

Wellpoint Learning Collaborative

Green & Healthy Homes Initiative*

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Organization Vision and Mission

Advancing health and racial equity and opportunity through healthy housing.

GHHI is dedicated to addressing the social determinants of health and the advancement of racial and health equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate childhood lead poisoning and the negative health impacts of unhealthy housing and unjust housing policies for children, seniors and families in low-income communities - with an emphasis on black and brown communities. GHHI's work ensures better health, economic and social outcomes for all.





Agenda



















The Scope of Asthma



- a VERY common problem across the US
- the most chronic disease of childhood
- Affects people of all ages, genders, & ethnicities

- About **25 million** (1 in 12) people in the US have asthma (7 million for children)
- **Baltimore City** 20% of children are diagnosed with asthma, compared to 9.4% nationwide
- Baltimore's pediatric asthma hospitalization rate is the highest in Maryland and one of the highest in the nation
- Asthma accounts for more than 10 million missed workdays & about 13 million missed school days each year
- Asthma has a higher rate of occurrence in minority populations
- Individuals in underprivileged, lower-income, and inner-city communities have a higher risk of dying from asthma



The Cost of Asthma

- The annual economic cost of asthma: \$19.7 billion
 - Direct costs: medications
 - Indirect costs: loss of productivity
- Asthma can have a significant financial impact on the family due to:
 - Medication refills/copays
 - Missed work
 - Travel expenses: transit fees, parking, car maintenance
 - Medical provider, ER, hospital visits





Scope of Work

The GHHI Asthma Education Program:

- individually tailored, multifaceted homebased intervention
- comprehensive, holistic approach to asthma care management, focusing on:
 - providing self-management education
 - multifactorial environmental health services to address triggers in the home

CRITERIA

- Reside in Baltimore City
- Age 2 to 18
- Current member of Wellpoint
- Asthma diagnosis by HCP
- Asthma not well managed
 - Hospital/ER visit in immediate month preceding referral
 - Non-compliant in using controller medications for over 90 days



Referral, Intake, & Baseline Assessment

- Members referred by Wellpoint, based on criteria (see last slide)
- Intake Specialist performs client outreach
- Comprehensive Intake Assessment; demographics
- Asthma pre-survey; asthma related info + home concerns
- Review program details & client consent
- Refer to Health Educator or schedule initial visit for HE



Initial Home Visit

 Health Educator & Environmental Assessor

- Overview of Asthma Program
- Signatures of Consent and HIPAA Forms
- **Initial Asthma Survey**: Individual Asthma Basics, Medical & Medication History, Asthma Trigger Overview, Hazard & Safety Overview
- Asthma Control & Severity Tests
- **Medication Management**: ensure up to date prescription and practice proper use of medication
- Environmental assessor to conduct an **environmental assessment** of home to identify triggers and health & safety hazards
- Discuss potential **referrals** to assist in addressing any additional home hazards
 - Onsite IPM and CO/smoke detector installation
- Distribute supply kit with education
 - Asthma & Healthy Homes education material
 - HEPA Vacuum
 - 2 buckets
 - Mop
 - Mop refill
 - Environmentally friendly all-purpose cleaner
 - Dust mite & allergen proof mattress encasement
 - 2 Dust mite & allergen proof pillowcases
 - Gloves
 - Sponges

CACT

- scale from 0-27
- score of 20 or above indicates a child's asthma is well controlled

Patient's Name: _____

1. How is your asthma today?

Childhood Asthma Control Test for children 4 to 11 years.

How to take the Childhood Asthma Control Test

- Step 1 Let your child respond to the first four questions (1 to 4). If your child needs help reading or understanding the question, you may help, but let your child sett the response. Complete the remaining three questions (5 to 7) on your own and without letting your child's response influence your answers. There are no right or wrong answers.
- Step 2 Write the number of each answer in the score box provided.
- Step 3 Add up each score box for the total.
- Step 4 Take the test to the doctor to talk about your child's total score.
 Have your child complete these questions.



