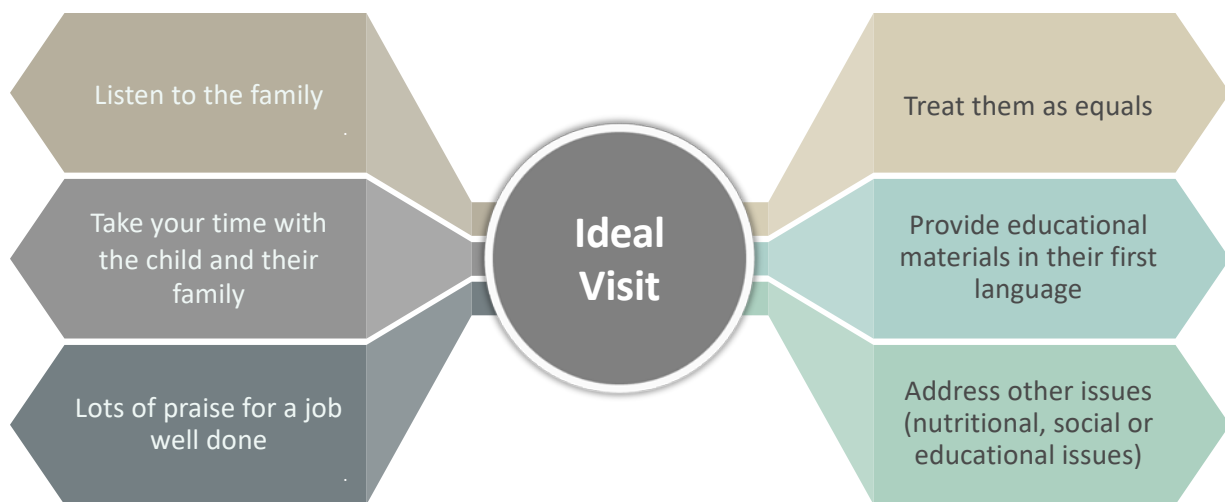
Education reinforced at each visit member

Support patient emotionally and physically



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## What an Ideal Visit Takes



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
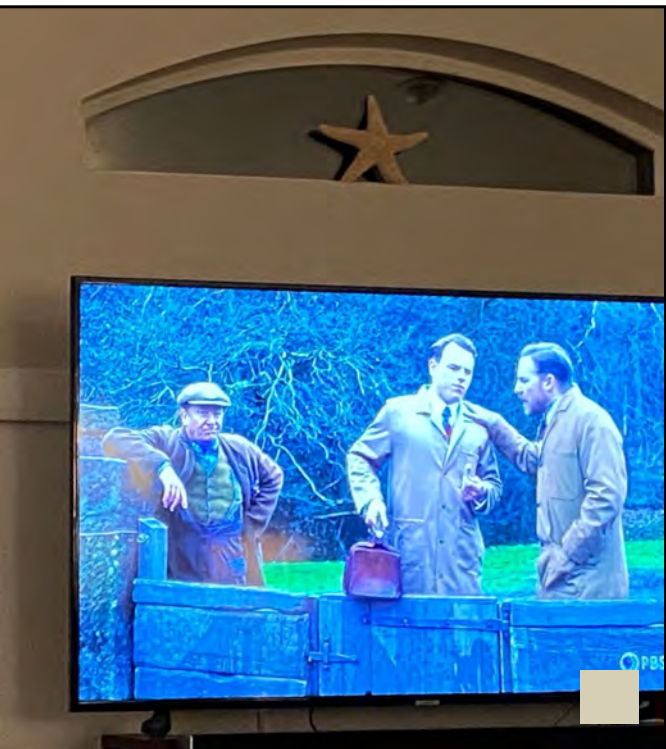
Food for Thought

“ The connection between health and the dwelling of the population is one of the most important that exist.”  
*Florence Nightingale*



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People Still Make House Calls (home visits?)



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## Relationship Between the Provider & Family

Professional Relationship.



