

CREATION OF AN ACCOUNTABLE CARE COMMUNITY  
TO ADDRESS EARLY CHILDHOOD FOOD INSECURITY AND MALNUTRITION  
IN ROBESON COUNTY, NC

By

MARTHA J. BOCK, KENEDY DAWSON & ANNALIESE M. KERN

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Approved by:

Vaughn Mamlin Upshaw, EdD, DrPH, MPH

Dana Rice, DrPH, MPH

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## ABSTRACT

We aim to leverage the collective resources of diverse community partners into an Accountable Care Community (ACC) with the goal of improving the food environment in Robeson County, NC, a predominantly minority community with disparately lower health indicators than the rest of the state. The established ACC will work collaboratively to reduce the prevalence of food insecurity and malnutrition among children ages 0-4 and improve access to healthy, affordable foods county-wide. Experiencing food insecurity at any age is linked to many detrimental health consequences, but consequences are far greater when food insecurity is experienced early in life. Among children ages 0 to 4, food insecurity can change the development of a child's central nervous system, increasing their risk of poor health, obesity, developmental or growth impairments, social and behavioral problems, and poor academic performance. Given the paramount importance of early nutrition in early life, our ACC will focus on reducing food insecurity and improving food access among preschool-aged children.

With this funding, we will gather diverse, multi-sector community partners with expertise on the issues of food insecurity and childhood development into an ACC that leverages our collective resources. We will design, implement, and evaluate community-wide solutions to address food insecurity among children ages 0-4 through hands-on nutritional education. Despite challenges with regards to program reach and accessibility, we are confident our ACC will successfully improve the Robeson food environment. Decreasing food insecurity and malnutrition while improving access to healthy food for the children in our community will have significant positive impacts on the equitable health and wellbeing of all Robeson residents.

**Keywords:** *food insecurity, malnutrition, nutrition education, food education, early childhood education (ECE), accountable care community (ACC), child development*

## COMMON PROPOSAL

We aim to organize a coalition of cross-sector stakeholders into an Accountable Care Community (ACC) in Robeson County, NC to achieve a healthier, more just, and more invigorated community. The ACC that would be created through the generous funding of Kate B. Reynolds Health Care Trust aims to reduce preschool food insecurity and poor nutrition among children ages 0-4 in Robeson County, NC. Robeson was chosen as the primary geographic area of focus due to the disproportionately poor health indicators and rankings of the county when compared to other counties in the state, as well as the underlining inequities evident in the disproportionate distribution of these poor health indicators across racial lines.<sup>1</sup> Out of 100 counties in North Carolina, Robeson ranks 95 of 100 counties for childhood obesity<sup>2</sup> and lowest in overall health outcomes and health behaviors in a ranking system that considers obesity, physical inactivity, access to exercise opportunities, and food environment.<sup>3</sup> The county also ranks last for childhood poverty, at 44%, with a greater percentage of minority populations living in areas of concentrated poverty than their white counterparts.<sup>4</sup> Each of these poor health indicators contribute to the highest childhood food insecurity prevalence of any county in North Carolina, at 28.7%.<sup>5</sup> While food insecurity, defined as “disruption of food intake or eating patterns because of lack of money and other resources,” negatively impacts all age groups, reducing both food access and nutrition,<sup>6</sup> Robeson preschoolers are most vulnerable to the negative impacts of food insecurity.<sup>7</sup> This is because children between ages 0 to 4 are experiencing critical developmental stages, in which food security and access is vital.<sup>8</sup> In fact, during the first years of life, food insecurity can change the fundamental neurological architecture of a child’s brain and central nervous system, increasing their risk of poor health, suffering developmental or growth impairments, experiencing social and behavioral problems,

and performing poorly in school, compared to their food-secure peers<sup>9 10</sup> Furthermore, “food insecurity in a child’s first years is associated with obesity at age 4, even after accounting for other factors.”<sup>11</sup>

Given the paramount importance of proper nutrition early in life, we will focus our efforts on establishing an ACC that will convene a multi-sector group of stakeholders with expertise on the issue of food insecurity and malnutrition in children ages 0-4 in Robeson County. To the extent they are able, each partner will contribute their diverse knowledge, skills, and resources towards establishing and fulfilling mutually agreed upon objectives and activities of the ACC. They will cooperatively design, implement, and evaluate a proposed intervention that will address food insecurity and malnourishment in kids 0-4 through hands-on, multi-sensory education. They will know they have accomplished their goal when they have successfully improved the children’s understanding of nutrition and dietary needs, as well as increased access to healthy, affordable food for preschool-aged kids in Robeson County, NC.

Data shows that in North Carolina, among racial and ethnic groups living in poverty, African Americans, Hispanics and Latinos and American Indians suffer the worst health and education outcomes; this is true in Robeson County.<sup>12</sup> Despite the poverty rate across all of Robeson being higher than the state and national average (29.2%,17.4% and 13.5%, respectively), the burden of poverty among children in Robeson County falls most heavily on the racial and ethnic minority residents: among Robeson children living in areas of concentrated poverty, 54.8% are African American, 33.1% are Hispanic and 38.6% identify in other non-white racial and ethnic groups (including American Indian), compared to only 23% of White children in the county.<sup>13</sup> No solution will truly improve community health without addressing the health of the community members that are most affected. It is important, when developing public health

solutions, to include and prioritize the voices of minority community members in the decision-making process, to ensure equity in outcomes and shared success. Our ACC will engage minority groups in the program planning and implementation process early, through inclusion of tribal leadership, leaders from predominantly African American and Latino faith-based organizations, and representative minority community members in the stakeholder network, that will create and implement solutions in the community. As members of our stakeholder network, they will be empowered to address the unique challenges their communities face, drawing on the collective resources of the ACC. Additionally, the ACC will incorporate input from these stakeholders to inform the design and implementation of the food and nutrition curriculum, infusing diversity and multiculturalism into different pedagogical methods and teaching activities, for the purpose of embracing the intersectionality and historical perspectives that influence how different races, ethnicities and cultures approach eating and sharing meals.<sup>14 15</sup>

We believe that addressing the complex etiologies of food insecurity and malnourishment in kids 0-4 through hands-on, multi-sensory and multicultural education will be the most successful and sustainable intervention for the ACC to pursue, in that it empowers young children with the knowledge to understand and interact with their nutritional health over their lifetime. Research has shown that early exposure to nutritional education and consistent introductions to new, unfamiliar healthy foods is key to positive and sustainable dietary impact, given that the skills and habits developed in the first years of life often form the foundation for skills and habits that are continued as the child grows.<sup>16</sup> Additionally, due to the complex history of racial inequities and the ways in which their legacies influence the distribution and attainment of healthful opportunities and indicators in Robeson County, any food and nutritional education introduced in the county that integrates components of multiculturalism and diversity in the

curriculum will be most effective in addressing this diverse audience of young children.<sup>17</sup> Thus, it is hoped that this carefully planned educational intervention, sensitive to the unique needs of Robeson County, would reduce the health impacts associated with poor and inadequate diets among preschool-aged children,<sup>18 19</sup> across racial lines,<sup>20</sup> while simultaneously increasing the children's exposure and access to consistent, healthy foods through their participation in the intervention.

Through the grant funds obtained from Kate B. Reynolds Charitable Trust, we will establish a collective partnership in the form of an Accountable Care Community united by a shared vision to develop the social, programmatic, and community resource infrastructure in Robeson County, so we can ultimately reduce the prevalence of preschool food insecurity that currently puts our children and our community at risk.

We have created a Steering Committee to oversee the progress of our ACC. The committee is comprised of two representative members from each of the four partnering organizations: 1) Robeson County Health Department (RCHD), 2) Early Child Education (ECE) staff, 3) North Carolina Child and Adult Food Care Program (NCCAFCP), 4) Robeson County Partnership for Children, Inc. (RCPCI), and 5) Eat Smart, Move More NC (ESMM). As the main governing body accountable for ensuring progress through our ACC, the Steering Committee has established the following goals:

1) Establish a cohesive partnership of diverse community groups and organizations to collectively work toward the creation and implementation of supportive food and nutrition education for children in Robeson County under the age of 5. We expect this partnership to be created within the first 6 months of funding; successful completion of this goal will be measured



by the creation and ratification of a Memorandum of Understanding that outlines the roles of each stakeholder and an agreement to contribute to the ACC's collective efforts, by Month 2.

2) Identify and investigate possible nutrition education programs for implementation, evaluate and prioritize these programs, and determine specific action steps, by the end of Year 1; successful completion of this goal will be measured by the creation of a detailed action plan to implement education programming among children ages 0-4 in Robeson County.

3) Leverage collective resources and ideas to implement the action plan developed in Year 1 of the partnership. We expect this goal to be accomplished by the end of Year 2; successful accomplishment of the goal will be measured by the completion and evaluation of a nutrition education pilot program established by the ACC. A change from baseline of nutritional competency among preschoolers will be assessed through time-series surveys. Additionally, changes in fruit and vegetable uptake from baseline will be measured using a Veggie Meter, an innovative, non-invasive tool which measures a person's fruit and vegetable intake through bodily levels of indicator nutrients.<sup>21 22</sup>

There are a number of challenges that our ACC must consider when designing a successful intervention to address food insecurity among Robeson children ages 0-4. First, this priority population is relatively hard to reach through traditional educational methods because children under five lack a minimum education requirement in NC.<sup>23</sup> This means Early Childhood Education (ECE) centers do not necessarily constitute a location where an ACC program could be implemented with guaranteed high impact and high programmatic reach. Instead, only ~40% of North Carolinian children under five attend an ECE program, while 60% participate in no licensed ECE program before kindergarten.<sup>24</sup> Further limiting programmatic reach is the fact that 62.6% of Robeson County is rural<sup>25 26</sup> and 6.6% of households in the county (23,072) report

having no access to a vehicle.<sup>27 28</sup> These factors make travel and accessibility to an ACC program difficult, and thus, may further contribute to lowered program participation.

Despite these challenges, some evidence suggests that ECE facilities may still be the best location to house an ACC educational intervention. Since 2010, North Carolina has progressively instituted a number of revisions to strengthen their obesity prevention practices and policies in their child care licensing regulations, including regulations involving positive nutrition practices. In fact, out of all 50 states, North Carolina was ranked as having the second strongest support of Healthy Weight Practices (HWP) in child care regulations, surpassed only by Tennessee.<sup>29</sup> This demonstrated commitment to the improvement of early childhood health in North Carolina should be leveraged to gain support for the ACC, as our proposed focus on hands-on, multi-sensory food and nutrition education would naturally align with the HWP already supported in the state. Furthermore, some of the HWP that remain unfulfilled in the state are natural topic areas to be covered in the ACC curriculum, such as incorporating a variety of vegetables and fruits into meals and snacks: NB2 and NB3, respectively.<sup>30</sup> In short, pairing the ACC nutritional competencies with already established HWP activities in ECE centers would add to the intervention strength by diversifying intervention strategies and increasing engagement with children, which would likely correlate with stronger health impacts<sup>31</sup> with regards to NC's goal to decrease childhood obesity and the ACC's aim to decrease food insecurity and malnutrition through a food and nutrition education intervention.

However, this still leaves the problem of engaging the kids under age five that do not attend a preschool or daycare center. One potential solution that provides strong evidence for engaging diverse community support, regardless of affiliation with an organized institution (like an ECE center) is the use of community gardens. Studies find that community gardens can serve

as a “positive social influence within neighborhoods and also as a catalyst for other positive place-based social dynamics.”<sup>32</sup> Moreover, the community engagement through gardens may be strongest in low-income communities. In fact, one study found that low-income neighborhoods were four times as likely as non-low-income gardens to lead to other issues in the neighborhood being addressed outside of traditional garden activities, reportedly due to the organizing facilitated through the community gardens.<sup>33</sup> Given the fact that families earning less than \$100,000 per year identified cost as the primary barrier to finding childcare, including ECE care, paired with the fact that Robeson has the highest prevalence of poverty in households with children (44%),<sup>34</sup> it is reasonable to assume that the amplified community engagement observed in low-income communities could be reproduced in Robeson County. Thus, community gardens may offer a possible intervention strategy for engaging children between 0-4, both enrolled and not enrolled in a licensed ECE program, in the ACC nutritional education intervention. Additionally, community gardens situated in close proximity to ECE centers could further capture both cohorts of children, enrolled and not enrolled in a preschool or daycare center in Robeson, ultimately increasing the reach and equitable access to the educational opportunities provided through the ACC.

Addressing food insecurity and malnutrition among children ages 0-4 years old in Robeson County is a top public health priority. By partnering with a diverse stakeholder network, this Accountable Care Community will make great strides towards improving the food environment in Robeson County. Our collective work will have drastic impacts on the health and equity of our community, and our concentrated efforts among Robeson County children will have the greatest impact. Together we can transform the food environment in Robeson County and empower our residents with the opportunity to live healthier lives.

## APPENDIX A – GROUP DELIVERABLES

### PROBLEM STATEMENT - GROUP

**Introduction:** Robeson County has disparately higher rates of food insecurity compared to the rest of North Carolina.<sup>35 36</sup> Food insecurity is defined as the “disruption of food intake or eating patterns because of lack of money and other resources.”<sup>37</sup> Such disruptions may increase the risk of developing diet-related chronic illness, like obesity, diabetes, and coronary heart disease, as well as various mental health issues, like depression, anxiety, and suicide ideation.<sup>38 39 40</sup> But, among children between ages 0 to 4, who are experiencing critical developmental stages, food security and access is vital:<sup>41</sup> during the first years of life, food insecurity can change the fundamental neurological architecture of a child’s brain and central nervous system, increasing their risk of poor health, suffering developmental or growth impairments, experiencing social and behavioral problems and performing poorly in school, compared to their food-secure peers.<sup>42</sup> <sup>43</sup> Furthermore, “food insecurity in a child’s first years is associated with obesity at age 4, even after accounting for other factors.”<sup>44</sup> Given the paramount importance of proper nutrition early in life, efforts to improve public health should include initiatives to provide affordable and accessible healthy food options to residents, especially those under age 5. Therefore, our efforts will focus on improving food security in Robeson, targeting residents ages 0-4 in Census Tract 9608.01, where improved food access and security are greatly needed to improve public health.<sup>45</sup>

**Geographic & Historical Context:** Robeson, the largest county by land area in NC, is located in the southern part of the state and is mostly comprised of sandhills and coastal dunes.<sup>46</sup> The area has a long history of being occupied by various Native American tribes prior to colonization.<sup>47</sup> Robeson is unique in that it is one of the few counties in the United States in

which the population is majority-minority, with over 70% of the population consisting of people of color.<sup>48</sup> Native Americans comprise the largest minority population in the county at 35%, followed by Whites (28%), Blacks (25%), and Hispanics (6%).<sup>49</sup> During the Civil War era, Robeson was heavily affected by racial segregation laws, and racist organizations, like the Ku Klux Klan, were prevalent in the region until the late 1950s. Consequently, threads of racial discrimination are still woven throughout the county today, contributing to health disparities;<sup>50 51</sup> in 2017, Robeson was ranked the least healthy county in NC, and poor health indicators were most prevalent among people of color.<sup>52</sup>

Poverty is also grounded in racist legacies and is a root cause of food insecurity. In 2015, Robeson had an overall poverty rate of 29.2%<sup>53</sup> compared to 17.4% in the state<sup>54</sup> and 13.5% in the US.<sup>55</sup> In fact, the USDA defines Robeson as *persistently poor*, for both adults and children, meaning 20% or more of the population was living in poverty for three consecutive censuses.<sup>56 57</sup> It is important to note that, despite the poverty rate across all of Robeson being higher than the state and national average, the burden of poverty falls most heavily on the racial and ethnic minority residents of Robeson, with a 34.9% poverty rate for Native Americans and 26.5% for Blacks, compared to 18.1% for Whites in the county.<sup>58</sup> Poverty not only makes individuals more vulnerable to food insecurity by limiting their ability to obtain healthy, affordable food, it also increases their exposure to marketing and advertising for obesity-promoting products.<sup>59 60</sup>

Furthermore, the closure of 9 manufacturing plants in 2013 propelled economic decline and increased poverty rates across the county, leaving workers who often had no more than a high school diploma out of work in a job market that increasingly demands a college degree. As jobs shrink, economic decay is perpetuated, because “laid-off workers have less money to inject into the economy, additional support jobs are lost, businesses lose revenue, and more strain is put

on social services.”<sup>61</sup> <sup>62</sup> <sup>63</sup> Then, in October 2016, Hurricane Matthew hit the county, causing historic flooding, 67mph winds, and economic devastation.<sup>64</sup> Hurricanes Florence and Dorian furthered destruction in 2018 and 2019, respectively. Despite resilience and cohesiveness displayed by the Robeson community, the impact of multiple hurricanes furthered financial devastation, creating barriers to medical care. Additionally, chronic stress, mental anguish, and substance abuse habits have developed in the community, especially in households displaced by the storms.<sup>65</sup> <sup>66</sup>

Lastly, much of Robeson is considered rural, which limits access to healthy food options. In general, rural areas tend to have significantly limited access to food outlets of all types, but they also have particularly limited access to chain supermarkets.<sup>67</sup> Not surprisingly, Robeson lacks conveniently located grocery stores; in 2014 there were only 30 in the county<sup>68</sup> while 6.86% of households were without a car and 35.04% of low-income households were located more than one mile away from the nearest supermarket.<sup>69</sup> At the same time, there is an abundance of convenience stores and fast-food restaurants in the county (98 and 68, respectively), offering cheap, unhealthy food options.<sup>70</sup> The rurality of the county limits residents’ access to fresh fruits and vegetables while the abundance of convenience stores and fast-food restaurants may encourage the purchase and consumption of processed food that impede a healthy diet.

