



**HINTON**  
C E N T E R  
*Cultivating Hope*

# IMPACT REPORT 2023



# ACKNOWLEDGEMENTS

We would like to express our thanks to the many organizations that partner with us in creating safe and healthy homes.

We would also like to thank the many people it took to put this report together.

## Health Advisory Council

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Katlyn Moss, BSN, RN, MAHEC

## Thank you to our funders:

- AARP
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- Nantahala Health Foundation
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- Solomon Cramer
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- The Duke Endowment
- United Methodist Camp and Retreat Ministries
- Wesley Memorial United Methodist Church
- WNC Bridge

**“Hinton’s approach to supporting the community in Southern Appalachia is thoughtful and holistic. The organization has recognized that beyond physical home improvements, a focus on social determinants of health, education, and support for unmet needs will unlock lasting impact across generations.”**

**–Cassie Houff, Vice President of Strategy, Humana**



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Hinton Rural Life Center (Hinton Center) is a Christian retreat, conference, and mission outreach center. Incorporated in 1961, Hinton Center serves individuals, congregations, and rural communities through retreat ministries, educational opportunities, and missional outreach. Our largest ministry focuses on improving the quality of housing in our region. Hinton Center leads teams of guests, construction interns, and local volunteers in assessing and repairing homes and making them safer and healthier.

Over the years, Hinton Center has completed thousands of home repairs and constructed more than 50 homes from the ground up. Yet, in 2014, we embarked on a journey of self-reflection and community exploration, challenging our long-standing mission outreach by asking a fundamental question:

**"Why, despite our decades of effort, are the houses in Southern Appalachia not in better condition?"**

This report offers an in-depth look into our ministries and provides a review of what happened in 2023, through lessons learned, experiences shared, and lives transformed.

## IMPACT REPORT 2023

### WHY SAFE AND HEALTHY HOMES MODEL?



By transitioning to the Safe and Healthy Homes model, we aim not only to enhance housing quality, but also to directly improve the overall well-being and health of our community members. Through this transformation, we are not merely repairing houses; we are fostering environments that support the health and safety of those who call Southern Appalachia home. Furthermore, we are working diligently to demonstrate the impact of our work. We want to see the correlation of the effect on the finances and health of our neighbors, as well as the insurance and medical communities. We have created a Health Advisory Council (members listed on the acknowledgments page) to assist in this process. In addition to educating our neighbors, we also educate our volunteers—both youth and adults from across the United States—on poverty and the health implications of poor housing.

Our commitment to supporting our neighbors does not end upon completion of projects. Instead, we shift our focus to empowering homeowners and renters to understand and take charge of maintaining and further improving their homes. Our aim is to transfer the responsibility for the ongoing maintenance and enhancement of their living environment while continuing to provide crucial “walk-alongside” support, including a range of resources such as education, coaching, incentives, tools, and supplies.





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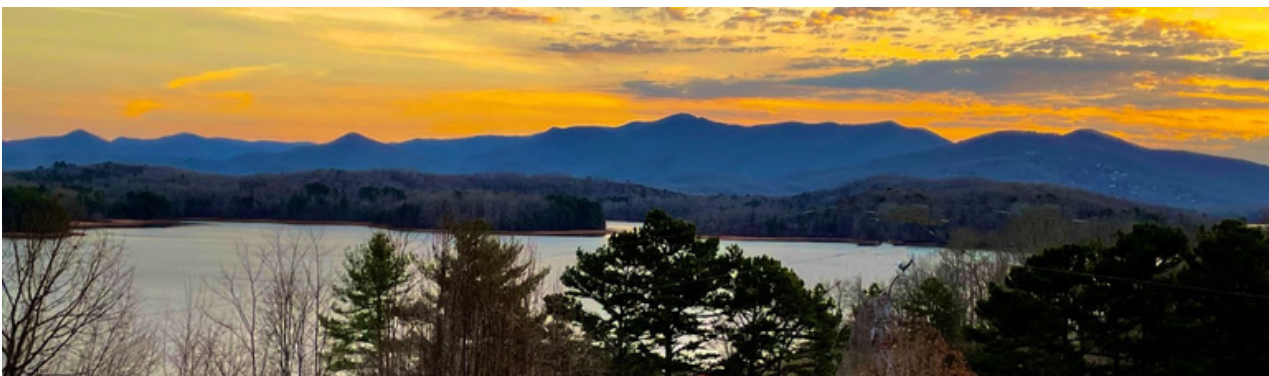
**IMPACT REPORT 2023**  
**WHY SAFE AND HEALTHY HOMES**  
**MODEL?**

Recognizing that a significant portion of our homeowners are elderly, we understand that to bring about lasting change in the housing conditions of our region, we must raise awareness and instill a sense of responsibility throughout the entire community and across all age groups, and socioeconomic sectors. In pursuit of this goal, we have partnered with the local education system and created a mobile teaching unit known as the House on Wheels (HOW).

We believe that our approach aligns with our vision of enhancing the quality of life in Southern Appalachia in a holistic and empowering manner. It underscores our commitment to creating a lasting and self-sustaining impact, where homeowners and the community at large become active participants in the improvement process. Simply put, better housing conditions mean a healthier and safer community for all residents.

For more information on our quest to improve life in Southern Appalachia, see the document linked below.

<https://hintoncenter.org/wp-content/uploads/2023/11/A-Quest-to-Improve-Life-in-Southern-Appalachia-Hinton-Rural-Life-Center.pdf>





**IMPACT REPORT 2023**  
**HOME ENVIRONMENT IMPACTS**  
**HEALTH**

With our main focus on housing, we transformed our half-century-old home repair program into a comprehensive approach focused on creating "Safe and Healthy Homes" and began referring neighbors to other resources for non-housing-related needs. This transformation came as a result of our profound realization of the intrinsic link between housing conditions and health and safety.

Through our research, we learned that asthma and lung cancer are just two of the health conditions that can be caused and/or exacerbated by housing-related issues, such as mold and radon. We learned that falls are the leading cause of death for people over the age of 60, that non-fatal falls are the basis of a \$50 billion-a-year industry, and that another \$754 million in medical expenses are related to fatal falls each year (Centers for Disease Control and the National Council on Aging). We also learned that a Harvard study revealed that "your ZIP code is a better predictor of your health than your genetics" (Harvard, 2014). These evidence-based revelations prompted us to explore and understand in depth the various ways in which the built environment directly impacts the health of our community members.

**YOUR ZIP CODE IS A  
BETTER PREDICTOR  
OF YOUR HEALTH  
THAN YOUR GENETICS**





## **IMPACT REPORT 2023**

### **HOME ENVIRONMENT IMPACTS**

### **HEALTH**

There is a significant amount of data in the literature about health issues that can shed light on the connection between home repair needs and family health impacts. Indoor air pollution, excessive mold, and contaminants in old carpet may create or worsen respiratory conditions such as COPD and asthma. Research by the Robert Wood Johnson Foundation found that 40% of asthma diagnosed in childhood is caused by conditions in their homes, such as poor indoor air quality caused by mold, mildew, and inadequate ventilation. High housing-related costs place a particular economic burden on low-income families, forcing trade-offs between food, heating and other basic needs. One study found that low-income people with difficulty paying rent, mortgage or utility bills were less likely to have a usual source of medical care and more likely to postpone treatment and use the emergency room for treatment. Since low-income homeowners are deciding what basic needs to pay for, any home repairs needed to make the environment better for them and their family are often not funded. Thus, they are caught in a web of not being able to afford home repairs that could make their lives healthier, and the short term and long term health costs continue to mount. Through the NC Department of Health and Human Services (NCDHHS), Medicaid launched the Healthy Opportunities Pilot (HOP) program, which pays for certain non-clinical services that are proven to impact health. The five-year program, that Hinton is involved in, takes a whole-person centered approach that addresses medical and nonmedical drivers of health.

#### **Robert Wood Johnson Foundation**

Healthy homes are crucial for good physical and mental health, while poor quality and inadequate housing can result in chronic diseases, injuries, and negative effects on childhood development. Hazards like poor indoor air quality and lead paint place children and families at risk for multiple health issues.

Lead poisoning irreversibly affects brain and nervous system development, resulting in lower intelligence and reading disabilities.

Substandard housing such as water leaks, poor ventilation, dirty carpets and pest infestation can lead to an increase in mold, mites and other allergens associated with poor health.

Cold indoor conditions have been associated with poorer health, including an increased risk of cardiovascular disease. Extreme low and high temperatures have been associated with increased mortality, especially among vulnerable populations such as the elderly.

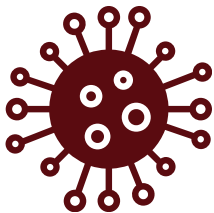
**IMPACT REPORT 2023**  
**HOME ENVIRONMENT IMPACTS**  
**HEALTH**



**Lead:** Can cause permanent nervous system damage that leads to learning and behavior problems. Lead poisoning is one of the most preventable health risks for children at home.



**Asthma and Allergies:** Triggers of asthma found in the home include allergens such as pet dander, mold, or pests as well as irritants such as scented cleaning products and second hand smoke.



**Mold and Moisture:** Mold can affect the health of all family members. Often homeowners and renters do not have a clear understanding of what causes mold, how to treat it, or that it could be impacting their family's health. Molds produce allergens and irritants.