Difficult to get parent to focus during the visit

Parent likes the Healthcare Provider (HCP)



Provider is wondering if the parent is saying exactly what is going on at home

Parent not always listening to the Healthcare Provider



Difficulty contacting HCP through office channels



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## Why Are Home Visits Important in Asthma Care

Helps provider to know what is going on in the home

Allows the provider to refer the family to needed resources

The home visitor/CHW acts as the eyes and ears of the provider

The home visitor/CHW is the liaison between family and provider

Education allows family to care for child with asthma and feel empowered

Decrease in ED visits/hospitalizations for asthma, improved medication compliance and improved family life



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## Partnerships

Provider



Diagnose & prescribe



Public Health Educator or  
Community Health Worker



Reinforce & Educate

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### Who are Community Health Workers? (CHW's?)




- Trusted member of the community
- Member of the health team
- Knows the communities they serve
- Are culturally sensitive


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## Where the Home Visitor/CHW Comes In

-  Liaison between family and HCP  
Eyes and ears for the HCP
-  Family confides in them
-  Home visitor works with the family and HCP to see what family needs to care the child's asthma



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## Relationship Between Home Visitor and Client

- Somebody they can trust
- Somebody who will listen to them
  - Somebody who will help them
- Somebody who will empower them

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## Home Visiting Programs Address the Barriers that Families are Facing

- Non-compliance – intentional or unintentional
- Poor perception of what happens with asthma
- Cost of prescriptions
- Home environment
- Transportation
- Language/illiteracy



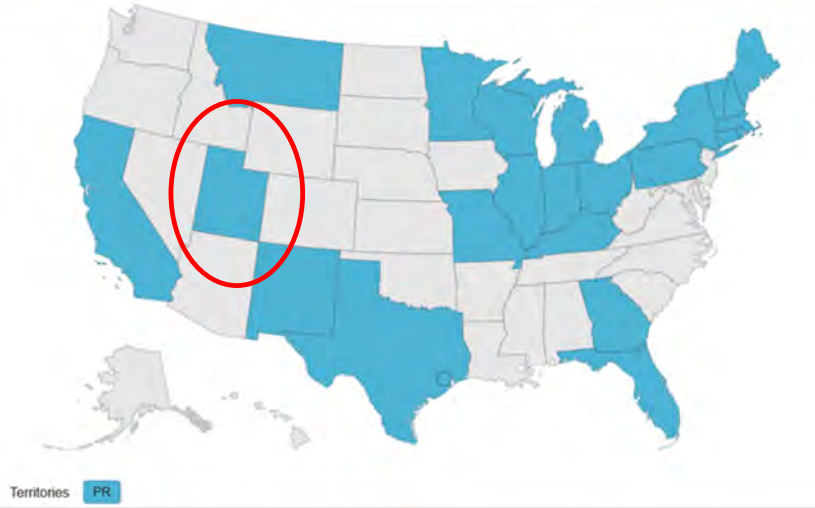
POSSESS YOUR SUCCESS

5 Barriers to Success This Year (and How to Avoid Them)

26

# 25 CDC Funded Asthma Program sites

CDC National Asthma Control Program Grantees



All states in the US (except North and South Dakota) have an asthma program  
 They can be local, state, public health department, hospital based, coalition based

<https://www.cdc.gov/asthma/contacts/default.htm>



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The screenshot shows the website for the Room2Breathe Asthma Home Visiting Program. The header includes the Education Plus Health logo and navigation links: ABOUT US, OUR IMPACT, OUR PROGRAMS, SBHC COLLABORATIVE, ADVOCACY PLATFORMS, and DONATE. The main heading is 'Room2Breathe Asthma Home Visiting Program'. Below this, a paragraph describes the program: 'Education Plus Health operates the Room2Breathe Program in partnership with the Philadelphia Department of Public Health. Launched in 2019, the program is currently embedded within Temple Pediatrics and St. Christopher's Center for the Urban Child. A community health worker is embedded within each of these pediatric practices to serve their patients who meet the eligibility criteria with one inpatient hospitalization over the last year or two emergency room visits due to asthma. Community health workers conduct up to seven home visits with eligible families over a 12-month period helping them to manage their asthma in partnership with their doctor, and ultimately reduce visits to the hospital because of asthma.'

