

UNCONDITIONAL CASH TRANSFERS AS A STRATEGY FOR IMPROVING HOUSING  
AFFORDABILITY IN CLEVELAND COUNTY, NORTH CAROLINA

By

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A capstone project submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the Public Health Leadership Program, Nutrition and Health Policy and Management in the Gillings' School of Global Public Health.

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## **ABSTRACT**

Adeniran, Bonavire, Kadro, Knudstrup: Unconditional Cash Transfers as a Strategy for Improving Housing Affordability in Cleveland County, North Carolina  
(Under the direction of Dana Rice and Seema Agrawal)

Households in Cleveland County experience severe housing cost burden, which negatively impacts health and well-being. More importantly, vulnerable households who spend more than 30% of income on housing costs experience this burden at a greater severity. To combat housing cost burden, an Unconditional Cash Transfer (UCTs) intervention is proposed to support vulnerable families for two years. To effectively assess the impact of the UCTs, a quality of life and food security survey will be conducted before and after the program. Based on results from the Stockton Economic Empowerment Demonstration (SEED) project, which demonstrated the effectiveness of UCTs in Stockton California, it is hypothesized that participants will reduce depression, anxiety, and food insecurity and experience higher quality of life, and more economic stability than at baseline. This intervention aims to show the effectiveness of UCT's in positively impacting health outcomes while respecting the dignity and autonomy of community members.

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## Problem Statement

Social Determinants of Health (SDoH) are factors in one's environment like the economic and social conditions, educational opportunities, neighborhoods, and healthcare that impact health outcomes and quality of life ("Social Determinants of Health - Healthy People 2030 | health.gov," n.d.). This project focuses on the category of "Housing and Homes" within the SDoH "Neighborhood and Built Environment" (NBE) as defined by the US Department of Health and Human Services, Healthy People 2030, in the geographic location of Cleveland County, North Carolina (NC). The specific objective target of this program policy transformation is "reducing the proportion of families that spend more than 30% of income on housing," ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.). The overarching goal of this SDoH as described by Healthy People 2030 is "improving the health and safety in the places where people live, work, and play" ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.).

Fifty percent (50%) of households in Cleveland County spend more than 30% of income on rent alone, demonstrating severe housing cost burden (Kennedy, 2019). Poverty, especially among children in Cleveland County, is more prevalent than in the US - 31% compared to 10%, respectively ("County, North Carolina | County Health Rankings & Roadmaps," n.d.). Poverty is associated with adverse health outcomes like early death from cardiovascular disease and type II diabetes, and in is demonstrated by data showing 23% of residents are in poor health, compared to 18% in NC and 14% in top performing US counties (Raphael, 2011; "U.S. Census Bureau QuickFacts: Cleveland County, North Carolina," n.d.). Poverty, housing costs, and food insecurity<sup>1</sup> are interrelated and one of the short-term impacts of families spending more than 30% of their income on housing is increased food insecurity (Fletcher, Andreyeva, & Busch, 2009; Kirkpatrick & Tarasuk, 2011). Food insecurity is negatively associated with health outcomes; for example, children experiencing food insecurity have twice the likelihood of reporting fair

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<sup>1</sup> Food insecurity is the limited or uncertain ability of nutritionally adequate and safe foods, or limited or uncertain ability to acquire acceptable foods in socially acceptable ways ("Core Indicators of Nutritional State for Difficult-to-Sample Populations", 1990)

or poor health and are 1.4 times as likely to have asthma than kids who are not food insecure (Gundersen & Ziliak, 2015). Furthermore, food insecurity in older adults is associated with limitations to activities of daily living (Gundersen & Ziliak, 2015).

### **Policy and Programmatic Changes**

Given the housing costs burden in Cleveland County, there is an urgent need to support the most impacted households with resources to meet basic needs and avoid harmful coping mechanisms that are detrimental to health and associated with poor health outcomes. To address this public health challenge, an Unconditional Cash Transfer (UCT) policy is being proposed to support the most impacted households in Cleveland County with a cash transfer of \$250 every month for two years. The purpose of this policy is not to eliminate the burden; rather, it is to cushion its effects on households who have the highest risk of experiencing poor health outcomes attributable to housing costs burden. UCTs are cheaper in administrative cost per dollar. They give recipients the freedom and dignity to prioritize immediate needs given that monthly needs will not always be the same across vulnerable households (International Rescue Committee, 2022; Cunha et al. 2022).

In a 2018 working paper published by the National Bureau of Economic Research, UCTs were found to be associated with positive effects on employment rates, quality of nutrition, school attendance, grades and test scores of children in recipient households (Marinescu, 2018). It was also associated with an 8.5 decrease in hospitalizations (Marinescu, 2018). Similarly, in evaluating the policy alternative using the most prioritized criteria — impact and equity — UCTs scored higher (see Table A1, Appendix A). This further justifies UCTs as an effective solution that can reduce health disparities and give households in Cleveland County an opportunity to achieve improved health outcomes.

The Stockton Economic Empowerment Demonstration (SEED) program in California found success in the implementation of UCTs (called guaranteed monthly incomes) for those in the community struggling to meet financial needs (Baker, et al., 2021). UCTs are the best fit because they will address the financial burden associated with housing cost among the priority population (West, et al., 2021). This will allow for financial relief and the ability to purchase quality food in adequate amounts for each household.

Funds will be used to ensure participating households receive \$250 every month via a prepaid debit card. This amount was concluded using the SEED intervention as a starting point and adjusting the monthly amount based on the average housing cost/rent in Cleveland County (*NC Rental Data, 2021*; Wipfler, 2022).

It is a priority of this intervention to provide an equal opportunity to all participants to increase food security. The use of UCTs as a guaranteed monthly income will allow for greater autonomy among participants. Key reasons to support this policy include enabling discrete participation in the program that allows participants to express involvement to the degree they see fit. Moreover, as evidenced by the SEED project, cash transfers have an impact on public health, as they allow participants to pursue higher education and higher wages, two factors that are associated with better health outcomes (Baker, et al., 2021). Additionally, UCTs are more cost effective than in-kind benefits and most funds are spent on essential items normally provided by in-kind support such as food, shelter, and health (Baker, et al., 2021).

### **Stakeholders**

For the UCT program policy to be successful several key stakeholders must be included in the planning, design, implementation, and evaluation of the program: these include the mayor of Shelby where the pilot program will take place; an implementation and evaluation team from the Cleveland County Health Department; Cleveland County Residents who would be eligible for the program i.e., people spending more than 30% of income on housing; the Cleveland County Government, and The Economic Security Project who will fund the program; community and government organizations currently providing housing support like The Salvation Army, the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation; finally, the financial institution who will administer the UCT payments. Each of these stakeholders brings important knowledge, skills, and experience to contribute to the success of the program within the context of Cleveland County.



**Budget**

The UCTs will be funded by the Cleveland County Government and the Economic Security Project ("Economic Security Project", 2022). With the population of the priority area (census tract 950900) being 3,010, 313 households were estimated to bear the highest housing cost burden. Hence, the direct cost and total cost budgeted for the Unconditional Cash Transfer are \$1,878,000, and \$2,027,491.72 respectively.

The size of this program does not necessitate full-time work; hence, the project manager and the project assistant will work 16 hours a week (0.4 FTE) and 8 hours a week (0.2 FTE), respectively. The other responsibilities will be handled by contract staff. Hence, personnel cost is estimated to be \$117,251.72.

A quality-of-life scale and household food security survey will be conducted at the program's onset to assess the impact of housing costs burden on vulnerable households. The program will give each household twenty dollars to incentivize participation in the surveys. 1,204 households were estimated to be present in the target population. Similarly, after the program runs its course, a quality-of-life and household food security survey will be conducted to assess its impact on recipient households. Hence, the total cost for data collection is \$30,340

**Engagement and Accountability Plan**

The purpose of the engagement plan is to understand the needs, wants, values, attitudes, and beliefs of the key stakeholders in Cleveland County. To successfully engage with key stakeholders, the following methods will be used: Focus Groups will be used for UCT program participants, the mayor and administrative team, and the community and government organizations; a "Give Get Grid" will be completed with participants, the mayor and administrative team, the funders, and the community and government organizations; lastly, semi-structured interviews will be used for participants, the mayor, the city manager, the lead from the implementation and evaluation team, the funding agency lead, the community and government organization leads, and the financial institution lead.

The backbone agency is the implementation and evaluation team housed within the Cleveland County Health Department. The City of Shelby Administrative Office will be responsible and accountable

for carrying out the work of administering Unconditional Cash Transfers to the qualifying residents in Shelby, with the assistance of the contracted financial institution issuing the debit cards. The implementation and evaluation team will be responsible and accountable for the stakeholder engagement, data collection, interpretation, and dissemination of the findings.

### **Program/Policy Evaluation**

The short-term outcome that will be measured is change in access to foods among those living 200% below the federal poverty level by implementing UCTs, a guaranteed income initiative, to financially support those affected by extreme housing cost burden (West, et al., 2021). The long-term outcome that will be measured is the change in overall quality of life among those living 200% below the federal poverty line due to increased access to foods as measure by the validated survey, The Quality-of-Life Scale (QOLS) (Burckhardt, 2003).

Data collected from participants debit cards assigned for the cash supplement in the intervention will be used as a key deliverable in providing evidence that cash transfers are used on appropriate and necessary expenses, such as rent (West, et al., 2021). The percentage of money used on categories of goods will be analyzed, with a primary focus of how much of the UCT was used on food purchases. This will include where food was purchased and the type of foods purchased, for example, produce or sugar-sweetened beverages. Participant feedback and income volatility data will be measured monthly through self-reporting via short messaging system (SMS) (West, et al., 2021). Quality of life and food security will be measured using the Quality-of-Life Scale and U.S. Household Food Security Survey Module: Six-Item Short Form (Burckhardt, 2003 & Blumberg, et al., 1999) (See Appendix A and B).

Success will be defined as statistically significant improvements in the quality of life and food security at the 12-month midpoint and the 24-month endpoint of the intervention, with scores being compared to baseline survey scores. The data for this assessment and evaluation of the interventions impact will be collected by sending all participants survey links through text message. Survey scores will be aggregated and compared to the matched participants baseline survey scores.

## APPENDIX A

Figure A1. Quality of Life Scale Questions.

### QUALITY OF LIFE SCALE (QOL)

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
1. Material comforts home, food, conveniences, financial security . . . . .	7	6	5	4	3	2	1
2. Health - being physically fit and vigorous . . .	7	6	5	4	3	2	1
3. Relationships with parents, siblings & other relatives- communicating, visiting, helping . . .	7	6	5	4	3	2	1
4. Having and rearing children . . . . .	7	6	5	4	3	2	1
5. Close relationships with spouse or significant other . . . . .	7	6	5	4	3	2	1
6. Close friends . . . . .	7	6	5	4	3	2	1
7. Helping and encouraging others, volunteering, giving advice . . . . .	7	6	5	4	3	2	1
8. Participating in organizations and public affairs . . . . .	7	6	5	4	3	2	1
9. Learning- attending school, improving understanding, getting additional knowledge . .	7	6	5	4	3	2	1
10. Understanding yourself - knowing your assets and limitations - knowing what life is about . .	7	6	5	4	3	2	1
11. Work - job or in home . . . . .	7	6	5	4	3	2	1
12. Expressing yourself creatively . . . . .	7	6	5	4	3	2	1
13. Socializing - meeting other people, doing things, parties, etc . . . . .	7	6	5	4	3	2	1
14. Reading, listening to music, or observing entertainment . . . . .	7	6	5	4	3	2	1
15. Participating in active recreation . . . . .	7	6	5	4	3	2	1
16. Independence, doing for yourself . . . . .	7	6	5	4	3	2	1

## Figure A2. U.S. Household Food Security Survey Module: Six-Item Short Form

HH3. I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

HH4. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
- No (Skip AD1a)
- DK (Skip AD1a)

AD1a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes
- No
- DK

AD3. In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

- Yes
- No
- DK

Food security status is assigned as follows:

- Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale)
- Raw score 2-4—Low food security
- Raw score 5-6—Very low food security

Table A1. Budget Summary

<b>Funding Source</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
Cleveland County	\$813,266.00	\$783,683.72		\$1,596,949.72
Economic Security Project	\$200,000.00	\$200,000.00	\$30,542.00	\$430,542.00
<b>Total Funding</b>	<b>\$1,013,266.00</b>	<b>\$983,683.72</b>	<b>\$30,542.00</b>	<b>\$2,027,491.72</b>

<b>Budget Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
<b>Total Program Cost</b>	\$1,013,266.00	\$983,608.72	\$30,467.00	<b>\$2,027,341.72</b>
<b>Direct UCT</b>	\$939,000.00	\$939,000.00		\$1,878,000.00
<b>Personnel Line Items</b>	\$48,636.00	\$44,508.72	\$24,107.00	\$117,251.72
<b>Non-Personnel Line Items</b>	\$1,550.00	\$100.00	\$100.00	\$1,750.00
<b>Data Collection/Evaluation</b>	\$24,080.00		\$6,260.00	\$30,340.00
<b>Net Balance</b>	\$0.00	\$0.00	\$0.00	\$0.00

Table A2. Evaluation Matrix

Evaluation Criteria	Weight	Policy Options	
		Unconditional Cash Transfers	Community Gardens
<b>Impact</b>	4	2	1
<b>Equity</b>	4	2	1
<b>Cost to County</b>	1	1	2
<b>Political Feasibility</b>	2	1	2
<b>Weighted Scores</b>	-	19	14

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## PRESENTATION AND SCRIPT

# Unconditional Cash Transfers as a Strategy for Improving Housing Affordability in Cleveland County, North Carolina

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## Social Determinants of Health

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Script:

First, we want to provide a general overview of what a SDOH is and why they are important.

Social determinants of health are defined as factors in one's environments like the economic and social conditions, education opportunities, neighborhoods, and health care that impact health outcomes and quality of life ("Social Determinants of Healthy – Healthy People 2030 | health.gov, n.d")

## Neighborhood and Built Environment: Why It's Important

**Table 4: Top Ten Tracts by Percentage for Severe Housing Cost Burden**

Geography	Percentage of Households Paying More Than 50% of Income on Rent
Census Tract 537.19, Wake County	77.40%
Census Tract 201.06, Chatham County	71.30%
Census Tract 201.02, Brunswick County	70.40%
Census Tract 49, Mecklenburg County	66.10%
Census Tract 612.05, Iredell County	64.00%
Census Tract 9507, Jackson County	62.60%
Census Tract 606.03, Iredell County	60.80%
Census Tract 203.06, Brunswick County	60.70%
Census Tract 203.09, Union County	59.30%
Census Tract 9510, Cleveland County	56.90%

“Reduce the proportion of families that spend more than 30% of their income on housing.”

(“Neighborhood and Built Environment - Healthy People 2030 | health.gov,” n.d.; Rohe, Owen, & Kerns, 2017; Kennedy, 2019).

### Script:

Within the neighborhood and built environment domain we are focusing on housing and homes, and specifically housing costs in Cleveland County, North Carolina. The overall goal of the neighborhood and built environment domain is to “improve the health and safety in the places where people live, work, and play.” The specific objective target for this capstone project is to “reduce the proportion of families that spend more than 30% of their income on housing” (“Neighborhood and Built Environment - Healthy People 2030 | health.gov,” n.d.). In Table 4 pictured here, look at the very bottom row, where data from 2017 shows 56.90% of households in Census Tract 9510 in Cleveland County were spending more than 50% of their income on rent (Rohe, Owen, & Kerns, 2017). Severe housing costs impact the entire county; in 2019 more than 50% of households in the county were spending more than 30% of their income on housing (Kennedy, 2019).

# Why We Should Prioritize Severe Housing Costs in Cleveland County



Addressing severe housing costs will improve health equity in Cleveland County

(“2019 Cleveland County Community Health Assessment,” n.d.; Kennedy, 2019; Raphael, 2011; “Reduce the proportion of families that spend more than 30 percent of income on housing — SDOH-04 - Healthy People 2030 | health.gov,” n.d.)

Script:

Why is this important? To say it simply, severe housing costs are associated with worse long term health outcomes: so, focusing attention on reducing severe housing costs is a way to go upstream and make a significant positive impact on the long-term health outcomes of Cleveland County residents. In 2019, the community health assessment in Cleveland County identified poverty as the number one priority, with housing problems, and food insecurity also ranking very high (“2019 Cleveland County Community Health Assessment,” n.d.) Addressing housing costs will also improve health equity in the county, because we know severe housing costs disproportionately affect Black and Latinx people; for example, 30% of Black people and 31% of Latinx people are living in poverty, compared to 17% of White people (Kennedy, 2019). We also know severe housing costs, childhood poverty, and food insecurity negatively impact long term health outcomes, regardless of whether economic conditions improve later in life (Raphael, 2011). When families spend significant portions of their monthly income on rent, they have little money left over to meet the basic needs required for physical and mental health, such as buying healthy food.