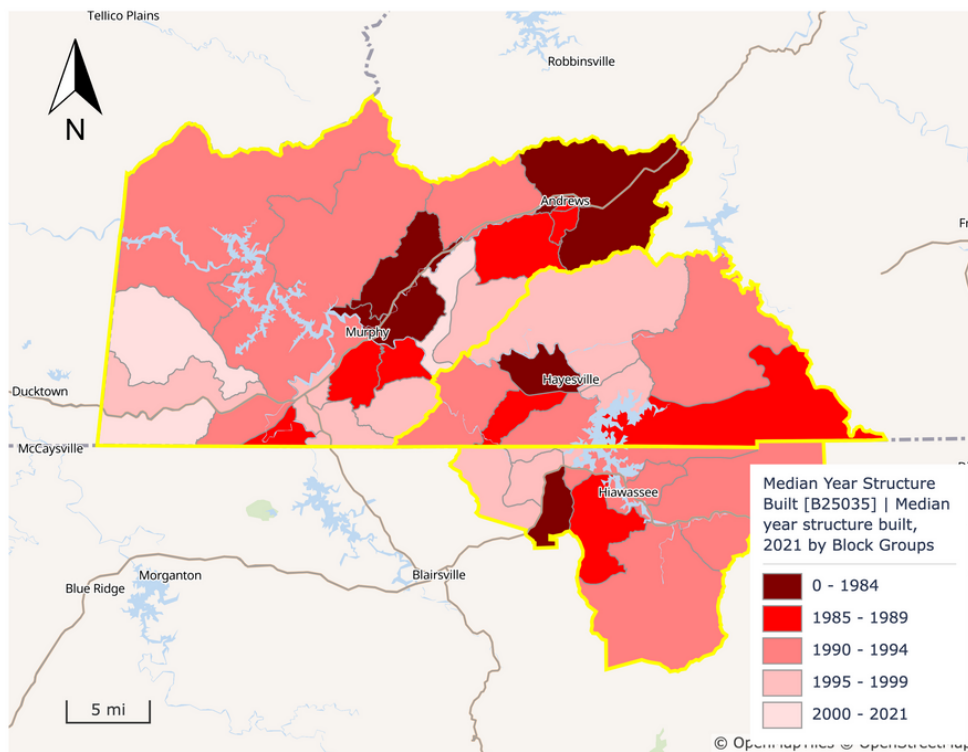
**Carbon Monoxide:** CO is a toxic gas. No amount is safe to breathe. CO cannot be seen, tasted, felt, or smelled. CO can make a person sick and can be fatal. Over 400 people in the United States die every year from CO poisoning.



**Radon:** Radon is a gas that cannot be seen, or smelled or tasted. As a result, it may be present at a hazardous level without the family being aware of it. Radon is estimated to cause many thousands of deaths each year.

**For more information on keeping a safe and healthy home see the report from HUD**

**IMPACT REPORT 2023**  
**HOME ENVIRONMENT IMPACTS**  
**HEALTH**



It is very important to acknowledge the age of the home because of the different complications. Homes built before 1978 should be checked for lead, and homes before 1989 should be checked for asbestos.

**Clay County (NC)**

Homes built before 1978 = 31%  
 Homes built before 1989 = 50%

**Cherokee County (NC)**

Homes built before 1978 = 27%  
 Homes built before 1989 = 47%

**Towns County (GA)**

Homes built before 1978 = 27%  
 Homes built before 1989 = 43%

**We have seen that homes in rural areas tend to be older because of houses that are passed down from generation to generation.**

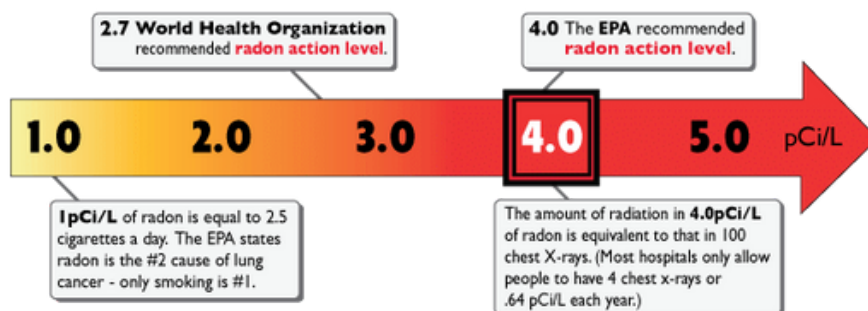


**IMPACT REPORT 2023**  
**HOME ENVIRONMENT IMPACTS**  
**HEALTH**

Radon is the leading cause of lung cancer among non-smokers. An estimated 21,000 people nationally die each year from radon-induced lung cancer. 450 North Carolinians are estimated to die each year due to radon-induced lung cancer. Data provided by the Center for Disease Control and Prevention indicated that 77 of the 100 counties in North Carolina have radon indoor air levels above action level of 4 pCi/L. Radon is a colorless, odorless, tasteless and chemically inert radioactive gas. It is formed by the natural radioactive decay of uranium in rock, soil and water. Testing for radon is the only way to know how much is present in a building.

According to the CDC, Radon is measured in units of picocuries per liter (pCi/L) of air. Radon is naturally found in outdoor air at very low levels, and some radon will always be in your indoor air. According to EPA, the average radon level in American homes is about 1.3 pCi/L.

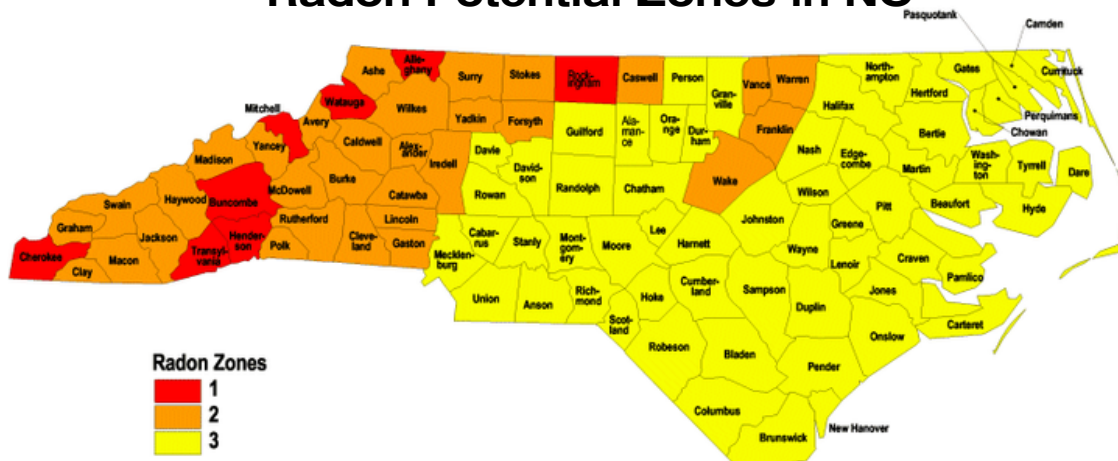
**TESTING:** The only way to know if you have a radon problem



The EPA says radon poses a greater health risk to children than to adults.

Information Provided By: NATIONAL RADON DEFENSE

**Radon Potential Zones in NC**



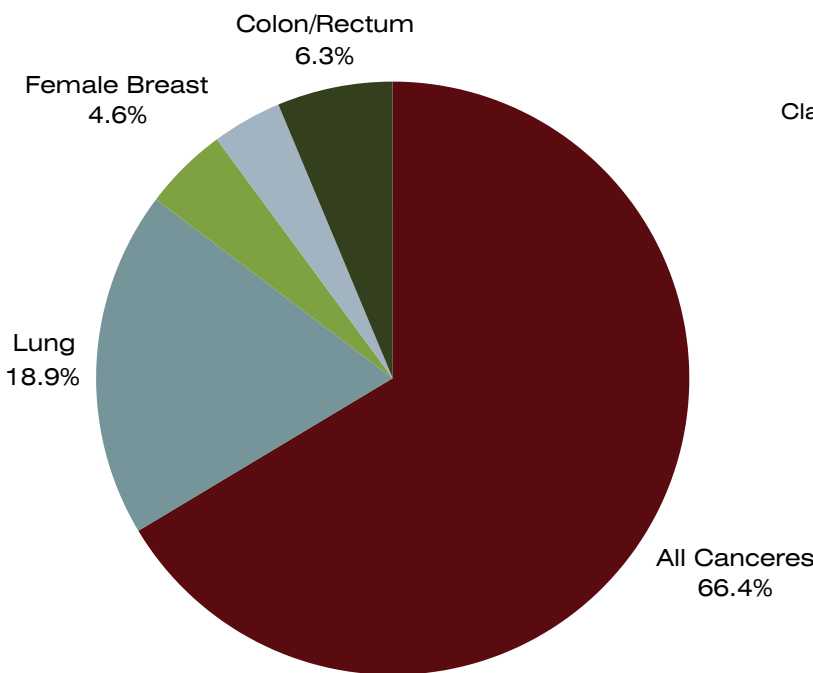


**IMPACT REPORT 2023**  
**HOME ENVIRONMENT IMPACTS**  
**HEALTH: CANCER**

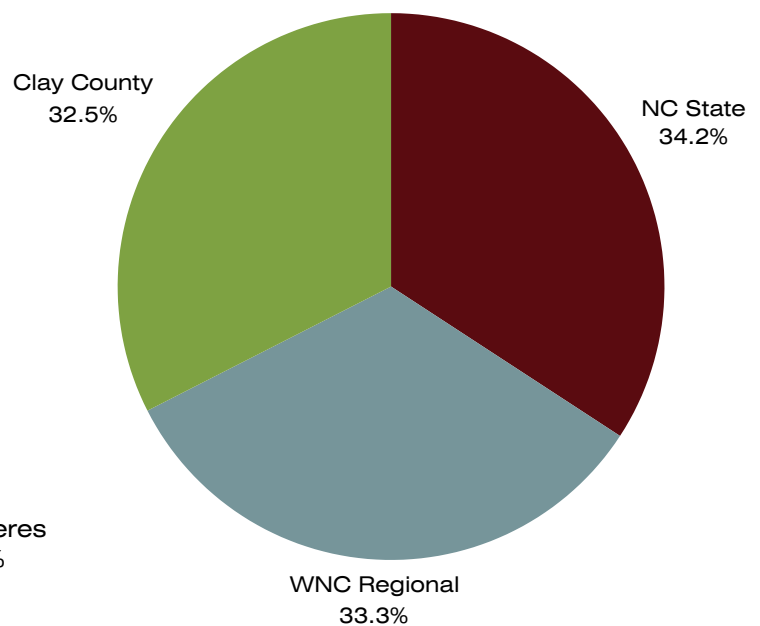
Cancer is the second leading cause of death in Clay County, where Hinton is located.

**WHAT THE NUMBERS SAY:**

**Cancer Rate in Clay County (2015-2019)**



**Total Cancer Rate (2015-2019)**



**Graphs adapted from the Clay County Community Health Assessment**

According to the data, the leading cause of death included diseases of the heart, chronic lung disease, and diabetes mellitus. Health priorities in Clay County were identified by the Community Health Assessment, 2021 as:

- Chronic disease control and prevention
- Prevention and management of acute respiratory infections
- Prevention and screening for cancer

One way Hinton Center can support these priorities is by educating renters and homeowners about the importance of screenings if the age of their home is older, and especially if radon, asbestos, and/or lead are present and remediated.