**Priority Population:** Robeson County, Census Region 8: Tract 9608.01, situated within the town of Lumberton, has a population comprised of 85.5% non-white individuals. It has the highest health disparities of any county (z-score = 1.47) according to an index combining indicators from 3 domains: *Social & Neighborhood Resources*, *Economic*, and *Housing and*

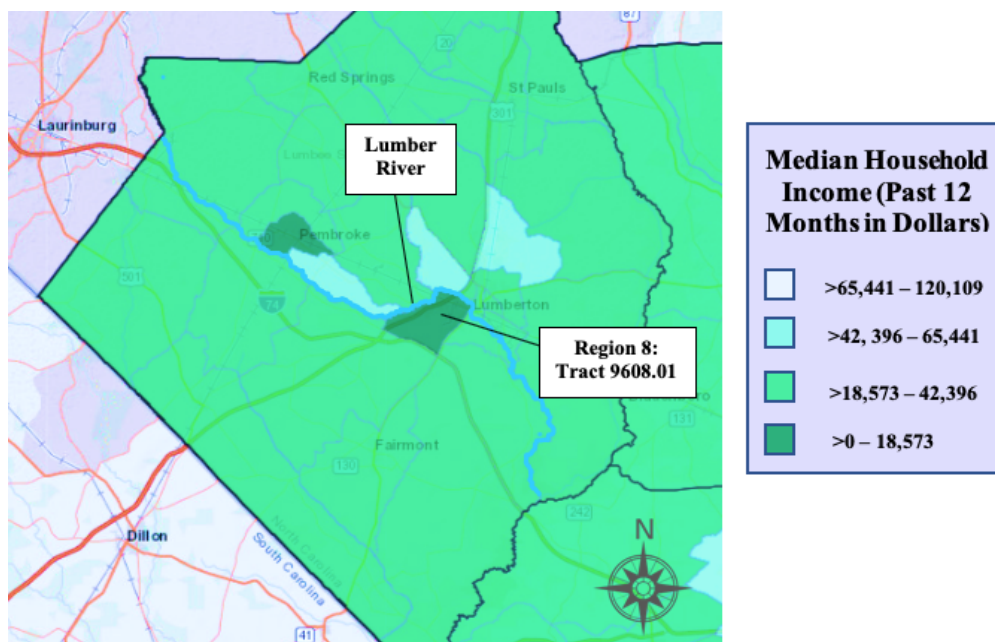
*Transportation*, into an average score. According to this index, Tract 9608.01 is a food desert, with 3,003 residents out of 4,535 reporting both low access to grocery stores and healthy foods. The tract also reports 27.2% of households have no vehicle, further straining access to healthy food. Moreover, 54.1% of the population lives below poverty, making the tract a *concentrated poverty* area, with a 21.9% unemployment rate – the highest of all census tracts in Robeson.<sup>71</sup>

Additionally, compared to all surrounding tracts, Tract 9608.01 has the lowest median household income in the past 12 months, at \$16,101.<sup>72</sup> Also, the Lumber River forms the northern border of this tract, placing residents at an increased risk of flood-related injuries and damages, as well as physical displacement due to high water, especially during severe weather.<sup>73</sup> All of these factors correlate with a higher risk of food insecurity, especially for children who rely on adults for their nutritional needs.<sup>74</sup> For these reasons, this public health intervention will focus on non-white residents under the age of 5 living within Tract 9608.01. *\*Appendix A.1\**

**Measures of Problem Scope:** Despite existing health infrastructure, like Wellness on Wheels, Healthy Communities A- Z, community gardens, and mobile grocers, Robeson had a 19.8% food insecurity rate compared to 14.6% in NC, in 2017.<sup>75</sup> <sup>76</sup> This has resulted in a high obesity risk, especially among poorer individuals and those without cars, who are forced to rely on less-healthy food options from convenience stores, gas stations, and fast-food restaurants.<sup>77</sup> In the 2017 Robeson County Community Needs Assessment, “healthier food choices” was the second most common response to the question “*What does your community need to improve the health of your family, friends, and neighbors?*” (23% of respondents), and 10.6% of residents indicated “*access to food.*”<sup>78</sup> Moreover, 62% of children age 0-5 in Robeson live in households below 200% Federal Poverty Level and 29% of children under 18 live in a food-insecure household.<sup>79</sup>

**Rationale/Importance:** Food insecurity does not exist in isolation, and low-income families in Robeson County are affected by multiple, overlapping issues, resulting in a vicious cycle that creates and exacerbates food insecurity related health problems. Therefore, to improve the poor health among Robeson residents, food insecurity must be addressed.<sup>80</sup> Furthermore, interventions must focus on residents in Census Tract 9608.01 under the age of 5, as they face additional challenges, including historically poorer health outcomes, geographic proximity to the Lumber River, and a history of devastating natural disasters that have rendered the region disproportionately more vulnerable to food insecurity.<sup>81 82</sup>

### Appendix A.1: Median Household Incomes in Robeson County

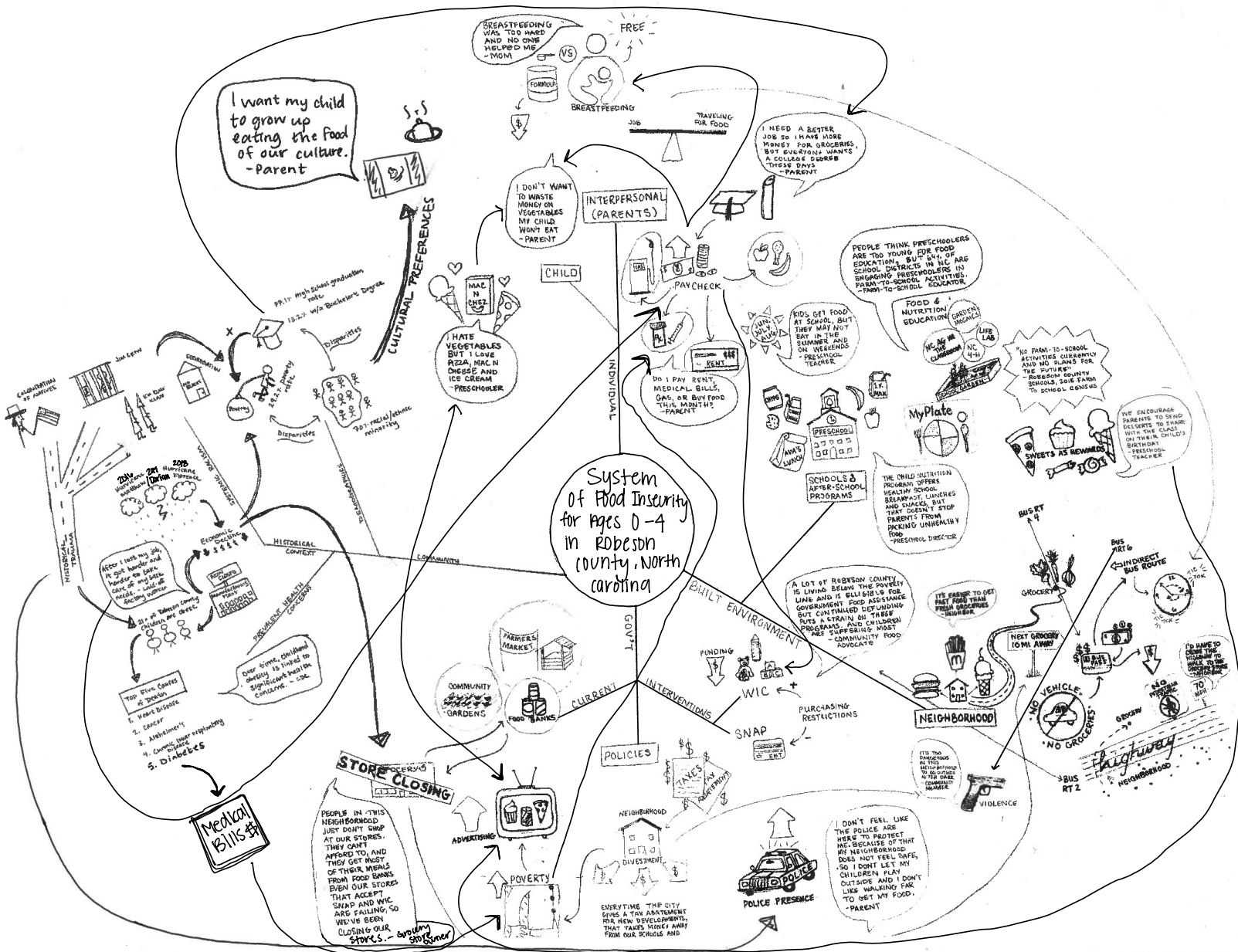


*Adapted from State Center of Health Statistics. (n.d.). Story Map Series*

The image above shows a map of Robeson County, NC, with arrows pointing out Region 8: Tract 9608.01 and the Lumber River that makes up the northern border of Tract 9608.01. As demonstrated by the color gradients (see legend above, right), this tract suffers from a disproportionately lower median household income compared to all surrounding census tracts.



RICH PICTURE - GROUP



ROOT DEFINITION - GROUP

The equitable food environment in Robeson County, NC is designed to alleviate food insecurity among children ages 0-4 in Robeson County by aligning residents with culturally appropriate opportunities to obtain healthy, affordable and convenient food options in order to reduce the prevalence of malnutrition and its health consequences.

## **RASCI NARRATIVE - GROUP**

### **ACC Priorities for System Transformation**

**Priority 1:** By 2022, we aim to build partnerships with childcare and preschool staff, parents, and Robeson County Health Department, as well as Robeson County Partnership for Children, Inc., NC Child and Adult Care Food Program, and East Smart, Move More to support efforts to implement a hands-on, multi-sensory food and nutrition education intervention, with the aim to decrease the prevalence of preschool food insecurity and malnutrition in children age 0-4 in Robeson County, NC.

**Priority 2:** By 2022, we aim to build capacity for improving access to affordable, healthy, fresh foods in Robeson County through the development and support of healthy food programs and vendors. The Robeson County Health Department will align organizations with the ability to address food access, elicit feedback from community members and stakeholders, and support the infrastructure needed to increase Robeson County residents' access to fresh fruits, vegetables and whole grains.

**Priority 3:** By 2022, we aim to create the infrastructure that increases Robeson County residents' consumption of healthy foods such as fruits, vegetables and whole grains through community education efforts supported by the Robeson County Health Department and relevant stakeholders.

Who is...	Priority 1	Priority 2	Priority 3
<p><b>Responsible:</b> owns the problem/project</p>	<p>Robeson County Health Department (RCHD)</p>	<p>University of North Carolina Public Health Researchers</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p>
<p><b>Accountable:</b> ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible</p>	<p>Robeson County Health Department (RCHD)</p> <p>Eat Smart, Move More NC</p> <p>Robeson County Partnership for Children, Inc.</p> <p>NC CACFP</p>	<p>Robeson County Health Department (RCHD)</p> <p>Eat Smart, Move More NC</p>	<p>Robeson County Health Department (RCHD)</p> <p>Eat Smart, Move More NC</p>
<p><b>Supportive:</b> can provide resources or can play a supporting role in implementation</p>	<p>Robeson County Health Department (RCHD)</p> <p>Department of Public Social Services (DPSS)</p> <p>County Commissioners</p> <p>Local grocers/food vendors/farmers/farmers markets</p> <p>Local community garden owners</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>County Commissioners</p> <p>Local grocers/food vendors/farmers/farmers markets</p> <p>Local food banks and community garden</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>Local grocers/food vendors/farmers/farmers markets</p> <p>Local community garden owners</p> <p>Local chefs</p>

	<p>Farm to School Coalition of North Carolina and other Pediatric Nutrition Education Professionals</p> <p>USDA Food and Nutrition Services</p>	<p>owners</p> <p>City Council Members</p> <p>School Board members</p> <p>Community groups/faith-based organizations</p>	<p>Nutrition professionals</p> <p>Community groups/faith-based organizations</p>
<p><b>Consulted:</b> has information and/or capability necessary to complete the work</p>	<p>Robeson County Health Department (RCHD)</p> <p>Parents and families</p> <p>NC CACFP</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>Parents and families</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>Parents and families</p>
<p><b>Informed:</b> must be notified of results, process, and methods, but need not be consulted</p>	<p>Parents and families</p> <p>County Commissioners</p> <p>School Board</p> <p>District Superintendent</p>	<p>Parents and families</p> <p>County Commissioners</p> <p>City Council</p>	<p>Parents and families</p> <p>City Council</p> <p>Teachers and childcare professionals</p>

**ACCOUNTABLE CARE COMMUNITY OVERVIEW PRESENTATION – GROUP**

*Slide Presentation [excerpt] and Corresponding Script*



Title Slide

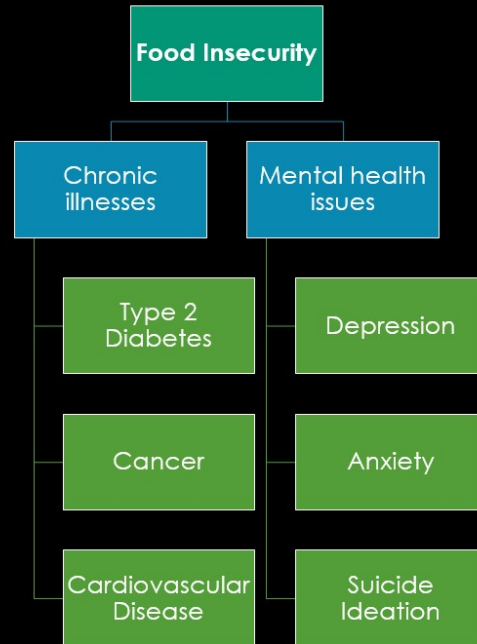


*Kenedy Dawson:*

Welcome everyone and thank you for joining us today to learn more about this innovative opportunity for our organizations to join together to create an Accountable Care Community, or ACC, that will benefit and empower Robeson County to achieve a healthier and more invigorated community – a vision that is shared by every person at this table today. During this time, my colleagues and I at the Robeson County Health Department want introduce the ACC’s aim to address food insecurity among the preschool population in Robeson County, and establish a collective understanding of the complex and detrimental impacts it has in our community. Furthermore, we want each organization to leave with a clear sense of your role in this ACC, as well as how these collaborative partnerships can be leveraged for the mutual benefit of all those involved.