# Unconditional Cash Transfers



A monthly cash transfer of \$250 for households bearing the highest burden of housing costs in Cleveland County...

(Marinescu, I. (2018). No Strings Attached: The Behavioral Effects of U.S. Unconditional Cash Transfer Programs. *National Bureau Of Economic Research.*)

## Script:

To address the problem of housing cost burden in Cleveland County, we are proposing a monthly cash transfer program for two years for households bearing the highest burden of housing costs. This program is adapted from the Stockton Economic Empowerment Demonstration (SEED) which provided guaranteed income of \$500 for specific individuals. However, given the relatively lower housing costs and other associated cost of living in Cleveland County, we are proposing a monthly cash transfer of \$250.

Compared to the program alternative, Unconditional Cash Transfer Scored high in terms of impact on mitigating housing costs burden and improving access to healthy food and other social determinants of health. Similarly, the preliminary evidence from the SEED project, and analysis of other Unconditional Cash Transfer program in the United States revealed that Unconditional Cash Transfer programs were associated with an increase in employment rates, quality of nutrition, school attendance, reduced hospitalization, and an improvement in overall health.

With the sole limitation being funding and initial reach, the impact of UCTs on mitigating housing costs, and improving health outcomes justifies it as an ideal program to improve housing affordability and improving overall health of residents of Cleveland County.

# Nutrition Program



## Unconditional Cash Transfers & Food Insecurity

(West, et al., 2021 & Cleveland County Community Health Assessment - NC DHHS., 2019 )

### Script:

- We decided unconditional cash transfers would best impact nutrition among our priority group of residents who spend 30% or more of income on housing costs because groups burdened by housing costs also tend to identify as having low food security compared to groups less burdened by housing costs.
- Food security describes an individual's ability to access and obtain adequate food. food insecurity may lead to hunger and has been shown to increase long term chronic health issues such as obesity, diabetes, hypertension, and heart disease as individuals who experience low food security tend to have limited ability to access healthy foods such as whole grains, fruits, and vegetables and replace these foods with processed foods such as sugar sweetened beverages, processed meats, and other high calorie, low nutrient rich foods.
- Our priority population is believed to fall in the food insecure group because when rent costs are burdensome, there is less money left over to pay for healthier foods, therefore unconditional cash transfers can provide that extra money to purchase healthier foods in higher amounts. We are confident in this outcome because in the Stockton demonstration, consistently participants spent the highest percentage of their cash on food and those that participated in the intervention described experiencing greater food security compared to previous experiences when monthly

food stamps were not enough or their income was volatile due to changes at work (West, et al., 2021).

- Respondents to the community health assessment were asked if they had been told by a doctor, nurse, or other health professional if they had specific health conditions, 45% responded yes to having overweight or obesity, 37% said yes to high blood pressure, 34% said yes to high cholesterol, 12% said yes to diabetes, and 6% said yes to heart disease. (CCCHA, 2019)

## Key Stakeholders: Important Voices to Include in the Conversation




("Welcome to Cleveland County, NC," n.d.; "SEED," n.d.)

Script:

For the Unconditional Cash Transfer program to be successful we think the following stakeholders should be included in the planning, design, implementation, and evaluation of the program: these include the mayors of Cleveland County, an implementation and evaluation team from the health department, Cleveland County Residents who would be eligible for the program, like people who are spending more than 30% of their income on housing, and funding partners such as the "Economic Security Project" who funded a similar program in California called the Stockton Economic Empowerment Demonstration ("SEED," n.d.). In addition, we think it would be good to include private sector organizations or citizens who can either help fund the program, such as Cleveland County businesses, Churches, or Civic Groups, or who can provide knowledge, skills, information, and resources to accomplish the mission. Specific community organizations who are key assets in Cleveland County like The Salvation Army that already help families with clothing, food, medicine, utilities, rent or

mortgages, and housing assistance organizations like the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation, are also important stakeholders to help inform this work (“Welcome to Cleveland County, NC,” n.d.) Lastly, the financial institutions who will deliver the payments to the recipients of the program should also be included.



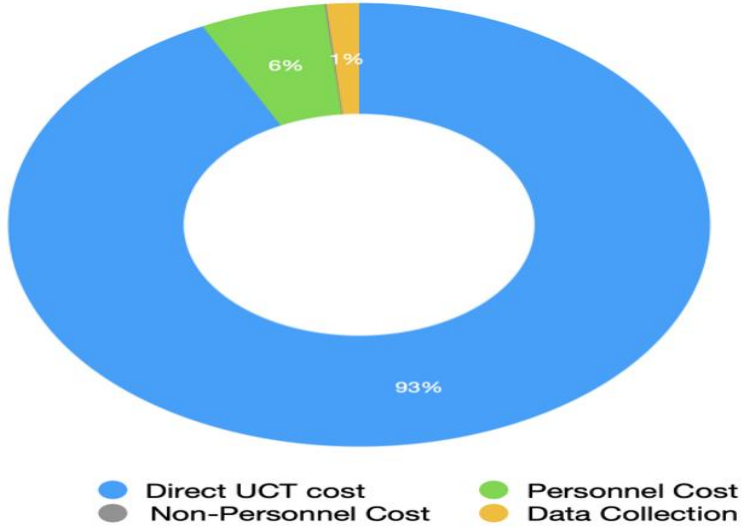
Budget Categories	Year 1	Year 2	Year 3	Total
Total Program Cost	\$1,013,266.00	\$983,608.72	\$30,467.00	\$2,027,491.72
Direct UCT	\$939,000.00	\$939,000.00		\$1,878,000.00
Personnel Line Items	\$48,636.00	\$44,508.72	\$24,107.	\$117,251.72
Non-Personnel Line Items	\$1,550.00	\$175.00	\$175.00	\$1,900.00
Data Collection/Evaluation	\$24,080.00		\$6,260.00	\$30,340.00

**Funders: Cleveland County and the Economic Security Project**

Script:

We are asking the Cleveland County Commissioners and the Economic Security Project for the required funds for this project. The Direct costs will cover funding for the cash transfer; while the personnel costs will cover funding for an initial administrative training by the Racial Equity Institute, a project manager, a social worker, a program evaluator, and other administrative costs.

# Program Budget



Script:

This budget covers a period of three years, with the direct costs of the UCTs accounting for 93% of the total costs, personnel costs for 6%, and other costs 1%.

# Evaluation Plan



## GOALS

- Improve overall quality of life
- Decrease stress associated with extreme housing cost burden
- Improve food security status

(Burckhardt, 2003 & USDA, 2012 & West, et. at, 2021).

Script:

- The goals of our intervention are to (read goals), this will be measured and evaluated by:
- Quality of Life Survey and a Food Security Survey that will be filled out at baseline, midpoint and the end of the intervention. These surveys will be used to evaluate the progress and success of the intervention.



- Data will also be collected from the debit card dedicated to intervention throughout the duration of the intervention, to access what the UCT was spent on.
- All participants who were chosen to participate in the intervention will be included in the evaluation/analysis.
- We will work with the participants to better understand where the UCT was most used and what they felt the UCT benefitted the most. We plan on utilizing text messaging to collect satisfaction data.
- The intervention will be successful if there is an improvement at midpoint and/or at the end of the intervention on either survey compared to baseline data.
- The data we collect from the intervention will be used to further implement guaranteed monthly incomes in the form of UCTS in communities experiencing similar hardships associated with housing cost.
- Strength and limitations:
  - Besides providing families with some financial stress relief, a primary strength of UCTs is that it provides participants with greater autonomy and participation in the program will be discrete and up to those participating If they want to disclose their involvement.
  - Some disadvantages include participants spending the money on things that will not benefit their health or overall situation.

## Engagement and Accountability Plan



### Script:

The purpose of the engagement plan is to get to know, understand, and find common ground with the key stakeholders in Cleveland County. The engagement plan aims to understand the unique needs and values of each group of stakeholders and to create a plan of action that aligns everyone toward a shared vision. We will use the following engagement strategies: focus groups, where we get small groups together in conversation; semi-structured one on one interviews; and work groups where we discuss what we hope to get from each stakeholder and what we can give in return. The backbone agency is the implementation and evaluation team housed within the Cleveland County Health Department. The City of Shelby Administrative Office will be responsible and accountable for carrying out the work of administering Unconditional Cash Transfers to the qualifying residents in Shelby, with the assistance of the contracted financial institution issuing the debit cards. All stakeholders and participants will be treated with dignity and respect, and all negotiations and business transactions will be carried out in good faith and conducted in an ethical manner. The vision is for the UCT program in Cleveland County to become a model for improving health and wellbeing in a way that respects the autonomy and dignity of the people we serve.

# Conclusion

- Reduce the proportion of families spending more than 30% of their income on housing through Unconditional Cash Transfers
- Our ask: administrative support from the Health Department and City of Shelby Administrative Office
- Unconditional Cash Transfers can also improve food security which can positively impact long-term health conditions
- Evaluate the improvement in quality of life and food security among participants



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## **APPENDIX B: OLUWAMUYIWA ADENIRAN INDIVIDUAL DELIVERABLES**

### **Problem Statement**

According to the World Health Organization (WHO), the social determinants of health (SDoH) are the non-medical factors that influence health outcomes ("Social determinants of health", n.d.). They are also the conditions in the environments where people are born, live, learn, work, play, worship, and age, that affect a wide range of health functioning, and quality-of-life outcomes and risks ("Social Determinants of Health: Know What Affects Health", 2021). The SDoH consists of five domains, namely: Economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context ("Social determinants of health", n.d.). With approximately 50% of deaths in the United States being primarily related to SDoH indicators rather than clinical factors (Braveman & Gottlieb, 2014), it is important to focus on the SDoH as important drivers of health outcomes.

Similarly, the neighborhood and built environment have been recognized to play a significant role in shaping health outcomes (Sallis et al., 2012). Compelling evidence demonstrates that disadvantaged neighborhoods and environments are associated with higher mortality rates (Warren Andersen et al., 2018). This association is not far-fetched because the components of the neighborhood and built environment, such as quality of housing, availability of healthy foods, access to transportation, crime, and violence, can affect health outcomes in the short and long term. They affect health outcomes directly by influencing environmental quality; and indirectly by influencing behaviors that impact disease transmission and health (Pinter-Wollman, Jelić & Wells, 2018). In the short-term, neighborhood and built environment influence behavior and health care utilization. At the same time, the long-term impact occurs through the process of weathering, i.e., the ills of accumulated stress and limited resources experienced over many years (Ellen, Mijanovich & Dillman, 2001).

### **Geographic and Historical Context**

Cleveland County is located in the Piedmont region of southwestern North Carolina. It was formed in 1841 from Rutherford and Lincoln Counties. The Cherokee and Catawba tribes were the early

inhabitants of the region, followed by German, English, and French settlers (NCpedia, 2022). It has a population of 98,803, and a growth rate of 0.44% (Census Bureau QuickFacts, 2022)

Up until the 1960s, the economy of Cleveland was largely agrarian with cotton being the prime agricultural product. However, in present times, the county's economy has been diversified, with manufacturing now employing over 40% of Cleveland's workforce (NCpedia, 2022). Socioeconomically, Cleveland County performs poorly compared to the rest of North Carolina as shown in Table A1, Appendix A.

In the 2019 County Health Assessment, Cleveland County prioritized issues of tobacco use, teen birth rate, and limited access to healthy food ("Cleveland CHA", 2019). Furthermore, some local organizations have banded together to form the Partnership for Community Prosperity to improve the SDoH by focusing on the number of single parent households, the number of children in poverty, the number of teens giving birth, and workforce readiness ("Partnership for Community Prosperity", 2022).

### **Priority population**

To address the SdoH and improve health outcomes in Cleveland County, it is necessary to focus on the population who are most vulnerable, and are at a higher risk of having poor health outcomes. According to the key findings from the 2019 County Health Rankings, more than 1 in 10 households (11%) in the United States are severely housing cost burdened i.e., spending more than half of income on housing costs. Similarly, studies have shown that households that spend more than 30% of their income on housing costs have increased odds of experiencing food insecurity (Fletcher et al., 2009). These housing costs serve as a barrier to accessing the social determinants of health, and living long and healthy lives. Among other things, individuals in these households have a higher risk of exposure to unhealthy food (Kirkpatrick & Tarasuk, 2011), and this may further worsen the obesity rates in Cleveland County which at 37% ("County Health Rankings & Roadmaps", 2022) is already higher than the obesity rate in North Carolina as a whole.

According to a report by the National Low Income Housing Coalition, low-income households are at a higher risk of being severely house burdened (NLIHC, 2022). With 56.90% of households in

Cleveland County experiencing severe housing cost burden (Rohe, Owen & Kerns, 2017), it is important to prioritize low-income households as they are more likely to experience poor health outcomes.

### **Measure of Problem Scope**

With 56.90% of households in Cleveland County experiencing severe housing cost burden (Rohe, Owen & Kerns, 2017), it is one of the top ten counties with the highest number of households experiencing severe housing cost burden in North Carolina (Rohe, Owen & Kerns, 2017). The 2019 County Health Rankings revealed that counties with the highest and lowest housing cost burden differ remarkably in rates of child poverty, and self-rated fair or poor health (“Cleveland CHA”, 2019). Hence, it can be concluded that severe housing cost burden has a sizable impact on the health of 56.9% of households in Cleveland County.

A 2019 study revealed an association between obesity and severe housing cost burden (Nobri et al., 2019), and over the past decade, the adult obesity rate in Cleveland has risen from 24% to 37%, compared to 32% and 30% for North Carolina and the United States respectively (“Cleveland CHA”, 2019; “County Health Rankings & Roadmaps”, 2022). In addition, 18% of Cleveland residents lack access to reliable food supply, compared to 16% in North Carolina as a whole (“Cleveland CHA”, 2019; “County Health Rankings & Roadmaps”, 2022). This justifies the need to focus on addressing the housing cost burden as a means to improving the health of households in Cleveland County.

### **Rationale**

Households whose housing costs surpass the affordability threshold have a higher risk of experiencing poorer health outcomes compared to households with affordable housing (Maqbool et al., 2022). Unaffordability of housing might force poorer households to make trade-offs, substituting costlier and healthier food alternatives with cheaper and less healthier ones that increases the risk of obesity and cardiovascular diseases (Fletcher et al., 2009). Furthermore, limited access to healthy food was reported as the third highest ranked indicator for Cleveland County in 2019 (“Cleveland CHA”, 2019), hence specifically focusing on reducing the proportion of families that spend more than 30% of income on housing will help improve the health of households in Cleveland County, North Carolina.

### **Disciplinary Critique**

Over the past year, there has been an increase in the cost of rent and cost of living in the United States which has been compounded by an inflation rate that is considered the highest in decades (Carpenter, 2022). Furthermore, with the sufficient evidence linking housing costs with health outcomes (Maqbool et al., 2022), there is ample justification for health policy professionals to focus all efforts on working to mitigate the wicked problem of severe housing cost burden. A failure of policy makers to address this problem will lead to a further widening of disparities in health outcomes in the United States. In addition, the problem is a wake-up call for health policy professionals to lead intersectoral collaborations, propose, and implement policies that will mitigate the impact of the recent increase in rent and living cost on households experiencing severe housing cost burden.

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## **Policy Analysis**

### **Background Information and Introduction of Policy Options**

Households that spend more than 30% of their annual income on housing costs are often forced to make tradeoffs that result in food insecurity (Waxman, 2017). In this context, the recent increase in housing costs only serves to worsen the hardship these families experience (Carpenter, 2022). The 2014 Hunger in America Report on charitable food distribution in the United States underscores the impact of housing cost burden on food insecurity. Over 57.1% of client households reported that over the past year, they had to make a tradeoff between housing costs and food budget at least once; 27.2% reported making such a trade-off every month (Weinfield et al., 2014). According to the Urban Institute emergency rental assistance priority index, Cleveland County Census 950900 has the highest proportion of households who are severely cost-burdened low-income renters, unemployed, and living in poverty (Urban Institute, 2021); hence, it is worth exploring policies that will mitigate the resulting burden of food insecurity among these most vulnerable households in Cleveland County. The two policies proposed to address the resultant challenges of housing costs burden are Unconditional Cash Transfer and Community Gardens.

Historically, in the United States and around the world, Cash transfer policies have been lauded as programs that substantially improve the lives of poor households and is associated with an improvement in overall health outcomes (Sun et al., 2021). Similarly, community gardens have been hugely beneficial in supporting families experiencing food insecurity (Carney et al., 2011). Community gardens are also effective in shaping social norms to encourage healthier eating behaviors, the building of social capital, and are associated with an improvement in mental health (Seligman et al., 2015).