[https://www.clayhdnc.us/\\_files/ugd/fe4bcd\\_1c793247ff67452e995c6cfe539cd65a.pdf](https://www.clayhdnc.us/_files/ugd/fe4bcd_1c793247ff67452e995c6cfe539cd65a.pdf)



**IMPACT REPORT 2023**  
**IMPACT OF POOR HOUSING QUALITY**  
**ON CHILDREN**



**HAZARDS      HEALTH EFFECTS**

Lead	<ul style="list-style-type: none"> <li>• Hyperactivity</li> <li>• Reduced IQ</li> <li>• Behavioral problems</li> <li>• Learning disabilities</li> </ul>
Pests CO Mold Smoke VOCs	Asthma
Radon Asbestos	Cancer
Trips/Falls Electrical hazards Fire Explosions	Unintentional Injuries

**IMPACTS**

- **School absenteeism**
- **Poor school performance**
- **Long-term health problems**
- **Socialization problems**
- **Special education needs**
- **Costly health care needs**
- **Hospitalization**

**24 million homes** have significant lead based paint hazards.  
**Lead poisoning effects**  
**535,000** U.S. children ages 1-5

**18,000 deaths** related to injuries occur annually in U.S. homes.  
**12 million nonfatal injuries** occur annually in U.S. homes.

**6.8 million homes** have radon exposures above the current EPA action level.  
**Lung cancer** from radon exposure causes  
**21,000 deaths**



**IMPACT REPORT 2023**  
**IMPACT OF POOR HOUSING QUALITY**  
**ON CHILDREN**

Example of how a single unhealthy housing problem can lead to multiple health effects and economic impacts, like a “pebble in a pond.” The impacts of one hazard contributes to many facets of the home, health, and community impacts.



**LEGEND**

	<b>Housing problem</b>		<b>Hazard</b>		<b>Health effect</b>		<b>Costs to the individual</b>		<b>Costs to society</b>
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**IMPACT REPORT 2023**  
**WHAT IS A HEALTHY HOME?**



<b>Dry</b>	Damp houses provide a nurturing environment for mites, roaches, rodents, and molds, all of which are associated with asthma.
<b>Clean</b>	Clean homes help reduce pest infestations and exposure to contaminants.
<b>Pest-Free</b>	Recent studies show a causal relationship between exposure to mice and cockroaches and asthma episodes in children. Yet, inappropriate treatment for pest infestations can exacerbate health problems since pesticide residues pose risks for neurological damage and cancer.
<b>Ventilated</b>	Studies show that increasing the fresh air supply in a home improves respiratory health.
<b>Safe</b>	The majority of injuries among children and adults occur in the home. Falls are the most frequent cause of residential injuries to children, followed by injuries from objects in the home, burns, and poisonings.
<b>Contaminant Free</b>	Chemical exposures include lead, radon, pesticides, volatile organic compounds, and environmental tobacco smoke. Exposures to asbestos particles, radon gas, carbon monoxide, and secondhand tobacco smoke are far higher indoors than outside
<b>Maintained</b>	Poorly maintained homes are at risk for moisture and pest problems. Deteriorated lead-based paint in older housing is the primary cause of lead poisoning, which affects some 535,000 U.S. children annually.
<b>Thermally Controlled</b>	Tenants and homeowners are at risk for various health problems related to prolonged exposure to excessive heat or cold when their homes do not maintain adequate temperatures.

**Information from the CHM Healthy Homes Initiative)**

<https://www.chesapeakehousingmission.org/wp-content/uploads/2022/10/CHM-Healthy-Homes-Initiative-3-year-study-V05-hp.pdf>



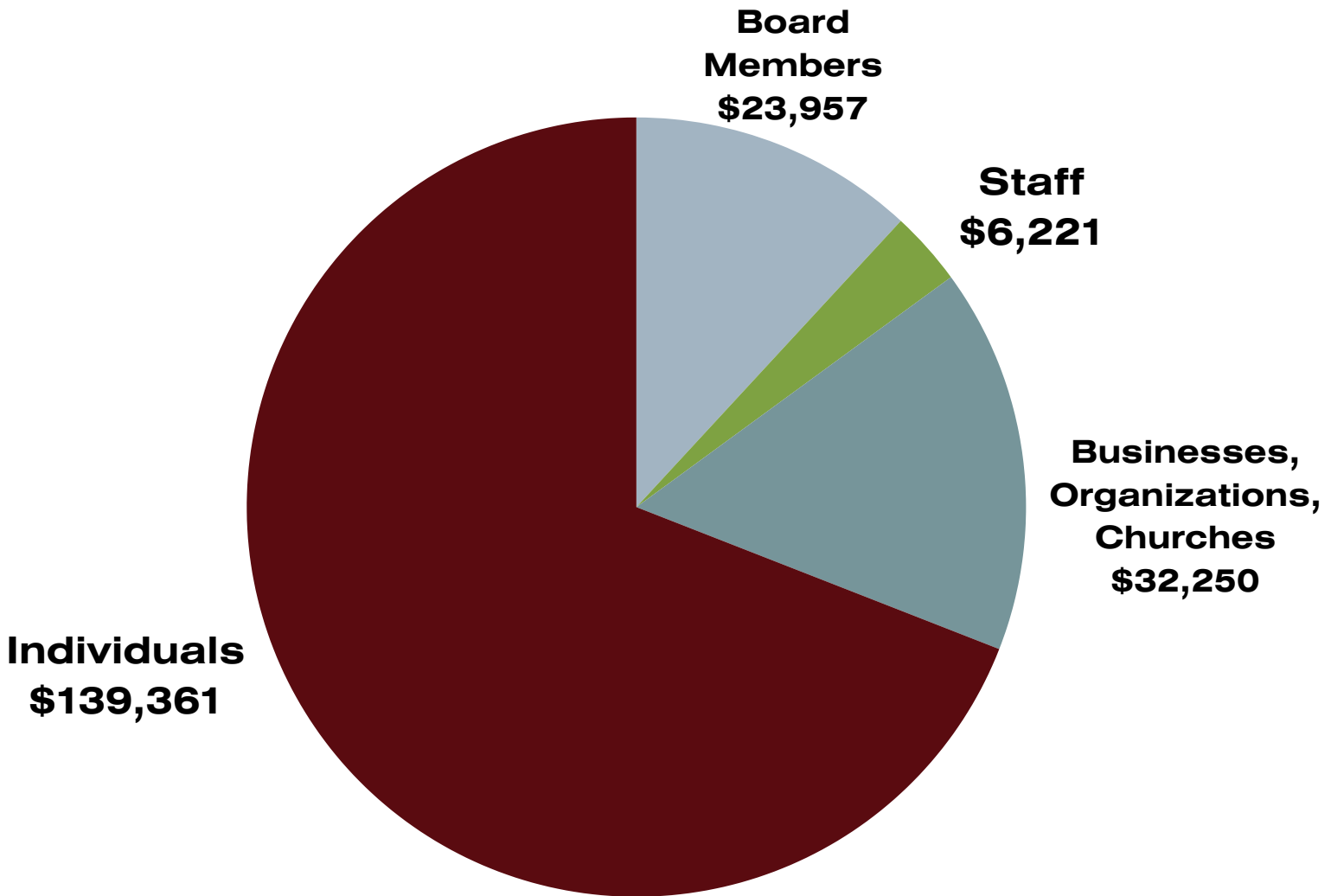
**1164 Unique Volunteers**  
**20,180 Volunteer Hours**  
**\$602,575 Value of Volunteer Hours**



**We are so grateful for all our volunteers!**

**2023 FINANCIAL STATISTICS**

**AMOUNT DONATED BY DIFFERENT GROUPS**



**OTHER FINANCIAL STATISTICS**

\$171 Average amount donated by individuals	221 Individual Donors	34 Monthly Donors
33 Major Donors	41 Organizations that Donated	\$768,110 Grant Funding