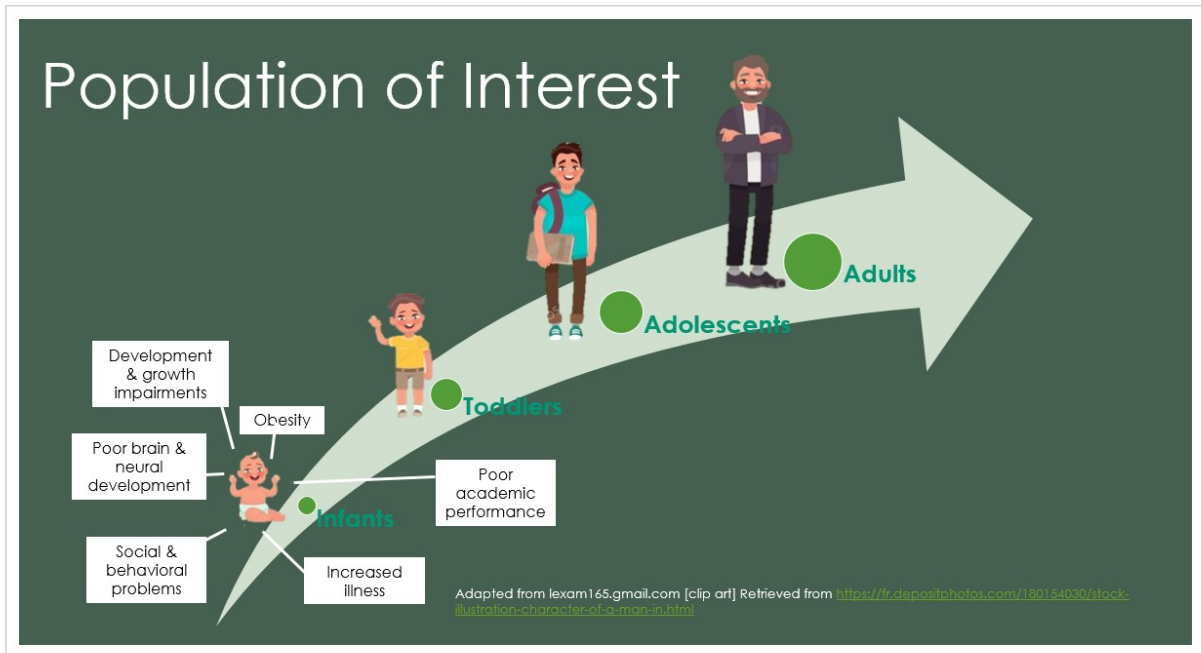
# Food Insecurity

**food insecurity**  
*noun*  
disruption of food intake or eating patterns because of lack of money and other resources



*Kenedy Dawson:*

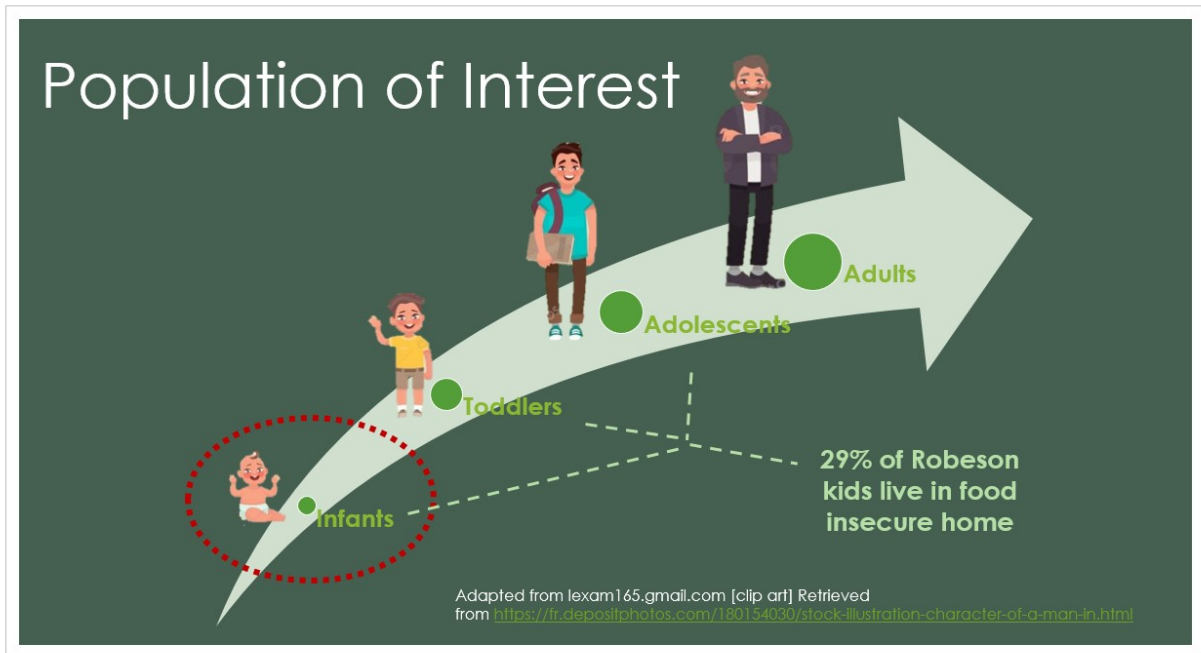
To begin, *food insecurity* is defined as the “disruption of food intake or eating patterns because of lack of money and other resources.” These disruptions are associated with many health consequences including mental health issues, like depression, anxiety and suicide ideation, or diet-related chronic illnesses like type 2 diabetes, certain cancers, and cardiovascular disease.



*Kenedy Dawson:*

But, the long-term health risks of food insecurity are far greater when food insecurity is experienced early. Among children between ages 0 to 4, food insecurity can change the development of a child’s brain and central nervous system, increasing their risk of poor health, suffering developmental or growth impairments, experiencing social and behavioral problems and performing poorly in school. It also increases their risk of obesity. Although food insecurity is a significant issue for all residents in Robeson County, it is important to address it particularly among children, who are one of the most vulnerable populations.





*Annaliese M. Kern:*

In Robeson County, 29% of children under the age of 18 live in a food-insecure household. To reduce the risk of poor school performance, inadequate physical and mental development, and other life-long health and developmental problems related to food insecurity among children that ultimately carry into adulthood, it is imperative that this ACC focuses on initiatives to provide affordable and accessible healthy food options to residents, especially those under age 5.



*Annaliese M. Kern:*

To understand food insecurity in Robeson County, we will next cover the scope of the issue. Robeson County has higher rates of food insecurity compared to the rest of North Carolina. Despite existing health infrastructure, Robeson County has a 19.8% food insecurity prevalence compared to the state prevalence of 14.6%. According to the 2017 Robeson County Community Health Needs Assessment, many of the top five leading causes of death in Robeson County - which are shown in the circle above - have been linked to food insecurity. In the same Needs Assessment, *“healthier food choices”* was the second most common response to the question *“What does your community need to improve the health of your family, friends, and neighbors?”*.

**Group MOU**

**ACC GOAL:** Develop social, programmatic & community resource infrastructure necessary to address food insecurity among Robeson children age 0-4

Establish	Discuss & establish mutually agreed upon objectives and outcomes, with regards to each organization's activities and contributions
Contribute	Contribute skills, resources & professional perspectives relative to each organization's means and abilities
Explore	Explore opportunities to share & expand resources, infrastructure & support

*Annaliese M. Kern:*

With all this in mind, my colleagues and I invite you all to join us in establishing a collective partnership, united by a shared vision to develop the social, programmatic and community resource infrastructure in Robeson County, so we can ultimately reduce the prevalence of preschool food insecurity that currently puts our children and our community at risk. But this partnership can only be achieved if every organization agrees to shared rules. First, our organizations must agree to discuss and establish mutually agreed upon objectives and outcomes for this ACC, with respect to how we plan to leverage our collective resources to craft an effective response to preschool food insecurity. We must also promise to contribute the valuable skills, resources, professional perspectives and talents of each of our organizations, and to explore further opportunities to continue to build and share these resources, to the extent that each organization is able.

## Group MOU – Evaluation of Success

Establish	Develop	Implement
Establish ACC, by Month 6	Develop ACC infrastructure to aid in the implementation of solutions that address preschool food insecurity in Robeson County, by end of Year 1	Implement equitable solutions that increase affordability & accessibility of healthy food options for children under age 5 in Robeson County, by Year 2

*Martha J. Bock:*

In doing so, we can achieve our first two evaluation goals: 1) to successfully establish a cohesive partnership of diverse organizations to collectively work toward a shared goal as an Accountable Care Community, within 6 months, and 2) to develop and implement the mutually-agreed upon infrastructure determined by the ACC to be necessary to achieve our goal of reducing preschool food insecurity, by the end of Year 1. Our final evaluation metric will be determined by the ACC's ability to leverage their collective resources and ideas to create equitable solutions that increase the affordability and accessibility of healthy food options in Robeson County for children under age 5. We aim to accomplish this by Year 2.

## Key Partners for ACC



EAT SMART, MOVE MORE NC



NORTH CAROLINA CHILD  
AND ADULT CARE FOOD  
PROGRAM (NC CACFP)



ROBESON COUNTY  
PARTNERSHIP FOR  
CHILDREN, INC.

*Martha J. Bock:*

To achieve the goals we have discussed, we are inviting the members of the groups listed here to join an Accountable Care Community (ACC), which is a coalition of cross-sector stakeholders that work together to improve the health in Robeson County, NC. As members of the community with high interest in our issue and significant power to address it, your respective organizations are vital to our success.

# What can you expect from us?



## Logistical Oversight

- Agenda setting
- Creating mission, vision & strategic plan
- Organizing & facilitating planning meetings
- Program implementation
- Coordinating communication
- Data collection, management & analysis
- Financial management



## Steering Committee

- 2 members from each organization
- Will govern ACC decisions
- Director of County Health Department will serve as Committee Chair



## Meeting Space

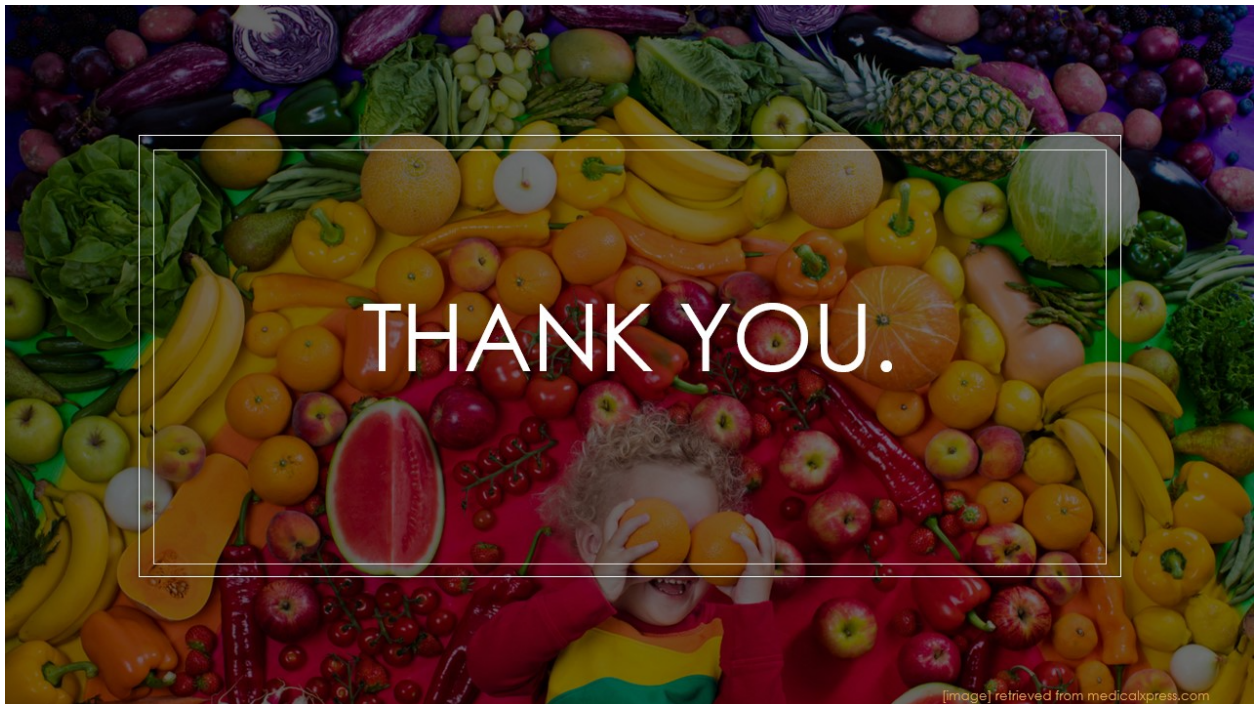
- ACC planning meetings
- Steering Committee meetings

*Martha J. Bock:*

Now, we will talk about what you can expect us to contribute to the efforts of the ACC in order to reach our collective goal to reduce food insecurity in Robeson County. As the backbone organization of the ACC, my colleagues and I at the Robeson County Health Department will oversee the day-to-day operations of the Accountable Care Community. This will include setting the agenda for the ACC; creating a mission, vision, and strategic plan; organizing and facilitating planning meetings; implementing programs; coordinating communication with community stakeholders; collecting, managing, and analyzing data; and also managing financial resources. Our first major task will be to convene 2 representative members from each of our partner organizations into a steering committee that will serve as the governing board for the ACC. My colleagues and I will provide the space for steering committee meetings and we will set the agenda. The health director of the County Health Department will serve as the chair of this committee.

We will now speak directly to those groups we hope will join in this partnership, discussing the unique role we anticipate that each organization will play in accomplishing our shared goals and how their partnership with the ACC will, in turn, benefit their own organization's goals.

***\*\*\*See Individual Presentations for individual ACC Partner Outreach Presentations\*\*\****



*Martha J. Bock:*

We hope you agree that addressing food insecurity in Robeson County, NC is a top public health priority. We believe that creating this ACC will make great strides towards improving the food environment in the county. Our work together will have drastic impacts on the health of our community, and our concentrated efforts among Robeson children will have the greatest impact. We hope that you will join our ACC and contribute your unique talents and resources to our collective effort. Together we can transform the food environment in Robeson County and give our residents the chance to live healthier lives. We look forward to developing this ACC and working with our community partners to make progress towards this meaningful goal.