Below the text, there is a section titled 'Room2Breathe community health workers:' followed by a list of five bullet points:

- Teach families about asthma self-management
- Educate families about reducing asthma triggers in the home
- Provide families with supplies to help control triggers in the home
- Keep practitioners updated by sharing visit summary reports
- Refer families to pest management services as needed
- Connect families to community-based agencies to address the social determinants of health, as needed

To the right of the list is an image of a community health worker assisting a young boy with his asthma inhaler.



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“Align services between **public health** and **health care sectors** to provide comprehensive asthma control services.”



1. In-depth self-management education

2. Home-based trigger reduction



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### REFER A PATIENT TO THE ASTHMA HOME VISITING PROGRAM

UTAH COUNTY HEALTH DEPARTMENT

**IDENTIFY ELIGIBLE PATIENTS**

 **OR**  **OR** 

ED Visit and/or Hospitalization within the Last Year      Prednisone or Other Oral Steroid Within The Last Year      Asthma Control Test less than 19 for Ages 4+ or a TRACK of less than 80


**PATIENTS GIVE CONSENT**      **SEND INFORMATION (NEW FAX ID)**

 Consent may be verbal confirmation or a signature on a release form.       **OR** 

Email [andrea@utahcounty.gov](mailto:andrea@utahcounty.gov) for a sample release form      Send an encrypted email to **Andrea Jensen** [andrea@utahcounty.gov](mailto:andrea@utahcounty.gov)      Send a fax to Utah Asthma Home Visiting Program **801-851-7508**

**WE WILL SEND A REPORT**

A report will be sent back to you when the patient either:

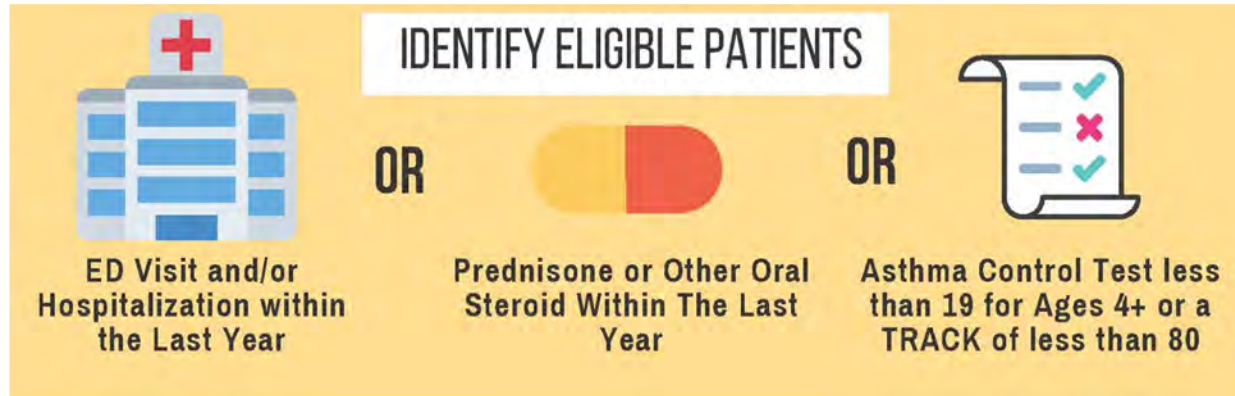
 **Has Completed the Program**      **OR**       **Declines Services**

 **FOR QUESTIONS ABOUT THE PROGRAM CALL 801-851-7509** 



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## Target Population: Persistent/Uncontrolled Asthma



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## We help anyone with persistent/controlled asthma



- No income requirements
- No age limit

*\* Every state/program is different\**

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## Sending a Referral

 **PATIENTS GIVE CONSENT**

Consent may be verbal confirmation or a signature on a release form.