**SAFE & HEALTHY HOME REPAIRS,  
FIREWOOD, CHRISTMAS CARE OF CLAY COUNTY**



**617**

**Total Mission  
Participants**

**47**

**Churches Served  
through Missions**

**282**

**Total Projects**

**61**

**Home Repair  
Households**



**346**

**Kids Received  
Clothing Gifts  
through  
Christmas Care**



**460**

**Rural Poverty  
Simulation  
Participants**



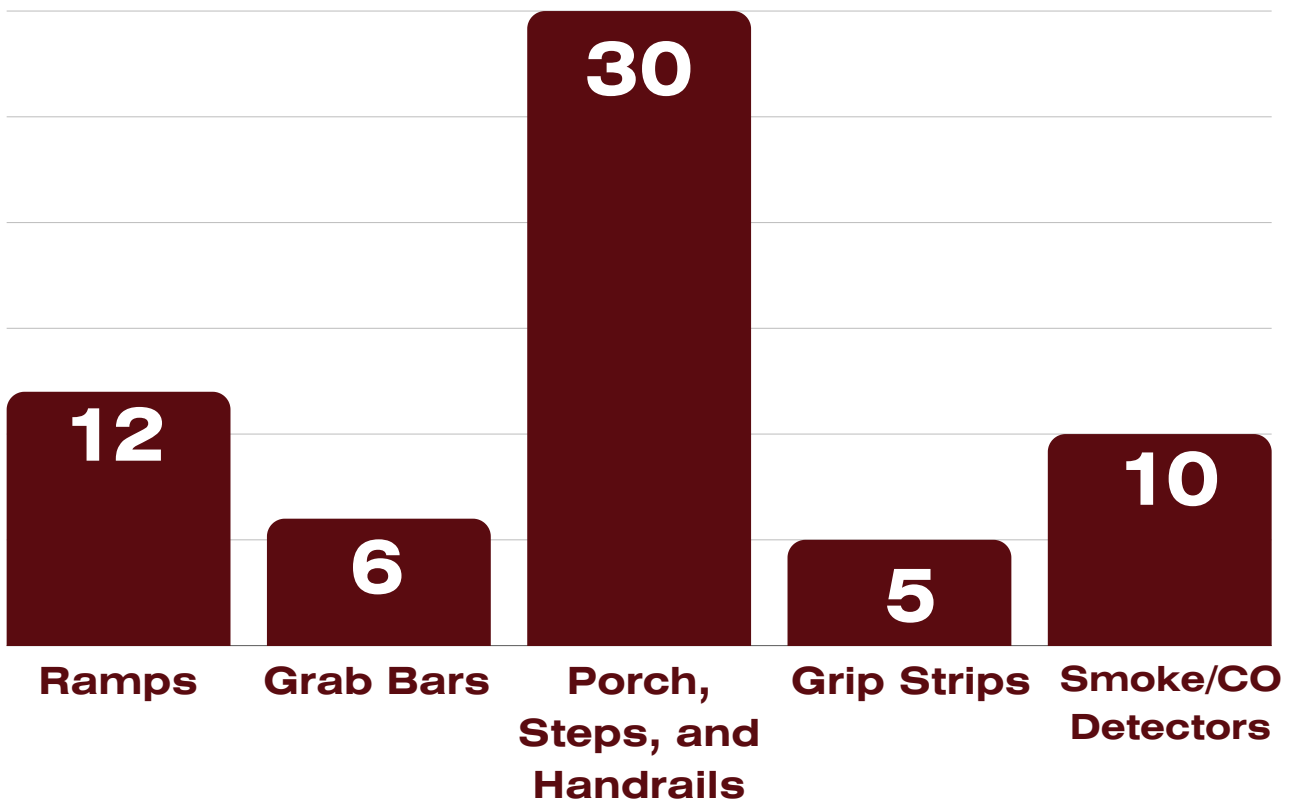
**706**

**Loads of  
Firewood**



Hinton repairs homes for our neighbors in Clay and Cherokee counties in North Carolina, as well as Towns County, Georgia. In these three counties, an average of 18% of residents live in poverty. Many of the people we serve are single parents, elderly, individuals with a disability, or people who are unemployed or underemployed.

## Number of Homes that Received...



**Other Typical Projects:**  
yard work, staining, mold/mildew removal,  
painting, and other needed projects

**“I learned that no matter how small the task is, the impact is amazing.” -Zachary, volunteer, age 15-18**

**IMPACT REPORT 2023**  
**2023 BY THE NUMBERS**  
**FIREWOOD**

**201** Individual Families Served

**706** Loads of Firewood Valued at \$139,454

**103** Woodchucker Volunteers

**1617** Volunteer Hours worth over \$48,000



## IMPACT REPORT 2023 SAFE & HEALTHY FIREWOOD

Hinton Center utilizes both local and mission volunteers in our firewood ministry. As part of our safe and healthy homes initiative, we've been intentional to make sure we are providing the safest and healthiest wood we can.

Alliance for Green Heat states that “firewood banks can aid in the ‘equitable transition to a clean-energy economy’ and help address the problem of heat insecurity for many rural and low-income Americans who still rely on wood heat to keep warm, and can aid in the transition from a fossil-fuel economy.”

According to the American Lung Association, burning wood produces emissions that are widely recognized as harmful to human health. Many of these harmful emissions can occur both indoors and outdoors. People with lung disease face special risks, but so do children, older adults, people with cardiovascular disease and diabetics.

Emissions from wood smoke, discussed on the next page, can cause coughing, wheezing, asthma attacks, heart attacks, and premature death, among other health effects. Many of these pollutants can worsen air quality indoors and outdoors.





**IMPACT REPORT 2023**  
**SAFE & HEALTHY FIREWOOD**

Particle Pollution	Wood-burning can be a major source of particle pollution
Carbon Monoxide	Wood smoke add to the outdoor levels of carbon monoxide, as well as increasing indoor concentrations.
Nitrogen Oxides	Nitrogen oxides harm health indoors and outdoors and helps create particle pollution.
Volatile Organic Compounds	These gases include harmful pollutants and contribute to creating ozone pollution. Some of these gases are carcinogens, including benzene and formaldehyde.
Climate Change Pollution	Wood smoke adds carbon dioxide and methane to the air, two pollutants that contribute significantly to climate change.

**Hinton encourages the use of safe wood-burning practices:**

- **Only burn seasoned firewood (cut and dried for 6+ months) and newspaper/dry kindling**
- **Build a hot fire**
- **Regularly remove ashes**
- **Ensure proper ventilation**

Hinton provides carbon monoxide detectors and fire blankets/ spray cans to firewood recipients. Funding from the Alliance for Green Heat has allowed Hinton to have a covered area for processed hardwood to be stored, and we use moisture meters to meet goal of 20% or less. Summer missions plans include building lean-tos at firewood recipients' homes for proper wood storage.

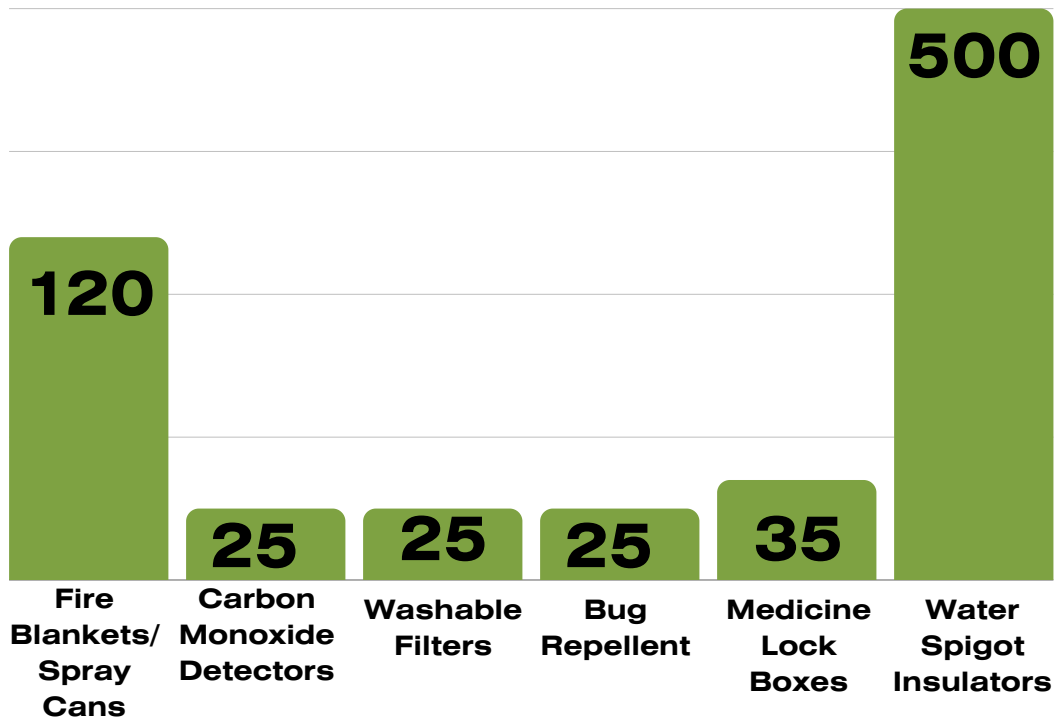
Information from the American Lung Association

# IMPACT REPORT 2023

## TINY HOUSE ON WHEELS



In 2019, Hinton received a grant from Duke Endowment to build an educational portable tiny home that is now known as our House on Wheels (HOW). This innovative platform allows us to take our message and educational resources directly into the community, reaching people at health fairs, parades, and various other community events. Along with the specific items below Hinton gives out school supplies, candy, information and stickers.







## **IMPACT REPORT 2023**

### **OUR CHECKLIST AND STAR RATING SYSTEM**

Prioritizing safety and health in the built environment, especially in disadvantaged communities, is not just a matter of infrastructure, but also a fundamental step toward ensuring equitable living conditions and overall well-being.

In response to this newfound understanding, we undertook a multifaceted approach to our work. We delved into the health conditions prevalent in our region, crafting a Safe and Healthy Homes Checklist (**Appendix A**) that serves as a foundational evaluation tool for each home, regardless of socioeconomic status. We also introduced a Star Rating System (found on the next page) to quantify the health and safety of each home, which we use to guide our interventions. Our goal is to ensure that, upon our initial engagement with a homeowner, their home reaches at least a three-star rating, signifying that it is deemed adequate in terms of safety and health.

**Unfortunately, we occasionally assess a home in which the conditions are so bad that they are beyond repair. This has been particularly relevant in our work with the Healthy Opportunity Pilot, in which Medicaid dollars can be used to cover home repairs related to health and safety. The pilot program in western North Carolina is facilitated by Dogwood Health Trust – Impact Health. In circumstances such as these, we notify the case manager and work to connect families with other agencies that will provide appropriate assistance through NC Care 360. For those homes that can be improved, we work with the homeowner to improve the house to a three-star level, adequate housing, or higher.**

To achieve this goal, our dedicated construction ministry coordinator and teams of enthusiastic volunteers work diligently to address the conditions that affect the star rating of the homes. Along the way, we prioritize cultivating a dignifying relationship with the homeowner and understand the importance of educating them about the repairs being undertaken and the reasons behind them. We also provide them with reminders on how to maintain and sustain the improvements, creating a sense of ownership and empowerment for the long-term well-being of the homes and their occupants.