### **Policy Analysis**

To evaluate the policy options for Cleveland County, the following criteria will be used: Cost to the county, impact, political feasibility, and equity. Out of the four criteria, impact and equity are weighted highest at 4 points each. This approach would help ensure that the recommended policy pick will be equity-focused and at the same time have the highest impact on the most vulnerable households in Cleveland County. Political feasibility and the cost to the county are considered the least weighted at 2 and 1 points respectively.

In addition, each policy option will be assessed under each criterion using a two-point system, with 1 point considered as lower than 2 points.

**Unconditional Cash Transfers (UCTs):**

The purpose of this policy is not to eliminate housing costs burden in Cleveland County; rather, it is to cushion its effect on individuals who have the highest risk of experiencing poor health outcomes attributable to housing costs burden. This policy will be modeled after the Stockton Economic Empowerment Demonstration (“SEED”, 2022); however, given the lower costs of living and average cost of rent in Cleveland County, this policy proposes that \$250 dollars be given to each household living in poverty in census tract 950900 which is the area most impacted by housing costs burden.

The target area has a population of 3,010 and according to the North Carolina Housing Coalition (NCHC), 26% of households in Cleveland County spend more than 30% of annual income on housing costs i.e., are housing costs burdened. In addition, given that the average household size in the United States is 2.5, it can be estimated that this policy will aim to reach 313 households in this area. The UCT itself will last for two years and will cost \$1,878,000 per annum. Considering that the County’s source of funding is not infinite, the cost implications of UCTs translate to a lower political feasibility.

In a 2018 working paper published by the National Bureau of Economic Research, UCTs were found to be associated with positive effects on employment rates, quality of nutrition, school attendance, grades and test scores of children in recipient households (Marinescu, 2018). It was also associated with an 8.5 decrease in hospitalizations (Marinescu, 2018). Similarly, preliminary data from cash transfers implemented in Stockton, California, revealed that recipients were more likely to find jobs (“SEED”, 2022). Furthermore, given that recipient households would have the liberty to utilize the funds in such a manner that meets immediate needs, this policy option would be more impactful than community gardens; hence, it will be assigned two points.

More importantly, this policy scores high on equity because it would be directly targeted at vulnerable individuals in the most indigent area of Cleveland County (Census tract 950900); hence, it has

a high potential to reduce disparities and gives these individuals an opportunity to achieve better health outcomes.

**Community Gardens:**

Community garden is another evidence-based strategy to mitigate the impact of food insecurity resulting from housing costs burden. However, unlike UCTs, the community gardens will be developed in five census tracts with the highest burden in Cleveland County. Using the Urban Institute emergency rental assistance priority index tool (Urban Institute, 2022), the community garden will be first established in census tract 950900, then subsequently rolled out in phases to the next four census tracts with the highest burden. The goal of this policy is to use the principles of community engagement to facilitate community ownership and promote the future sustainability of the gardens as a resource for community health and wellness in Cleveland County.

According to the North Carolina State University, it costs about \$5,000 to start up a quarter acre lot of community garden (NCSU, 2022). With administrative costs and logistics, the five community gardens are estimated to cost less than \$200,000. Seeing the cost implications of this policy option and its long-term sustainability, it scores higher on cost and political feasibility, compared to UCTs. Hence, this policy is assigned 2 points each for these two criteria.

From the results of the California Healthy Cities and Communities project, community gardens resulted in improved health outcomes by reducing obesity and cardiovascular diseases by 10% (Twiss et al., 2003). It also increased the access of vulnerable households to fresh fruits, vegetables, and other healthier food alternatives. However, community gardens will only address the food insecurity component of housing costs burden. It will not primarily ease the financial crunch of households experiencing housing costs burden. Furthermore, given that household needs might vary from month to month, food insecurity may not always be a consistent problem. For these reasons, community gardens are given a lower impact score of 1 point. In addition, while community gardens will be primarily targeted to vulnerable households, to avoid objectification and stigmatization of the gardens as belonging to the poor,

the garden will be nurtured as belonging to the entire community. Thus, this policy also scores lower in terms of equity.

**Recommendation**

The policy with the highest ranking is Unconditional Cash Transfer. This policy option scored higher in Impact and Equity, the highest weighted criteria. Hence, Unconditional Cash Transfer directly addresses the disparities in housing costs burden in Cleveland County. While political feasibility might be a challenge to actualizing this policy, it would be helpful to cite the success of the Stockton Economic Empowerment Demonstration (“SEED”, 2022). This approach would help convince local policymakers to support Unconditional Cash Transfer as a strategy for improving health outcomes in Cleveland County.

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## **Financial Oversight (Program Budget)**

### **Program/Policy Summary**

Given the housing costs burden and its impact in Cleveland County, there is an urgent need to support vulnerable households with resources to meet basic needs and avoid harmful coping mechanisms that are detrimental to health and associated with poor health outcomes. This program will support households bearing the highest housing cost burden in Cleveland County with an Unconditional Cash Transfer of \$250 every month for two years.

Through this Unconditional Cash Transfer (UCT), households would be given cash instead of food, shelter assistance, or other support. Hence, recipients benefit from the money, or wire transfers that they can utilize to meet immediate needs, be it food, transportation, or rent. In addition, UCTs are cheaper in administrative cost per dollar. They give recipients the freedom and dignity to prioritize immediate needs (International Rescue Committee, 2022; Cunha et al. 2022), given that monthly needs will not always be the same across vulnerable households. This policy of UCTs is geographically based and need-targeting, i.e., targeting households spending more than 30% of income on housing costs in Cleveland County with the highest housing costs burden (census tract 950900).

### **Budget Narrative**

The program will be modeled after the Stockton Economic Empowerment Demonstration (“SEED”, 2022), and funded by Cleveland County and the Economic Security Project (“Economic Security Project”, 2022). According to the North Carolina Housing Coalition (NCHC), 26% of Cleveland County were housing costs burdened in 2021 (“North Carolina Housing Coalition”, 2022). The average family size in the United States is 2.52 (Statista, 2020). With the population of the priority area (census tract 950900) being 3010, 313 households were estimated to bear the highest housing cost burden. Hence, the total amount budgeted for the Unconditional Cash Transfer is \$1,878,000.

A need and vulnerability assessment/survey will be done at the program's onset to assess the impact of housing costs burden on vulnerable households. This data will also help evaluate the program after it runs its course. The program will give each household twenty dollars to incentivize participation in



the surveys. Using the average family size in the United States, 1,204 households were estimated to be present in the target population. Therefore, the total cost budgeted for the need assessment is \$24,080.

The Racial Equity Institute will be responsible for equity training of personnel/staff. This approach will help ensure that the program is delivered equitably in a culturally appropriate manner. Furthermore, the size of this program does not necessitate full-time work; hence, the project manager and the project assistant will work 16 hours a week (0.4 FTE) and 8 hours a week (0.2 FTE), respectively. The other responsibilities will be handled by contract staff. Hence, personnel cost is estimated to be \$117,251.72.

Similarly, after the program runs its course, a survey will be done to assess its impact on easing housing costs burden and improving health outcomes on recipient households. The estimated cost of the post-Unconditional Cash Transfer survey is \$6,260.

All personnel costs were estimated based on salary estimates from Salary.com (“Salary.com – Unlock the Power of Pay”, 2022) and Glassdoor (“Glassdoor”, 2022)

## APPENDIX A

Table A1. Socioeconomic Indicators (Household Income and Poverty) in Cleveland County and

North Carolina

INDICATORS	CLEVELAND	NORTH CAROLINA
<b>HOUSEHOLD INCOME</b>		
<b>PERCENTAGE OF RESIDENTS EARNING LESS THAN \$10,000</b>	10.9%	7.3%
<b>PERCENTAGE OF RESIDENTS EARNING MORE THAN \$200,000</b>	1.5%	4.3%
<b>MEDIAN HOUSEHOLD INCOME</b>	\$40,002	\$50,320
<b>POVERTY</b>		
<b>PERCENTAGE OF POPULATION BELOW POVERTY LINE</b>	20.4%	13.6%
<b>PERCENTAGE OF CHILDREN LIVING IN POVERTY</b>	31%	19%

**Table 1:** Adapted from County Health Rankings County Health Rankings & Roadmaps. (2022).

Retrieved 19 January 2022, from <https://www.countyhealthrankings.org/app/north-carolina/2021/rankings/cleveland/county/outcomes/overall/snapshot>

Table A2. Evaluation Matrix

Evaluation Criteria	Weight	Policy Options	
		Unconditional Cash Transfers	Community Gardens
Impact	4	2	1
Equity	4	2	1
Cost to County	1	1	2
Political Feasibility	2	1	2
Weighted Scores	-	19	14

Table A3. Three-year Budget

	Unit Cost per month	No. of Households				Year 1	Year 2	Year 3	Total
Direct UCT	250	313				\$939,000	\$939,000		\$1,878,000.00
							SUM	\$1,878,000.00	
Administrative cost/Personnel	FFTE	Rate	Salary	Benefits (20%) <sup>2</sup>	FICA (7.65%) <sup>3</sup>	Personnel Cost/Salary/Contract Payment			Total
						Year 1	Year 2 (2% Increase per annum)	Year 3 (Evaluation)	
Training (At the onset of the program)	Contract		\$5,000			\$5,000			\$5,000.00
Project Manager	0.4	\$45,000	\$18,000	\$3,600	\$1,377	\$22,977.00	\$23,436.54		\$46,413.54
Project Assistant	0.2	\$30,000	\$6,000	\$1,200	\$459	\$7,659.00	\$7,812.18		\$15,471.18
IT support specialist	Contract		\$10,000			\$8,000.00	\$8,160.00		\$16,160.00
Social Worker	Contract		\$5,000			\$5,000.00	\$5,100.00		\$10,100.00
Program Evaluator (Year 3)	0.5	\$48,214	\$24,107					\$24,107.00	\$24,107.00
								SUM	\$117,251.72
<b>Non-Personnel Line Items</b>									<b>Total</b>
Equipment	Unit Cost	Fixed/Variable				Year 1	Year 2	Year 3	
Computer	\$300	Variable				\$1,200.00			\$1,200.00
Printers and accessories	\$250	Variable				\$250.00	\$75.00	\$75.00	\$400.00
Writing materials and stationery	\$10	Variable				\$100.00	\$100.00	\$100.00	\$300.00
								SUM	\$1,900.00

<sup>2</sup> Benefits are only for employees, not for contract workers

<sup>3</sup> FICA (Federal Insurance Contributions Act) consists of Social Security which is 6.2% of wages up to \$106,800; and 1.45% of all wages towards Medicare

Data Collection	Unit Cost	No. of Households				Year 1	Year 2	Year 3	Total
Pre-UCT Survey	\$20	1,204				\$24,080.00			\$24,080.00
Post-UCT survey	\$20	313						\$6,260.00	\$6,260.00
								SUM	\$30,340.00

Funding Source	Year 1	Year 2	Year 3	Total
Cleveland County	\$813,266.00	\$783,683.72		\$1,596,949.72
Economic Security Project	\$200,000.00	\$200,000	\$30,542.00	\$430,542.00
<b>Total Funding</b>	\$1,013,266.00	\$983,683.72	\$30,542.00	<b>\$2,027,491.72</b>

Budget Categories	Year 1	Year 2	Year 3	Total
<b>Total Program Cost</b>	\$1,013,266.00	\$983,683.72	\$30,542.00	<b>\$2,027,491.72</b>
UCT	\$939,000.00	\$939,000.00		\$1,878,000.00
Personnel Line Items	\$48,636.00	\$44,508.72	\$24,107.00	\$117,251.72
Non-Personnel Line Items	\$1,550.00	\$175.00	\$175.00	\$1,900.00
Data Collection/Evaluation	\$24,080.00		\$6,260.00	\$30,340.00
Net Balance	\$0.00	\$0.00	\$0.00	\$0.00

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## INDIVIDUAL ORAL PRESENTATION

### Unconditional Cash Transfers



A monthly cash transfer of \$250 for households bearing the highest burden of housing costs in Cleveland County...

(Marinescu, I. (2018). No Strings Attached: The Behavioral Effects of U.S. Unconditional Cash Transfer Programs. *National Bureau Of Economic Research*.)

To address the problem of housing cost burden in Cleveland County, we are proposing a monthly cash transfer program for two years for households bearing the highest burden of housing costs. This program is adapted from the Stockton Economic Empowerment Demonstration (SEED) which provided guaranteed income of \$500 for specific individuals. However, given the relatively lower housing costs and other associated cost of living in Cleveland County, we are proposing a monthly cash transfer of \$250.

Compared to the program alternative, Unconditional Cash Transfer Scored high in terms of impact on mitigating housing costs burden and improving access to healthy food and other social determinants of health. Similarly, the preliminary evidence from the SEED project, and analysis of other Unconditional Cash Transfer program in the United States revealed that Unconditional Cash Transfer programs were associated with an increase in employment rates, quality of nutrition, school attendance, reduced hospitalization, and an improvement in overall health.

With the sole limitation being funding and initial reach, the impact of UCTs on mitigating housing costs, and improving health outcomes justifies it as an ideal program to improve housing affordability and improving overall health of residents of Cleveland County.

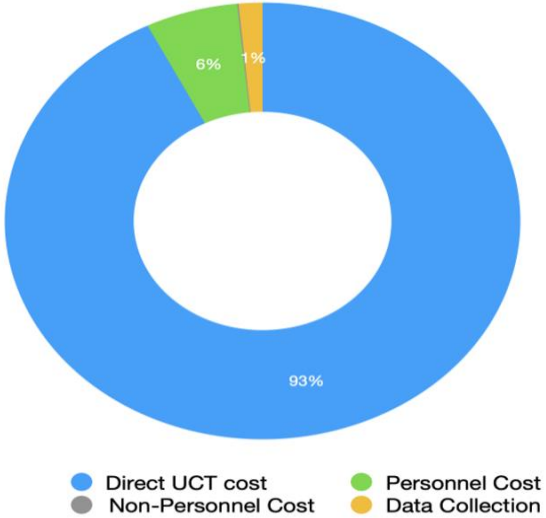
Program Budget

Budget Categories	Year 1	Year 2	Year 3	Total
Total Program Cost	\$1,013,266.00	\$983,608.72	\$30,467.00	\$2,027,491.72
Direct UCT	\$939,000.00	\$939,000.00		\$1,878,000.00
Personnel Line Items	\$48,636.00	\$44,508.72	\$24,107.	\$117,251.72
Non-Personnel Line Items	\$1,550.00	\$175.00	\$175.00	\$1,900.00
Data Collection/Evaluation	\$24,080.00		\$6,260.00	\$30,340.00

Funders: Cleveland County and the Economic Security Project

We are asking the Cleveland County Commissioners and the Economic Security Project for the required funds for this project. The Direct costs will cover funding for the cash transfer; while the personnel costs will cover funding for an initial administrative training by the Racial Equity Institute, a project manager, a social worker, a program evaluator, and other administrative costs.

Program Budget



This budget covers a period of three years, with the direct costs of the UCTs accounting for 93% of the total costs, personnel costs for 6%, and other costs 1%.



## **APPENDIX C: KAILA BONAIRE INDIVIDUAL DELIVERABLES**

### **Problem Statement**

#### **Social Determinant of Health**

The social determinant of health, neighborhoods and built environment represents the impact that neighborhoods and the surrounding environment has on the overall health and wellbeing of a community (Healthy People 2020, 2020). Neighborhood and built environment are not only a public health priority in Cleveland County but a nutrition priority. There are many aspects of neighborhoods and the built environment that can affect a community. Some major aspects include quality of housing, safety within neighborhoods and the community, access to healthcare and healthy food, and access to transportation (Spring, 2018; EPA, 2021). Some short-term impacts of the issues associated with neighborhood and built environment, on health outcomes, include low consumption of healthy foods, poor health maintenance related too low access to health care and transportation (Spring, 2018; EPA, 2021). Some long-term impacts of the issue on health outcomes include deterioration of health, decreased quality of life, and increased risk of chronic disease and obesity (Spring, 2018; Umberson, 2010).

Specifically, in Cleveland County the key objective being addressed within the social determinant of health is to reduce the proportion of families that spend more than 30% of income on housing. Those that spend 30% or more of income on housing are impacted both short term and long term. Short-term impacts include not having enough money left over to spend on food, clothes, utilities and healthcare (Housing Instability, 2020). Other short-term impacts include overcrowding, health and safety risks such as vermin, mold, water leaks and inadequate heating/cooling systems (Housing Instability, 2020). Long term impacts include decreased mental and physical health/wellbeing due to lack of access to affordable healthcare and access to healthy food (Housing Instability, 2020).