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## APPENDIX B – INDIVIDUAL DELIVERABLES

### PROBLEM STATEMENT – BOCK

#### Affordable Housing in Robeson County, NC

**Introduction:** Many families across the United States cannot obtain affordable housing and are considered housing insecure, meaning the total cost of their rent and utilities or monthly home mortgage is more than 30% of their total annual income.<sup>1</sup> Unfortunately, every year, increasingly more families in the US lack affordable housing, which puts them at risk for long-term health problems and decreases the viability of communities across the country.<sup>2 3</sup> In the short term, lack of affordable housing units in a region forces residents to live in dilapidated or hazardous environments, exposing them to a variety of physical and environmental hazards like mold, lead, and radon; poor ventilation, air quality, and sanitation; and improper heating and cooling systems.<sup>4 5</sup> Over time, lack of affordable housing increases one’s risk of developing serious health complications, such as obesity, diabetes, and cardiovascular disease,<sup>6 7 8 9 10 11 12 13</sup> due to exposure to environmental hazards and financial strain. Families without affordable housing often delay visits to the doctor due to the high incurred costs and receive little preventative care or treatment for their health conditions.<sup>14</sup> In addition, financial strain can create psychological distress, which has been linked to substance use, intimate partner violence, and symptoms of trauma in adults,<sup>15 16</sup> and poor development and educational difficulties in children.<sup>17</sup> Affordable and safe housing is an important determinant of health; efforts to improve public health should include initiatives to provide affordable housing to residents. We will be focusing our efforts on Robeson County, North Carolina, where affordable housing initiatives are needed to improve public health.

**Background and Scope:** There are 3.8 million households in North Carolina, 35% of which are renters.<sup>18</sup> In Robeson County, 36% of the 46,000 households are rented.<sup>19</sup> It is estimated that about 500,000 households in North Carolina pay over half of their monthly income on housing costs alone and 43% of all North Carolina renters cannot afford a modest two bedroom apartment.<sup>20</sup> The median household income for Robeson County is below the state's level (\$32,128 for Robeson vs. \$47,884 for the state of NC) and many of the residents live below the federal poverty level.<sup>21</sup> The result is that very few residents of Robeson County live in housing that is considered affordable, and most lack the financial ability to live a healthy life. It is estimated that roughly 26% of Robeson County households are burdened by their housing costs.<sup>22</sup> The 2017 Community Health Needs Assessment conducted in Robeson surveyed 682 residents of varying demographic characteristics. Results found that only 43.6% of respondents reported having had a physical examination within the last 12 months, and 23.7% of respondents identified cost as the primary barrier preventing them from getting necessary health care.<sup>23</sup>

**Geographic and Historical Context:** Robeson County is located in the southern part of the state of North Carolina. It is the largest county in North Carolina by land area and is mostly comprised of sandhills and coastal dunes.<sup>24</sup> The area has a long history of being occupied by various Native American tribes prior to colonization, and a large Native American population still lives in Robeson County today.<sup>25</sup> Robeson is unique in that it is one of the few counties in the United States in which the population is majority-minority, meaning that the combined population of people of color (Native American, Black, and Latino) is over 70% of the total population of the county.<sup>18</sup> Native Americans comprise the largest minority population in Robeson County at 35% of the population, followed by Whites (28%), Blacks (25%), and Hispanics (6%).<sup>26</sup> During the

Civil War era, Robeson County was heavily affected by racial segregation laws. Racists organizations like the Ku Klux Klan were prevalent in the region until the late 1950s, and the threads of racial discrimination are still woven throughout the county today.<sup>27</sup>

**Determinants of Housing Insecurity:** Poverty is a root cause of housing insecurity, limiting one's ability to gain and maintain wealth and reducing opportunities to obtain affordable housing.<sup>28</sup> In North Carolina in 2015, 17.4% of North Carolina residents lived below the poverty level; this percentage was notably higher for Robeson County, where the poverty rate is 29.2%.<sup>29</sup> <sup>30</sup> It is important to note that, despite the poverty rate across all of Robeson County being higher than the state and national average, the burden of poverty falls most heavily on the racial and ethnic minority residents of Robeson County. The poverty rate for Native Americans in Robeson County is 34.9% and for Blacks in Robeson County is 26.5% (by comparison, the poverty for Whites in Robeson County is 18.1%).<sup>31</sup>

Educational attainment is an additional driver of an individual's ability to obtain affordable housing; those with a high school degree or higher are more likely to find safe and affordable housing.<sup>32</sup> Unfortunately, only 13.2% of Robeson residents possess a Bachelor's degree or higher, and the high school graduation rate is 77.1%, which is lower than the North Carolina state high school graduation rate (85.4%).<sup>33</sup> The low educational attainment for Robeson residents is likely a factor in the housing insecurity in the region. Like poverty, lack of education is more common among the minority residents of Robeson County.<sup>34</sup> The disparities in wealth and education, coupled with the troubled past and present record of discrimination along racial lines among federal housing laws and policies, continue to make affordable housing

unattainable for people of color.<sup>35</sup> Special focus needs to be made to address affordable housing in Robeson County among minority populations in order to make solutions equitable.

**Justification:** Because of the health disparities among racial and ethnic minority residents in Robeson County, and particularly minority residents living in poverty, efforts to improve housing security should be focused on this population as a priority. Out of all 100 counties in North Carolina in 2016, Robeson County was considered the worst for health factors (behavioral, clinical, social, economic and environmental factors) and health outcomes (mortality/morbidity, overall health, birth outcomes).<sup>36</sup> The mortality rate from heart disease and diabetes in Robeson County far exceed the state's rate, with significant disparities existing among racial and ethnic minority residents.<sup>37</sup> According to the 2017 Robeson County Community Health Needs Assessment, the top five leading causes of death in the county are heart disease, cancer, Alzheimer's, chronic lower respiratory diseases, and diabetes,<sup>38</sup> most of which have been linked to lack of affordable housing.<sup>39</sup> Previous efforts have been made to address affordable housing in Robeson, but often times they are limited by lack of funding and community support,<sup>40</sup> and the county still faces significant health challenges, particularly among its minority residents.<sup>41</sup>

Improving the availability of affordable housing in Robeson County for minority residents living below the federal poverty level is a public health priority because of the health concerns identified in the Robeson County CHNA<sup>42</sup> and their relationship to housing affordability and conditions.<sup>43</sup> Increasing access to safe and affordable housing among the priority population of minority residents in Robeson will improve the health disparities for these historically disadvantaged populations. Ultimately, the reduction of health disparities will improve the poor health outcomes seen in Robeson County.

## **CATWOE NARRATIVE – BOCK**

### **CATWOE for Families in the Robeson County Food Environment**

Jessica is a 32-year-old mother of 2 children. Her oldest child is 4 and her youngest is 2 years old. Jessica lives in Robeson County and is a member of the Lumbee Native American tribe. Jessica is married to Justin; Jessica has a high school education and Justin has his associate degree. Justin works a low-paying job during the day and picks up hours often to help pay for the family's expenses. Jessica recently returned to work as a medical admission secretary at night. She works a few nightshifts a week and stays home with her children during the day while Justin works. She and Justin cannot afford childcare every day, but they send their children twice a week to a low-cost facility on the mornings after Jessica's night shifts so that she can get a few hours of sleep. When they go to daycare, the children eat breakfast at the facility and Jessica does not have any control over what they eat. On the other days, she is responsible for feeding her children breakfast, lunch, and dinner. Justin works late and does not have time to help cook any meals. Because of the time it takes to go to the grocery store, Jessica only has time to go once a week on Sundays, when Justin has a day off and can watch the kids. It's too much work to take them with her during the week. When she goes to the store, Jessica must get all the food that she needs for meals during the week, and it has to be able to last a whole week, so she doesn't get very many fresh fruits and vegetables. She buys low-cost, non-perishable food items for the children to eat at breakfast, like pop tarts and fruit snacks. For lunch, she often buys boxes of macaroni and cheese or cans of ravioli. Multiple nights a week, Justin will bring home fast food for the family on his way home from work, or Jessica will get pre-made meals from her local convenience store that is two blocks from her home, because it is the only thing close and easy enough for her to go to with the children.

Jessica is only vaguely aware that fast food and pre-made meals are not healthy. She and Justin get their health care through Medicaid, and the children do not see a pediatrician often, due to the high associated cost and the inconvenience of going to the doctor. When Jessica delivered her children, she was given a bland packet of information from the hospital about breastfeeding and healthy foods for young children. After that, she never received any education on child nutrition. She buys food that is within her budget, will last a week, is something that her children will eat, and is easy to prepare because she does not have a lot of time and is constantly tired. The nutritional quality of the food is not nearly as important to her as the cost or the convenience.

Jessica would like to see the food system in Robeson County become more accessible to her and her family. The grocery store is difficult to get to and the prices are very high. She would like more options for food in her area that are cheap and accessible, so that she can save time and money. Jessica sees other families in her neighborhood struggling with this same issue and she would like to see the county support her better and give her more opportunities to feed her family in a way that doesn't strain her financial and time resources so much.

Transformation of the food environment in Robeson County would benefit Jessica and Justin, as well as the other parents of young children in the county. Making healthy food more accessible, both financially and geographically, to parents will help them feed their young children healthy foods with less time and money. Education about healthy foods that are budget-friendly and easy to make, and how to prepare them, will also help families learn how to support the nutritional needs of their developing children.

In 2015, Robeson had an overall poverty rate of 29.2% compared to 17.4% in the state and 13.5% in the US.<sup>44 45 46</sup> The burden of poverty falls most heavily on the racial and ethnic



minority residents of Robeson, with a 34.9% poverty rate for Native Americans and 26.5% for Blacks, compared to 18.1% for Whites in the county.<sup>47</sup> Poverty not only makes individuals more vulnerable to food insecurity by limiting their ability to obtain healthy, affordable food, it also increases their exposure to marketing and advertising for obesity-promoting products.<sup>48 49</sup> Transformation of the system, therefore, will likely benefit members of the community living in poverty most, and especially the minority residents in Robeson County.

The actors in this system that can bring about the transformation and provide Robeson County residents with affordable, accessible, healthy foods are the local policymakers, who make the zoning rules about where the food vendors can be located. The actors are also local businesses, like food vendors and convenience store owners, that seek food and determine prices of the products. Finally, actors include community groups and researchers that have the ability to design, implement, and evaluate programs to address food insecurity in creative and cost-effective ways.

The main owners that have power over the actors are state-level policymakers that control funding for state-level public health programming. The Robeson County Public Health Department is also an owner in this process. The owners have the ability to control and allocate spending and resources to programs that support food security in Robeson County. The main barrier for these entities is that they are cost driven. Funding can be tight, and the owners are not going to allocate money to programs or changes that are not effective or that are very expensive. This may prove to be a barrier for the transformation process, so cost needs to be considered in all solutions and the owners of the system need to be consulted and monitored closely when transformations are occurring.

There are many distal factors that affect the transformation process and contribute to the perspective of the parents and caregivers supporting young children in Robeson County. The built environment in Robeson County is not conducive to healthy eating; grocery stores are sparse and the prices are high. Often, due to socioeconomic status, vehicular constraints, and time constraints, parents are not able to get fresh foods often or at all. Many families lean heavily on fast food and highly processed foods for their children. Robeson County has a long history of systematic racial discrimination, and the neighborhoods with the most food insecurity and poverty are dealing with divestment of resources and have significant safety concerns. Additionally, there are cultural factors that dictate what parents and children like to eat; these factors will need to be planned for and considered in any solutions for food insecurity in Robeson County.

## **RASCI NARRATIVE – BOCK**

Food insecurity, defined as the disruption of food intake or eating patterns because of lack of money and other resources, is an important public health problem that needs to be addressed in Robeson County.<sup>50</sup> Compared to the rest of North Carolina, Robeson County has a higher prevalence of food insecurity among its residents.<sup>51 52</sup> Addressing food insecurity is important for preventing future health problems, because food insecurity has been linked to chronic illnesses like obesity, diabetes, and heart disease, as well as mental health problems like depression and anxiety.<sup>53 54 55</sup> It is especially important to address food insecurity among children due to the paramount importance of proper nutrition early in life and the link between food insecurity at a young age and obesity rates in adulthood.<sup>56</sup> In order to address food insecurity among children ages 0-4 in Robeson County, we will need to identify community members, leaders, and groups with an interest in the problem and the resources to contribute to a solution and form a network of these stakeholders that work together in an Accountable Care Community (ACC).

To achieve our goal of reducing the prevalence of food insecurity among Robeson County children, we will need to partner with a variety of stakeholder groups to form an ACC. The efforts of every stakeholder are important, though each stakeholder group has a different role in the ACC. The relevant stakeholders for our ACC are: preschool and early childcare centers; the Robeson County Department of Public Health; the local school board and superintendent; the NC Department of Health and Human Services, Early Education Branch/School Board; the Farm to School Coalition of North Carolina; North Carolina County Commissioners; USDA Food and Nutrition Services; local community garden owners; local grocers/food vendors/farmers/farmers markets; faith-based organizations; and other Pediatric

Nutrition Education Professionals. Creating system-level change in Robeson County and supporting the infrastructure for reducing childhood food insecurity requires the efforts of many community members united under common priorities.

Our stakeholder network will convene to address 3 common priorities. The first priority for the stakeholders in our ACC to accomplish is to build partnerships with community members, childcare and preschool staff, Robeson County Commissioner's office, and the Health Department to support efforts to increase healthy food consumption among children under 5 through hands-on food and nutrition education in preschool and daycare centers. The second priority for the stakeholders is to accomplish is to build capacity for improving access to affordable, healthy, fresh foods in Robeson County through the development and support of healthy food programs and vendors. The third and final priority for the stakeholders in our ACC is to create infrastructure that increases Robeson County residents' consumption of healthy foods such as fruits, vegetables, and whole grains, through community education efforts supported by the Robeson County Public Health Department and relevant stakeholders. By working together to make progress towards these goals, our stakeholders can ultimately improve the built environment in Robeson County so that families can obtain healthy food and decrease the overall prevalence of food insecurity among young children.

Responsibility to achieve our first priority falls on the Robeson County Health Department. They have significant experience in convening community stakeholders and uniting them under a common goal and will be able to provide the infrastructure backbone necessary for achieving our first ACC goal. As the responsible entity, they will research the options for hands-on food education program models and make recommendations. The health department will also be accountable for achieving this priority, along with the Robeson County Partnership for

Children, Inc., Eat Smart, Move More NC, and the North Carolina Child and Adult Care Food Program (NC CACFP). As the oversight organizations for childcare and child food resources in North Carolina, these groups have the most touchpoints with our population of interest and have the power, interest, and ability necessary to achieve progress toward our goal.

The Robeson County Health Department will be ultimately answerable for the correct and thorough completion of goals and delegating the work to those responsible under the second priority of building capacity for improving food access. As the accountable entity, they will align organizations with the ability to address food access, elicit feedback from community members and stakeholders, and support infrastructure needed to increase Robeson residents' access to fresh fruits, vegetables, and whole grains. Because developing and supporting healthy food programs and vendors is a county-wide endeavor, implementing the project will build on the county's resources and responsibilities. Researchers from the University of North Carolina Gillings School of Global Public Health will have ultimate ownership of capacity building to accomplish this goal. UNC public health researchers have experience in community-based project ownership and management, and this expertise will be important to ensure the necessary groups are at the table and engaged in a way that creates meaningful progress towards our goal.

The responsibility and ownership for achieving the third priority will be shared by the Robeson County Health Department and the University of North Carolina Public Health Research Team. These groups have the infrastructure, experience, and staff necessary to create community-level policies and educational resources and programming for Robeson County. The Robeson County Health Department will be held accountable for measuring and achieving progress towards this priority. Creating the infrastructure for community education will require the establishment of a diverse network of stakeholders who can contribute to efforts, and the

Department of Public Health has the power and means to collaborate these stakeholders, unite them under a common goal, and foster relationships that will address the social determinants of health that contribute to poor health and food insecurity in Robeson.