**IMPACT REPORT 2023  
STAR RATING SYSTEM**



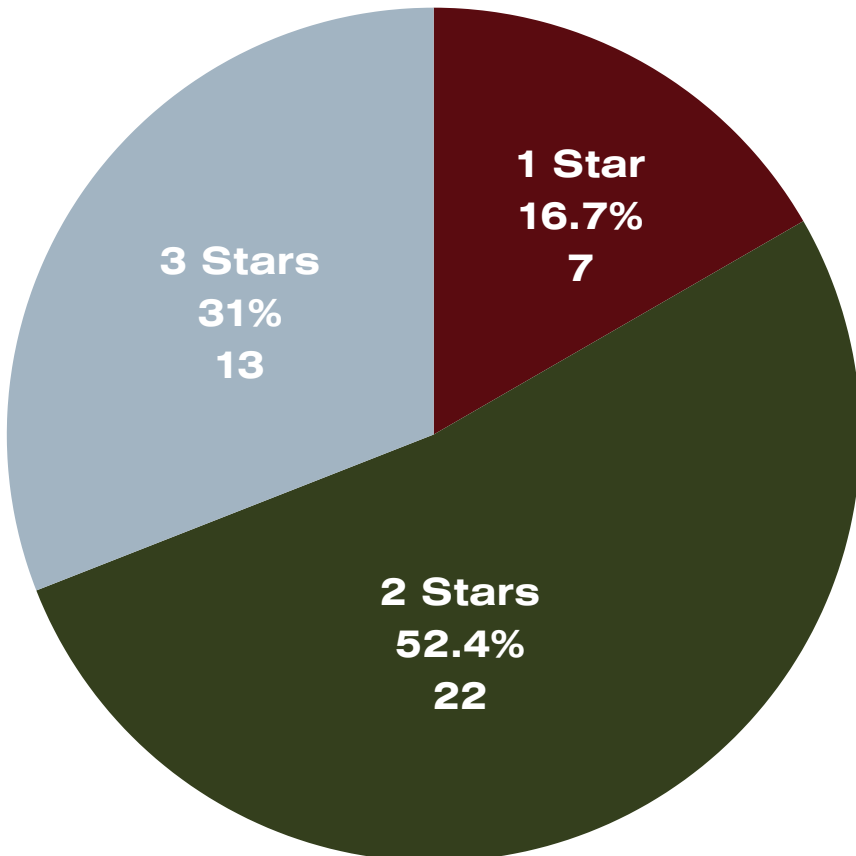
STAR RATING	DESCRIPTION	# CONCERNS IDENTIFIED
★	House provides basic shelter from elements, but has 25 or more health and/or safety concerns identified.	25+
★★	House provides shelter from elements, but has 20 or more health and/or safety concerns identified.	10-24
★★★	House provides shelter from elements, but has 5 or more health and/or safety concerns identified.	5-9
★★★★	House provides shelter from elements, has climate control, and has less than 5 health and/or safety concerns identified. House has also been tested or is known to be free from at least two of the three: asbestos, lead, and/or radon.	0-4
★★★★★	House provides shelter from elements, has climate control, has a safe and healthy environment, and has additional weather and energy saving aspects. House does not have asbestos or lead paint, and has safe levels of radon. House has reliable internet.	0-4



**IMPACT REPORT 2023**  
**OVERALL STAR RATINGS**

Goal: to raise the majority of homes to 3 stars or above, meaning they have 9 or less health/safety concerns identified in their home.

**Initial Star Rating**



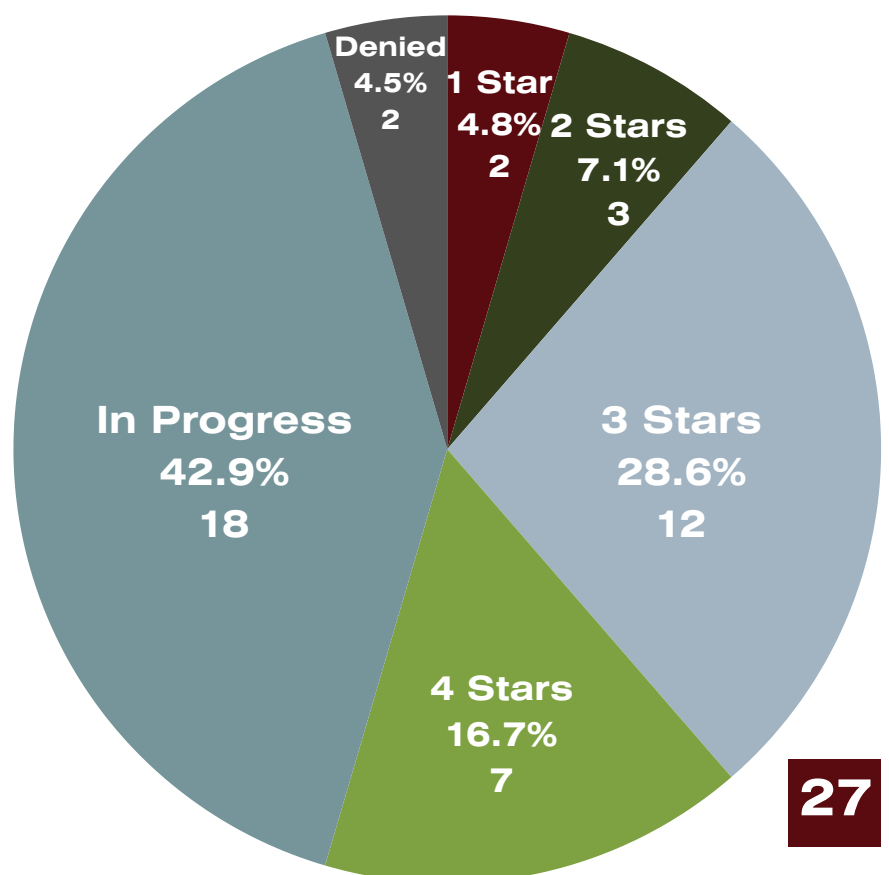
**42 Homes Rated**

STAR RATING	# HOMES
3 --> 4	7
2 --> 3	8
1 --> 3	1
1 --> 2	1
No Change	7
Other*	18

**Current Star Rating**

**Other\***

Homes with work still in progress	16
Homes unable to complete because the work was too extensive/ exceeded budget and skill (denied)	2





## **IMPACT REPORT 2023**

### **PARTICIPATION IN HEALTHY OPPORTUNITIES PILOT PROGRAM AS OF NOVEMBER 2023**

Hinton is participating in HOP. The Healthy Opportunities Pilot is the first comprehensive program in the United States to test the impact of providing select evidence-based, non-medical services related to housing, food, transportation, and interpersonal safety and toxic stress to address social needs of eligible Medicaid enrollees. Eligible populations include North Carolina Medicaid enrollees living in three primarily rural Pilot regions, with at least one qualifying physical or behavioral health condition and one qualifying social risk factor.

**Participants and Goals:** At a high level, the program delivery model involves multiple levels of design and administration. Three regional Network Lead organizations – Access East, Inc., Community Care of the Lower Cape Fear (CCLCF), and Impact Health – were selected by the North Carolina Department of Health and Human Services (NC DHHS) from a competitive application process. Each Network Lead is responsible for building and supporting networks of human service organizations (HSOs) – program terminology comparable to CBOs – to deliver social services in a region of the state, which together represent roughly a third of North Carolina’s counties. HSOs are contracted to deliver one or more of 29 Pilot services. Prepaid Health Plans (PHPs – North Carolina’s Medicaid managed care plans) are ultimately responsible for managing Pilot participants’ cost of care, health, and social needs, and are tasked with managing funding allocated for the Pilot, identifying eligible Medicaid enrollees, and authorizing and paying for services with Pilot funds. Care managers – either within a PHP, a state-certified Advanced Medical Home (AMH), or local health department – work with PHPs to identify, screen, enroll, and track Medicaid enrollees in the Pilot over time.

The goals of the Pilot are to:

- Evaluate the effectiveness of select evidence-based, federally approved, non-medical interventions, as well as the role of regional Network Lead organizations, in improving health outcomes, reducing health care costs, and promoting health equity for high-risk North Carolina Medicaid Managed Care members.
- Leverage evaluation findings to embed cost-effective interventions that improve health outcomes into the Medicaid program statewide.
- Support the sustainability of delivering effective non-medical services, including by strengthening the capabilities of HSOs and partnerships with health care payers and providers.

[https://www.milbank.org/wp-content/uploads/2023/09/Milbank-Social-Needs-through-Medicaid-Report-ACCESS\\_v05.pdf](https://www.milbank.org/wp-content/uploads/2023/09/Milbank-Social-Needs-through-Medicaid-Report-ACCESS_v05.pdf)

In 2023, Hinton Center completed 12 environmental exposure assessments and assisted 5 clients through the Healthy Opportunities Pilot Program. (as of 11/23)

Environmental Exposure Assessments are Safe & Healthy Homes checklists looking for specific HOP-related information.

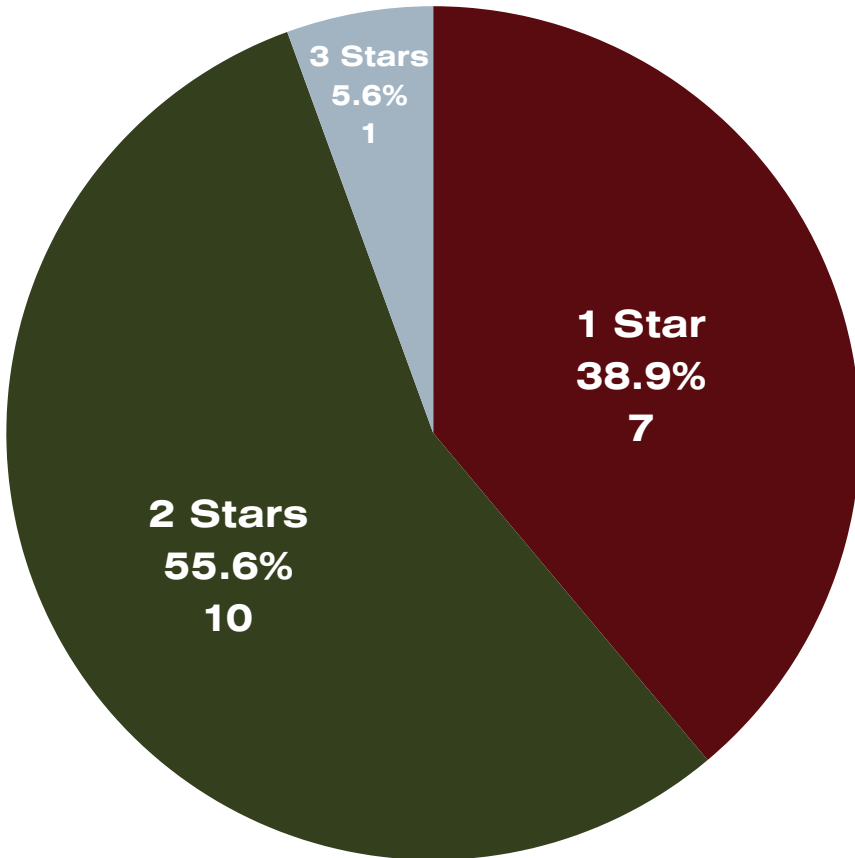
Work completed included accessibility ramps, porches, and hiring contractors for roofing, plumbing, flooring, and heating/air.