#### **Geographic and historical context:**

Cleveland County is on the southwest border of North Carolina, it is 42 miles west of Charlotte and 75 miles east of Asheville. Shelby is the largest city in Cleveland County. The total population in Cleveland County as of 2020 is 99,519 (U.S Census Bureau, 2020). Out of the total population, 75.8% are White, 20.8% are Black or African American, 1.1% are Asian, and 3.8% are Hispanic or Latino (U.S

Census Bureau, 2020). Among the population, 84.2% have a high school diploma or higher and 17.6% have a bachelor's degree or higher (U.S Census Bureau, 2020).

The county is considered a rural county, with 55.8% of the population defined as rural, and is designated as a tier one economically disadvantaged county, despite the proximity to major metropolitan areas (U.S Census Bureau, 2020; N.C LEAD, 2021). The economy employs around 40,000 people and the median household income in 2019 was \$42, 427 (U.S Census Bureau, 2020; Data USA, n.d). The largest industries in the county are manufacturing, health care and social assistance, and retail trades (U.S Census Bureau, 2020; Data USA, n.d). Cleveland County does not have a publicly funded transportation system. There are no bus lines linking Shelby and Kings Mountain with the smaller municipalities across the county and there is only a limited taxi service available in the City of Shelby (NC LEAD, 2021).

Currently, in Cleveland County there are various assets available to the community to address housing burdens and associated issues (Community Resources, 2018). There are community resources that assist with clothing, food, medicine, utilities and rent or mortgage (Community Resources, 2018). These resources include the Greater Cleveland County Baptist Association, Kings Mountain Crisis Ministry, U-CAN The Bliss Center, and Emergency Housing facilities (Community Resources, 2018).

**Priority Population:**

The social determinant of health, neighborhood and built environment impacts the entire community of Cleveland County. It is important to focus on the population that is most affected by the impacts of the social determinant of health. Those among the most affected in the community are living in poverty (U.S Census Bureau, 2020; Data USA, n.d). Currently, 15% of the total population is living in poverty in Cleveland County, which is defined as living 200% below the federal poverty level (U.S Census Bureau, 2020; Data USA, n.d). Although it is important to improve the health of all community members, the priority population of interest for neighborhood and built environment in Cleveland County is those living 200% below the federal poverty level. This is a top improvement priority of the 2019 health assessment in Cleveland County (“Cleveland County Community Health Assessment”, 2019).

In Cleveland County, the most common racial group living below the poverty line in 2019 was Whites, followed by African Americans and Hispanics (Cleveland County, NC, 2019). Although there are more than twice the amount of White people (12,068) experiencing poverty in Cleveland County than African Americans (6,397), there are more health disparities present among the African American

population (Cleveland County, NC, 2019; NC LEAD, 2021). There is a higher death rate among African Americans compared to Caucasians in Cleveland County (NC LEAD, 2021). African Americans also experience higher rates of various chronic disease such as Heart Disease, Cerebrovascular Disease and Diabetes (“Cleveland County Community Health Assessment”, 2019). A contributing factor to increased death rates among the African American population in Cleveland County is the cost of treatment, lack of access to care, lack of transportation, and issues of insurance (“Cleveland County Community Health Assessment”, 2019).

**Measures of Problem Scope:**

The population living 200% below the federal poverty line are significantly impacted by housing cost. Those that spend more than 30% of income on housing costs are housing cost burdened (Nch County Profile, 2021). In Cleveland County, 26% of households are considered cost-burdened and 19% of homeowners have difficulty affording home (Nch County Profile, 2021). According to the 2017 Extreme Housing Report in North Carolina, more than 50% of households in Cleveland County are paying more than 30% of income on Rent (Rohe, et al., 2017).

Those in impoverished neighborhoods are at a greater risk for negative health outcomes including mental illness, chronic disease, higher mortality and lower life expectancy (NC LEAD, 2012). An important health disparity in Cleveland County associated to housing cost-burden, is limited accessible healthcare and affordable healthcare (Bureau, U. S. C). A major contributor to this health disparity is income (Bureau, U. S. C). Other factors that are associated with health disparities among the low income/impoverished population in Cleveland County are reliance on public transportation, acceptance of Medicaid and free clinics (“Cleveland County Community Health Assessment”, 2019).

There are currently no free clinics within the county and some healthcare facilities are not accepting Medicaid from new patients (“Cleveland County Community Health Assessment”, 2019).

**Rationale/Importance:**

As mentioned, those living 200% below the federal poverty level and pay 30% or more of income on housing costs have barriers to accessing healthy food (Housing Instability, 2020; Nch County Profile, 2021). This is due to the amount of money spent on housing cost and not having money left over for food (Housing Instability, 2020; Nch County Profile, 2021). These community members primarily reside in rural areas and rural areas are described as living less than 10 miles from a grocery store (“Cleveland County Community Health Assessment”, 2019). More rural parts of the county are served by corner

stores and other retailers such as Dollar General and Family Dollar, which do not provide consistent healthy food options (“Cleveland County Community Health Assessment”, 2019). Limited access to healthy food in Cleveland County contributes to the increased prevalence of negative health outcomes among those in poverty, including diabetes and obesity (NC LEAD, 2021).

**Disciplinary critique:**

Focusing on housing cost and the associated burdens are important, specifically the association to healthy food access. Public health leaders need to address neighborhood and built environment alongside Dietitians in Cleveland County. This is important because healthy food access is a main contributor to overall health and disease prevention that is negatively affected by housing-cost burden (“Cleveland County Community Health Assessment”, 2019). Access to healthy food is equally important for all community members but it is of immediate concern to improve access among the priority population. In Cleveland County, several faith communities have offered food pantries and youth programming to residents in need (“Cleveland County Community Health Assessment”, 2019). Other efforts include the REACH transit bus to help transport residents to needed services, including grocery stores (“Cleveland County Community Health Assessment”, 2019).

It is also important for public health leaders to address the racial inequities in healthcare and in health outcomes among the African American Population. Although more White people experience poverty in Cleveland County, there are higher rates of disease among African Americans (Cleveland County, NC, 2019; NC LEAD, 2021). Public health leaders and Nutrition professionals need to work together to improve housing cost burden to increase healthy food access and improve equal access to health care in Cleveland County, specifically among those experiencing poverty.

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## **Implementation Plan**

### **Background Information**

Neighborhood and built environment are a social determinant of health that affects all community members living in Cleveland County (Rohe, et al., 2017; Spring, 2018; EPA, 2021). The key objective is to focus on the population that is most severely affected, which are those living at 200% or more below the federal poverty level (U.S Census Bureau, 2020; Cleveland County, NC, 2019). Among those living at 200% below the federal poverty line, more than 50% of households are paying more than 30% of income on rent in Cleveland County (Rohe, et al., 2017). People who are burdened with housing costs do not have money left over for other essentials such as food (Housing Instability, 2020).

### **Problem Relevance**

This problem is relevant to nutrition because of the association between housing cost burden and access to healthy food (Bureau, U. S. C). Individuals who spend a large portion of income on housing often do not have enough money left over to purchase quality food (Housing Instability, 2020; Nch County Profile, 2021). These community members primarily reside in rural areas — rural areas are defined as living less than 10 miles from a grocery store (“Cleveland County Community Health Assessment”, 2019). It is important to address food access because limited access to healthy foods is associated with an increased risk for negative health outcomes, including diabetes and obesity (NC LEAD, 2021).

### **Purpose**

More rural parts of the county are served by corner stores and other retailers such as Dollar General and Family Dollar, which do not provide consistent healthy food options (“Cleveland County Community Health Assessment”, 2019). It is difficult to maintain a healthy diet without consistent access to a variety of healthy foods (CDC, 2020). When there is limited access to healthy food choices, people are likely to settle for the food that is available (CDC, 2020). Specifically, in the priority population the food that is most available is typically convenience food that is found at corner stores and fast-food locations (“Cleveland County Community Health Assessment”, 2019; CDC, 2020). Poor diet is one of the leading causes of chronic disease and negative health outcomes, affecting overall wellbeing (CDC, 2020).

## **Impact on Population**

Limited access to healthy food in Cleveland County contributes to the increased prevalence of negative health outcomes among those in poverty, including diabetes and obesity (NC LEAD, 2021). It is important to address the health inequities that are present among those living in poverty. In Cleveland County, the most common racial group living below the poverty line in 2019 was Whites, followed by African Americans and Hispanics (Cleveland County, NC, 2019). Although there more than twice the amount of White people (12,068) experiencing poverty in Cleveland County than African Americans (6,397), there are more health disparities present among the African American population (Cleveland County, NC, 2019; NC LEAD, 2021). There is also a higher death rate among African Americans compared to whites in Cleveland County (“Cleveland County Community Health Assessment”, 2019). African Americans also experience higher rates of various chronic diseases such as Heart Disease, Cerebrovascular Disease and Diabetes (“Cleveland County Community Health Assessment”, 2019).

### **Evidence Based Outcomes**

#### **Short-term outcome objectives:**

The short-term outcome is to increase access to foods among those living 200% below the federal poverty level by implementing a guaranteed income initiative to financially support those affected by extreme housing cost burden (West, et al., 2021).

#### **Long-term impact:**

There will be an increase in the overall quality of life among those living 200% below the federal poverty line due to increased access to healthy foods as measured by the validated survey, The Quality-of-Life Scale (QOLS) (Burckhardt, 2003).

#### **Strategies and Activities**

The Stockton Economic Empowerment Demonstration (SEED) in California found success in the implementation of guaranteed monthly incomes for those in the community struggling to meet financial needs. A guaranteed monthly income is the best fit because it will address the financial burden associated with housing cost among the priority population (West, et al., 2021). This will allow for financial relief and the ability to purchase healthy food in adequate amounts for each household.

In this intervention, data was collected on what the unconditional cash supplement was spent on (West, et al., 2021). The data showed that the majority of money spent on the debit card surrounded food



(West, et al., 2021). Those that participated in the intervention described experiencing greater food security compared to previous experiences when monthly food stamps limits were met or when they did not receive enough hours at work (West, et al., 2021). Results also confirmed that before the SEED project was implemented, households settled for lower quality foods to provide food for household (West, et al., 2021).

The implementation will be among those living 200% below the federal poverty level in Cleveland County. People will need to apply for the intervention by providing information on income status and housing cost. For those that qualify, a recipient will be chosen to receive the cash supplement every month for the household. This intervention will be implemented by Cleveland County's board of commissioners, specifically the Public Health board.

#### **Levels of the Socioecological Model Addressed**

The guaranteed monthly income intervention will address all levels of the socioecological model. On the individual level, the intervention will address the health outcomes of individuals participating in the intervention by decreasing the barrier to healthy food. It will address the interpersonal level because it will have an impact on families in the priority population by providing financial relief. This intervention will address the community level because it will implement a solution with local leaders that will positively affect the community by improving overall wellbeing. At the county level, the intervention will address the inequalities people in the priority population face when it comes to access to healthy foods. It will also address racial inequities associated with the negative health outcomes among those in poverty.

The expected reach into the priority population would be all those experiencing housing burden cost that is negatively impacting the ability to buy food. According to the 2017 Extreme Housing Report in North Carolina, more than 50% of households in Cleveland County are spending more than 30% of income on rent (Rohe, et al., 2017).

#### **Stakeholders**

Potential stakeholders in this intervention include the county commissioners, researchers, beneficiaries, intervention staff, and the participating families. The county commissioners' primary role would be advocating for the guaranteed income intervention and reaching out to donors. The donors are

essential in the success and implementation of this intervention. The beneficiary's primary role would be to provide donations to the Cleveland County guaranteed intervention program. The researcher's role would be to collect and analyze data from the participants. This would include data from what the money was used to purchase, survey data on participant satisfaction and eventually analyze long-term data from surveys on the affect the intervention had on overall wellbeing associated with increased healthy food access. The role of the intervention staff would be to communicate with participants on anything they need help with. The role of the intervention staff is to be a support for all those involved. The primary role of the participating families would be to follow appropriate intervention procedures and participate in necessary data collection, such as the QOLS survey.

### **Budget**

Funds will be used to ensure participating households receive \$250 every month via a prepaid debit card. This amount was concluded using the SEED intervention as a starting point and adjusting the monthly amount based on the average housing cost/rent in Cleveland County (*NC Rental Data, 2021*; West, et al., 2021). The amount used in the SEED intervention was \$500 (West, et al., 2021). It was decided to halve the cost from the SEED intervention based on the differences in rent/housing cost between Stockton, California and Cleveland County, NC (*NC Rental Data, 2021*; West, et al., 2021). Funds will also be used to pay for researchers and necessary material and equipment. The intervention staff will primarily be made up of volunteers, but it is likely there will need to be funds allocated to services to maintain long-term participation and to guarantee there will be support for participants. Since this intervention will be analyzed for short- and long-term impacts, funds will have to be reevaluated after two years to ensure long term sustainability.

### **Conclusion**

It is a priority of this intervention to provide an equal opportunity to all participants to increase access to healthy foods. The use of Unconditional Cash Transfers as a guaranteed monthly income will allow for greater autonomy among participants. An advantage to a cash transfer is that participation in the program will be discreet and up to the participants to express involvement.

The disadvantage to the specific expected outcome may be that participants will spend the money on other things besides food. This would affect the overall goal of the intervention. Another disadvantage is that although this will address the financial burden associated with healthy food access, it will not address access to transportation. Cleveland County does not have a publicly funded transportation system (NC LEAD, 2021). This purposes a disadvantage to reaching larger grocery stores with more of a variety of healthy foods.

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## **Evaluation Plan**

### **Intervention Summary**

Neighborhood and built environment are a social determinant of health that affects all community members living in Cleveland County (Rohe, et al., 2017; Spring, 2018; EPA, 2021). The key objective is to focus on the population that is most severely affected, which are those living 200% or more below the federal poverty level (U.S Census Bureau, 2020; Cleveland County, NC, 2019). Among those living 200% below the federal poverty line, more than 50% of households are paying more than 30% of income on rent (Rohe, et al., 2017). People who are burdened with housing costs do not have money left over for other essentials such as food (Housing Instability, 2020).

### **Summary of Intervention Description and the Components**

A guaranteed monthly income will be implemented to address the financial burden associated with housing cost among the priority population (West, et al., 2021). This will allow for financial relief and the ability to purchase food in adequate amounts for each household. (West, et al., 2021). The Stockton Economic Empowerment Demonstration (SEED) in California found success in the implementation of guaranteed monthly incomes for those in the community struggling to meet financial needs (West, et al., 2021). A letter will be mailed out to the chosen census tract and those who choose to respond will be chosen at random to participate in the intervention (West, et al., 2021). The only qualification for participants is they must be part of the designated census tract and respond to mailed letter (West, et al., 2021). Participants will receive a debit card in the mail that will be loaded each month with the \$250 cash supplement (West, et al., 2021). This intervention will be implemented by Cleveland Counties board of commissioners.

### **Evidence based long and short-term term outcomes**

The short-term outcome that will be measured is change in access to foods among those living 200% below the federal poverty level by implementing a guaranteed income initiative to financially support those affected by extreme housing cost burden (West, et al., 2021). The long-term outcome that will be measured is the change in overall quality of life among those living 200% below the federal poverty line due to increased access to foods as measure by the validated survey, The Quality-of-Life Scale (QOLS) (Burckhardt, 2003).

### **Study design/data collection:**

Data will be collected from participants debit card assigned for the cash supplement in the intervention (West, et al., 2021). Specifically, analysis will occur regarding what the money was used to

buy, looking primarily at food purchases. This will include where food was purchased and the percentage of the money that was spent on food. Participant feedback and income volatility data will be measured monthly through self-reporting via short messaging system (SMS) (West, et al., 2021). Quality of life and food security will be measured using the Quality-of-Life Scale and U.S. Household Food Security Survey Module: Six-Item Short Form (Burckhardt, 2003 & USDA, 2012) (See Appendix A and B).

### **Sample and Sampling Strategy**

All participants who were selected at random will be included in the evaluation due to the small sample size. As mentioned above, the evaluation will be conducted via SMS and the Quality-of-Life Scale and the Food Security Survey Module: Six-Item Short Form (Burckhardt, 2003 & USDA, 2012 & West, et al., 2021).

### **Specific measures**

Outputs include the population reached, debit card use, and grocery store visits. The outcomes are access to food and change in quality of life, using the Quality-of-life measure. Disparities that will be measured are SES and disparities associated with race.

### **Analysis plan**

The data that will be collected from the debit card will be analyzed specifically to determine what the UCT was spent on. Data from the Quality-of-Life Scale and the Food Security Survey Module: Six-Item Short Form will be analyzed using a paired sample T-test (West, et al., 2021).

### **Timing**

Evaluation and stakeholder activities will occur at the baseline before implementation, at the midpoint, and after 1 year to assess any improvements and/or changes. Progress will be defined as whether the intervention has lessened the burden of housing costs associated with food access in Cleveland County. This will be determined by comparing participant feedback collected from SMS responses at the end of the first year compared to baseline.