Using a stakeholder analysis tool,<sup>57</sup> we identified which stakeholders need to be involved in the ACC, but have limited roles due to the combination of their interest and power. Not all stakeholders need to have ultimate responsibility or accountability. Some stakeholders, like the school board, local parents and families, need to be consulted. In order to make progress towards the goals, the ACC needs to consult these stakeholder groups to ensure programs and policies are aligned with their interests and values; their opinions are very important and need to be considered in program design and implementation, but these stakeholder do not need to be directly involved in the operationalization of ACC projects. Similarly, the ACC will need to keep stakeholders like the District Superintendent, County Commissioner and teachers, informed. Despite having moderate interest, these stakeholders have low power with regards to achieving the ACC's goals, so keeping them in the loop is sufficient for their involvement.<sup>58</sup>

## **MEMORANDUM OF UNDERSTANDING – BOCK**

### **Memorandum of Understanding (MOU) Between Robeson County Health Department, NC CACFP, Eat Smart, Move More NC, and Robeson County Partnership for Children, Inc.**

#### **1. Purpose**

- a. This Memorandum of Understanding aims to designate the roles, responsibilities, and agreements between the responsible and accountable partners in our Accountable Care Community (ACC). The goal of our ACC is to create the infrastructure for programing and community resources with the aim of reducing the prevalence of food insecurity among children ages 0-4 years old living in Robeson County, North Carolina.

#### **2. Key Partners**

- a. The ultimate responsibility for and ownership of the efforts of the ACC will be placed on the backbone organization, the Robeson County Health Department (RCDH).
- b. The following partners will be answerable for the correct and thorough completion of the ACC's deliverables or tasks, and will be delegating the work to those responsible:
  - i. The Robeson County Partnership for Children, Inc.
  - ii. NC Child and Adult Care Food Program (NC CACFP)
  - iii. Eat Smart, Move More NC

#### **3. Scope of activities**

- a. RCDH will oversee the day-to-day operations of the ACC. This will include setting the agenda for the ACC; creating a mission, vision, and strategic plan;

organizing and facilitating planning meetings; implementing programs; coordinating communication with community stakeholders; collecting, managing, and analyzing data; and managing financial resources.

- b. RCDH will convene members of the abovementioned groups into a steering committee that will serve as the governing board for the ACC. RCDH, Robeson County Partnership for Children, Inc., NC CACFP, and Eat Smart, Move More NC will each contribute members to the steering committee. RCDH will provide the space for steering committee meetings and set the agenda.
- c. The steering committee will meet to identify community groups, organizations, and collectives with a stake in the issue of childhood food insecurity in Robeson County. They will then identify champions within each stakeholder group and meet with the champions to get their buy-in and collaboration on the project.
- d. The steering committee will convene stakeholder champions and engage them in community-led change efforts through listening sessions, town halls, and interactive meetings. Together with the stakeholders, the steering committee will identify, evaluate, and prioritize interventions to address food insecurity and tailor the interventions for the local community.
- e. RCDH will provide the infrastructure and capacity for evaluation of the ACC'S efforts:
  - i. Creating and managing a database.
  - ii. Creating an evaluation plan for all projects and ACC-led activities.
  - iii. Spearheading a dissemination plan.



- f. The steering committee will develop a sustainability plan, in which they detail strategies and methods for securing novel funding and embedding programs and resources into existing community structures.

#### **4. Activity Agreements**

- a. Prior to the implementation of any activities, the relevant parties will compile data to assess the scope of the food insecurity problem in Robeson County. The members will convene to discuss how they view the problem and the factors that lead to it. They will create a rich picture of the food environment in Robeson County, detailing possible leverage points and areas of focus for program implementation.
- b. Prior to the implementation of any programs, RCHD will facilitate the creation of detailed action and strategic plans. All stakeholders will create and sign specific agreements for each activity that dictate the mutually agreed upon outcomes and objectives for programs.
- c. Any activity that involves the exchange of funds or resources will require a separate agreement between the relevant parties.
- d. Any disagreements about activities, funds, resources, or responsibilities that cannot be solved to the satisfaction of the relevant parties will be brought in front of the advisory board for discussion. The members of the advisory board will serve as conflict mediators; once a conclusion/solution is reached, all parties will be asked to sign agreements detailing the resolution and the plan moving forward.

#### **5. Liaison**

- a. The Director of RCHD will serve as the liaison for implementing this MOU. All activities conducted under the MOU on behalf of all parties must have the written endorsement of the liaison. The liaison will sign action plans that signify the endorsement of the activities they contain. Changes to the activity plans and actions require liaison approval. The liaison will notify their counterpart should a new person be named to the position.

## **6. Terms and conditions**

- a. Effective dates
  - i. This MOU goes into effect on May 1, 2020, at midnight ET. The term of the MOU is 2 years, ending on April 30, 2022, at 11:59pm ET.
- b. Termination of agreement
  - i. This MOU may be terminated by any party involved with or without cause by giving at least 60 days' written notice to the other party and the liaisons.
  - ii. At the time of termination, activities in progress will continue, but any activities that have not yet begun will cease.
- c. Amendment of agreement
  - i. Any amendments to this MOU must be done in writing. Amendments will be submitted to the liaison and voted upon by all parties represented in the MOU.
- d. Renewal of agreement
  - i. This MOU can be renewed for 2 years via vote with majority approval.

## **7. Signatures of MOU Members**

## SPECIFIC OUTREACH TO A KEY STAKEHOLDER – BOCK

*Slide Presentation [excerpt] and Corresponding Script*



*Martha J. Bock:*

I will now turn to our final partner organization, Robeson County Partnership for Children. As the oversight entity for the statewide Smart Start Programs serving children under the age of 5, you have an important role in our Accountable Care Community.



*Martha J. Bock:*

Your knowledge of early childhood resources within our community will help us as we develop our network of community stakeholders. Your organization can help us find community partners to identify, prioritize, and implement programs that address food insecurity in Robeson County. In addition, the programs that your organization already supports, such as the Nurse Family Partnership and the Parents as Teachers Home Visiting Program, facilitate important touchpoints for families who may be struggling with food insecurity. As the implementors of these programs, you have direct contact on a regular basis with these families. You also have the power to incorporate nutrition education into the materials that you deliver to them. Eventually, the programs you run may serve as vectors for disseminating programming and educational resources to families in the county. We hope that you can use your knowledge of community resources and your existing program infrastructure to help us develop programs that alleviate

food insecurity in our county, particularly for the vulnerable population of children under the age of 4.

The infographic features a dark green vertical bar on the left with the text "Robeson County Partnership for Children, Inc." in white. To the right, on a black background, is a list of roles and contributions to the ACC, each preceded by a horizontal line and the heading "Roles and Contribution to the ACC".

Roles and Contribution to the ACC	Contribution
	Connect the ACC to families at risk for food insecurity; be point of contact
	Advise the ACC on best practices for educating the priority population and delivering program content
	Integrate nutrition education into existing curriculum
	Provide staff for conducting evaluations

*Martha J. Bock:*

As a valuable member of our Accountable Care Community, your role will contribute significantly to our success. To begin, we hope your organization can provide access to our priority population. You have created trust with and connection to Robeson County children and families, and your programs offer an opportunity for us to connect with those we wish to serve. We ask that you help us build on that trust, and connect us to the families who are at risk for food insecurity, so that we can learn their needs and develop programs that help them. Your organization will serve as the point of contact between the Accountable Care Community's steering board and the priority population. You and your staff will reach out to these families as

we enter the program planning stages so that we can hold focus groups with families and caregivers to assess their needs for nutrition programming.

Another important role you hold is to advise the ACC on the best practices for educating the priority population and delivering program content. Your years of experience delivering education to Robeson County families will be instrumental in our program planning and we will be leaning heavily on your models for educating families and caregivers. Additionally, we are hoping your organization will integrate any nutrition programming or education that our ACC develops into your existing curriculum for your home visits. As the owners of your curriculum, you will be able to integrate our content in a way that is consistent with best practices and is effective. Finally, we ask that you contribute your home visitors and nurses to help with any evaluations we conduct. This will likely be in the form of conducting a brief survey at baseline and after implementing any programming. As staff with an established rapport and connection to our priority population, we believe you would be most suited for this role.

# Robeson County Partnership for Children, Inc.

## What Can We Accomplish Together?



Steven Key (2015). Retrieved from <https://www.entrepreneur.com/article/241595>

*Martha J. Bock:*

Your mission to support the health of young children and their caregivers through collaboration with early childhood naturally aligns perfectly with the goals of our ACC; we strive for the same mission and will serve the same priority population through our efforts. We believe that one important way to accomplish this mission is by addressing food insecurity, as it is a critical social determinant of health affecting the well-being of our county. The resources we hope you will contribute are immensely important to the success of the ACC. But it is also important to highlight how we, as a collective group engaged in this ACC, can help you. As a member of our Accountable Care Community, you will have access to the Robeson County Health Department's resources and infrastructure as we work together to help you further your vision to ensure that Robeson County children and families have the capacity to achieve their fullest potential in all aspects of life. The collaborative network created by this ACC will connect and mobilize community resources and assets, and you can tap into this network to better serve your clients.

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## **PROBLEM STATEMENT – DAWSON**

### **Food Insecurity in Robeson County, NC**

One of the many social determinants of health that affects Robeson County in North Carolina is the lack of access to healthy food. Food is one of the most important aspects of our health and is something we have no choice but to engage with multiple times a day. Since Robeson County has the highest prevalence of obesity out of all the counties in North Carolina it is obvious that designing an intervention focused on food could improve the health status of the population.<sup>1</sup> Although food is vital to our health and wellness, it isn't something that everyone has access to. Rural areas tend to have significantly limited access to food outlets of all types, but they also have particularly limited access to chain supermarkets.<sup>2</sup> They do have access to some corner stores that provide some food but typically these do not have as healthy of options as this community needs. There were only 30 grocery stores or farmer's markets in Robeson County in 2014, but 98 convenience stores and 68 fast-food restaurants at this same time.<sup>3</sup> These rural communities have much less access to shop for fresh fruits and vegetables and may encourage more processed food purchases that are not as healthful.

In the context of Robeson County, this county has the highest prevalence of obesity in adults (30.2%) out of all the counties in North Carolina.<sup>4</sup> They also have a high number of citizens receiving benefits from the Supplemental Nutrition Assistance Program (SNAP) due to the number of low-income citizens in Robeson County.<sup>5</sup> Robeson County also has a high number of citizens that are living below the poverty line (1/3) which is higher than the national average of 13.4%.<sup>6</sup> 62% of Robeson County lives in a rural area<sup>7</sup> while the minority population makes up 70% of the community members in Robeson County.<sup>8</sup> Overall the priority population of interest for this social determinant of health are rural communities in Robeson County. This population is

living in low socioeconomic levels, far away from grocery stores, healthy food choices and is likely unable to access the type of food they need to be eating to maintain a healthy lifestyle.

It has been shown that the prevalence of obesity and cardiovascular disease are higher in Robeson County than in any other county in North Carolina, and these levels are also higher than the statewide statistics on obesity.<sup>9</sup> Robeson County is one of the 10% of U.S. counties that are made up of mostly minority individuals, which adds up to over 70% of its population.<sup>10</sup> This county is in deep danger of worsening their health outcomes because of poor nutrition and passing these habits on to the generations after them.

This public health problem of lack of healthy food access is affecting this population in significant ways as shown by the evidence, and the community members of Robeson County agree that it is an issue. In the 2017 Robeson County Community Needs Assessment, “healthier food choices” was the second most common response to the question “What does your community need to improve the health of your family, friends, and neighbors?” (23.0% of respondents), and 10.6% of residents indicated “access to food.” Additionally, 13.5% of residents report their community lacks the funds for food.<sup>11</sup> It is a continuing issue that is leading to poor health outcomes across the community, and there are even more burdens in the minority and rural communities.<sup>12</sup> There are statistics and studies continuously showing the dangerous health status of the citizens of Robeson County and with the low socioeconomic status of the population, it is obvious that they cannot do this alone. Even though the effects of poor nutrition and an unhealthy lifestyle are clear, and there are many interventions out there trying to combat it, there is still more work to be done. Lack of healthy food is something that offers multiple opportunities for intervention with life-saving results.

## CATWOE NARRATIVE – DAWSON

The equitable food environment in Robeson County is designed to alleviate food insecurity among children ages 0-4 in Robeson County by aligning residents with culturally appropriate opportunities to obtain healthy, affordable, and convenient food options in order to reduce the prevalence of juvenile obesity and its health consequences. In this food environment system, the government officials and policymakers are key stakeholders in this initiative. Specifically, the Robeson County commissioners are a key stakeholder in this system as they are the ones that decide how much funding the public-school system will get and they make governing decisions for the programs and policies to be implemented in the county. The county commissioners will want to see their platform be used to improve the lives of their constituents and they want them to feel like their voices have been heard. They are concerned with making sure every community member has access to food, but they are very interested in making sure this can be done with financial stability since they are the ones responsible for the budget for the county.

The transformation that needs to be addressed in order to improve the food environment in Robeson County is the allocation of finances to create equitable opportunities to alleviate food insecurity among children. The Public-School Forum of North Carolina showed that Robeson County was next to last in per-pupil spending out of the states 100 counties.<sup>13</sup> The Robeson County commissioner's pay is one of the highest in the state, and they are responsible for funding the system<sup>14</sup> so it can be assumed that based on the financial priorities that a community transformation needs to occur. If a reallocation of finances can occur more investment can be made into the health of the young students. When the county commissioner uses their power and platform to advocate for this transformation, more community members can have access to the



nutritious foods and the education they need. The county commissioner would likely like to see a healthy and thriving community, but because they are responsible for major financial decisions, they must continue to use this frame to effectively complete their job while doing what is equitable and beneficial for the community.

The customers that will be the beneficiaries in this situation are the members of the community of Robeson County. Despite past efforts to improve food access and nutrition, Robeson County still has disparately higher rates of food insecurity compared to the rest of North Carolina.<sup>15</sup> The community will benefit from these programs to continually improve nutrition and food insecurity in the community.

The actors are the major vehicles of the county government. This would include school board directors, social services, and likely the public health department director among other agencies operated by the county. These groups are supplemented by those who do not work directly with the county but can influence their decisions such as other community representatives like the city council, and the voters. All of these groups will continually ensure that action is taken when there is an issue that is important to them and their community. They will be the people who can bring about the change because they are the stakeholders who are in places of high power. Each actor will play a role in moving this intervention forward.

The owners of the process are the government officials, and the county commissioner. These individuals are in positions in the community that allow them to make decisions to dictate what programs can get funding, what projects can take off, and which projects are not a priority. The platform and power that these people hold can play a role by encouraging positive changes in the community, and making sure that improvements are constantly being made to create a more equitable culture in Robeson County.

The environmental constraints are lack of community support, financial instability, and difficulties being able to carry out long term sustainable efforts rather than short term relief. The county commissioner is an elected position and if there are issues within the government or disagreements between parties then it may be increasingly difficult to create an equitable food environment and make sure that proper funding is allocated to alleviate food insecurity in Robeson County. The issue of finances which is highlighted in our rich picture is going to be the largest factor that can either hinder or promote the effectiveness and sustainability of this transformation.

## **RASCI NARRATIVE – DAWSON**

In our RASCI analysis our goal is to address food insecurity among children ages 0-4 in Robeson County, North Carolina. The stakeholders that are important to include in our ACC and will be responsible and accountable throughout this project are the University of North Carolina Public Health researchers, the local school board, and district superintendent. Also included would be preschool and early childhood care center staff and administration as well as organizations that work with childhood nutrition such as Eat Smart, Move More NC, and the North Carolina Child and Adult Care Food Program (NC CACFP).