**IMPACT REPORT 2023**  
**HOP STAR RATINGS**



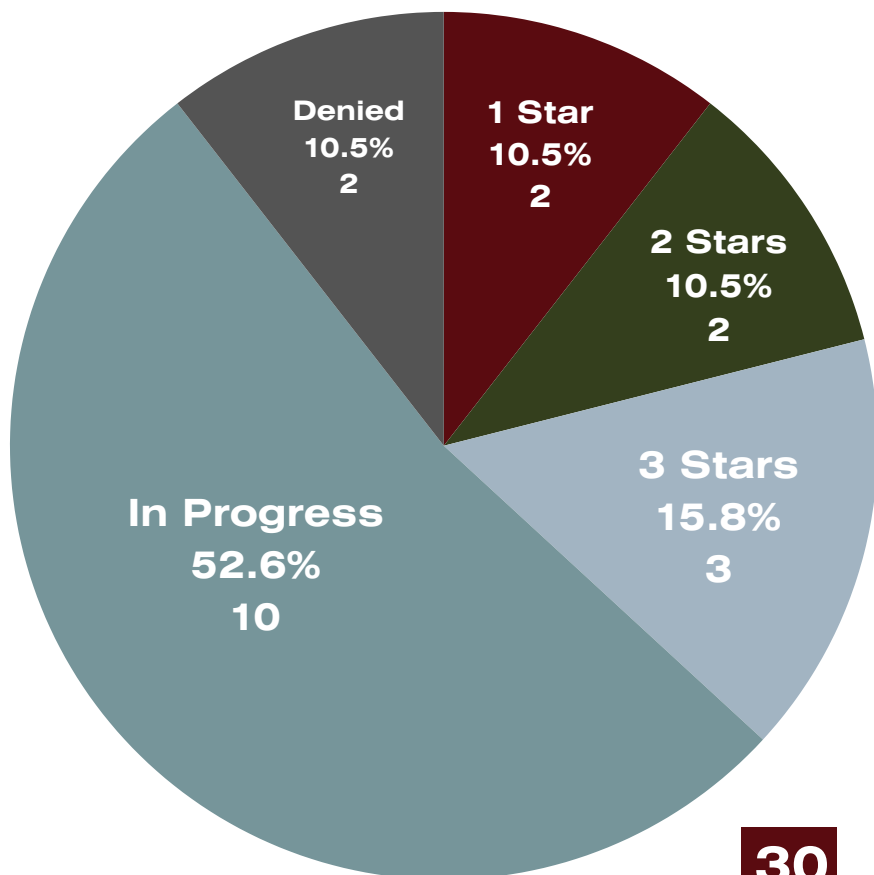
Of the 42 houses rated, 18 of the homes were referred to us by HOP.

**Initial Star Rating**



STAR RATING	# HOMES
3 --> 4	0
2 --> 3	2
1 --> 2	1
No change	2
Still in progress	10
Denied	2

**Current Star Rating**



Findings: All of the homes that were initially rated 1 star (see previous page) are HOP homes, and make up nearly 40% of all HOP homes. As such, it is challenging to get these homes to a higher rating with the funding provided. We also are unable to work on some of the HOP homes because of the amount of work needed that exceeds our budget and /or skill level. There are more than 50% still in progress, because we are working with subcontractors, and that process takes longer.



## **IMPACT REPORT 2023 FALL PREVENTION COHORT SUMMARY AS OF NOVEMBER 2023**

Hinton is participating in a cohort through the Coalition for Home Repair with the purpose of gathering data about the types of home repairs completed and their impact on medical/health outcomes to allow the evaluation of cost savings from home repair interventions.

### Methods:

- 12 participating organizations: Anderson Interfaith Ministries, Appalachia Service Project, Chesapeake Housing Mission, Community Housing Coalition of Madison County NC, Habitat for Humanity Dekalb, Hinton Rural Life Center, Home Works, HopeBuilders Home Repair, Rebuild Upstate, Rebuilding Together of Greater Charlotte, Renovation Alliance, Servants Inc.
- 231 projects, with 157 completed 6-month follow-up surveys
- 3 surveys- baseline, 6 months after project completion, and 12 months after project completion
- Data analysis completed by collaborators at the Homes Renewed Resource Center and the East Tennessee State University College of Public Health

### Selected Findings after 6-month Follow-up:

- Demographic characteristics:
  - Average age of 73.1 years
  - 50% white, 47% black
  - Income level: extremely low (36%), very low (36%) and low (25%), 3% as 'other'
- As of the 6-month follow-up, with adjustments for 4 outlier observations (n=153):
  - Falls inside the home dropped from 144 during the 6 months prior to the home repair to 39 prior to the follow-up call
  - Falls while entering or exiting the home dropped from 53 during the 6 months prior to the home repair to 8 prior to the follow-up call
  - Unplanned medical visits increased from 24 to 34
  - Limitations and plans:
    - Participation shrinkage- Coalition staff will assist participating organizations with 12-month follow-up calls as needed.
    - Survey timing- '6-month' follow-up calls averaged 6.6 months after work was completed, ranging between 3 and 17 months. The Coalition will provide reminders for 12-month survey timing.
    - Self-reporting- data regarding medical/health outcomes may suffer from self-report-related biases such as recall. Future project iterations may reduce follow-up time or reword questions to minimize.

<https://www.coalitionforhomerepair.org>

# Falls

**Falls are the leading cause of**

- **injury-related death in older Americans**
- **non-fatal injuries in older Americans**



**More than 1 out of 4 Americans age 65+ fall each year**

**\$745 Million**

**in medical expenses is spent related to fatal falls**

**32,000**

**Deaths**

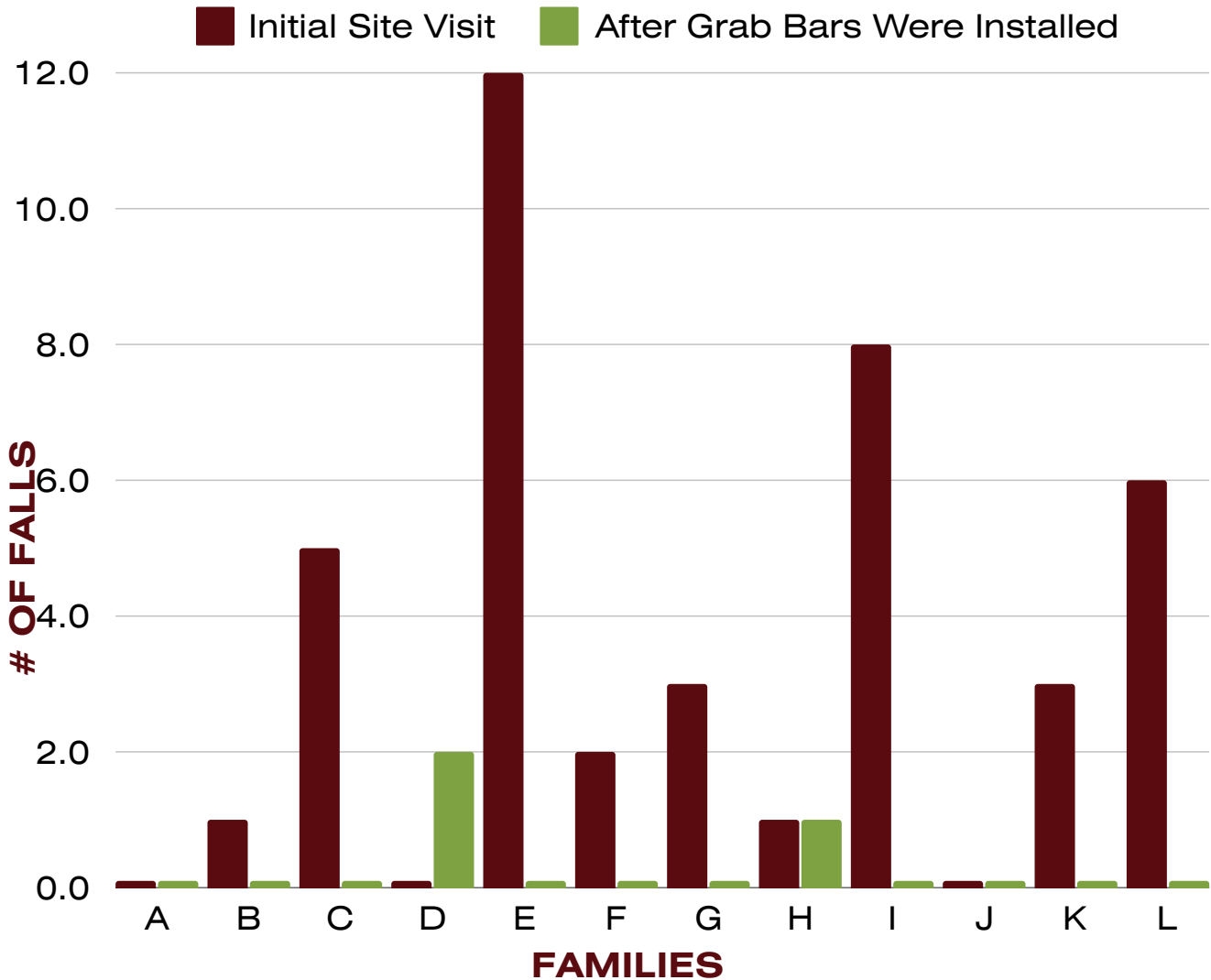
**due to injuries from falling**

**\$50 Billion**

**is spent on non-fatal falls**



**TIME FRAME: SITE VISIT TO ONE-YEAR FOLLOW-UP**



- 3 families reported the **same number** of falls
  - 2 of those 3 families had **no falls** to begin with, and grab bars were installed as a preventative measure
- 8 families reported a **decreased number** of falls
- 2 families reported an increased number of falls
  - Both self-reported **health decline** (1 family not included in the graph above due to increasing from 2 to 24 falls)

11 of the 13 families reported **feeling safer and more secure in their home** after the grab bars were installed

Home inspections were conducted on a total of 55 properties. Of the homes inspected, 95.6% were owner-occupied. Nearly two-thirds (62.3%) of the homes were single-family detached, stick-built/wood/brick construction. A third of homes (35.8%) were mobile homes. Finally, one home inspected was indicated to be a modular manufactured home.