Email  
andrea.j@utahcounty.gov  
for a sample release form

**SEND INFORMATION (NEW FAX !)**

 **OR** 

Send an encrypted email to  
**Andrea Jensen**  
andrea.j@utahcounty.gov



Send a fax to Utah  
Asthma Home  
Visiting Program  
**801-851-7508**

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## Close the Referral Loop

**WE WILL SEND A REPORT**

A report will be sent back to you when the patient either:

 **Has Completed the Program** **OR**  **Declines Services**

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**ASTHMA HOME VISIT PROGRAM**  
*Now providing virtual visits!*  
A free program to make your home asthma friendly

**VISIT 1**  
Learn about asthma symptoms, triggers, medications and inhaler techniques

**VISIT 2**  
Walk through your home to identify asthma triggers, then set goals to reduce the triggers

**VISIT 3**  
Discuss progress on controlling your asthma triggers or reducing triggers

**CALL 1**  
You will get a phone call 6 months after Visit 3 to talk about questions or concerns

**CALL 2**  
You will get a phone call 1 year after Visit 3 to talk about questions or concerns

FOR QUESTIONS ABOUT THE PROGRAM  
CALL 801-851-7500

UTAH STATE OFFICE OF HEALTH  
Utah County Health Department

**3** visits  
**2** follow up calls

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**\*\* We provide virtual "home" visits during the pandemic \*\***

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**VISIT 1**

**Learn about asthma symptoms, triggers, medications and inhaler techniques**



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## Visit 1 – In depth asthma education



**Physiology**

**Asthma triggers (3 pages)**

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# Controlled vs Uncontrolled Asthma

## Controlled Asthma



You sleep through the night without asthma symptoms



You have no trouble with your daily activities or exercising

## Uncontrolled Asthma



You take your rescue inhaler more than **2 times per week**



You wake up at night with asthma symptoms more than **2 times a month**



You refill your rescue inhaler more than **2 times per year**

The Rules of Two® is a registered trademark of Baylor Health Care System

# Visit 1

## Long-Term Controller Medication



- Reduces swelling in the airways
- Must be used EVERY day to help prevent an asthma attack
- Rinse mouth after use

## Quick Relief Medication



- Relaxes muscles around the airways
- Acts fast!

Controller vs rescue/reliever

**Respiratory Treatments**

Allegro & Allergan | Colgate | CHEST FOUNDATION

**SHORT-ACTING BETA<sub>2</sub>-AGONIST BRONCHODILATORS**

**LONG-ACTING BETA<sub>2</sub>-AGONIST BRONCHODILATORS**

**INHALED CORTICOSTEROIDS**

**COMBINATION MEDICATIONS**

**MUSCARINIC ANTAGONIST (ANTICHOLINERGIC)**

**BIOLOGICS**

**BRONCHIAL THERMOPLASTY**

**PDE4 INHIBITORS**

Inhaler poster



Spacers and nebulizers

Evaluate inhaler technique

41

## When To Go To the ER/Call 911

### Emergency Symptoms

- Retractions
  - Lips or fingernails become a purple/blue color
  - Can't say more than a short phrase because of shortness of breath
  - No improvement after using rescue inhaler
  - Head bobbing in infants
- Face becomes a pale, gray color



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**VISIT 2**

**Walk through your home to identify asthma triggers, then set goals to reduce the triggers**




# Trained through the National Center for Healthy Housing

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## Homework!


**Home Assessment for Asthma Triggers**

Look for the following asthma triggers in your home. Check the box if the statement is true:




**Dust Mites**

- The home is dusted at least weekly.
- The home is vacuumed at least twice per week.
- Home is kept free of excess clutter and stuffed animals.
- Mattress and pillow covers are used.
- Bedding is washed weekly in hot water.
- Carpets, rugs, curtains, and fabric furniture are cleaned regularly.