٢ Very bad Very good 2. How much of a problem is your asthma when you run, exercise or play sports? 3 It's a big problem, I can't do what I want to do. It's a problem and I don't like it. It's a little problem but it's okay. It's not a problem 3. Do you cough because of your asthma? 3 Yes, all of the time. No, none of the time. Yes, most of the time. Yes, some of the time. 4. Do you wake up during the night because of your asthma? Yes, all of the time. Yes, most of the time Yes, some of the time. No, none of the time. Please complete the following questions on your own. 5. During the last 4 weeks, how many days did your child have any daytime asthma symptoms? 0 Not at all 1-3 days 4-10 days 11-18 days 19-24 days Evervdav 6. During the last 4 weeks, how many days did your child wheeze during the day because of asthma? 5 4 3 2 1 0 Not at all 1-3 days 4-10 days 11-18 days 19-24 days Evervdav 7. During the last 4 weeks, how many days did your child wake up during the night because of asthma? 5 4 3 2 0 Not at all 1-3 days 4-10 days 11-18 days 19-24 days Everyday TOTA

CASI

- measures severity
- The lower the score, the less severe the asthma is

- Section 1: Daytime Asthma Symptom Assessment
 - During the last 14 days, how many days did the participant have wheezing or tightness in the chest or cough?
 - During the last 14 days, how many days has the participant had to use albuterol/ salbutamol by puffer or breathing machine/ nebulizer during the day for the relief of asthma symptoms?
 - Daytime Symptoms CASI Score. Record the highest point value from questions 1a and 1b
- Section 2: Nighttime Asthma Symptom Assessment
 - During the last 14 nights, how many nights did the participant wake up because of asthma, wheezing or tightness in the chest, or cough?
 - During the last 14 nights, how many nights did the participant use albuterol/salbutamol by puffer or breathing machine/nebulizer after going to sleep?
 - Nighttime Symptoms CASI Score. Record the highest point value from questions 2a and 2b
- Section 3: Controller Treatment Assessment
 - What is the participant's current asthma controller treatment regimen? (See tables 1 and 2 in the appendix for guidance regarding controller treatment assessment)
 - Treatment CASI Score
- Section 4: Exacerbation Assessment
 - In the last 2 months, how many systemic corticosteroid bursts did the participant take for asthma symptoms? (See Table 3 in the appendix for a partial list of medications used for systemic corticosteroid bursts)
 - Composite Asthma Severity Index (Exacerbation Score)
 - Section 5: Total Composite Asthma Severity Index Score



2nd Home Visit -Follow Up 1

- Health Educator
- 4-6 weeks
- Discuss CMAP & Healthy Housing Commitment Form
- Additional reinforcement of asthma education
- Additional med/med management education, if needed



Client Name:		Date:	Date:	
Issues	Plan/Strategy	Responsible Person	Target Date	





Green & Healthy Homes Initiative | 2714 Hudson Street Baltimore, MD 21224 | 410.-534-6447 | www.ghhi.org



Family commitment form

This form was designed just for your family. The goals below are used to create your Healthy Homes checklist. They will: Help you create and maintain your green and healthy home. Reduce indoor allergens that may cause you or your family to have asthma episodes.

Please review the goals below, sign the form and return it to us. When you sign this form, you agree to meet the goals listed in order to participate in our program.

- I will stay up-to-date with my asthma medication and devices. This means checking the
 expiration date and taking medicines as my doctor prescribed.
- · I will follow the guidelines of a healthy home to help reduce asthma symptoms.
- I will not let anyone smoke inside my home. I will make sure anyone smoking outside stays away from windows and doors around my home.
- I will use natural products in my home. I will stop using or reduce irritants like perfumes, candles, and bleach in my home.
- · I will mop floors, vacuum, and wash bed sheets in hot water weekly.
- I will stop or reduce my use of pesticides.
- · I will use a trash can with a lid both indoors and outdoors.
- I will remove clutter from my home.