There were several key repair concerns observed with potential health implications:

- 60.0% indicated need for additional home modification for accessibility and mobility;
- 50.0% had fall or tripping hazards;
- 45.5% of homes had potential evidence of asbestos containing materials;
- 40.0% of homes had chipped or peeling paint on windowsills and/or doorways;
- 33.3% had lint build-up in dryer exhaust vents, creating a potential fire hazard;
- 29.0% of homes did not have working fire extinguisher
- 27.3% showed evidence of pests or rodents;
- 23.1% of homes inspected showed evidence of active leaks on the ceiling;
- 21.7% had doors with poor seals;
- 19.0% had windows with broken/ missing panes of glass;
- 18.2% didn't have a smoke detector in proper locations;
- 10% of homes had been tested for radon; and
- None of the homes indicated having had any well water testing. Yet the majority of homes inspected (78.4%) rely on well water.



## **IMPACT REPORT 2023**

### **WNC BRIDGE PILOT PROJECT**

#### **CLIENT INTERVIEW**

Since having the ramps installed, the respondents indicate that they had experienced greater mobility and increased independence. As one said, “he gets out on the porch. Like if we have to take him someplace, he walks down the ramp to get in the car. And every time, he's walking more with the walker out on the porch and stuff.”

Similarly, another resident also had greater freedom and mobility and was able to leave her home using a walker:

Well, I wouldn't go down the back steps because first of all, they're too steep. And they're cement the house is built in 1960. And with my hip, I was on initially on, after I go to the hospital I was on a walker. And so you know, how could I go down the steps with a walker? So, using the ramp, I was able to get down the steps and, and, I didn't go out that much until I was able to get some groceries with transportation. But initially, because of that, I would have to use a walker to go down the lot the ramp, I couldn't have used a walker to go down the back steps at all. So, I was able to get out of the house and do what I had to do... after that it took me still several months, I think before I would even of course was healed with my hip and I even tried to go down those back steps. I was still a little bit afraid to get to go down the back steps.

This project was supported by the Western North Carolina (WNC) Bridge Foundation. Technical assistance provided by the consultant included reviewing the existing Hinton Safe and Healthy Homes Checklist and Star Rating system bringing it closer to U.S. Department of Housing and Urban Development Housing Quality Standards (HQS) Inspection; providing updated socioeconomic and demographic data for Clay and Cherokee Counties; and documenting the activities and efforts of the Hinton project as they inspected and remediated issues with homes. The report was compiled by Dr. Stephen J. Sills Senior Vice President, Research, Policy, & Impact Center, National Institute of Minority Economic Development.

## THROUGHOUT THE YEARS

**\$6,654,365** In grant funding (2014-2023)

**\$390,772** Given by churches and organizations (2014-2023)

**Over \$5,000,00** The monetary value of volunteer work (2014-2023)

**2,806** Loads of firewood (2019-2023)

**11,171** Unique volunteers (2014-2023)

**Over 200,000** Hours of service (2014-2023)



### In the last 5 years...

- Hinton has served 1,920 homes/families and completed 1,000 home repair projects.

### In the last 10 years...

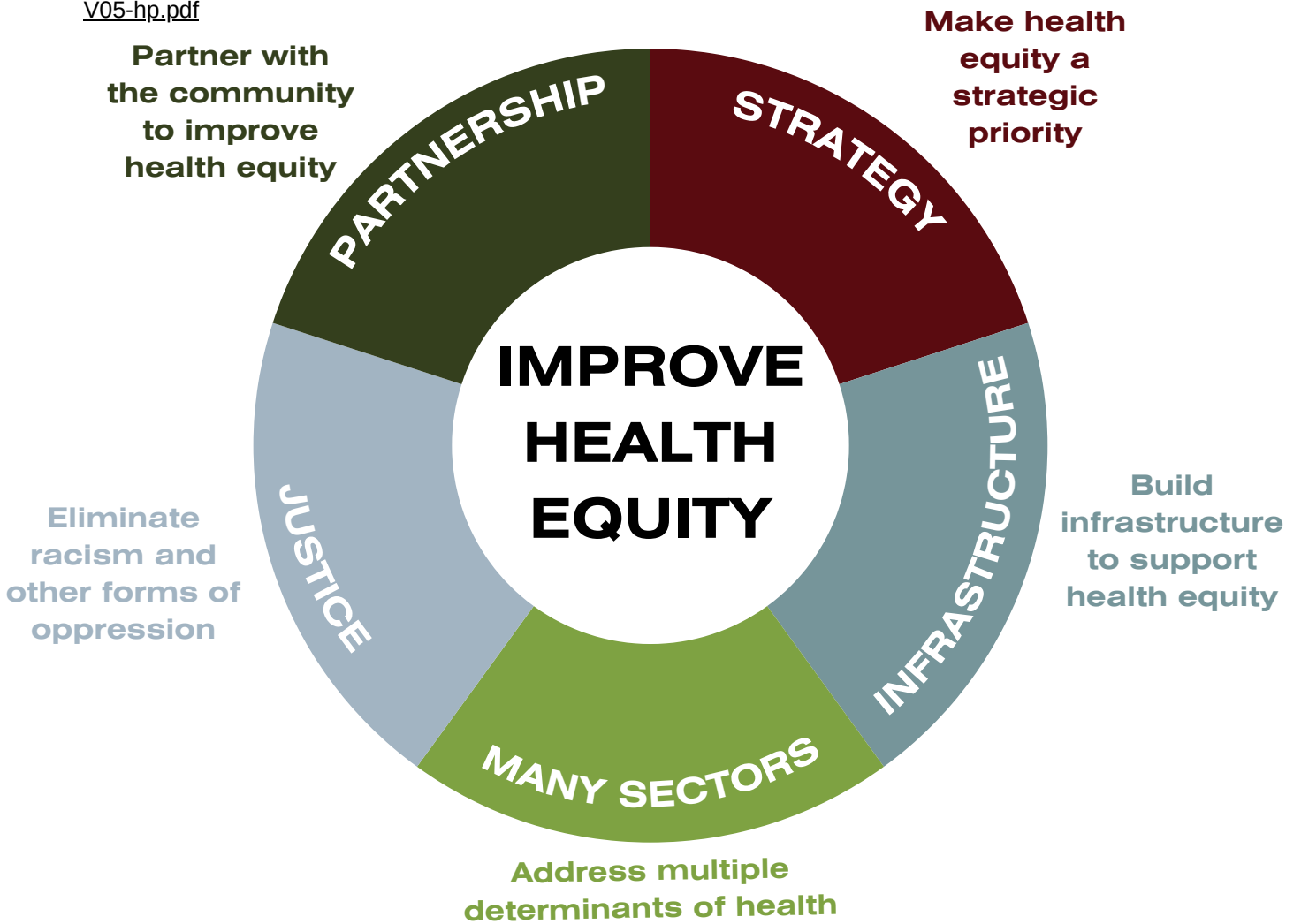
- Hinton has hosted nearly 8,099 mission participants and over 486 church groups.



**IMPACT REPORT 2023**  
**CURRENT & FUTURE ENDEAVORS**  
**WORKING TO ACHIEVE HEALTH EQUITY**

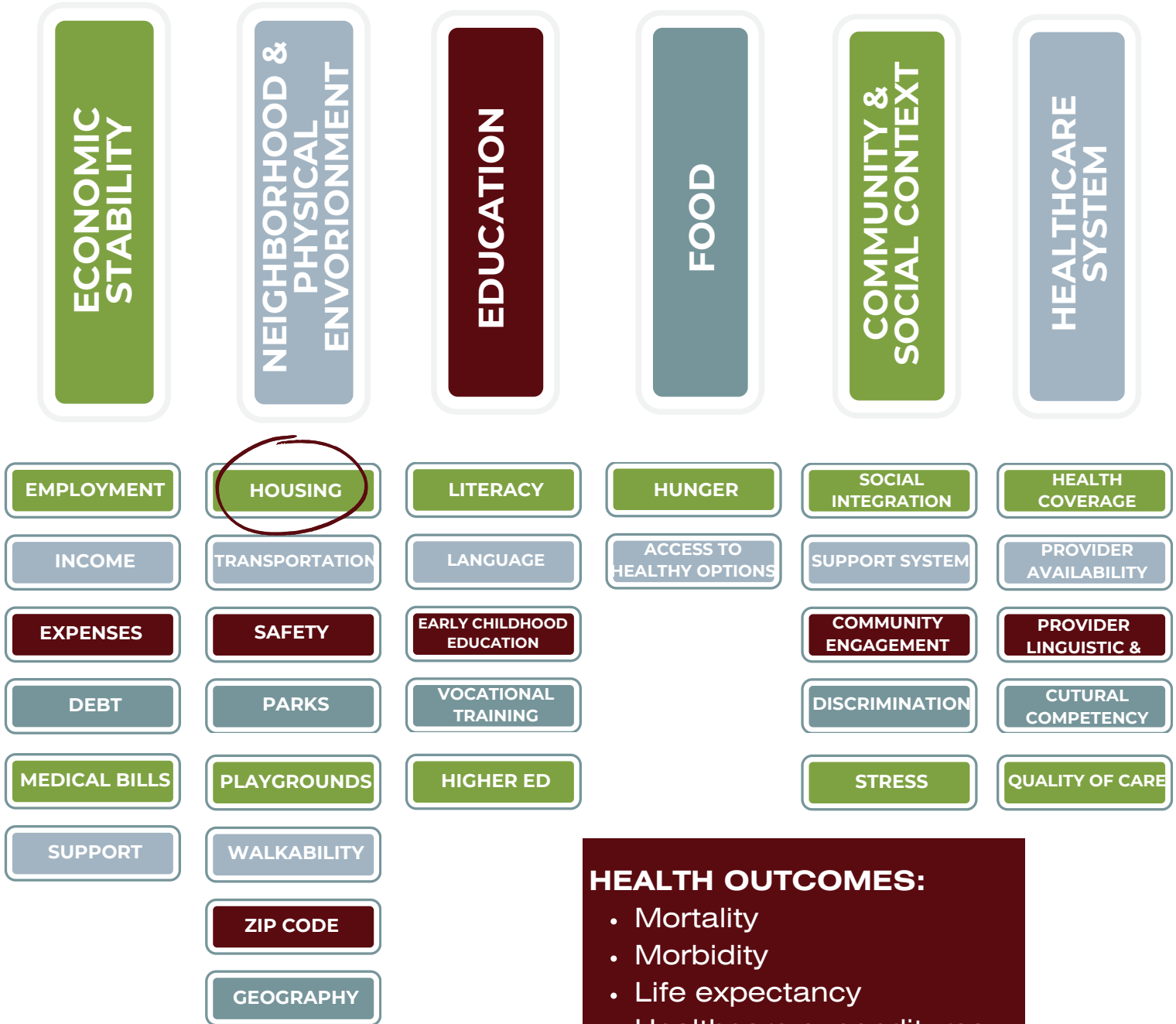
Health equity is defined by the CDC as, “The opportunity to attain one’s full health potential and no one is disadvantaged from achieving this potential because of their social position or other socially determined circumstance.” Many attribute the responsibility of “health” and “health equity” to healthcare systems and providers, and while these institutions have an important role in attaining the vision of health equity as stated by the CDC, so much of what creates inequity in health is outside of the realm of the healthcare system and tied to social determinants of health. We know that housing and health are intricately related, and Hinton has an intentional focus on addressing underserved communities, and overcoming barriers, such as information privilege, access issues, and more.