### **Sources of funding**

The program will be sustained by donations from organizations such as the Economic Security Project (Economic Security Project, 2021). This project provides donations for interventions of this nature and will fund the intervention for the entire pilot period. The timeline for funding will be yearly, at the baseline of the intervention.

**Data use and dissemination**

The data will be used to further the implementation of guaranteed monthly incomes in counties experiencing similar hardships associated with housing cost. Data will be disseminated through relevant journals and publications to allow the intervention to be used as a model for similar programs.

**Strengths, and challenges**

The use of Unconditional Cash Transfers as a guaranteed monthly income will allow for greater autonomy among participants. An advantage to a cash transfer is that participation in the program will be discreet and up to the participants to express involvement. The disadvantage to the specific expected outcome may be that participants will spend the money on other things besides food. This would affect the overall goal of the intervention. Another disadvantage is that although this will address the financial burden associated to food access, it will not address access to transportation. This purposes a disadvantage to reaching larger grocery stores with more of a variety of healthy foods.



## APPENDIX A: Quality of Life Scale

Figure A1. Quality of Life Scale Questions

### QUALITY OF LIFE SCALE (QOL)

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
1. Material comforts home, food, conveniences, financial security . . . . .	7	6	5	4	3	2	1
2. Health - being physically fit and vigorous . . .	7	6	5	4	3	2	1
3. Relationships with parents, siblings & other relatives- communicating, visiting, helping . . .	7	6	5	4	3	2	1
4. Having and rearing children . . . . .	7	6	5	4	3	2	1
5. Close relationships with spouse or significant other . . . . .	7	6	5	4	3	2	1
6. Close friends . . . . .	7	6	5	4	3	2	1
7. Helping and encouraging others, volunteering, giving advice . . . . .	7	6	5	4	3	2	1
8. Participating in organizations and public affairs . . . . .	7	6	5	4	3	2	1
9. Learning- attending school, improving understanding, getting additional knowledge . .	7	6	5	4	3	2	1
10. Understanding yourself - knowing your assets and limitations - knowing what life is about . .	7	6	5	4	3	2	1
11. Work - job or in home . . . . .	7	6	5	4	3	2	1
12. Expressing yourself creatively . . . . .	7	6	5	4	3	2	1
13. Socializing - meeting other people, doing things, parties, etc . . . . .	7	6	5	4	3	2	1
14. Reading, listening to music, or observing entertainment . . . . .	7	6	5	4	3	2	1
15. Participating in active recreation . . . . .	7	6	5	4	3	2	1
16. Independence, doing for yourself . . . . .	7	6	5	4	3	2	1

Figure A2. U.S. Household Food Security Survey Module: Six-Item Short Form

HH3. I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

HH4. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
- No (Skip AD1a)
- DK (Skip AD1a)

AD1a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes
- No
- DK

AD3. In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

- Yes
- No
- DK

Food security status is assigned as follows:

- Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale)
- Raw score 2-4—Low food security
- Raw score 5-6—Very low food security

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## POWERPOINT PRESENTATION SLIDES

### Social Determinants of Health

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#### Script:

First, we want to provide a general overview of what a SDOH is and why they are important.

Social determinants of health are defined as factors in one's environments like the economic and social conditions, education opportunities, neighborhoods, and health care that impact health outcomes and quality of life (“Social Determinants of Healthy – Healthy People 2030 | health.gov, n.d”)

# Evaluation Plan



## GOALS

- Improve overall quality of life
- Decrease stress associated with extreme housing cost burden
- Improve food security status

(Burckhardt, 2003 & USDA, 2012 & West, et. at, 2021).

## Script:

- The goals of our intervention are to (read goals), this will be measured and evaluated by:
- Quality of Life Survey and a Food Security Survey that will be filled out at baseline, midpoint and the end of the intervention. These surveys will be used to evaluate the progress and success of the intervention.
- Data will also be collected from the debit card dedicated to intervention throughout the duration of the intervention, to access what the UCT was spent on.
- All participants who were chosen to participate in the intervention will be included in the evaluation/analysis.
- We will work with the participants to better understand where the UCT was most used and what they felt the UCT benefitted the most. We plan on utilizing text messaging to collect satisfaction data.
- The intervention will be successful if there is an improvement at midpoint and/or at the end of the intervention on either survey compared to baseline data.

- The data we collect from the intervention will be used to further implement guaranteed monthly incomes in the form of UCTS in communities experiencing similar hardships associated with housing cost.
- Strength and limitations:
  - Besides providing families with some financial stress relief, a primary strength of UCTs is that it provides participants with greater autonomy and participation in the program will be discrete and up to those participating If they want to disclose their involvement.
  - Some disadvantages include participants spending the money on things that will not benefit their health or overall situation.

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## APPENDIX E: ZACHARY KADRO INDIVIDUAL DELIVERABLES

### Problem Statement

#### **Social Determinant of Health (SDoH):**

Social Determinants of Health (SDoH) are factors in one's environment that impact health outcomes and quality of life e.g., economic conditions, educational opportunities, healthcare, neighborhood and built environments, and social conditions ("Social Determinants of Health - Healthy People 2030 | health.gov," n.d.). This problem statement focuses on the SDoH "Neighborhood and Built Environment" (NBE) as defined by the US Department of Health and Human Services, Healthy People 2030; the geographic focus is Cleveland County, North Carolina (NC); the specific objective focus, within the category of NBE called "Housing and Homes," is "reducing the proportion of families that spend more than 30% of their income on housing," ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.). Healthy People 2030 describes NBE as focusing on "improving the health and safety in the places where people live, work, and play" ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.).

There are many short-term impacts of NBE issues on health outcomes: for example, there are physical harms from violent crimes and motor vehicle crashes, respiratory complications from poor air quality or secondhand smoke, and reduced money for food and basic needs due to a high proportion of income spent on housing ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.). In addition, there are many long-term impacts of NBE issues on health outcomes: for example, there are long term health harms associated with limited access to broad band internet, long-term exposure to unsafe water, air, or toxins, dental caries from improper water fluoridation, and reduced IQ from lead exposure ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.).

#### **Geography, Historical Context, Demographics, Cultural Values, and Community Assets:**

Cleveland County is in the foothills of the Blue Ridge Mountains in Southwestern, NC, between Charlotte, Asheville, and Greenville/Spartanburg and the county government is based in Shelby, NC ("Welcome to Cleveland County, NC," n.d.). It was incorporated from surrounding counties in 1841. The

top three industries are agriculture, manufacturing, and mining (“Cleveland County (1841) - North Carolina History Project,” n.d.).

The demographics of Cleveland County are similar to NC overall where around 20% of residents are non-Hispanic Black, 60% are non-Hispanic White, 10% are Hispanic, and around 2% are American Indian or Alaska Native; Cleveland County has slightly less Hispanic people and more White people compared to NC as a whole, and the county is over 50% rural compared to about 30% rurality for the rest of the state (“County, North Carolina | County Health Rankings & Roadmaps,” n.d.). Cleveland County is known for its civic spirit and leadership, as evidenced by a recent 1,500-acre greenway along the Broad River, its celebration of rich musical heritage, and the Cleveland County Fair (Jeff Michael, n.d.). Community organizations are key assets in Cleveland County: several organizations like The Salvation Army help families with clothing, food, medicine, utilities, rent or mortgages (“Welcome to Cleveland County, NC,” n.d.). In addition, housing assistance is provided by organizations like the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation (“Welcome to Cleveland County, NC,” n.d.).

**Priority Population:**

Based on results from the 2019 Community Health Assessment, all of the following health indicators were voted into the top seven priorities by key stakeholders from Cleveland County: they included, individuals living at or near 200% of the federal poverty line, adverse childhood experiences, tobacco use, severe housing problems, and limited access to healthy food (“2019 Cleveland County Community Health Assessment,” n.d.). Based on community identified priorities, Healthy People 2030 NBE objectives, and relevant county data, the priority population are adults and children spending more than 30% of household income on housing costs (“County, North Carolina | County Health Rankings & Roadmaps,” n.d.; “Neighborhood and Built Environment - Healthy People 2030 | health.gov,” n.d.; Short & The Cleveland County Public Health Center, 2016). This population may include adults and children living in poverty, individuals and families living within 200% of the federal poverty guidelines, and those whose problems with housing costs have led to food insecurity or less access to healthy foods (Fletcher, Andreyeva, & Busch, 2009; Piaskoski, Reilly, & Gilliland, 2020).

**Measures of Problem Scope:**

In Cleveland County, about 4 in 10 children live in single-parent households, compared to around 1 in 10 in top performing US counties: in addition, 3 in 10 children are living in poverty in Cleveland County, compared to 2 in 10 children in NC, and 1 in 10 children in top performing US counties (“U.S. Census Bureau QuickFacts: Cleveland County, North Carolina,” n.d.). About 15 of every 100 residents in Cleveland County - and NC as a whole - experience severe housing problems, compared to 9 of every 100 residents in top performing US counties. Moreover, 57% of Cleveland County residents in census tract 9510 pay more than 50% of income on rent (Rohe, Owen, & Kerns, 2017). About 2 in 10 Cleveland County residents - and NC residents as a whole - are food insecure, compared to 1 in 10 residents in top performing US counties (“County, North Carolina | County Health Rankings & Roadmaps,” n.d.). Finally, for health-related outcomes: 10.4% of people under 65 are living with a disability, 13.4% of people under 65 have no health insurance, 26% of adults are obese, 14.4% are meeting fruit and vegetables intake targets, 18% of adults smoke, 46% have tooth decay, 12% of adults have diabetes, 512 per 100,000 people have cancer, and there are 207 per 100,000 age-adjusted heart disease deaths (“Cleveland County - NCIOM,” n.d.; “U.S. Census Bureau QuickFacts: Cleveland County, North Carolina,” n.d.).

**Rationale and Importance:**

Cleveland County has a severe housing cost burden with 57% of households in census tract 9510 paying more than 50% of their income on rent alone, and 50% of households in the county spending more than 30% of income on housing (Rohe et al., 2017; Kennedy, 2019). Poverty, housing costs, and food insecurity are interrelated (Kirkpatrick & Tarasuk, 2011).<sup>4</sup> Reducing the proportion of families spending 30% or more of income on housing should be a public health priority in Cleveland County for several reasons. Poverty is associated with adverse health outcomes and early death from cardiovascular disease and type II diabetes (Raphael, 2011). Poverty, especially among children in Cleveland County, is more

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<sup>4</sup> Food insecurity is the limited or uncertain ability of nutritionally adequate and safe foods, or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (“Core Indicators of Nutritional State for Difficult-to-Sample Populations”, 1990)

prevalent than in the US - 31% compared to 10%, respectively (“County, North Carolina | County Health Rankings & Roadmaps,” n.d.). Furthermore, 23% of Cleveland County residents are in poor health, compared to 18% in NC and 14% in top performing US counties (“U.S. Census Bureau QuickFacts: Cleveland County, North Carolina,” n.d.). Finally, food insecure children have poorer health compared to those who are not (Gundersen & Ziliak, 2015)

### **Disciplinary Critique:**

In 2019, the community health assessment identified poverty as the number one priority, with housing problems, and food insecurity also ranking very high (“2019 Cleveland County Community Health Assessment,” n.d.) In Cleveland County, poverty – and related housing costs - disproportionately affects Black and Latinx people; for example, 30% of Black people and 31% of Latinx people are living in poverty, compared to 17% of White people (Kennedy, 2019). Public health leaders have not adequately addressed poverty and severe housing costs in Cleveland County, where over 50% of people still pay more than 30% of income on housing (Kennedy, 2019). Severe housing costs, childhood poverty, and food insecurity negatively impact long term health outcomes, regardless of whether economic conditions improve later in life (Raphael, 2011). When families spend more than 30% of monthly income on rent, they have little money left over to meet the basic needs required for physical and mental health. Public health leaders can and should prioritize affordable housing in Cleveland County through an equity-focused approach to improve health outcomes.

**APPENDIX A**

<b>Table 1: Sociodemographic Characteristics of Cleveland County, North Carolina.</b>			
<b>Characteristic</b>	<b>Cleveland County, North Carolina</b>	<b>Top US Performers</b>	<b>North Carolina</b>
Population	97,947	332,449,279	10,488,084
Age			
% Below 18 years of age	22%	22%	22%
% 65 and older	19%	16.5%	17%
Education			
Completed high school	85%	90%	88%
Some college	56%	42%	67%
Race/Ethnicity			
Non-Hispanic Black	21%	12.1%	21%
American Indian or Alaska Native	0.4%	0.7%	1.6%
Asian	1.1%	5.9%	3.2%
Hispanic	3.8%	18.7%	9.8%
Non-Hispanic White	76%	57.8%	63%
Rurality	56%	20%	67%
Food insecurity	16%	9%	14%
Limited access to healthy food	7%	2%	7%
Per capita income	\$22,589	\$33,740	\$30,783
Median household income	\$42,247	\$67,521	\$54,602
Adults living in poverty (%)	15%	11%	14%
Children living in poverty	31%	10%	19%
Children in single-parent households (%)	37%	14%	28%
Severe housing problems (%)	15%	9%	15%
People in poor or fair health	23%	14%	18%

**Table 1 References:** (“County, North Carolina | County Health Rankings & Roadmaps,” n.d.), (“U.S. - seniors as a percentage of the population 2050 | Statista,” n.d.); “A Breakdown Of 2020 Census Demographic Data Including Multiracial People : NPR,” n.d.; “High School Completion Rate Is Highest in U.S. History,” n.d.; “Income and Poverty in the United States: 2020,” n.d.; “Population Clock,” n.d.; “U.S. Adult Population Grew Faster Than Nation’s Total Population From 2010 to 2020,” n.d.; “U.S. Census Bureau QuickFacts: North Carolina,” 2019; “US Household Income per Capita, 1984 – 2021 | CEIC Data,” n.d.; “What is Rural America?,” n.d.)

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## Stakeholder Analysis

### **Introduction: Social Determinant of Health (SDoH) and Program Policy Transformation**

Social Determinants of Health (SDoH) are factors in one's environment like the economic and social conditions, educational opportunities, neighborhoods, and healthcare that impact health outcomes and quality of life ("Social Determinants of Health - Healthy People 2030 | health.gov," n.d.). This stakeholder analysis focuses on the category of "Housing and Homes" within the SDoH "Neighborhood and Built Environment" (NBE) as defined by the US Department of Health and Human Services, Healthy People 2030, in the geographic location of Cleveland County, North Carolina (NC). The specific objective target of the program policy transformation is "reducing the proportion of families that spend more than 30% of income on housing," ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.). The overarching goal of this SDoH as described by Healthy People 2030 is "improving the health and safety in the places where people live, work, and play" ("Neighborhood and Built Environment - Healthy People 2030 | health.gov," n.d.).

In Cleveland County, 57% of households in census tract 9510 pay more than 50% of income on rent alone, and 50% of households in the county pay more than 30% of income on rent, demonstrating the county has a severe housing cost burden (Rohe, Owen, & Kerns, 2017; Kennedy 2019). In addition, poverty, especially among children in Cleveland County, is more prevalent than in the US - 31% compared to 10%, respectively ("County, North Carolina | County Health Rankings & Roadmaps," n.d.). Poverty is associated with adverse health outcomes like early death from cardiovascular disease and type II diabetes, and in Cleveland County this is demonstrated by data showing 23% of residents are in poor health, compared to 18% in NC and 14% in top performing US counties (Raphael, 2011; "U.S. Census Bureau QuickFacts: Cleveland County, North Carolina," n.d.). Poverty, housing costs, and food insecurity are interrelated and one of the short-term impacts of families spending more than 30% of income on housing is increased food insecurity (Fletcher, Andreyeva, & Busch, 2009; Kirkpatrick & Tarasuk, 2011). Food insecurity is negatively associated with health outcomes; for example, children experiencing food insecurity have twice the likelihood of reporting fair or poor health and are 1.4 times as likely to have

asthma than kids who are not food insecure (Gundersen & Ziliak, 2015). Furthermore, food insecurity in older adults is associated with limitations to their activities of daily living (Gundersen & Ziliak, 2015).

One program policy option to provide families with immediate relief from high housing cost burden is “Unconditional Cash Transfers” (UCTs), which were found in a 2017 Cochrane Database Systematic Review to likely be effective at reducing people’s chances in low-and-middle-income (LMICs) countries of having an illness or experiencing food insecurity (Pega et al., 2017). Here in the United States, preliminary data from the mayor-led “Stockton Economic Empowerment Demonstration,” (SEED) which gave 125 people \$500 per month for two years, between 2019-2020, found recipients were healthier than controls (less depression and anxiety), demonstrated enhanced well-being, and were more likely to find jobs (“SEED,” n.d.). A similar mayor-led UCT effort “Compton Pledge” is underway in Compton, California (“ABOUT - The Compton Pledge,” n.d.). UCTs were tested over 4 years between 1974 and 1979 in Dauphin, Manitoba (Canada), and a 2013 analysis of the data found UCTs reduced hospitalizations by nearly 10% compared to controls, mostly due to reductions in accidents, injuries, and mental health problems (Forget, 2013). UCTs are a worthwhile policy solution to improve health and well-being in Cleveland County by reducing harms like food insecurity (and the associated negative health outcomes) experienced by families spending more than 30% of their income on housing.