, agree to the goals listed above.

Parent/Guardian signature

Date

Date

If you have questions or concerns after this home visit, contact our Senior Environmental Health Educator at 410-534-6447.



3rd Home Visit – Follow Up 2

- Health Educator
- 3 months
- Follow up
 - CMAP review
 - Med management
 - Trigger reduction
 - Commitment form
 - CACT/CASI

Telephone - Follow Up 3

- Health Educator
- 5 months
- Follow up
 - CMAP review
 - Med management
 - Trigger reduction
 - Commitment form
 - CACT/CASI
- If asthma is poorly controlled, HE will schedule another visit

Telephone - Follow Up 4

- Health Educator
- 12 months
- Follow up
 - CMAP review
 - Med management
 - Trigger reduction
 - · Commitment form
 - CACT/CASI
- Closeout: dismiss after survey is complete



Asthma Program Case Study

Pre-Intervention Situation

- Family of 3 (mother and 2 sons) both diagnosed with moderate to severe asthma
- Both children have been to the ED or hospitalized at least twice in last year
- Conditions: indoor allergies, mouse infestation, dust mite accumulation, lack of proper venting causing high moisture levels and mold
- With schools being closed due to the pandemic, Mom is very concerned about children's constant exposure to indoor triggers and allergens

Post-Education/Virtual Assessment Follow-Up

- Mom was uncomfortable with any mold remediation resource/ service entering her home due to COVID-19
 - She was torn between potentially exposing her children to the virus from an outside source or risking her children experiencing an exacerbation, due to the mold trigger
 - We discussed ways for her to properly handle mold specifically tailored to product use and health and safety techniques that will not harm her and asthmatics in the home, based on the EPA & Healthy Home guidelines
 - EA instructed her how to combat the mice infestation with the integrated pest management
- Supply usage: explained again thoroughly & confirmed CMAP: ways to keep home clean by following 8 Elements of Healthy Home, keeping her kids away from triggers, and continuing a good and open relationship with her kids' PCP

Follow-Up Visits

- At each follow up visit, asthma symptoms decreased in number
- By the 3 month and 5 month follow up, Mom was acclimated to the CMAP
- Her children's CACT results increased in number and CASI results decreased
- Mom repeatedly thanks our organization for continuing to be on the front lines of ensuring her family is healthy, despite the current state of the environment.





NEW – Tier II Interventions



In addition to current Tier I Interventions:

(3 home visits + 2 follow up visits, healthy home supplies, IPM, and 3, 5, 12 month surveys)

Indoor Air Purifier – installed in child's bedroom

+

Air Conditioner OR Dehumidifier (33 clients)

Food Boxes and COVID-19 Prevention Supplies (50 clients, where needed)



RESOURCES

Baltimore City DHCD HUD Lead Hazard Reduction Grant – \$13M

Maryland DHCD Lead Grant and Loan Program:

Eligibility

- Must be a Maryland Resident
- Own and Occupy the dwelling to be repaired as a principal residence or as residential rental
- There are <u>NO</u> income limits
- Financial Assistance (grant or loan) is based on the applicant's ability to repay

Property Eligibility

- Owner-occupied and rental properties with 1 to 100 units
- Units must be in need of lead hazard reduction activity
- Units must be constructed prior to 1978
- Units must be structurally sound upon completion
- Units must be registered with MDE if rental
- Licensed Childcare facilities may also be eligible

Improvements Permitted

- Any activity that meets the risk reduction standards
- Any innovative lead hazard reduction method approved by DHCD
- Any lead-related costs required to meet lead dust clearance standards
- MUST address all lead hazards



RESOURCES

MDH and MDDCHD Healthy Homes for Healthy Kids Lead Testing and Remediation Services

Eligibility

- Maryland resident
- 18 years or younger
- Has a recent blood lead test of 5 micrograms per deciliter or higher
- Is enrolled in OR eligible for Medicaid/CHIP
- Spends 10 hours or more per week in the place (home, apartment, day care) where the lead exposure happened

HAS YOUR CHILD BEEN

There is a new program in Maryland to help families with lead poisoning. The Maryland Department of Housing and Community Development, in partnership with Maryland Department of Health will pay for the removal of lead from the home or apartment where the child lives or spends time, at no cost to the homeowner or renter.