**Heating**

- Any gas appliances or stoves in the home are vented.
- Wood is not burned in the home.
- The heating system is inspected each year.
- Air filters are changed according to manufacturer's instructions.




**Mold**

- Exhaust fan or open window is used to ventilate the kitchen.
- Exhaust fan or open window is used to ventilate the bathroom.
- There is no evidence of excess moisture or mold in the home (e.g. mildew, moist walls or ceilings, water stains, etc.)
- There are no plumbing leaks.




**Pests**

- Trash is removed regularly.
- Food is only eaten in the kitchen or dining room.
- Floors are swept at least twice per week.
- Dirty dishes, food, or crumbs are cleaned regularly and not left overnight.
- There is no evidence of insects and rodents in the home.




**Tobacco Smoke**

- Smoking is not allowed in the home.
- Smoking is not allowed in the car.




**Pets**

- Warm-blooded pets (e.g. dog, cat) are not allowed in the home.
- Warm-blooded pets are not allowed in the bedroom.
- Warm-blooded pets are not allowed on furniture or in the bed.
- Pet hair is regularly removed from carpet, furniture, and beds.
- Pets are washed regularly.



**Pollen**

- Shoes are not worn in the house.
- Family members with asthma shower before bed during pollen season.
- Doors and windows are kept closed during pollen season.



**Strong Odors**

- Candles, scented oils, incense, or air fresheners are not used in the home.
- There is limited use of hair products, aerosol sprays, perfume, cologne, body spray, nail polish, scented lotion, or other fragrant products in the home.
- Preemptive measures are taken when chemicals, cleaners, or paints are used in the home (e.g. ventilating the area, wearing a mask, cleaning when those with asthma are out of the house).

**Plan to reduce asthma triggers in my home:**

What I would like to do:	Steps I will take to do this (include when/how often):

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## Visit 2



Where to find dust mites

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## Visit 2



Strong Odors



Are you exposed to any smokers or vapers?

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Furnace filter



Car Cabin Filter

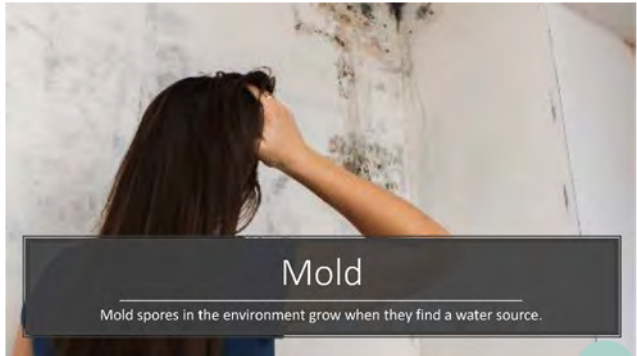
Do you know the MERV rating on your filter?