<https://www.chesapeakehousingmission.org/wp-content/uploads/2022/10/CHM-Healthy-Homes-Initiative-3-year-study-V05-hp.pdf>





**IMPACT REPORT 2023**  
**CURRENT & FUTURE ENDEAVORS**  
**SOCIAL DETERMINANTS OF HEALTH**



Information from: KFF The Henry J. Kaiser Family Foundation



**IMPACT REPORT 2023**  
**FUTURE PLANS**  
**EDUCATIONAL TOOL BARN**



In our continued commitment to community education and engagement, we are excited to share that, with the generous funding of The Duke Endowment, we are currently constructing an Educational Tool Barn on our campus, with the official ribbon-cutting ceremony scheduled for April 15, 2024.



**This innovative facility is designed to serve as a hub for community education and hands-on learning, reinforcing the vital connection between the built environment and its impact on health and well-being.** We are tremendously grateful to The Duke Endowment for funding this project even through the interruption of the COVID pandemic.



Within the Educational Tool Barn, we will feature a wealth of engaging educational materials and exhibits, each focused on key aspects of the built environment. Topics will include:

- water and air quality
- the hazards of radon, asbestos, and lead
- fall prevention
- much more



Through interactive displays, informative resources, and speakers, visitors will gain a deeper understanding of how these factors directly influence the health and the safety of their homes.



**IMPACT REPORT 2023**  
**FUTURE PLANS**  
**EDUCATIONAL TOOL BARN**



The Educational Tool Barn will serve as a versatile space for learning events, school field trips, and community workshops, fostering a culture of education and awareness among people of all ages.

**It is our belief that by providing accessible, hands-on educational experiences for our guests, our volunteers, and our neighbors, we can empower individuals to make informed decisions about their living conditions and proactively improve their homes.**

One feature of the Educational Tool Barn is the inclusion of bay doors on each side, enabling our volunteer mission teams to pull up and efficiently load their work trucks with tools and supplies so that they are ready to venture out into the community to help repair homes. This strategic design ensures that our teams are well prepared to respond to the needs of homeowners promptly and effectively, further enhancing our capacity to improve the quality of housing.

As we look ahead, we are eager to see this facility become a cornerstone of community education and action, starting with our newest endeavor to mentor local youth in carpentry, business, and leadership. This project was just funded through the generosity of Dogwood Health Trust.





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**IMPACT REPORT 2023**  
**FUTURE PLANS**  
**LIVING LEARNING LODGE**

We are also excited to share that we are in the planning stages of a transformative project—the Living Learning Lodge. This innovative initiative will provide guests with a unique opportunity to stay in our remodeled Hinton Lodge and immerse themselves in an educational experience that explores the intricate relationship between the built environment and its effects on health and safety.

The Living Learning Lodge will incorporate technology to create an interactive and immersive learning environment. Guests will have access to educational resources and experiences that shed light on how housing, water, and air quality; cost impacts; carbon footprint; and other elements of the built environment can directly impact their health, finances, and overall wellbeing. We have already been in consultation with game designers and museum designers, and are in the process of learning about artificial intelligence (AI). This experiential approach will empower individuals to make informed decisions about their living conditions and inspire them to take action to improve their own homes, the homes of others, and other facilities in their communities.

The Living Learning Lodge represents a significant step forward in our mission to empower individuals with knowledge and resources to create safer, healthier, more economical homes and communities. As we move into the planning and development phases of this project, we invite potential funders to join us in bringing this visionary initiative to life. Your support will help us create an immersive educational experience that has the potential to drive lasting change by equipping individuals with the knowledge and awareness to make positive choices for their homes and communities. Together, we can continue our journey to enhance the quality of life in the Southern Appalachia region and create a brighter, healthier future for all.

**IMPACT REPORT 2023**  
**FUTURE PLANS**  
**RURAL POVERTY SIMULATION**

Furthermore, our commitment to addressing the multifaceted challenges in our region extends to helping everyone understand the impacts of poverty. To this end, we are planning to include our rural poverty simulation in the learning concepts of the Living Learning Lodge. Our rural poverty simulation was created in conjunction with Western Carolina University and provides a tremendous understanding of the impact of poverty—specifically in rural communities. To date, we have provided the simulation for more than 1,500 participants.

Many participants described their experience as eye opening and said that it gave them a better understanding of rural poverty than they had before the simulation. In addition to gaining new perspective, several commented that they recognized privilege they did not know they had. **“It made me aware of how hard people in poverty work to be on budget and support their families, and it opened my eyes to how much they can struggle with things other people are privileged with,” said one participant.** Information privilege is one of the main components discussed during the simulation. In addition to the poverty simulation, we will include information about the Social Determinants of Health, as well as Adverse Childhood Experiences and resilience. By fostering awareness, empathy, and understanding, we aim to inspire action and collaboration to address poverty-related issues—particularly those prevalent in rural communities.





## IMPACT REPORT 2023

### SOURCES

Alliance for Green Heat

<http://www.forgreenheat.org/issues/firewoodbanks.html>

American Lung Association on Wood Burning

[https://www.lung.org/clean-air/indoor-air/indoor-air-pollutants/residential-wood-](https://www.lung.org/clean-air/indoor-air/indoor-air-pollutants/residential-wood-burning#:~:text=Burning%20wood%20produces%20emissions%20that,wit)

[burning#:~:text=Burning%20wood%20produces%20emissions%20that,wit](https://www.lung.org/clean-air/indoor-air/indoor-air-pollutants/residential-wood-burning#:~:text=Burning%20wood%20produces%20emissions%20that,wit)  
[h%20cardiovascular%20disease%20and%20diabetics](https://www.lung.org/clean-air/indoor-air/indoor-air-pollutants/residential-wood-burning#:~:text=Burning%20wood%20produces%20emissions%20that,wit)

CDC Fall Prevention Information

<https://www.cdc.gov/falls/index.html>

Clay County Community Health Assessment

[https://www.clayhdnc.us/\\_files/ugd/fe4bcd\\_1c793247ff67452e995c6cfe539cd65a.pdf](https://www.clayhdnc.us/_files/ugd/fe4bcd_1c793247ff67452e995c6cfe539cd65a.pdf)

Coalition for Home Repair

<https://www.coalitionforhomerepair.org/>

HUD Information on Radon

[https://www.hud.gov/program\\_offices/healthy\\_homes/healthyhomes/radon](https://www.hud.gov/program_offices/healthy_homes/healthyhomes/radon)

HUD Stakeholder Guide

[https://www.hud.gov/sites/documents/STAKEHOLDER\\_EDSHH.PDF](https://www.hud.gov/sites/documents/STAKEHOLDER_EDSHH.PDF)

Information on Health and Zip code from Harvard

[https://news.harvard.edu/gazette/story/newsplus/zip-code-better-predictor-of-health-than-genetic-](https://news.harvard.edu/gazette/story/newsplus/zip-code-better-predictor-of-health-than-genetic-code/#:~:text=Goodman%20participated%20in%20the%20program,health)

[code/#:~:text=Goodman%20participated%20in%20the%20program,health](https://news.harvard.edu/gazette/story/newsplus/zip-code-better-predictor-of-health-than-genetic-code/#:~:text=Goodman%20participated%20in%20the%20program,health)  
[%20than%20your%20genetic%20code.%E2%80%9D](https://news.harvard.edu/gazette/story/newsplus/zip-code-better-predictor-of-health-than-genetic-code/#:~:text=Goodman%20participated%20in%20the%20program,health)

Information on HOP

[https://www.milbank.org/wp-content/uploads/2023/09/Milbank-Social-Needs-through-Medicaid-Report-ACCESS\\_v05.pdf](https://www.milbank.org/wp-content/uploads/2023/09/Milbank-Social-Needs-through-Medicaid-Report-ACCESS_v05.pdf)

KFF The Henry J. Kaiser Family Foundation

National Council on Aging Information

<https://www.ncoa.org/article/get-the-facts-on-falls-prevention>

#### A Quest to Improve Life in Southern Appalachia

- Paper written by Hinton’s CEO Jackie Gottlieb
- <https://hintoncenter.org/wp-content/uploads/2023/11/A-Quest-to-Improve-Life-in-Southern-Appalachia-Hinton-Rural-Life-Center.pdf>

#### Chesapeake Housing Mission Report

- Report following a 3-year study on safe and healthy homes
- <https://www.chesapeakehousingmission.org/wp-content/uploads/2022/10/CHM-Healthy-Homes-Initiative-3-year-study-V05-hp.pdf>

#### Stakeholder Guide

- Report published by the U.S. Department of Housing and Urban Development
- [https://www.hud.gov/sites/documents/STAKEHOLDER\\_EDSH\\_H.PDF](https://www.hud.gov/sites/documents/STAKEHOLDER_EDSH_H.PDF)

#### WNC Bridge Pilot

- Report compiled from projects Hinton completed
- <https://hintoncenter.org/wp-content/uploads/2023/11/WNC-Bridge-Pilot-Report.pdf>