**Stakeholder Analysis: See Appendix**

The specific tool that will be used for this stakeholder analysis is a CATWOE analysis, which stands for Customers, Actors, Transformation process, Worldview, Owners, and Environmental constraints, and can be found in the Appendix at the end of this section before the reference page.

**Stakeholder Analysis Summary: rationale for why key stakeholders should be included in a transformative change for the social determinant of health.**

In order for the UCT program policy to be successful several key stakeholders must be included in the planning, design, implementation, and evaluation of the program: these include the mayors of Cleveland County, an implementation and evaluation team, Cleveland County Residents who would be eligible for the program i.e., people spending more than 30% of their income on housing, State and/or Federal partners who may help fund the program, and private sector organizations, representatives, or citizens who may either help fund the program e.g., Cleveland County Businesses, Churches, Civic

Groups, or provide knowledge, skills, information, and resources to accomplish the mission. Lastly, financial institutions who may be involved with administration of the UCT payments should also be included. Specific community organizations who are key assets in Cleveland County like The Salvation Army that help families with clothing, food, medicine, utilities, rent or mortgages, and housing assistance organizations like the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation, are important stakeholders to help inform this work (“Welcome to Cleveland County, NC,” n.d.).

**Mayors of Cleveland County** were chosen as stakeholders because they can provide leadership roles in community engagement, design, implementation, and evaluation of the program. Mayors can be boundary spanners with network connections to citizens, government, and the private sector, who will all be important players in making the UCT program a success.

**The Implementation and Evaluation Team** was chosen as stakeholders because they will be essential for the work of designing an implementation and evaluation plan. The implementation plan is important because it will outline the processes and procedures for carrying out the work. The evaluation plan is important because it gathers data for specific target goals chosen prior to implementation that can be analyzed to begin answering the questions about whether the program achieved its aims. This evaluation data can then be disseminated to the public health community, and the public, to share what they found and what they learned from the project.

**Eligible Residents** for the Program were chosen as stakeholders because they are the ones who will be receiving the UCTs and their input, ideas, concerns, and support are important for the success of the program. Residents will bring unique perspectives to the project; co-designing the program with residents who will be impacted by the program promotes equitable engagement.

**Funding Partners** were chosen as stakeholders because they are the ones who will be donating money to the program. Funders’ input and expertise in this domain is important, but it’s critical that funder priorities and potential biases or agendas do not dominate the voices of other stakeholders with less power e.g., recipients of the program. Potential funding partners may include the local, state, and federal government, and the private sector. “The Economic Security Project” is a potential funder that’s been identified; this non-profit organization helped fund the “SEED” project (“Guaranteed Income,” n.d.)

**Community and Government Organizations Providing Housing Support** like The Salvation Army, the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation, are important stakeholders to help inform this work. These organizations have already been deeply involved in the community by helping families with clothing, food, medicine, utilities, rent or mortgages, and general housing assistance. They will have important insights from their experiences to share with the UCT team. In addition, they can help identify strategies for reaching the people in the community who could benefit from participating in the UCT program.

**Financial Institutions** in Cleveland County who could administer the UCT payments are important stakeholders to include in the program. There are four credit unions in Cleveland County – Premier Federal Credit Union, Sharonview Federal Credit Union, State Employees’ Credit Union, and Truliant Federal Credit Union (“Best Credit Unions in Cleveland County North Carolina,” n.d.). There are also private national banks like Wells Fargo, Fidelity Bank, PNC, etc., in Cleveland County. Selecting a bank or credit union to provide debit cards to program recipients and distribute monthly payments, while also aligning with the programs’ vision and mission are important to the programs’ success. A process for interviewing the banks and credit unions and then selecting a partner to work with should be implemented early on by the implementation team.

## APPENDIX A

### Customers, Actors, Transformation Worldview, Owners, and Environment (CATWOE) Analysis

CATWOE Step	Stakeholder: Mayors of Cleveland County
<b>Transformation</b>	The mayors of Cleveland County want to see fewer of their citizens spending more than 30% of their income on rent so they have more money for other essential items and services e.g., food, healthcare, medicine, etc.
<b>Worldview</b>	Mayors have an obligation to advocate for the rights, hopes, dreams, and aspirations of their citizens, and can partner with public and private sector actors to lead change in their communities.
<b>Customers</b>	The mayors' customers are their citizens, city council, community organizations, and private businesses.
<b>Actors</b>	Funders, Residents of Cleveland County, Financial Institution, Implementation and Evaluation Team.
<b>Owners</b>	The mayors can own the UCT program.
<b>Environment</b>	The mayors operate in a rural county with high rates of poverty, and low-wage manufacturing jobs.

CATWOE Step	Stakeholder: Implementation and Evaluation Team
<b>Transformation</b>	The implementation and evaluation team (IET) wants to ensure that all eligible residents for the program receive the Unconditional Cash Transfers on a regular and “on-time” basis throughout the duration of the program and ensure that all necessary data is collected and securely stored, while maintaining good communication with all stakeholders throughout the process.
<b>Worldview</b>	The IET believes that an evidence-based implementation and evaluation plan can lead to success of the program and generate data for the creation of generalizable knowledge that can help other communities, public health professionals, and researchers.
<b>Customers</b>	Recipients of the program, the mayor, and the public health, philanthropic, and scientific communities.
<b>Actors</b>	Department of Administration in the city of Shelby (City Manager – Rick Howell, Assistant City Manager – Justin Merritt)
<b>Owners</b>	The Mayor of the City of Shelby, and the funding agency (the Economic Security Project)

<b>Environment</b>	Since this is a pilot project there will be some financial constraints
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<b>CATWOE Step</b>	<b>Stakeholder: Eligible Residents</b>
<b>Transformation</b>	They would like to receive Unconditional Cash Transfers (UCTs) to help them with severe housing cost burden and other necessary costs of living
<b>Worldview</b>	UCTs give us dignity and respect and demonstrate trust in our ability to act in our own best interest to provide for ourselves and our families
<b>Customers</b>	Community members qualifying for the program
<b>Actors</b>	Implementation and evaluation team
<b>Owners</b>	Economic Security Project
<b>Environment</b>	Live in an environment where housing, utilities, gas, food etc. are fixed costs

<b>CATWOE Step</b>	<b>Stakeholder: Funding Partners</b>
<b>Transformation</b>	The “Economic Security Project” would like to see recipients of the program use the money to get out of poverty and create financial stability for themselves and their families.
<b>Worldview</b>	“Cash offers dignity and self-determination that recognizes a one-size-fits-all approach is antiquated and rooted in distrust.” (“Guaranteed Income,” n.d.)
<b>Customers</b>	Recipients of the program, Implementation and Evaluation Team
<b>Actors</b>	Economic Security Project employees, Implementation and Evaluation Team
<b>Owners</b>	Economic Security Project employees
<b>Environment</b>	They must work within the laws and policies of the non-profit sector

CATWOE Step	Stakeholder: Community and Government Organizations Providing Housing Support
<b>Transformation</b>	They would like to see that the families who need financial support to assist with severe housing cost burden receive it.
<b>Worldview</b>	Government and non-government organizations have a role to play in supporting families in need.
<b>Customers</b>	People in need of financial support for housing
<b>Actors</b>	The Salvation Army, the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation.
<b>Owners</b>	Funders
<b>Environment</b>	Must work within the laws and policies of the government and non-profit sectors.

CATWOE Step	Stakeholder: Financial Institution
<b>Transformation</b>	The financial institution wants to ensure all recipients of the program receive their UCT on time for the duration of the program
<b>Worldview</b>	Financial services are an important part of a functioning society and provide families and businesses access to financial programs and services.
<b>Customers</b>	Recipients of the program and the funders
<b>Actors</b>	Bank staff
<b>Owners</b>	Funders
<b>Environment</b>	Must work within the laws and regulations of the financial sector

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## **Part I: Engagement Plan**

### **Statement of the purpose of the proposed program/policy to implement**

The purpose of this program is to implement an Unconditional Cash Transfer (UCT) pilot program to individuals in need of cash assistance in Shelby, North Carolina, as a way of addressing Social Determinants of Health (SDoH). UCTs can address the SDoH “Neighborhood and Built Environment” (NBE) as defined by the US Department of Health and Human Services, Healthy People 2030, by reducing the number of people in the program who spend more than 30% of their income on rent – which is one of the specific goals within Healthy People 2030. The aim is to provide 180 individuals with \$250 per month for two years with the goal of improving their health, well-being, and quality of life during the program’s two-year timeline. In Cleveland County, 57% of households in census tract 9510 pay more than 50% of their income on rent, and 50% of households in the county pay more than 30% of their income on rent, demonstrating the county has a severe housing cost burden (Rohe, Owen, & Kerns, 2017; Kennedy, 2019). Data collected in this pilot project will hopefully be used to demonstrate the feasibility of UCTs and to generate preliminary data showing UCTs are beneficial to clients by improving their quality of life, health, wellbeing, and economic stability, and that they are beneficial to the community by offsetting social services and healthcare costs (“SEED,” n.d.). The hope is this preliminary data demonstrating the effectiveness of UCTs will generate interest from Cleveland County and future donors in funding a larger program to reach more people in need in Cleveland County.

### **Overarching summary of the purpose and rationale behind engagement plan:**

The purpose of the engagement plan is to understand the needs, wants, values, attitudes, and beliefs of the key stakeholders in Cleveland County. For example, engaging with residents of Shelby, NC, living at 200% or below the federal poverty level<sup>5</sup>, the city mayor’s administrative team, the implementation and evaluation team, the funders (Economic Security Project), the community and government organizations, and the financial institution delivering the payments. The engagement plan

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<sup>5</sup> The federal poverty level is a measure of income, stratified by family size, this is issued every year by the Department of Health and Human Services to determine eligibility for certain programs and benefits (*Federal Poverty Level (FPL) – HealthCare.Gov Glossary, 2022*)

aims to understand the unique needs and values of each group of stakeholders and to create a plan of action that aligns everyone toward a shared vision.

### **Engagement Method**

To successfully engage with key stakeholders, the following methods will be used: Focus Groups will be used for UCT program participants, the mayor and administrative team, and the community and government organizations; a “Give Get Grid” will be completed with participants, the mayor and administrative team, the funders, and the community and government organizations; lastly, semi-structured interviews will be used for participants, the mayor, the city manager, the lead from the implementation and evaluation team, the funding agency lead, the community and government organization leads, and the financial institution lead (Appendix A).

Focus groups will be conducted in person and via videoconferencing to allow for maximal participation, flexibility, and accessibility for stakeholders. Focus groups will be limited to 6 participants to ensure everyone can contribute. Semi-structured interviews will be conducted one on one either in person or via videoconferencing based on the needs and preferences of participants. Interviews and focus groups will be recorded, transcribed, and analyzed for themes. In collaboration with focus group and interview participants “Give Get Grids” will be completed during the sessions to demonstrate what each party can contribute and the benefits each party can expect to receive from the program. Data gathered through the stakeholder engagement process and themes generated from the analysis will inform the implementation and evaluation process to ensure maximal feasibility and acceptability of the program.

### **Part II. Accountability Plan**

The backbone agency is the implementation and evaluation team housed within the Cleveland County Health Department. The City of Shelby Administrative Office will be responsible and accountable for carrying out the work of administering Unconditional Cash Transfers to the qualifying residents in Shelby, with the assistance of the contracted financial institution issuing the debit cards. The implementation and evaluation team will be responsible and accountable for the stakeholder engagement, data collection, interpretation, and dissemination of the findings. It is expected all activities will be

conducted in accordance with the public health code of ethics, and the rules and regulations of Cleveland County. All stakeholders and participants will be treated with dignity and respect, and all negotiations and business transactions will be carried out in good faith and conducted in an ethical manner. The vision is for the UCT program in Cleveland County to become a model for improving health and wellbeing in a way that respects the autonomy and dignity of people in need. The specific aims of this project are to (1) investigate the feasibility of UCTs in Cleveland County; (2) to estimate their effectiveness for improving health, wellbeing, quality of life, food security, and economic stability; and (3) estimate the cost saving impact of UCTs on other social services and healthcare costs.

**APPENDIX A**

**Table 1: Responsible, Accountable, Supportive, Consulted, Informed (RASCI) Analysis Grid**

<b>RASCI Levels</b>		
<b>Who is...</b>	<b>Policy/Program</b> Transformation	Rationale For Partner Participation
<b>Responsible = owns the problem / project</b>	Cleveland County Department of Public Health	Has the knowledge, skills, and expertise to implement and evaluate the program
<b>Accountable = ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those <i>responsible</i></b>	Implementation and Evaluation Team within the Cleveland County Department of Public Health	Has the knowledge, skills, and expertise to implement and evaluate the program
<b>Supportive = can provide resources or can play a supporting role in implementation</b>	Mayor’s office in the City of Shelby, NC,  Cleveland County Department of Public Health.  Financial Institution	Has leadership capacity at the City and county level, and a supportive administrative team who is knowledgeable, skilled, and experienced in carrying out programs and policies.  Administers payments
<b>Consulted = has information and/or capability necessary to complete the work</b>	Community and government organizations e.g., Salvation Army, City of Shelby Housing Authority, etc.  Program Participants          Economic Security Project	Have firsthand knowledge and experience working in the community on providing housing, medical, and food assistance to residents.  Have lived experience and firsthand knowledge about challenges of housing cost burden and its impact on health, wellbeing, quality of life, economic stability, food security, etc.  Will provide funds for the program and share knowledge and experience about similar projects they’ve worked on.
<b>Informed = must be notified of results, process, and methods, but need not be consulted</b>	Residents of Cleveland County not involved in the pilot project, state government, broader public health community.	All would likely have an interest in learning about the program and its results with potential to advocate for or participate in similar programs expanding on the pilot project.

**APPENDIX B: Table of Stakeholder Engagement Plan**

<b>Method</b>	<b>Stakeholder Engagement Plan</b>
<b>Focus Groups</b>	Used for participants, the mayor and administrative team, and the community and government organizations.
<b>Give Get Grid</b>	Will be completed with participants, mayor and administrative team, the funders, and the community and government organizations.
<b>Semi-structured Zoom interviews</b>	Used for participants, the mayor, the city manager, the lead from the implementation and evaluation team, the funding agency lead, the community and government organization lead, and the financial institution lead.

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Kennedy, B. (2019). Cleveland County Economic Snapshot.

## Individual Script for Oral Presentation

Slide # 3:

# Neighborhood and Built Environment: Why It's Important

Geography	Percentage of Households Paying More Than 50% of Income on Rent
Census Tract 537.19, Wake County	77.40%
Census Tract 201.06, Chatham County	71.30%
Census Tract 201.02, Brunswick County	70.40%
Census Tract 49, Mecklenburg County	66.10%
Census Tract 612.05, Iredell County	64.00%
Census Tract 9507, Jackson County	62.60%
Census Tract 606.03, Iredell County	60.80%
Census Tract 203.06, Brunswick County	60.70%
Census Tract 203.09, Union County	59.30%
Census Tract 9510, Cleveland County	56.90%

**“Reduce the proportion of families that spend more than 30% of their income on housing.”**

(“Neighborhood and Built Environment - Healthy People 2030 | health.gov,” n.d; Rohe, Owen, & Kerns, 2017; Kennedy, 2019).

Within the neighborhood and built environment domain we are focusing on housing and homes, and specifically housing costs in Cleveland County, North Carolina. The overall goal of the neighborhood and built environment domain is to “improve the health and safety in the places where people live, work, and play.” The specific objective target for this capstone project is to “reduce the proportion of families that spend more than 30% of their income on housing” (“Neighborhood and Built Environment - Healthy People 2030 | health.gov,” n.d.). In Table 4 pictured here, look at the very bottom row, where data from 2017 shows 56.90% of households in Census Tract 9510 in Cleveland County were spending more than 50% of their income on rent (Rohe, Owen, & Kerns, 2017). Severe housing costs impact the entire county; in 2019 more than 50% of households in the county were spending more than 30% of their income on housing (Kennedy, 2019).



Slide #4:

## Why We Should Prioritize Severe Housing Costs in Cleveland County



**Addressing severe housing costs will improve health equity in Cleveland County**

(“2019 Cleveland County Community Health Assessment,” n.d.; Kennedy, 2019; Raphael, 2011; “Reduce the proportion of families that spend more than 30 percent of income on housing — SDOH-04 - Healthy People 2030 | health.gov,” n.d.)