## Visit 2



### Pets

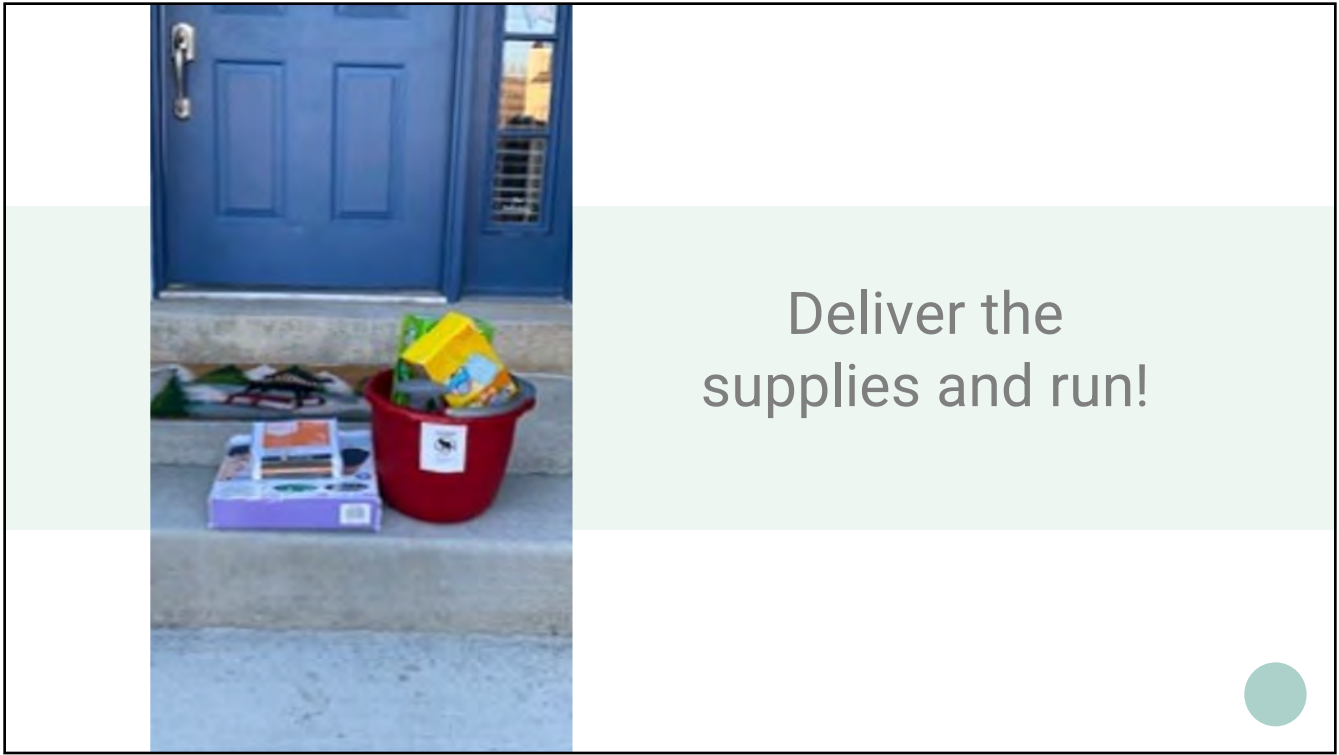
Allergens found in: Skin flakes or dander, Hair, Urine, Saliva



### Mold

Mold spores in the environment grow when they find a water source.





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## Partner with Housing Agencies



CRITICAL HOME REPAIR & HOUSING REHABILITATION PROGRAM

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### VISIT 3

Discuss progress on controlling your asthma triggers or reducing triggers




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Change inhalers?

Start a biologic?


Make home repairs?

Review inhaler technique




A photograph of a young child with brown hair, wearing a grey long-sleeved shirt, using a nebulizer mask. The mask is clear plastic with a blue handle. The child is holding the mask to their face, and a hand is visible holding the handle. The background is a plain, light-colored wall.

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 **CALL 1**

You will get a phone call 6 months after Visit 3 to talk about questions or concerns

 **CALL 2**

You will get a phone call 1 year after Visit 3 to talk about questions or concerns

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# Outcomes

↓ **Reduces Unwanted and Costly Events<sup>3</sup>**  
12 Months After Completing the Program



**80% decline** in average missed work days.



**51% decline** in average missed school days.



**41% reduction** in average unplanned doctor visits.



**51% reduction** in episodes requiring an oral systemic corticosteroid.



**75% reduction** in asthma-related ED visits.



**87% reduction** in asthma-related hospitalizations.

1. Asthma Care Quick Reference: Diagnosing and Managing Asthma. [https://www.nhlbi.nih.gov/files/docs/guidelines/asthma\\_qr.pdf](https://www.nhlbi.nih.gov/files/docs/guidelines/asthma_qr.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-adolescents-asthma>  
3. Utah Asthma Home Visiting Program Database: 2016-2020. Utah Asthma Program