MARYLAND Department of Health Maryland Department of Housing



ELIGBILITY CHECKLIST

Blood lead level of 5 micrograms

per deciliter (µg/dL) or more

Insurance Program (MCHP)

Eligible for or enrolled in Medicaid or Marvland Children's Health

/isit (for 10 more hours per week)

or live in the home/apartment with a lead problem

Under the age of 19 years

 \checkmark



2020–2023 HUD Healthy Homes Technical Studies (HHTS) Grant PARTNERS



Center for Injury Research and Policy Dr. Wendy Shields (PI)



Foster Care Program



Resident Education, Housing Assessment and Housing Intervention Programs Ruth Ann Norton (Co-PI)



Asthma Program



HUD Healthy Homes Technical Studies (HHTS) Grant

Preventing Injuries to Children Through Home Safety Audits and Modifications (CHASE HHTS Implementation Study)

Children's Housing Assessment for a Safer Environment (CHASE) Tool (Johns Hopkins Center for Injury Research and Policy)

Funder: US Department of Housing and Urban Development

Amount: \$999,871

Units: 300 household injury prevention resident educations, housing assessments and interventions in Baltimore DSS Foster Care Program and Wellpoint Asthma Program client homes

Period of Award: 36 Months



OBJECTIVE

To estimate the magnitude of home injury risks, identify strategies for addressing those risks and sustaining those interventions, and to calculate the costs of housing-related modifications to prevent childhood home injuries

Aim 1 - Implement injury prevention measures based on safety hazards identified using the CHASE Tool within 300 low-income households (at or below 80% AMI) in Baltimore City or County

Aim 2 - Determine the costs of the injury prevention measures completed by residents and/or professional providers

Aim 3a - Determine feasibility of incorporating injury prevention into residential programs from the perspective of installers and residents, including identifying barriers and facilitators

Aim 3b - Understand the consistency of implementing and maintaining the injury prevention measures across referral sources, by residents and staff



5 Phases of CHASE HHTS Study

Phase I CC

COMMUNITY OUTREACH

- Plan, Recruit and Convene Community Advisory Board
- IRB and Project Protocols

Phase II ASSESSMENT — INITIAL HOME VISIT

- Home assessment with CHASE hazard items
- Provide caregivers with SOW and recommended hazard remediation measures
- Provide caregivers with do-it-yourself education materials and injury prevention supplies

Phase III INTERVENTION — SECOND HOME VISIT — 1 MONTH LATER

- Document pass/fail rate by subdomain and injury prevention measures
- Interview families about what served as a barrier and facilitator in making the necessary child injury home modifications, how long the modifications took to complete, and the associated direct and indirect cost to the caregiver
- Create SOW2 (if necessary), schedule a time to complete outstanding injury prevention measures by GHHI Hazard Reduction Contractor Team home modification installers, and document associated costs in ETO

Phase IV THIRD HOME VISIT — 3 MONTHS LATER

- Document pass/fail rate by subdomain and injury prevention measures
- Administer feedback and follow-up

Phase V DISSEMINATION

Document pass/fail rate by subdomain and injury prevention measures



Translating In-person Services to Virtual Setting



GHHI's Virtual Healthy Homes Toolkit



https://www.greenandhealthyhomes.org/virtual-healthy-homes-toolkit/



Process Flow

Intake/Referral

Receipt of potential clients and collection of initial demographic information.