Why is this important? To say it simply, severe housing costs are associated with worse long term health outcomes: so, focusing attention on reducing severe housing costs is a way to go upstream and make a significant positive impact on the long-term health outcomes of Cleveland County residents. In 2019, the community health assessment in Cleveland County identified poverty as the number one priority, with housing problems, and food insecurity also ranking very high (“2019 Cleveland County Community Health Assessment,” n.d.) Addressing housing costs will also improve health equity in the county, because we know severe housing costs disproportionately affect Black and Latinx people; for example, 30% of Black people and 31% of Latinx people are living in poverty, compared to 17% of White people (Kennedy, 2019). We also know severe housing costs, childhood poverty, and food insecurity negatively impact long term health outcomes, regardless of whether economic conditions improve later in life (Raphael, 2011). When families spend significant portions of their monthly income

on rent, they have little money left over to meet the basic needs required for physical and mental health, such as buying healthy food.

Slide #7:

## Key Stakeholders: Important Voices to Include in the Conversation



(“Welcome to Cleveland County, NC,” n.d.; “SEED,” n.d.)

For the Unconditional Cash Transfer program to be successful we think the following stakeholders should be included in the planning, design, implementation, and evaluation of the program: these include the mayors of Cleveland County, an implementation and evaluation team from the health department, Cleveland County Residents who would be eligible for the program, like people who are spending more than 30% of their income on housing, and funding partners such as the "Economic Security Project" who funded a similar program in California called the Stockton Economic Empowerment Demonstration (“SEED,” n.d.). In addition, we think it would be good to include private sector organizations or citizens who can either help fund the program, such as Cleveland County businesses, Churches, or Civic Groups, or who can provide knowledge, skills, information, and resources to accomplish the mission. Specific community organizations who are key assets in Cleveland County like The Salvation Army that already help families with clothing, food, medicine, utilities, rent or mortgages, and housing assistance organizations like the City of Shelby Housing Authority, Section 8 Housing Assistance Program, and Cleveland County Community Development Corporation, are also important stakeholders to help inform

this work (“Welcome to Cleveland County, NC,” n.d.) Lastly, the financial institutions who will deliver the payments to the recipients of the program should also be included.

Slide #10

## Engagement and Accountability Plan



The purpose of the engagement plan is to get to know, understand, and find common ground with the key stakeholders in Cleveland County. The engagement plan aims to understand the unique needs and values of each group of stakeholders and to create a plan of action that aligns everyone toward a shared vision. We will use the following engagement strategies: focus groups, where we get small groups together in conversation; semi-structured one on one interviews; and work groups where we discuss what we hope to get from each stakeholder and what we can give in return. The backbone agency is the implementation and evaluation team housed within the Cleveland County Health Department. The City of Shelby Administrative Office will be responsible and accountable for carrying out the work of administering Unconditional Cash Transfers to the qualifying residents in Shelby, with the assistance of the contracted financial institution issuing the debit cards. All stakeholders and participants will be treated with dignity and respect, and all negotiations and business transactions will be carried out in good faith and conducted in an ethical manner. The vision is for the UCT program in Cleveland County to become a

model for improving health and wellbeing in a way that respects the autonomy and dignity of the people we serve.

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## **APPENDIX E: CAMILLE KNUDSTRUP INDIVIDUAL DELIVERABLES**

### **Problem Statement**

#### **Social Determinant of Health (SDoH)**

While social determinants of health (SDoH) broadly describe the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect quality-of-life outcomes, health risk, and functioning (CDC, 2018), the neighborhood and built environment (NBE) focus specifically on the places and locations people spend their lives (ODPHP, 2020). These environments may subject people to higher rates of crime, unsafe water or air, poor opportunities to exercise, less educational opportunities, more motor vehicle accidents, more exposure to tobacco use and smoke, and less access to healthy foods (ODPHP, 2020). Ultimately, the environment can dictate a person's quality of life and their long-term health, disease, and mortality risk (ODPHP, 2020).

Many of the negative aspects of the social determinants of health and the NBE tend to affect racial and ethnic minorities and people with low-income the most (ODPHP, 2020). In fact, the WHO designates poverty as the single largest determinant of health, as it impacts social and economic development, and is a deciding factor in where people live, work, what they eat, educational attainment, and access to healthcare (WHO, 2008). A consequence that overlays the issue of low-income and poverty and the NBE is the price of housing and rent. Healthy people 2030 dedicates SDoH-04 to reducing the proportion of families that spend more than 30 percent of income on housing because it is linked to a broad range of issues such as increased stress, mental health problems, less attainable health care (ODPHP, 2020), and food insecurity by leaving less funds available to spend on groceries (Kirkpatrick & Tarasuk, 2011).

#### **Geographic and Historical Context**

Cleveland County is one of North Carolina's many rural counties, with a population of approximately 97,000 residents (Data USA, 2021). It is predominantly occupied by people of White ethnicity, followed by Black or African American, Hispanic, /multi-racial, American Indian/Alaska Native, and Asian (Cleveland County CHA, 2019). The county's largest industries are manufacturing, health care and social assistance, and retail trade (Data USA, 2021). Much of the population is a high

school graduate or higher (84%), however few hold a bachelor's degree or higher (16.5%) (Cleveland County CHA, 2019). The Cleveland County Community Health Assessment has identified low health literacy, as a consequence of low educational achievement, as a barrier to healthcare utilization that has poorly impacted resident's health (Cleveland County CHA, 2019). Furthermore, specialty services are locationally out of reach for many residents, as residents may need to travel to Gastonia, Charlotte, or Asheville for care (Cleveland County CHA, 2019). This is an especially pertinent issue among low-income residents who may not have personal transportation (Cleveland County CHA, 2019).

The unemployment rate has followed US historical percentages, as of 2019 the county rate was 4.7% with a jump to 12.7% in 2020, however many full-time workers still do not make a living wage (Cleveland County CHA, 2019), and many make far less than the per capita national average (\$21,664 vs \$28,123 per year) (Data USA, 2021). This under-payment is reflected in the high rate of poverty among adults in the county, the rate of 20.4% has increased from 2018 to 2019 (Data USA, 2021). One disadvantage faced by many workers is the location of high paying jobs. For example, the highest paying jobs within manufacturing are mainly located within Shelby and Kings Mountain, leaving residents who live farther away unable to maintain employment (Cleveland County CHA, 2019). Cleveland county has worked to reduce the low-pay issue by partnering with major manufacturers in the area to launch a program called Accelerate Cleveland. This seven-week workforce readiness program aims to produce skilled workers that can fill high-paying positions within the industry (Cleveland County CHA, 2019).

### **Priority Population**

The priority population for this SDoH are residents paying 30% of income on housing. In the Cleveland County. In Cleveland County, Fair Market Rent prices are considered very low compared to national prices. Rent for a one-bedroom apartment was \$545 per month and a two-bedroom was \$693 per month (RentData, 2021). For context, an individual in a one-bedroom apartment would make approximately \$1,816 per month to spend 30% of their income on housing. This would total an annual income of approximately \$21,792, below the 200% federal poverty level of \$25,760 (See Table 1 for more FPL statistics) (Needy Meds, 2022).

The home ownership rate is 67.8%, but mortgage payments may still exceed 30% of income for many residents (Data USA, 2021). Low-income housing is one avenue to alleviate burdensome payments. In Cleveland County there are currently 58 low-income housing apartment communities totaling 1,820 affordable apartments (Affordable Housing Online, 2022). Subsidized housing has been shown to improve the outcomes of this priority population. For example, those in subsidized housing have a lower odds of food insecurity than those on waitlists and families in unsubsidized housing with high housing costs have an increased odds of food insecurity (Kirkpatrick & Tarasuk, 2011).

### **Measures of Problem Scope**

Across Cleveland County, 26% of households are considered cost-burdened by paying more than 30% of income on housing and 19% of homeowners report having difficulty affording their homes (Nch County Profile, 2021). Residents in census tract 9510 are among the top ten highest cost burdened in the state, as 56.90% of residents pay more than 50% of income on rent (Cleveland County CHA, 2019), a clear sign that the issue extends far beyond the SDoH quantifications (see Table 2 for county comparison). While there are counties, such as Wake and Chatham, where the proportion of residents paying 50% of income on rent is higher, the housing quality in Cleveland County is also extremely substandard in many cases with many residents feeling they must sacrifice access to working bathrooms and kitchens to afford housing (Rohe, et al., 2017).

### **Rational and Importance**

Residents surveyed for the Cleveland County CHA voted Individuals Living at or below 200% Federal Poverty level as their number one 2030 health indicator for the county (Cleveland County CHA, 2019). This indicates the combined burden of under-payment and high living costs is an issue felt across the county and is important to residents. Ultimately this SDoH is a public health priority as it can be related to many long-term health outcomes such as chronic disease, comorbidity, low quality of life, and all-cause mortality through its associated reduction of health care access and increase of food insecurity (Selegman, et al., 2010).



**Disciplinary Critique**

The housing burden increase can partially be blamed on a stagnation in worker compensation that does not follow inflated living costs (Rohe, et al., 2017). As this slump in wages tends disproportionality affect ethnicities of color, this discrepancy has far-reaching health equity implications (Rohe, et al., 2017). For example, geographic locations with housing cost burdens equal to or exceeding 30% of more of income are more likely to be home to residents of African American and Hispanic ethnicity (Rohe, et al., 2017), and burdensome housing costs are a factor in food security, making this an issue that contributes to the disproportionate health outcomes suffered by residents of these ethnicities, such as higher rates of obesity, diabetes, and heart disease (Cleveland County CHA, 2019). Therefore, an opportunity for health professionals to ensure equitable income that ensures individuals are able to afford increasing costs of living and housing expenses exists.

## APPENDIX A

Table A1. Income levels at different percentages of federal poverty levels (Needy Meds, 2022)

<b>Family Size</b>	<b>100%</b>	<b>133%</b>	<b>150%</b>	<b>200%</b>
1	\$12,880	\$17,130	\$19,320	\$25,760
2	\$17,420	\$23,169	\$26,130	\$34,840
3	\$21,960	\$29,207	\$32,940	\$43,920
4	\$26,500	\$35,245	\$39,750	\$53,000
5	\$31,040	\$41,283	\$46,560	\$62,080
6	\$35,580	\$47,321	\$53,370	\$71,160
7	\$40,120	\$53,360	\$60,180	\$80,240
8	\$44,660	\$59,398	\$66,990	\$89,320
For each additional family member	\$4,540	\$6,038	\$6,810	\$9,080

Table A2. Percentage of Households Paying More Than 50% of Income on Rent, County Comparison

Geography	Percentage of Households Paying More Than 50% of Income on Rent
Census Tract 537.19, Wake County	77.40%
Census Tract 201.06, Chatham County	71.30%
Census Tract 201.02, Brunswick County	70.40%
Census Tract 49, Mecklenburg County	66.10%
Census Tract 612.05, Iredell County	64.00%
Census Tract 9507, Jackson County	62.60%
Census Tract 606.03, Iredell County	60.80%
Census Tract 203.06, Brunswick County	60.70%
Census Tract 203.09, Union County	59.30%
Census Tract 9510, Cleveland County	56.90%

Table A3. Health Indicator prevalence Comparison by County (Cleveland County CHA, 2019)

Indicator	Cleveland	Lenoir	Pasquotank	Richmond	Vance	Wilson
Food Insecurity	17%	19%	19%	20%	22%	20%
Severe Housing Problems	15%	17%	20%	16%	19%	18%
Poverty Rate	19.10%	22.10%	18.20%	19.90%	26.30%	21.10%
Children In Poverty	28%	38%	28%	31%	36%	31%
Adult Smoking 24%	18%	19%	18%	21%	20%	18%
Adult Obesity	38%	33%	39%	39%	34%	32%
Physical Inactivity	29%	30%	28%	32%	37%	31%
Diabetes Prevalence	15%	18%	12%	19%	10%	14%

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## **Nutrition Policy**

### **Background Information**

While social determinants of health (SDoH) broadly describe the “conditions in the environments where people are born, live, learn, work, play, worship, and age that affect quality-of-life outcomes, health risk, and functioning,” (CDC, 2018) the neighborhood and built environment (NBE) focus specifically on the places and locations people spend their lives (ODPHP, 2020). These environments may subject people to higher rates of crime, unsafe water or air, poor opportunities to exercise, less educational opportunities, more motor vehicle accidents, more exposure to tobacco use and smoke, and less access to healthy foods (ODPHP, 2020). Ultimately, the environment can dictate a person’s quality of life and their long-term health, disease, and mortality risk (ODPHP, 2020).

An objective under the umbrella of the NBE, SD0H-04, calls to reduce the proportion of families that spend more than 30% of income on housing because it is linked to a broad range of issues such as increased stress, mental health problems, less attainable health care (ODPHP, 2020), and food insecurity (Kirkpatrick & Tarasuk, 2011). In Cleveland County, this is a poignant issue, as 26% of residents pay a staggering 30% of income on housing costs homes (Nch County Profile, 2021). The housing quality in Cleveland County is also extremely substandard in many cases with many residents feeling they must sacrifice access to working bathrooms and kitchens in order to afford housing (Rohe, et al., 2017).

Low wages contribute to this issue as many workers make far less than the per capita national average (\$21,664 vs \$28,123 per year respectively) (Data USA, 2021). Residents surveyed for the Cleveland County CHA voted Individuals Living at or below 200% Federal Poverty level as their number one 2030 health indicator for the county (Cleveland County CHA, 2019). This indicates the combined burden of under-compensation and high living costs is an issue felt across the county and is important to residents.

**Purpose**

A consequence of high housing costs may be food insecurity by leaving less funds available to spend on groceries once housing costs are addressed (Kirkpatrick & Tarasuk, 2011). The USDA (2019) defines food insecurity as “a lack of consistent access to enough food for an active, healthy life.” It is associated with less availability and consumption of health-promoting foods (Leung, et al., 2014), which may lead to long-term consequences such as hypertension, diabetes, heart disease, chronic kidney disease, cancer, and high cholesterol leading to a lower quality of life and higher risk of all-cause mortality (Selegman, et al., 2010). Additionally, food insecurity is a costly burden on the individual and the healthcare system. Berkowitz, et al., found food insecure adults had annual health care expenditures that were \$1,834 higher than food secure adults and the median annual health care cost associated with food insecurity was \$687,041,000 in the US (Berkowitz, et al., 2019).

**Evidence Based Outcomes****Short-term outcome objectives:**

In Cleveland County by 2024, food security will increase for those living 200% below the federal poverty level as a direct effect of the guaranteed income initiative targeted towards those paying 30% of income on housing (Wipfler, 2022).

**Long-term impact:**

Residents of Cleveland County earning 200% below the federal poverty line will report an increased quality of life due to increased food security (SEED, 2021). Improvements in quality of life will be measured by the Quality-of-Life Scale (Burckhardt, 2003).

**Strategies and Activities**

As evidenced by the Stockton Demonstration, crediting money onto debit cards for participants to use at their discretion is an efficient strategy for implementing Unconditional Cash Transfers (UTCs) (Baker, et al., 2021). Census tract 950900 has the highest proportion of households who are severely cost-burdened low-income renters, unemployed, and living in poverty (Urban Institute, 2021). Here, researchers will enroll participants who will agree to fill out surveys measuring their quality of life and food security status in exchange for \$250 per month for 24 months. What items are purchased with the debit card will be tracked to account for how the participants are using the funds. It is the researchers



hope that, in accordance with SEED, the funds will be used for necessity items such as housing and food (Baker, et al., 2021). The program expects to reach 313 households directly through the cash transfers and expect food security and housing burden cost to be alleviated as a result of the intervention (Baker, et al., 2021). Additionally, Unconditional Cash Transfers have the potential to mitigate generational poverty, as many participants in the SEED program were enabled to pursue higher paying jobs and attain higher education during the program (Baker, et al., 2021).

An intervention of this nature has the potential to impact all levels of the socioeconomic model. At the individual level, participants may gain confidence in their ability to invest in themselves and as a result increase their standing within socioeconomic system. Since money-related stress tends to negatively impact relationships, UTCs can improve participants interpersonal connections and allow them to share resources and support more generously. UTCs can directly impact the living and working level by providing participants funding to lift themselves from poor conditions. At the national and policy level, successful implementation of UTCs could change the way government welfare is provided if it proves to be more efficient and efficacious.