These individuals have been designated as responsible and accountable for accomplishing each of our goals because each stakeholder group plays a vital role in the development of programs. They each bring a different viewpoint of the population with them so that all aspects of addressing this issue can be addressed. They are in leadership roles in the community, they work with children, and they work in public health and research program development. Each stakeholder can access different parts of the community and bring individual expertise to develop program plans and options.

The stakeholders contribute to our SDOH goals by providing the resources, experience, intelligence, training, and community access to those in need. The University of North Carolina Public health research team will assist with the evaluation of programs due to their vast number of researchers, tools, and students who are capable of providing their data evaluation expertise. The nutrition organizations such as Eat Smart, Move More NC and the NC CACFP can help to design and implement programs to address our issue of food insecurity. The school district superintendent and school board also provide experience and have influential roles in the community. We are able to gain their insight into the area, the students, and what their needs

may be that we don't realize. They can help our ACC establish strategies so that food insecurity can be addressed and the children ages 0-4 can be prepared to enter the public-school system successfully. The preschools and early childhood care centers can give us an inside look into the community of interest, what their needs are, and what methods might be helpful to reach them since they are the ones that are consistently interacting with the parents and families of our age group of interest.

These stakeholders can each address different aspects of the environment in order to improve the food environment for the 0-4 age group. They will be able to build capacity for improving access to affordable health foods, and they can create infrastructures that increase Robeson County residents' consumption of healthy foods. Our stakeholders collectively can address the families of these individuals in the target age range through community and school connections, they can educate them and empower them to participate in the changes happening, and they can encourage them during the program. Our stakeholders can affect the food environment by creating programs that will empower the community and by creating policies that can enact permanent change in Robeson County. With the experience of our nutrition organizations they will be responsible for creating a program that they think will decrease the prevalence of food insecurity in Robeson County. The expertise of our childcare staff, and the district school board will ensure that the capacity for improved access to nutritious foods and they will build partnerships with relevant community members to ensure that children have access to hands-on food education.

The Robeson County Health Department will serve as the backbone organization and must continually be consulted with matters regarding the goals we are working to accomplish.

These stakeholders are responsible for meeting together, designing program systems, implementation plans, quality improvement plans, and evaluation plans. They are accountable to implement this program into the community and iteratively assess and re-assess its progress to determine the best long-term sustainable solution for the community to address the food environment in Robeson County. They will continue to do this while working on a team until they are able to confidently affect positive change in this food environment.

## **MEMORANDUM OF UNDERSTANDING – DAWSON**

### **Memorandum of Understanding (MOU) Between the Robeson County Department of Public Health and the Robeson County Childcare and Preschool Staff, Robeson County Commissioner, Robeson County School Board, Robeson County District Superintendent, Eat Smart, Move More NC, The North Carolina Child and Adult Care Food Program (NC CACFP), and the Robeson County Partnership for Children**

#### **Purpose**

The purpose of this Memorandum of Understanding (MOU) is to develop partnerships and cooperation among the backbone organization of our Accountable Care Community (ACC) the Robeson County Department of Public Health (RCDH), and the childcare and preschool staff in Robeson County, the local School Board, the Robeson County District Superintendent, and the Robeson County Commissioner. Also included to support the ACC and help establish this infrastructure will be the Eat Smart, Move More NC organization, the NC CACFP, and the Robeson County Partnership for Children. These mutually beneficial partnerships are designed to enhance healthy food consumption among children under the age of 5 through hands-on food and nutrition education in preschool and daycare centers. This partnership will reduce the food insecurity prevalence in Robeson County, North Carolina by designing and implementing a nutrition education curriculum and partnering with the Accountable Care Community.

#### **Scope of Activities**

The Accountable Care Community, in partnership with the previously mentioned Robeson County Representatives and partnering organizations aim to cooperate in areas that include, but are not restricted to the activities mentioned below. Before any of these activities are implemented the Accountable Care Community (ACC) and the Robeson County stakeholders

will address issues relevant to each party and discuss specific agreements for each participant based on the mutually agreed purpose and goals for each activity.

### **1. Opportunities for collaboration**

- a. The RCDH will manage the ACC by monitoring finances, meetings, strategies, visions and goals. The RCDH will facilitate all necessary administrative tasks including but not limited to stakeholder communication and engagement, communication with the community, and managing and analyzing data as needed.
- b. The RCDH will be available for all other parties to advise stakeholders on public health education actions.
- c. Robeson County childcare and preschool staff will share their knowledge and data on the population of interest with ACC and partnering organizations.
- d. ACC will collaborate with all stakeholders to create a robust intervention and modify goals as needed.
- e. Robeson County School Board and Robeson County District Superintendent will draft goals for program to address regarding student's preparedness to begin public school education and nutrition education needs.
- f. The Eat Smart, Move More NC organization will provide strategic intervention ideas as well as evaluation suggestions based on their previous experiences.
- g. Other partnering organizations including the NC CACFP, the Robeson County Partnership for children, and Eat Smart, Move More NC will be responsible for identifying assets in the community as well as appropriate

community members with a stake in the issue and will collaborate with the ACC as needed to form an actionable program plan.

**2. Shared personnel**

a. RCDH and ACC will ensure timely meetings with all personnel and will participate on advisory committees to oversee and assist with project management.

b. Robeson County School District Board will appoint at least 3 members to attend all meetings deemed necessary by the ACC.

**3. Advisory Committee**

a. The preschool and childcare staff will select two representatives for the advisory committee.

b. The RCDH may select relevant community stakeholders not otherwise mentioned in this MOU if they feel that they are necessary to the committee.

c. The three partnering organizations including Eat Smart, Move More NC, the NC CACFP, and the Robeson County Partnership for children may appoint two representatives to sit on the advisory committee.

d. The advisory committee will meet regularly to oversee the implementation plan.

**4. Shared Resources**

a. When appropriate, all parties may identify where resources can be shared or provided by specific parties.

b. RCDH will provide meeting space and office space and a computer for project use.



c. County commissioner's office may also provide computer for use and office space if necessary.

**5. Timely Communication**

a. Advisory committee will meet regularly to discuss progress of project. All parties will discuss and agree to a consistent meeting schedule.

b. All members will agree to communicate via email or phone. Individual members may make it clear which method of agreement is preferred.

c. Advisory committee will design quality improvement plan to continually assess progress and will effectively communicate when adjustments need to be made.

d. RCDH will appoint a liaison to manage the ACC and make sure communication and implementation of this MOU document is effective and thorough.

**6. Future Opportunities**

a. Advisory committee will investigate opportunities for project growth.

**Payment**

This agreement does not involve exchange of money between parties. If any exchange is deemed necessary it must be agreed upon by relevant parties.

**Renewal, Termination, and Amendment**

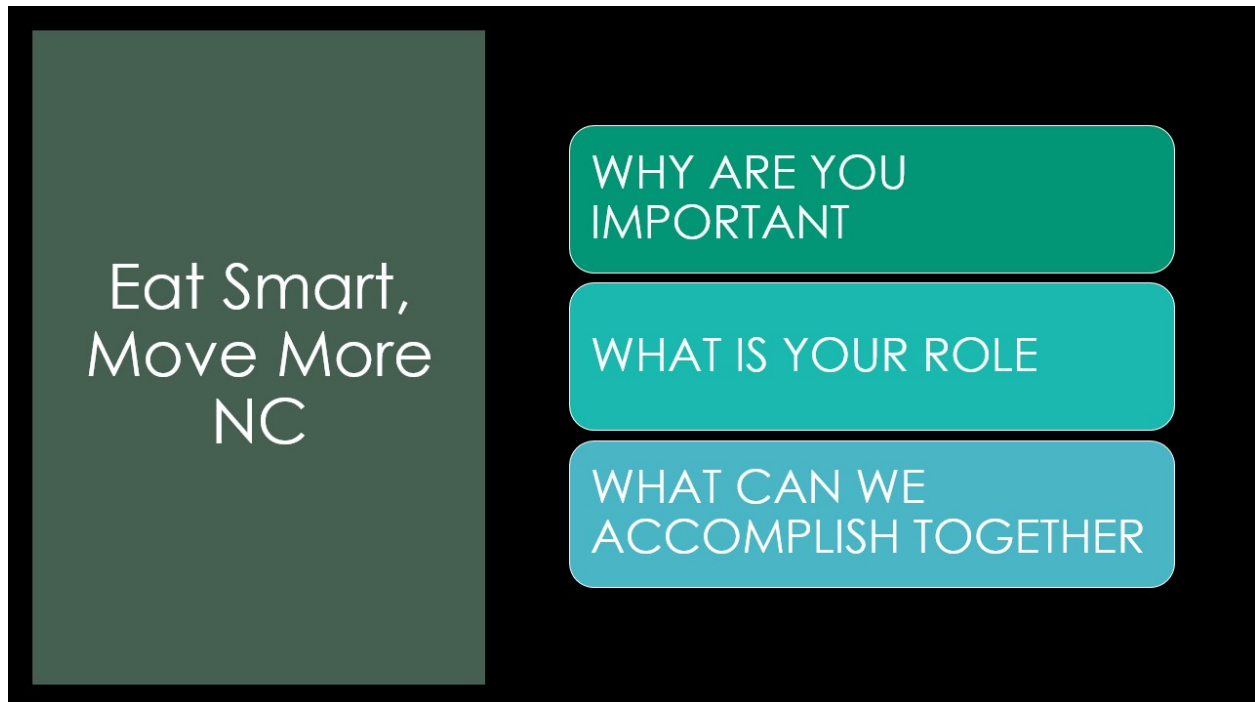
1. This MOU will remain in effect for a period of 3 years from the date of the last signature. This MOU may be extended by written consent of a simple majority of all parties.

2. This MOU may be terminated by any party by giving written notice to the other parties at least 90 days in advance of the stated termination date.
3. Termination of the MOU shall not affect progress of other activities, which will continue by other parties in accordance with their relevant terms or otherwise agreed upon.
4. This MOU may be amended with written and signed consent by relevant parties.

**Signatures of MOU Members:**

## SPECIFIC OUTREACH TO A KEY STAKEHOLDER – DAWSON

*Slide Presentation [excerpt] and Corresponding Script*



*Kenedy Dawson:*

First, I would like to address the Eat Smart, Move More NC representatives. I would like to talk about why your organization is important, what we believe we can accomplish together by inviting you to be a part of our Accountable Care Community, and what your specific role will be in this ACC so that we can discuss our hopes and expectations for what it will look like for us to work together. Because your organization is a statewide movement that promotes healthy eating, and your organization also consists of a multi-disciplinary team and a wealth of previously established partners across the state we felt it was important for your organization to contribute your resources, partnering organizations, and strategies to this Accountable Care Community.

# Eat Smart, Move More NC

Why are you important?

Local government resources

Previously established partnerships

- NC Child and Adult Care Program

*Kenedy Dawson:*

So, why are you important? The Eat Smart, Move More NC organization site already has resources catered to local and state government entities. We hope to tap into this network that will help us to accomplish our shared goals. We feel that with your previous experience in local government and established partnerships with organizations that this ACC will very likely encounter that having your organization as an ally will help us to quickly establish key stakeholders and expand our ACC members. Your organization also has an established partnership with the NC Child and Adult Care Food Program, another prospective member of our ACC, and we hope we can leverage this already existing partnership. Your prior experience and expertise implementing food insecurity programming will be vital to the efforts of the ACC. Through your organization, you have successfully designed and implemented programs centered on nutrition and physical activity in the state North Carolina and you have great resources that can be catered to our preschool population. Thus, you have vast knowledge of the etiology of

food insecurity, and a deep understanding of what makes health programming successful. We feel like we can use this knowledge to strengthen any future programs our ACC designs.

Eat Smart, Move More NC

- How will you be involved?

Activities and Roles			
Curriculum Design	Integration	Intervention	Evaluation

*Kenedy Dawson:*

So, the next question we will discuss is how we hope your organization will be involved in our Accountable Care Community. The Eat Smart, Move More NC organization will provide strategic curriculum designs that can include the resources the Accountable Care Community has been able to leverage to create a curriculum that can be adapted and sustainable for Robeson County. You will be responsible for integration of the curriculum and system design into the local government system. As we have previously discussed your organization already has resources that can be used in this context and your organization is very valuable in that respect. The ACC also hopes that your organization will provide methods for intervention in the community given your previous expertise, as well as evaluation suggestions so that our Accountable Care Community can ensure we are positively impacting the existing infrastructure

in Robeson County and reinforcing some of the work your organization has already done in the community. We hope that these clear roles and expectations will a set a strong foundation for our future partnership, and give you confidence in the value of your contributions.



*Kenedy Dawson:*

Lastly let's discuss what we can accomplish together with this ACC, allowing your organization to continue its important mission while also taking part in the exciting changes that our ACC hopes to make in Robeson County. Your goal to reverse the rising tide of obesity and chronic disease among North Carolinians by helping them to eat smart, move more and achieve a healthy weight can be realized through the efforts of our ACC. By collaborating together and pooling our respective resources, we believe we can help realize your organization's vision to create a North Carolina where healthy eating and active living are the norm, rather than the exception. We hope that your organization will consider partnering with us to achieve our collective goals together.