Intake Template

Pre-Assessment

Understand client's ability to participate virtually; prep client for virtual assessment; Gather preliminary information for assessor.

 Best Practices—Pre-Assessment
 Pre-Assessment Protocol

assessment.

Standalone Home Visit

Standalone Home Visit Protocol

- Deferral

Client that is not able to participate in virtual assessment is placed on waitlist for inperson assessment.

Virtual Assessment

Identify and document health and safety hazards as well as other areas for improvement in client's home (virtually) while ensuring client safety and comfort during assessment.

- Best Practices—Safe and Successful Assessments
- Considerations and Mitigation Guide

Provide standalone healthy homes education virtually with no

• Best Practices – Education Follow-up & Standalone Home Visit

- Virtual Healthy Home Assessment Protocol
- Scope of Work Template

Follow-up

Education and materials provided based on assessment results. Resource referral, where applicable.

• Best Practices –Education & Follow-up • Virtual Education & Follow-up Protocol



Important components for virtual home visits



Integrity to in-home, evidencebased model & supported by standardized guidelines & protocols



Paired with some form of home assessment for triggers & education about remediation



Validated through quality control oversight (through recorded visits, upon consent)



Client-friendly and adaptable to different user needs & abilities

1. Pre-visit

- At intake, Intake Specialist confirms client's access to virtual platform & schedules VHV/VHA
- HE/EA reviews info gathered during intake & preps relevant materials
- Send (via email or mail) educational materials, consent forms, etc.
- Confirmation/reminder call/email/text message to client for VHV – 24 hrs prior

2. VHV Intro

- Greet the client, introduce yourself, and do a video/sound check
- Ask the client if they are comfortable with the virtual format & provide overview of the home visit process
- Review documents as necessary (e.g., consent)

3. Information gathering

- Use in-person home visit protocol to gather relevant information (e.g., common symptoms, meds, asthma surveys, trigger assessment, etc)
- Clarify any questions or missing info from the intake process
- Stop and ask if there are any questions, frequently



4. Education

Use in-person home visit education protocol to provide self-management education:

- Potential home triggers
- Mitigation tactics for home triggers
- Review all medications/AAP
- Ask client to walk through how they use meds; show proper use if necessary

5. Resources

- Assess need for no-contact supply delivery; obtain consent & confirm address and delivery time
- Assess need for external asthma-related services & provide referrals as needed
- Assess need for nonasthma related services & provide referrals

6. Referrals & data

- Assess need for full home assessment and remediation services and provide referrals as needed
- Obtain consent to share health & housing data collected with other org
- Enter all client data from visit(s) into data management system

The **Virtual Environmental Housing Assessment** for Asthma Triggers

- Mold
- Moisture
- Pests (Mice, rats, roaches, dust mites)
- Lack of Ventilation and Poor Indoor Air Quality
- Extreme Heat or Cold Issues (No air conditioner, lack of adequate heating source)
- Carpeted floors
- VOCs

Develop Scope of Work for Property for Asthma Trigger Remediation

Advantages

- Enable assessors to prescribe home modifications to anyone with a smartphone or tablet
- Can be used to identify a range of health hazards such as asthma triggers, injury hazards, lead hazards, etc
- Provides access to limited but effective home modifications.

Disadvantages

- Technology discomfort; older clients
- Limited by level of mobility and health of the occupant
- Limited time 45-60 minutes.
- No access to attics/crawlspaces due to safety concerns
- No environmental testing (Water temp., CO, lead, asbestos, mold, etc.)
- Limited measurements (Area, length)
- Limited illumination (Flashlights)



Tools Used for Virtual Environmental Assessment

- Comprehensive Health & Safety Assessment Guidelines
- Virtual Home Assessment Protocol
- Target List or Hazards Checklist
- Contractor's Scope of Work (SOW)
- Client's Recommendations for Hazards Mitigation
- Photos