January 2021



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# Administrative Problems

Exceeding budget for mileage, time

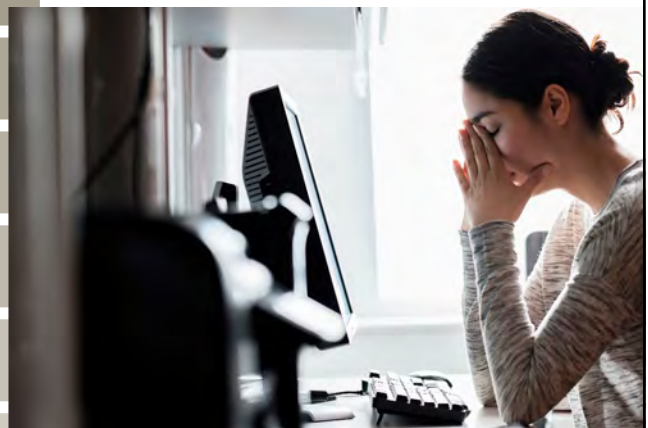
Need more funding, more staff

Last minute cancellations

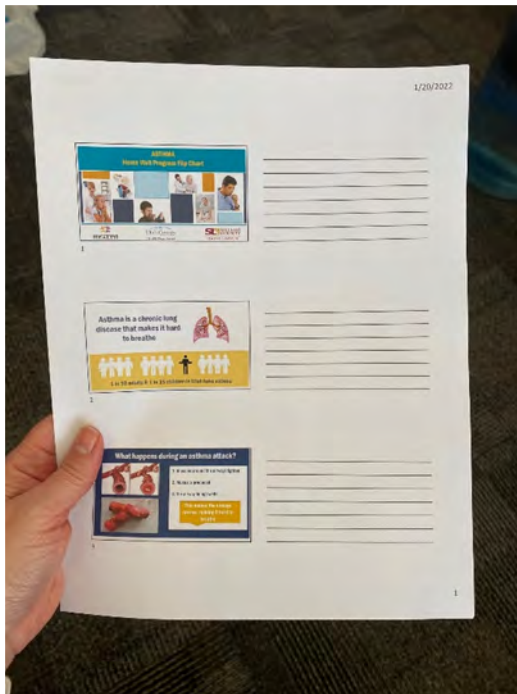
No-shows

Just want free incentives

Virtual visits during pandemic



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## Barriers

No tablet/laptop

Client moved

Phone is disconnected

No response to contact attempts



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## Potential Barriers

Crime/violent neighborhoods

Having asthma attacks in homes with triggers

Outside of house matches inside

Need to pre-medicate

Getting sick from families



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# Partnerships



Local schools



Colleges



State/local asthma programs



• Commercial Insurances



**Medicaid**

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Asthma and Allergy  
Foundation of America



American  
**College**  
of Allergy, Asthma  
& Immunology



**ASTHMA COMMUNITY NETWORK.ORG**

*Communities in Action*  
Share • Learn • Connect

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National Center for  
**HEALTHY HOUSING**



Health Departments

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## References

Journal of Asthma, March 2021, 58(3):360-369 Julie L Swann, Paul M Griffin, Pinar Kesknocak, Ian Bieder, Fatma Melike Yildirim, Tyrsynbek Nurmageambetov, Joy Hsu, Laura Seeff, Chrita-Marie Singleton - Return on investment of self-management education and home visits for children with asthma

Home Visits for Children with Asthma Reduce Medicaid Costs

Preventing Chronic Disease, 2020:17: E11

Erica T Marshall MPH, Jing Guo, PHD, Elizabeth Flood MPH, Megan T Sandel, MPH MD, Matthew Sador, MD, Jean M Zotter JD

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## Contact info



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[nuthatch61@gmail.com](mailto:nuthatch61@gmail.com)



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# QUESTIONS



## We'll get to as many questions as we can!

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Join us for our next webinar –

**Vaccines & COVID-19:**  
Science-based  
Thoughts on the Long  
Haul

**FEBRUARY 17, 2022**

4:00 PM ET

Dr. Purvi Parikh  
Dr. Doug Jones  
Tonya Winders



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Breathe Better Together



[allergyasthmanetwork.org](http://allergyasthmanetwork.org)

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