## REFERENCES – DAWSON

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## **PROBLEM STATEMENT – KERN**

### **Food Insecurity in Robeson County, NC, Census Tract 9608.01**

**Introduction:** Robeson County has disparately higher rates of food insecurity compared to the rest of North Carolina.<sup>1 2</sup> Food insecurity is defined as the “disruption of food intake or eating patterns because of lack of money and other resources.”<sup>3</sup> Such disruptions may increase the risk of developing diet-related chronic illness, like obesity, type 2 diabetes, and coronary heart disease,<sup>4</sup> as well as various mental health issues, like depression, anxiety, and suicide ideation;<sup>5 6</sup> <sup>7</sup> however, the long-term health risks are far greater when food insecurity is experienced early. In addition to the previously mentioned risks, food insecurity experienced by children between ages 0 to 4, who are undergoing critical developmental stages, carry additional risk:<sup>8</sup> during the first years of life, food insecurity can change the fundamental neurological architecture of a child’s brain and central nervous system, increasing their risk of poor health, suffering developmental or growth impairments, experiencing social and behavioral problems and performing poorly in school, compared to their food-secure peers.<sup>9 10</sup> Furthermore, “food insecurity in a child’s first years is associated with obesity at age 4, even after accounting for other factors.”<sup>11</sup> Given the paramount importance of proper nutrition early in life, efforts to improve public health should include initiatives to provide affordable and accessible healthy food options to residents, especially those under age 5. Therefore, our efforts will focus on improving food security in Robeson County, targeting residents ages 0-4 in Census Tract 9608.01, where food access and security are greatly needed to improve public health.<sup>12</sup>

**Geographic & Historical Context:** Robeson, the largest county by land area in NC, is located in the southern part of the state and is mostly comprised of sandhills and coastal dunes.<sup>13</sup> The

area has a long history of being occupied by various Native American tribes prior to colonization.<sup>14</sup> Robeson is unique in that it is one of the few counties in the United States in which the population is majority-minority, with over 70% of the population consisting of people of color.<sup>15</sup> Native Americans comprise the largest minority group in the county at 35%, followed by Whites (28%), Blacks (25%), and Hispanics (6%).<sup>16</sup> During the Civil War era, Robeson was heavily affected by racial segregation laws, and racist organizations like the Ku Klux Klan were prevalent in the region until the late 1950s. Consequently, threads of racial discrimination are still woven throughout the county today, contributing to health disparities;<sup>17</sup> <sup>18</sup> in 2017, Robeson was ranked the least healthy county in NC, and poor health indicators were most prevalent among people of color.<sup>19</sup>

Poverty is also grounded in racist legacies and is a root cause of food insecurity. In 2015, Robeson had an overall poverty rate of 29.2% compared to 17.4% in the state and 13.5% in the United States.<sup>20</sup> <sup>21</sup> <sup>22</sup> The USDA defines Robeson as *persistently poor*, for both adults and children, meaning 20% or more of the population was living in poverty for three consecutive censuses.<sup>23</sup> <sup>24</sup> It is important to note that, despite the poverty rate across all of Robeson being higher than the state and national average, the burden of poverty among children in the county falls most heavily on the racial and ethnic minority residents: among Robeson children living in areas of concentrated poverty, 54.8% are African American, 33.1% are Hispanic and 38.6% identify themselves in ‘other’ non-white racial and ethnic groups (including American Indian). In comparison, only 23% of White children in the county live in concentrated areas of poverty.<sup>25</sup> Poverty not only makes individuals more vulnerable to food insecurity by limiting their ability to obtain healthy, affordable meals, it also increases their exposure to marketing and advertising for obesity-promoting products that further exacerbate poor nutritional intake.<sup>26</sup> <sup>27</sup>

Furthermore, the closure of 9 manufacturing plants in 2013 propelled economic decline and increased poverty rates across the county, leaving workers who often had no more than a high school diploma out of work in a job market that increasingly demands a college degree. As jobs shrink, economic decay is perpetuated, because “laid-off workers have less money to inject into the economy, additional support jobs are lost, businesses lose revenue, and more strain is put on social services.”<sup>28 29 30</sup> Then, in October 2016, Hurricane Matthew hit the county, causing historic flooding, 67 mph winds, and economic devastation.<sup>31</sup> Hurricanes Florence and Dorian furthered destruction in 2018 and 2019, respectively. Despite resilience and cohesiveness displayed by the Robeson community, the impact of multiple hurricanes in succession furthered financial devastation and created extra barriers to medical care. Additionally, chronic stress, mental anguish, and substance abuse habits have developed in the community, especially in households displaced by the storms.<sup>32 33</sup>

Lastly, much of Robeson is considered rural, which limits access to healthy food options. In general, rural areas tend to have significantly limited access to food outlets of all types, but they also have particularly limited access to chain supermarkets.<sup>34</sup> Not surprisingly, Robeson lacks conveniently located grocery stores; in 2014, there were only 30 in the county,<sup>35</sup> and 6.86% of households were without a car. Moreover, 35.04% of low-income households were located more than one mile away from the nearest supermarket.<sup>36</sup> At the same time, there is an abundance of convenience stores and fast-food restaurants in the county (98 and 68, respectively), offering cheap, unhealthy food options.<sup>37</sup> The rurality of the county limits residents’ access to fresh fruits and vegetables while the abundance of convenience stores and fast-food restaurants may encourage the purchase and consumption of processed food that impede a healthy diet.

**Priority Population:** Robeson County, Census Region 8: Tract 9608.01, situated within the town of Lumberton, has a population comprised of 85.5% non-white individuals. It has the highest health disparities of any county (z-score = 1.47) according to an index combining indicators from 3 domains: Social & Neighborhood Resources, Economic, and Housing & Transportation, into an average score. According to this index, Tract 9608.01 is a food desert, with 3,003 residents out of 4,535 reporting low access to both grocery stores and healthy foods. The tract also reports 27.2% of households have no vehicle, further impeding access to healthy food. Furthermore, 54.1% of the population lives below poverty, making the tract a *concentrated poverty* area, with a 21.9% unemployment rate – the highest of all tracts in Robeson County.<sup>38</sup>

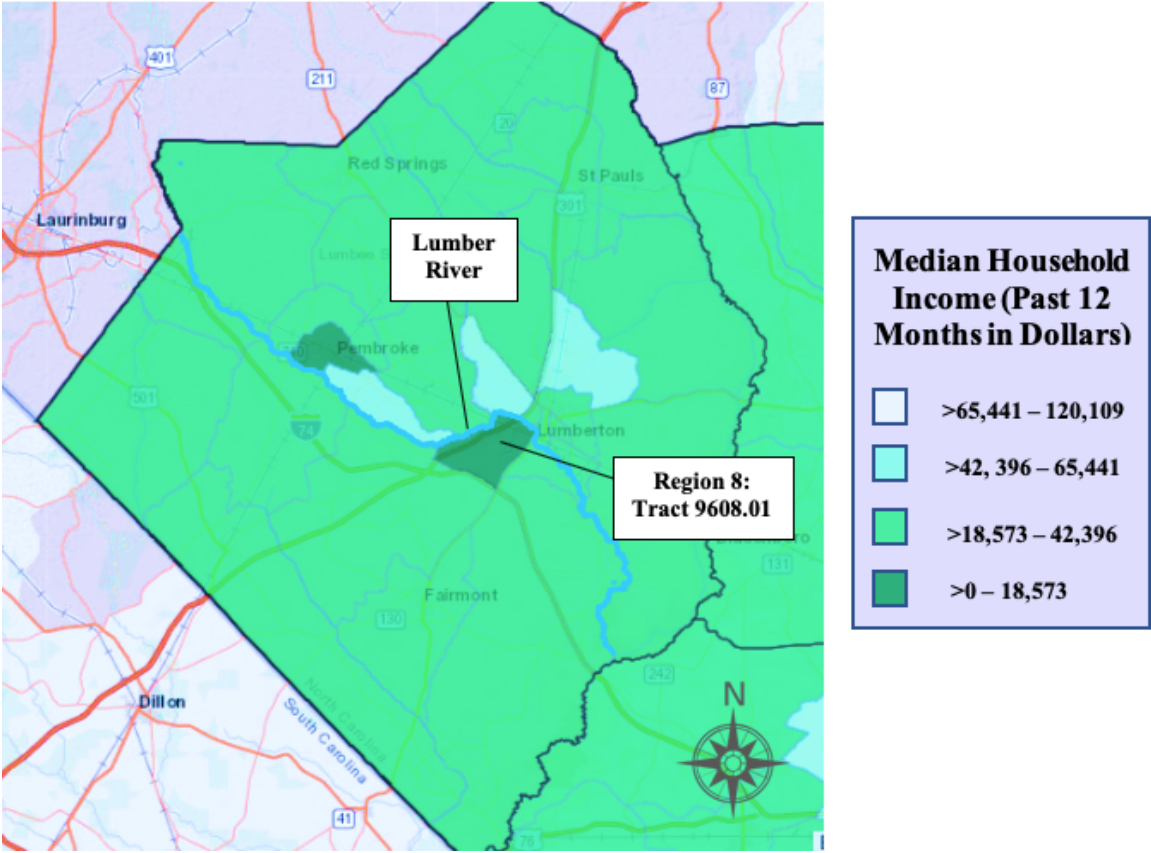
Additionally, compared to all surrounding tracts, Tract 9608.01 has the lowest median household income in the past 12 months, at \$16,101.<sup>39</sup> The Lumber River forms the northern border of this tract, placing residents at an increased risk of flood-related injuries and damages, as well as physical displacement due to high water, especially during severe weather.<sup>40</sup> All of these factors correlate with a higher risk of food insecurity, especially for children who rely on adults, and their financial wellbeing, for their nutritional needs.<sup>41</sup> For these reasons, this public health intervention will focus on non-white residents under the age of 5 living within Tract 9608.01. *\*Appendix A.1\**

**Measures of Problem Scope:** Despite existing health infrastructure, like Wellness on Wheels, Healthy Communities A-Z, community gardens, and mobile grocers, Robeson had a 19.8% food insecurity rate compared to 14.6% in NC, in 2017.<sup>42 43</sup> This has resulted in a high obesity risk, especially among poorer individuals and those without cars, who are forced to rely on less-healthy food options from convenience stores, gas stations, and fast-food restaurants. In the 2017

Robeson County Community Needs Assessment, “healthier food choices” was the second most common response to the question “What does your community need to improve the health of your family, friends, and neighbors?” (23.0% of respondents); 10.6% of residents indicated “access to food.”<sup>44</sup> Moreover, 62% of children age 0-5 in Robeson live in households below 200% Federal Poverty Level and 29% of Robeson children under the age of 18 live in a food-insecure household.<sup>45</sup>

**Rationale/Importance:** Food insecurity does not exist in isolation, and low-income families in Robeson County are affected by multiple, overlapping issues, resulting in a vicious cycle that creates and exacerbates food insecurity, along with its corollary factors, including racial inequalities, poverty,<sup>46</sup> and physical and mental health problems;<sup>47 48 49 50 51 52 53</sup>. Therefore, to improve the poor health among Robeson County residents, food insecurity must be addressed.<sup>54</sup> Furthermore, interventions must focus on residents in Census Tract 9608.01 under the age of 5, due to their particularly high vulnerability: due to both numerous chronic health concerns associated with early-childhood food insecurity, but also because young children in this particular census tract face additional challenges, including historically poorer health outcomes, geographic proximity to the Lumber River, and a history of devastating natural disasters that have rendered the region disproportionately more vulnerable to food insecurity.<sup>55 56</sup>

**Appendix A.1: Median Household Incomes in Robeson County**



*Adapted from State Center of Health Statistics. (n.d.). Story Map Series*

The image above shows a map of Robeson County, NC, with arrows pointing out Region 8: Tract 9608.01 and the Lumber River that makes up the northern border of Tract 9608.01. As demonstrated by the color gradients (see legend above, right), this tract suffers from a disproportionately lower median household income compared to all surrounding census tracts.

## CATWOE NARATIVE – KERN

Early Childhood Education (ECE) staff believe that the equitable food environment in Robeson is designed to (P) alleviate food insecurity and promote consumption of healthy foods (Q) through increased availability to healthy food options and educational programming to expand and reinforce positive food-based learning already being done in preschools and daycare centers (R) in order to empower kids aged 0-4 with the knowledge to engage their nutritional health and expand their curiosity for healthy foods, all while simultaneously building a healthier food environment in the surrounding community.

Preschool and daycare center staff act as key actors within the early-childhood food environment of Robeson County, providing healthy and consistent meals to their preschool students, who may not otherwise have dependable access to healthy food in their home environment. This is because 30.3% of children in the county live in food insecure homes.<sup>57</sup> Yet, many of the children between ages 0-4 are sent to ECE programs for the majority of their waking daytime hours. During these hours, ECE staff is charged with meeting the daily pediatric nutritional needs of each of their students through school breakfasts, lunches, and snacks.<sup>58</sup> This is also an opportunity for the children to try to new foods, tastes and textures in order to expand their interest and curiosity in a variety of healthy foods. That, in turn, helps them to get variety in their diet so they can consume the adequate vitamins and nutrients necessary to achieve nutritious and balanced diets, in preschool and as they age.<sup>59</sup> Moreover, because 10,690 kids in Robeson alone qualify for free and reduced priced school meals, it is clear that schools are poised to play a central role in transforming the preschool food environment to a more equitable and healthier one.<sup>60</sup>

In addition to their consistent, proximal access to students, ECE staff believe they should play a crucial role in improving early childhood nutrition because they understand the profound impact that food and nutrition has on their students, in particular: the majority of their students fall between the ages of 0 to 4, and are, therefore, experiencing critical stages in their development. Knowing that the development experienced in these first few years of life is so principal to the establishment of foundations of health that will impact a child's lifetime trajectory,<sup>61 62 63</sup> ECE staff are motivated to contribute their time and effort to their student. They believe their positive influence on food and nutrition education in the first four years may prevent, or at the very least mitigate chronic illness and other comorbidities associated with early-childhood food insecurity and malnutrition.<sup>64 65</sup> Furthermore, given the fact that students in Robeson preschools and daycare centers rely so heavily on school meals as their main – or possibly only – meals of the day, ECE staff feel their inclusion in efforts to improve preschool food security and nutritional attainment is indispensable.

However, the current food environment leaves many staff members frustrated by unaddressed barriers that prevent them from effectively meeting their students' nutritional needs. While the Division of Child Development and Early Education at the Department of Health and Human Services necessitates that all lunches served in preschool programs and daycare centers must meet USDA guidelines for healthy snacks and meals, ECE staff often complain that they cannot control the food and nutritional content of meals that children bring from home.<sup>66</sup> They also struggle with 'picky eaters,' or students who have no interest in eating healthy or unfamiliar food, even when it is offered. Regrettably, much of the school food budget is spent on fruits, vegetables and whole grains that kids refuse to eat.<sup>67</sup> Thus, school staff know that simply providing more healthy food options will not suffice; instead, they want to offer formal



educational programming that will teach students to be more amenable to, and curious about unfamiliar and healthy foods, helping schools to serve healthy food that will be eaten rather than thrown away.

Moreover, when there is a birthday, holiday, or any school celebration, parents send their children to school with desserts and other sweets to share with classmates,<sup>68</sup> leaving even less room in their students' small stomachs for healthy meals. Not only do teachers want educational programming that would increase student interest in healthy food consumption, they also hope these educational opportunities could include parents, too. This way, healthy food messaging and experiences kids learn in the classroom could be reinforced at home. However, school staff know that many of their students come from low-income homes. Some families have very limited food budgets while others are completely reliant on food pantries for their food. Similarly, less healthy, processed foods are often cheaper or more likely to be sold in the neighborhoods where their students live.<sup>69</sup> So, teachers want a program that would allow parents to take home fresh, healthy food at low or no cost and without needing to travel far to access it – ideally, at the preschool or daycare center, itself – so money and geographic access would not be a barrier to participation. Not only would this involve parents in healthy food education and alleviate food insecurity and malnutrition, it might also lead to an increased demand for healthy foods, like fruits, vegetables and whole grains, as families become more comfortable with healthy food in their diets. This, in turn, might increase business at local grocers – in place of fast food restaurants or convenient stores – helping to boost local business. It might also attract additional healthy food markets to the area, stimulating Robeson's economy, which is currently suffering from widespread and prolonged poverty as well as limited grocery and healthy food markets<sup>70</sup> – contributing factors of preschool food insecurity and nutrition gaps in the county.<sup>71</sup>

Unfortunately, despite ECE staff's desire to see formal food curriculums and activities in their preschools and daycare centers, Robeson County has no such programs in place and has no plans to implement them in the future.<sup>72</sup> Staff believe this political disinterest and general dearth of food and nutrition programming in the county are modern-day examples of a continued legacy of discriminatory and racist policies that largely shaped Robeson over the years.<sup>73</sup> They see the abysmal per-pupil spending in Robeson (\$525 per student in Robeson versus an average of \$1,568 per student in NC) – despite the fact that Robeson gets the most low-wealth funding of any county in North Carolina (receiving approximately \$17 million in 2017) – as one of many examples of discriminatory policies that funnel money away from an already struggling economy<sup>74</sup>, further exacerbating equity gaps, food insecurity and malnutrition, and solidifying Robeson's low health ranking, vis-à-vis the rest of the state.<sup>75</sup> Thus, staff believe that the County Commissioners must take responsibility to right the wrongs of unfair policies by throwing their financial and political support behind a early childhood food and nutrition education program for children in Robeson County. They also believe the Robeson County Health Department could assist in coordinating this curriculum, and provide resources for its sustained success. With this help, ECE staff believe they could support – and likewise, receive support from – education programs in their county, to teach young students to eat healthy food when it is served – at school and at home, rather than leaving it on their plate, untouched.<sup>76</sup> Furthermore, this curriculum may increase healthy food options in the neighborhoods where their students reside, boost local economies, and encourage parental participation in the goal to end food insecurity and malnutrition in kids under five in Robeson County, NC.