Virtual Process

Example of Virtual Assessment Report with Observations and Recommendations					
#	Prioritized Hazards	Hazards Description	Detailed Scope of Work	Hazards Mitigation Recommendations for Client	
1.	Lead Hazards	Chipping paint (pre-1978 home) throughout 2 nd & 3 rd floors doors, jambs, handrails, baseboards.	Replace or stabilize chipping paint on house components. Follow lead-safe practices.	Stabilize chipping paint on house components. Follow lead-safe practices.	
2.	Mold/Moisture Hazards	Mold growth (> 10 sq. ft.) inside closet, in 2 nd floor rear bedroom.	Use mold contractor to remove and properly discard mold contaminated surfaces inside closet, in 2 nd floor rear bedroom.	Keep bedroom door closed to reduce exposure. Keep window open to allow natural ventilation to increase air changes and dilute pollutants.	
3.	Mold Hazards	Mold growth in 2 nd floor shower due moisture from poorly vented area. Dust covered exhaust fan.	Scrub/clean mold on shower walls. Replace bathroom exhaust fan, vented to the outside (50 cfm, < 1 sone)	Scrub/clean mold inside shower. Use vacuum to remove dust from exhaust fan grid to increase venting.	
4.	Trip & Fall Hazards	Loose coaxial cable (TV) on floor across 2 nd floor hallway, potential trip and fall hazard.	Remove loose coaxial cable (TV) on floor across 2 nd floor hallway and reroute above door frame.	Straighten loose coaxial cable on hallway, 2 nd floor; use duct tape to cover it & glue it to floor.	



Post-VHA Follow-up Client Education

- 1. In-depth discussion of virtual housing assessment report and its recommendations.
- 2. Develop <u>family action plan</u> with measures designed for the family to address asthma triggers and potential Healthy Homes issues.
- 3. Resident Education on usage of asthma trigger reduction supplies and behavioral changes, reinforce
- 4. Healthy Homes supplies education, reinforce
- 5. Referrals to partnering organizations for any other related or leveraged services.





BEST PRACTICES: Virtual Home Visits



This is a conversation, not an interview - Some questions can be invasive + you are 'entering' someone's home – listen, be sensitive, and address questions even if they take you off script



Discuss privacy: who will be present, who will have access to the recording, and how data will be stored



Set clear expectations, including any followup steps, estimated timelines, and how the current uncertainty may impact work



Obtain consent before each conversation & ensure client knows they can end visit at any time and/or decline to answer questions



Key adaptations for virtual

	In-home visit	Virtual visit adaptation
Introduction	HE should review all paperwork alongside client, answer questions, and have client sign each form	 HE will email or mail all paperwork to client in advance and walk through the virtual visit. After answering questions, client will sign & return: Via email: within 24 hours Via mail: within 5 business days (provide paid return envelope)
Supplies	If supplies are needed (e.g., mattress covers), educator will bring supplies on visit and explain the use of each	If supplies are needed (e.g., mattress covers), educator will verify the client's address and schedule a date and time for no-contact delivery. Always do a second day-of delivery confirmation.

More details can be found in GHHI's Virtual Healthy Homes Toolkit <u>https://www.greenandhealthyhomes.org/virtual-healthy-homes-toolkit/</u>



Key adaptations for virtual

	In-home visit	Virtual visit adaptation
Education	General education: provide evidence- based self-management education in- person. Provide educational materials, go through the info, & leave with client.	General education: provide evidence-based self- management education virtually. Provide educational materials in advance via email or mail & go through each in detail during virtual visit.
	Medication management: Look at all client prescriptions & their expiration dates; ask client to explain how each medication is used; ask client to show how each device is used (e.g., inhaler)	Medication management: Ask client to tell educator each medication they take & the expiration; ask client to demonstrate use of any devices on the virtual platform (e.g., inhaler) — to ensure educator can assess properly, ask client to adjust position of self or camera & demonstrate multiple times

Questions

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