### **Stakeholders**

The Mayor of Cleveland County: Gather political support for the program and use momentum from program success to garner support for future initiatives. Implementation and Evaluation Team: Recruit participants, secure funding, form relationships with other stakeholders, create plan for dispersal of funds, analyze and publish findings of the program. Eligible Residents for the Program: Apply for program, follow-through on any instructions given for the implementation team, remain available for surveys and evaluations. State/Federal Partners/Funders: Gather political support for the program and supply funding for team compensation. Private Sector Partners/Funders: Promote the program on newsletters and social media, provide funds for the Unconditional Cash Transfers, provide guidance to team based on past programs.

Community Organizations: Support residents in the program by connecting them with resources tailored to their needs, help create relationships, trust, and support for the program among residents and

the implementation team. Financial Institution: Provide free and easily accessible avenues for participants to receive and use Unconditional Cash Transfers.

### **Budget**

The largest portion of the budget will be devoted to Unconditional Cash Transfers. The initial goal of \$250 per month to 313 households for two years will total \$1,878,000. These transfers will be deposited into each resident's bank account, allowing for easy tracking of card activity (Baker, et al., 2021). A needs and vulnerability assessment will be performed at the programs' onset to assess the impact of housing cost on vulnerable households within the census tract. This is estimated to cost \$24,080, as participants will be compensated for responding to surveys. Direct personnel costs are estimated to total \$117,251.72; adjustments will be made based on up-to-date salary estimators. The estimated cost of the post-Unconditional Cash Transfer survey is \$6,260. Additionally, researchers and evaluators will need to be compensated for aggregating the data into meaningful data. This aspect of funding, as well the costs associated with participant recruitment and long-term evaluation will be assessed in later stages of the program. Funds for the Unconditional Cash Transfers will be secured through private organizations dedicated to the promotion of guaranteed income.

### **Conclusion**

Cash transfers are thought to be an extremely cost-effective method to lifting people out of poverty (Bastagli et al., 2016). Their efficacy trumps other government vouchers and in-kind food assistance programs while reducing administrative costs (Doocy & Tappis, 2017). Furthermore, Unconditional Cash Transfers promote human rights and social justice by allowing participants to intelligently choose what is best for them with each deposit. They can also promote equity by targeting those most in need of assistance and most in poverty without forcing participants through disincentivizing processes that check for eligibility or require multi-step processes to receive benefits from multiple sources, such as food assistance from one source, housing assistance from another source, and welfare from a third source (USAGov, 2021). Additionally, participants are not penalized for their increased income as they are with government assistance programs that discourage higher earnings that may cause the loss of benefits (USAGov, 2021). On the contrary, participants in the SEED study used the stability

from their monthly cash transfers to pursue investments that would lead to higher pay, such as obtaining higher education and taking time to apply to higher-paying jobs, when they previously could not afford such gaps in employment (Baker, et al., 2021).

Disadvantages inherent to a small, privately funded program such as this are the small monthly amounts given and the small amount of people reached. There is a necessary trade-off between reaching more people with less money given or giving more money but reaching fewer people. In addition, Cleveland County is mainly a conservative county with 65.9% of voters choosing the Republican Party in 2020 (BestPlaces.net, n.d.). In a Pew Research Survey, 46% of Republicans and Republican “leaners” were classified as less supportive of expanded aid to people in need (Pew Research Center, 2019). Thus, a program dedicated to giving monetary aid may not be well received across the county given the trope that government aid can disincentive people from working. However, SEED reported more employment at the end of their program among participants (Baker, et al., 2021). Objectors of the program may also worry that the transfers will be spent on non-essential items such as tobacco and alcohol, but SEED found participants mainly used their funds for food, toiletries, utilities, auto care, services, transportation, and medical costs with less than 1% of tracked funds spent on tobacco and alcohol (Baker, et al., 2021).

While Unconditional Cash Transfers may not have the power to change existing structures that lead to and maintain the impoverishment of communities, they can positively impact those most disadvantaged and lead to powerful improvements in wellbeing, health, and financial stability (Young, 2019).

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## Implementation and Evaluation

### Intervention summary

While social determinants of health (SDoH) broadly describe the “conditions in the environments where people are born, live, learn, work, play, worship, and age that affect quality-of-life outcomes, health risk, and functioning,” (CDC, 2018) the neighborhood and built environment (NBE) focus specifically on the places and locations people spend their lives (ODPHP, 2020). These environments may subject people to higher rates of crime, unsafe water or air, poor opportunities to exercise, less educational opportunities, more motor vehicle accidents, more exposure to tobacco use and smoke, and less access to healthy foods (ODPHP, 2020). Ultimately, the environment can dictate a person’s quality of life and their long-term health, disease, and mortality risk (ODPHP, 2020).

An objective under the umbrella of the NBE, SDoH-04, calls to reduce the proportion of families that spend more than 30% of income on housing because it is linked to a broad range of issues such as increased stress, mental health problems, less attainable health care (ODPHP, 2020), and food insecurity (Kirkpatrick & Tarasuk, 2011). In Cleveland County, this is a poignant issue, as 26% of residents pay a staggering 30% of income on housing costs (Cleveland County CHA, 2019). Low wages contribute to this issue as many workers make far less than the per capita national average (\$21,664 vs \$28,123 per year respectively) (Data USA, 2021) Additionally, residents surveyed for the Cleveland County CHA voted Individuals Living at or below 200% Federal Poverty level as their number one 2030 health indicator for the county (Cleveland County CHA, 2019), indicating the combined burden of under-compensation and unmanageable living costs is an issue felt across the county and is important to residents.

Low-income is at the root of many residents’ ability to afford housing and food costs. Therefore, an Unconditional Cash Transfer program provides immediate relief in the form of a boost to monthly income (Baker, et al., 2021). The intervention proposes to give \$250 per month to 349 residents for two years within the poorest census track of Cleveland County. While this amount is half of the \$500 per month given in the Stockton Economic Empowerment Demonstration (SEED), the cost of living in Cleveland County is scored at 75.8 overall with housing at 44.3 (*Cost of Living in Cleveland County*,

*North Carolina*, n.d.) while Stockton scores at 113.9 overall with housing at 128.6 (*Cost of Living in Stockton, California*, n.d.), these cost of living indices are based on the US average of 100, indicating that less money could go farther towards residents rental costs in Cleveland County. Additionally, a one-bedroom apartment rents at an average of \$550, a two-bedroom at \$724, and a three-bedroom at \$976 in Cleveland County, so a monthly amount of \$250 could cover 25-45% of rental costs for most residents (*Cost of Living in Cleveland County, North Carolina*, n.d.).

### **Evidence Based Outcomes**

#### **Short-term outcome objectives:**

In Cleveland County by 2024, food security will increase for those living 200% below the federal poverty level as a direct effect of the guaranteed income initiative targeted towards those paying 30% of income on housing (Wipfler, 2022).

#### **Long-term impact:**

Residents of Cleveland County earning 200% below the federal poverty line will report an increased quality of life due to increased food security (Baker, et al., 2021). Improvements in quality of life will be by measured by the Quality-of-Life Scale (See Appendix A) (Burckhardt & Anderson, 2003). Food security will be measured using the U.S. Household Food Security Survey Module: Six-Item Short Form (See Appendix B) (USDA, 2012).

#### **Study design & Data Collection**

Each participant will respond to the Quality-of-Life Scale and U.S. Household Food Security Survey Module: Six-Item Short Form at baseline, the midpoint, and the 24-month postintervention conclusion. Survey scores from the midpoint and postintervention responses will be tallied and compared to the survey scores from the preintervention responses.

Each participant will receive a debit card that loads with \$250 each month. Use of this card will be tracked, and spending will be categorized and ranked based on the prevalence of spending on each item. This data will be used to show how participants use the additional funds and provide support for future interventions of the same nature (Baker, et al., 2021).

**Sample and Sampling Strategy**

Due to the small nature of the intervention, all participants will be included in the evaluation sample. Participants will be contacted via text message and prompted to respond to the Quality-of-Life Scale and U.S. Household Food Security Survey Module: Six-Item Short Form preintervention, at the midpoint, and postintervention.

**Specific Measures**

The constructs of quality of life and food security will be measured using the Quality-of-Life Scale (Burckhardt & Anderson, 2003) and U.S. Household Food Security Survey Module: Six-Item Short Form (USDA, 2012) (See Appendix A and B for respective scoring details).

**Analysis Plan**

Paired samples t-test will be used to compare the pre and post intervention survey scores (Baker, et al., 2021). Debit card usage will be summarized using descriptive statistics (Baker, et al., 2021).

**Timing**

Evaluation activities will begin at the intervention baseline when participants respond to the Quality-of-Life Scale (Burckhardt & Anderson, 2003) and U.S. Household Food Security Survey Module: Six-Item Short Form (USDA, 2012). Participants will respond to these surveys at the midpoint and endpoint of the intervention. Paired samples t-test will be used at the midpoint to assess the impact of the intervention. If scores on the two surveys have not significantly improved at the midpoint, participants will be asked for further in-depth feedback on why survey scores have not improved. Reassessment of the amount of funds given to each household will be reevaluated and increased if indicated from participant feedback.

**Sources of Funding**

The Economic Security Project will provide funding for the Unconditional Cash Transfers and additional funding needed for enrollment, implementation, and evaluation of the intervention (Economic Security Project, 2022).

**Data Use and Dissemination**

The results of this intervention will be used to provide an evidence base for Unconditional Cash Transfers for similar rural counties in similar financial situations. Results of the study will be disseminated through social media, news journals, and public health literature journals.



**Strengths and Challenges**

Strengths of Unconditional Cash Transfers include the ability to by-pass administrative costs associated with government safety programs and the discretion and ease of access afforded to participants (Rescue.org, 2016) Additionally, the SEED program found Unconditional Cash Transfers encouraged participants to improve financial status by pursuing education or searching for higher paying jobs (Baker, et al., 2021). This contrasts with traditional in-kind programs that discourage upward movement by deducting benefits when participants reach meager financial stability (Baker, et al., 2021).

While a benefit of the Unconditional Cash Transfer is its ability to allow participants to spend money on items they feel are needed at the time, the lack of oversight and consequences may leave room for some participants to spend money on non-essential items such as alcohol and tobacco (Baker, et al., 2021). Additionally, there will be a trade-off between households reached and amount of cash given. As the SEED program acknowledged, the amount of money should act as a supplement and would not be enough to cover catastrophic costs such as medical bills (Baker, et al., 2021).

## APPENDIX A

Figure A1. Quality-of-Life Survey Questions, Scoring, and Validation

### Questions and Instructions:

#### QUALITY OF LIFE SCALE (QOL)

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
1. Material comforts home, food, conveniences, financial security . . . . .	7	6	5	4	3	2	1
2. Health - being physically fit and vigorous . . .	7	6	5	4	3	2	1
3. Relationships with parents, siblings & other relatives- communicating, visiting, helping . . .	7	6	5	4	3	2	1
4. Having and rearing children . . . . .	7	6	5	4	3	2	1
5. Close relationships with spouse or significant other . . . . .	7	6	5	4	3	2	1
6. Close friends . . . . .	7	6	5	4	3	2	1
7. Helping and encouraging others, volunteering, giving advice . . . . .	7	6	5	4	3	2	1
8. Participating in organizations and public affairs . . . . .	7	6	5	4	3	2	1
9. Learning- attending school, improving understanding, getting additional knowledge . .	7	6	5	4	3	2	1
10. Understanding yourself - knowing your assets and limitations - knowing what life is about . .	7	6	5	4	3	2	1
11. Work - job or in home . . . . .	7	6	5	4	3	2	1
12. Expressing yourself creatively . . . . .	7	6	5	4	3	2	1
13. Socializing - meeting other people, doing things, parties, etc . . . . .	7	6	5	4	3	2	1
14. Reading, listening to music, or observing entertainment . . . . .	7	6	5	4	3	2	1
15. Participating in active recreation . . . . .	7	6	5	4	3	2	1
16. Independence, doing for yourself . . . . .	7	6	5	4	3	2	1

### Scoring:

The QOLS is scored by adding up the score on each item to yield a total score for the instrument.

Scores can range from 16 to 112. The QOLS scores are summed so that a higher score indicates higher quality of life. Average total score for healthy populations is about 90 (Burckhardt & Anderson, 2003).

**Validity:**

From Burckhardt & Anderson:

“Convergent and discriminant construct validity of the QOLS in chronic illness groups was evidenced first by the high correlations between the QOLS total score and the Life Satisfaction Index-Z (LSI-Z) [18] ( $r = 0.67$  to  $0.75$ ) and its low to moderate correlations with the Duke-UNC Health Profile (DUHP) [19] physical health status subscale ( $r = 0.25$  to  $0.48$ ) and a disease impact measure, the Arthritis Impact Measurement Scales (AIMS) [20] ( $r = 0.28$  to  $0.44$ ) [13]. Later, Burckhardt and colleagues offered evidence that the QOLS could discriminate levels of QOL in populations that would be expected to differ. A group of healthy adults as well as groups with more stable chronic illnesses, such as post-ostomy surgery, osteoarthritis, and rheumatoid arthritis, were shown to have significantly higher scores than groups of patients with the persistent painful condition, fibromyalgia, life-threatening COPD, or insulin-dependent diabetes [21].

More recently, a sample of 1241 chronically ill and healthy adults from American and Swedish databases was used to generate factor analyses for both the 15-item original QOLS and the 16-item chronic illness adaptation. Analysis of the data suggested that the QOLS has three factors in the healthy sample and across chronic conditions, two languages and gender. Factors that could be labeled (1) Relationships and Material Well-Being, (2) Health and Functioning, and (3) Personal, Social and Community Commitment were identified [22]. (Burckhardt & Anderson, 2003)”

Source: Burckhardt, C. S., & Anderson, K. L. (2003). The Quality of Life Scale (QOLS): Reliability, Validity, and Utilization. *Health and Quality of Life Outcomes*, 1(1), 60. Retrieved from <https://doi.org/10.1186/1477-7525-1-60>

Figure A1. U.S. Household Food Security Survey Module: Six-Item Short Form Questions,

Scoring, and Validation

**Questions and Instructions:**

FILL INSTRUCTIONS: Select the appropriate fill from parenthetical choices depending on the number of persons and number of adults in the household.

HH3. I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

Often true

Sometimes true

Never true

DK or Refused

HH4. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

Often true

Sometimes true

Never true

DK or Refused

**Scoring:**

Food security status is assigned as follows:

Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale)

Raw score 2-4—Low food security

Raw score 5-6—Very low food security

**Validity:** From USDA:

"The six-item short form of the survey module and the associated Six-Item Food Security Scale were developed by researchers at the National Center for Health Statistics in collaboration with Abt Associates Inc. and documented in "The effectiveness of a short form of the household food security scale," by S.J. Blumberg, K. Bialostosky, W.L. Hamilton, and R.R. Briefel (published by the American

Journal of Public Health, vol. 89, pp. 1231-34, 1999). It has been shown to identify food-insecure households and households with very low food security with reasonably high specificity and sensitivity and minimal bias compared with the 18-item measure (USDA, 2012).”

From Blumberg:

“The short form classified 97.7% of households correctly and underestimated the prevalence of overall food insecurity and of hunger by 0.3 percentage points (Blumberg, 1999).”

Sources:

Blumberg, S. J., Bialostosky, K., Hamilton, W. L., & Briefel, R. R. (1999). The effectiveness of a short form of the Household Food Security Scale. *American Journal of Public Health*, 89(8), 1231–1234.

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## Nutrition Program



### Unconditional Cash Transfers & Food Insecurity

(West, et al., 2021 *Cleveland County Community Health Assessment* NC DHHS., 2019)

- Notes: we decided unconditional cash transfers would best impact nutrition among our priority group of residents who spend 30% or more of income on housing costs because groups burdened by housing costs also tend to identify as having low food security compared to groups less burdened by housing costs.
- Food security describes an individual's ability to access and obtain adequate food. food insecurity may lead to hunger and has been shown to increase long term chronic health issues such as obesity, diabetes, hypertension, and heart disease as individuals who experience low food security tend to have limited ability to access healthy foods such as whole grains, fruits, and vegetables and replace these foods with processed foods such as sugar sweetened beverages, processed meats, and other high calorie, low nutrient rich foods.
- Our priority population is believed to fall in the food insecure group because when rent costs are burdensome, there is less money left over to pay for healthier foods, therefore unconditional cash transfers can provide that extra money to purchase healthier foods in higher amounts. We are confident in this outcome because in the Stockton demonstration, consistently participants spent



the highest percentage of their cash on food and those that participated in the intervention described experiencing greater food security compared to previous experiences when monthly food stamps were not enough or their income was volatile due to changes at work (West, et al., 2021).

- Respondents to the community health assessment were asked if they had been told by a doctor, nurse, or other health professional if they had specific health conditions, 45% responded yes to having overweight or obesity, 37% said yes to high blood pressure, 34% said yes to high cholesterol, 12% said yes to diabetes, and 6% said yes to heart disease. (CCCHA, 2019)

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