## **RASCI NARRATIVE – KERN**

The Accountable Care Community (ACC) will attempt to reduce the disproportionately high prevalence of food insecurity and malnutrition of children under the age of five in Robeson County, NC through hands-on, multi-sensory food and nutrition education<sup>77</sup>. The staff of Early Childcare Education (ECE) centers, including preschool and daycare programs; parents and guardians of children under five; Robeson County Health Department (RCHD); Robeson County Partnership for Children, Inc. (RCPCI); NC Child and Adult Care Food Program (NCCACFP) and Eat Smart, Move More (ESMM) will be included as partners in the ACC. To the extent they are able, all partners will work collectively, through resource-sharing and open communication, to achieve mutually-agreed upon activities and objectives that address the complex etiologies of early childhood food insecurity and malnutrition, through an educational intervention, reducing their prevalence and negative impact on children in the county.

Staff of preschool and daycare centers will play a central role in the ACC intervention involving food and nutrition education for three reasons: first, ECE centers have consistent, daily contact with preschoolers, accounting for the majority of a child's waking hours; second, these institutions provide their young students with daily meals, including breakfasts, lunches and snacks, and; third, due to their consistent contact hours and meals with preschoolers, they are responsible for a majority of the teaching and development of foundational dietary and nutrition habits in each student, which will ultimately play a role in how each child develops and grows in preschool and beyond.<sup>78</sup> Furthermore, because ECE centers provide consistent care to Robeson preschoolers, they have a built rapport with the community, including parents and preschoolers; thus, they are poised to be accountable leaders in the community, able to stimulate community support and adherence to ACC objectives while also taking on the responsibility of overseeing

the interventions and the positive changes in the daily lifestyles of preschoolers each school day. Likewise, due to their unparalleled access to, and expertise on the daily lives and needs of children under five in Robeson County, preschool and daycare centers should also be consulted throughout the process, as well as shadowed in the classroom on pre-determined school days, so the ACC can gain an understanding of which interventions will work, which are infeasible or unsuccessful, and why.

Additionally, preschools and daycare centers are institutions created to serve the Robeson community and thus, they are well positioned to undertake the responsibility of being included in an ACC, for the purpose of serving the food and nutrition needs of young children in the county. This is intrinsically different from individual stakeholders – like preschool parents and guardians – who are not necessarily beholden to the prosperity and advancement of the general community, beyond their own household. However, like ECE staff, parents are experts in their child’s life and their needs. For this reason, they will be included in the ACC, acting in a supportive role. It is hoped that their inclusion will further inform the ACC’s design and implementation process of early-childhood educational interventions, while simultaneously encouraging parents to support and reinforce their child’s food and nutrition education within the home environment. Evidence from other early childhood health interventions suggests that these hopes are well-founded: “parent communication and engagement strategies are an important component...to implementing setting-based interventions to promote child health,<sup>79</sup> especially considering the parent or guardian’s role in sustaining any nutritional improvements or learned behaviors<sup>80</sup> resulting from an intervention. Moreover, given the limited agency and independence afforded to children under five, with regards to their food environment, parental involvement and support of the ACC teaching points are crucial to the intervention’s success.

Next, the Robeson County Health Department (RCHD) is another public institution created with a responsibility to serve the needs of the Robeson community, to be included in the ACC. Much like ECE centers, the RCHD's accountability to preschoolers' food and nutritional needs is intrinsic – evident in their current oversight of the federal nutrition assistance program for women and children up to five years of age (WIC) as well as the “comprehensive child health and wellness care for patients ages birth to 21 years,” including preventative health services and nutrition counseling, offered by RCHD<sup>81</sup>. And, not only do these programs demonstrate RCHD's accountability to county-based preschool-age nutritional health interventions, they also demonstrate the organization's aptitude for successfully implementing, operating and coordinating multiple, simultaneous interventions across the county. RCHD's existing resources, coordination experience, and commitment to childhood food and nutritional health make them a vital partner to the ACC. Their logistical support and accountability to the ACC's intervention would ensure that the food and nutrition-based curriculum would have the leadership, resources and guidance necessary to deliver consistent, effective and engaging education to young children across the county<sup>82</sup>. Moreover, as a centralized point of coordination, RCHD could establish county-wide objectives, standards, and provisions for program evaluation, as well as delegate ACC powers to appropriate stakeholders, to ensure that hands-on, multi-sensory learning opportunities<sup>83</sup> were equitably distributed across diverse early-childhood populations throughout Robeson County.<sup>84</sup> Lastly, RCHD could work collaboratively ECE staff and the parents, combining their knowledge of public health practice and evidence-based interventions with teachers' and parents' expert knowledge of preschoolers and their needs, in order to craft innovative interventions to fulfill the ACC's objectives<sup>85</sup>.

Robeson County Partnership for Children, Inc. (RCPCI) is yet another community-centered group, like RCHD, naturally situated for both supportive and accountability roles in the ACC. RCPCI collaborates with ECE programs in Robeson County to provide guidance and resources to ensure quality education and health promoting opportunities for children between the ages of 0-4<sup>86</sup>. Their built rapport with preschool and daycare organizations in the county, as well as their experience creating unique programming to address the age-specific needs of children under five would make them a valuable ACC partner. Likewise, NC Child and Adult Care Food Program (NCCACFP), run by the USDA's Food and Nutrition Services (FNS), "ensures that eligible children...who attend qualifying non-residential care facilities receive nutritious meals" through state and federal grants<sup>87</sup>. Given that 62% of Robeson children between age 0-5 have both parents working, and that 62% of the same population cohort are living below 200% Federal Poverty Level, it is reasonable to assume that most of these children are attending an ECE center that receives meals provided by NCCACFP<sup>88</sup>. Thus, the inclusion of this partner in the ACC would be imperative, given their existing authority over the nutritional standards and food served in early-learning settings in Robeson County. Their ability to support, guide and sanction ACC food and nutrition interventions - including nutritional competencies and any food tasting activities that were incorporated into the curriculum - adds value and legitimacy to the intervention. Additionally, their inherent accountability to the ACC's goal of improving the food and nutritional needs of preschoolers in the county further confirms their natural incorporation into the ACC. Finally, Eat Smart, Move More (ESMM), a North-Carolina-based initiative promoting multidisciplinary approaches to engaging community members to increase their opportunities for healthy eating and physical activity could also play a supportive role in the ACC<sup>89</sup>. Their experience creating and implementing wellness programming across the

state and across all age groups, including preschoolers, equips ESMM with expertise that could support the development and ultimate success of the ACC intervention, such as guidance on wellness programming design, best practices, evidence-based strategies, and learning and training resources. The inclusion of these three partners within the ACC would diversify the expertise of the group, increasing the opportunity to envision a successful, hands-on, multi-sensory intervention<sup>90</sup> to address food insecurity and malnutrition among preschoolers aged 0-4 in Robeson County. It also ensures that the ECE staff and parents, who are most directly responsible for childcare and development of these children, are equipped with a strong support system of ACC members, who are deeply invested in their success - both as it relates to the ACC intervention, and more broadly, as it relates to early childhood health overall. Together, the diverse commitment and expertise in this ACC will fuel the intervention's success, shorten learning and training phases, reduce anxieties stemming from changes brought by the intervention, and increase the buy-in and trust – of the ACC partners – for the intervention and the process steps it requires to elicit positive transformation in the county.<sup>91</sup>

## **Appendix A.2: ACC Priorities for System Transformation**

***\*\*FOCUS OF RASCI NARRATIVE, ABOVE\*\* Priority 1: By 2022, we aim to build partnerships with childcare and preschool staff, parents, and Robeson County Health Department, as well as Robeson County Partnership for Children, Inc., NC Child and Adult Care Food Program, and East Smart, Move More to support efforts to implement a hands-on, multi-sensory food and nutrition education intervention,<sup>92</sup> with the aim to decrease the prevalence of preschool food insecurity and malnutrition in children age 0-4 in Robeson County, NC.***

**Priority 2:** By 2022, we aim to build capacity for improving access to affordable, healthy, fresh foods in Robeson County through the development and support of healthy food programs and vendors. The Robeson County Health Department will align organizations with the ability to address food access, elicit feedback from community members and stakeholders, and support the infrastructure needed to increase Robeson County residents' access to fresh fruits, vegetables, and whole grains.

**Priority 3:** By 2022, we aim to create infrastructure to increase Robeson County residents' consumption of healthy foods such as fruits, vegetables, and whole grains, through community education efforts, supported by the Robeson County Health Department and other relevant stakeholders.



Who is...	Priority 1	Priority 2	Priority 3
<b>Responsible:</b> owns the problem/ project	Robeson County Health Department (RCHD)	University of North Carolina Public Health Researchers	Robeson County Health Department (RCHD)  University of North Carolina Public Health Researchers
<b>Accountable:</b> ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible	Robeson County Health Department (RCHD)  Eat Smart, Move More NC  Robeson County Partnership for Children, Inc.  NC CACFP	Robeson County Health Department (RCHD)  Eat Smart, Move More NC	Robeson County Health Department (RCHD)  Eat Smart, Move More NC
<b>Supportive:</b> can provide resources or can play a supporting role in implementation	Robeson County Health Department (RCHD)  Department of Public Social Services (DPSS)  County Commissioners  Local grocers/food vendors/farmers/farmers markets  Local community garden owners	Robeson County Health Department (RCHD)  University of North Carolina Public Health Researchers  County Commissioners  Local grocers/food vendors/farmers/farmers markets  Local food banks and community garden	Robeson County Health Department (RCHD)  University of North Carolina Public Health Researchers  Local grocers/food vendors/farmers/farmers markets  Local community garden owners  Local chefs

	<p>Farm to School Coalition of North Carolina and other Pediatric Nutrition Education Professionals</p> <p>USDA Food and Nutrition Services</p>	<p>owners</p> <p>City Council Members</p> <p>School Board members</p> <p>Community groups/faith-based organizations</p>	<p>Nutrition professionals</p> <p>Community groups/faith-based organizations</p>
<p><b>Consulted:</b> has information and/or capability necessary to complete the work</p>	<p>Robeson County Health Department (RCHD)</p> <p>Parents and families</p> <p>NC CACFP</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>Parents and families</p>	<p>Robeson County Health Department (RCHD)</p> <p>University of North Carolina Public Health Researchers</p> <p>Parents and families</p>
<p><b>Informed:</b> must be notified of results, process, and methods, but need not be consulted</p>	<p>Parents and families</p> <p>County Commissioners</p> <p>School Board</p> <p>District Superintendent</p>	<p>Parents and families</p> <p>County Commissioners</p> <p>City Council</p>	<p>Parents and families</p> <p>City Council</p> <p>Teachers and childcare professionals</p>

**MEMORANDUM OF UNDERSTANDING – KERN**

**MEMORANDUM OF UNDERSTANDING between the Robeson County Health Department, Robeson County Preschool and Daycare Centers, North Carolina Child and Adult Care Food Program, Robeson County Partnership for Children, Inc., and Eat Smart, Move More**

**PURPOSE**

A. The purpose of this Memorandum of Understanding (MOU) is to facilitate partnerships between local groups and organizations within Robeson County, North Carolina. Partners will work together as part of an Accountable Care Community (ACC) to collectively facilitate a hands-on, multi-sensory food and nutrition education intervention<sup>93</sup> to address food insecurity and malnutrition<sup>94</sup> among residents aged 0-4 in Robeson County, NC. Participating in this ACC is the Robeson County Health Department (henceforth referred to as *RCHE*), who will act as the Anchor Organization; preschool and daycare staff (henceforth referred to as *ECE staff*); the North Carolina Child and Adult Care Food Program (henceforth referred to as *NCCACFP*); the Robeson County Partnership for Children, Inc. (henceforth referred to as *RCPCI*), and; Eat Smart, Move More (henceforth referred to as *ESMM*).

**SCOPE OF ACTIVITIES**

RCHE, ECE staff, NCCACFP, RCPCI and ESMM agree to the following scope of activities including, but not limited to:

- A. Collectively facilitate the ACC's objective of designing and implementing a hands-on, multi-sensory intervention addressing food insecurity and malnutrition among Robeson County residents aged 0-4, incorporating evidence from previous educational interventions in early childhood health.<sup>95 96 97</sup>
- B. Contribute skills, resources and professional perspectives to fulfill ACC objective, including, with consent of RCHD, reaching out to other organizations who may add value to the ACC objective.
- C. Commit to ongoing and honest communication and exchange of resources and research pertaining to ACC objective, including materials, publications, and information.
- D. Explore opportunities to expand shared resources, including but not limited to supplies, time, space, staffing and partnerships to support ACC objective.
- E. Attend ACC meetings, or inform RCHD Director in advance of one's anticipated absence from a meeting.
- F. Stay informed of ACC decisions and actions through ongoing meeting attendance, telecommunications, and ACC monthly updates, which will be compiled and distributed to all ACC partners by RCHD one week following the conclusion of every meeting.
- G. Consider and explore a wide range of opportunities for how to design and implement an intervention that successfully achieves ACC objectives, to the satisfaction of all ACC partners.
- H. Seek ongoing inclusion of community members and parents in the design, implementation and evaluation of ACC education-based intervention.

- I. Commit to ongoing, transparent communication with community stakeholders about program developments and decisions as well as successes and opportunities for improvement.
- J. Ensure education-based intervention is designed and implemented in a way that equitably addresses food insecurity and malnutrition among children ages 0-4 in Robeson County, NC.
- K. Ensure ongoing-evaluation of ACC intervention; commit to adapting intervention based on analysis of evaluation data collected.
- L. Agree that the execution and ownership of daily functions and responsibilities of each ACC partner group, per their organization, will continue to be the sole responsibility of that individual partner group, regardless of their involvement in the ACC.
- M. Appoint two individuals, within each ACC partner group, to be representative of that ACC partner group within the overall ACC, participating in the Steering Committee. Within this role, each representative will oversee that any communications from the ACC, via the RCHD or Steering Committee meetings, are distributed and received by all relevant members within that ACC partner organization. As it is unlikely that every member within an ACC partner group will be present at all, or even the majority of meetings, these appointed individuals are responsible for attending all ACC and Steering Committee meetings or finding a suitable stand-in in advance of their anticipated absence.
  - a. The RCHD Director agrees to act as a representative for the RCHD partner group.

## ACTIVITY AGREEMENTS

- A. Before any procedural steps relating to the implementation and evaluation of the ACC intervention take place, all ACC partners must discuss the relevant issues to the satisfaction of each member and enter into specific activity agreements based on the mutually agreed objectives and outcomes of the intervention. Activity agreements will include such terms as the following:
- a. The education of students in preschools and daycare (ECE) centers shall continue to be the sole responsibility of the ECE staff.
  - b. Treatment of patients and execution of public health programs at RCHD shall continue to be the sole responsibility of the RCHD, and shall be governed by its rules and regulations.
  - c. The oversight that ensures that all eligible children of qualifying non-residential care facilities receive nutritious meals funded through the Child and Adult Food Program, and the regulations established to conduct the national program within the state of North Carolina, shall continue to be the sole responsibility of NCCACFP.
  - d. Individual organizational responsibilities of ACC partners, including responsibilities and commitments to partners or organizations unaffiliated with the ACC, will continue to be the sole responsibility of that organization.
  - e. All ACC partners shall retain the exclusive right to appoint their respective staff and division directors.

- f. RCHD agrees to accept the responsibility of providing logistical support, including equitable funding and resource allocation to the extent necessary to successfully execute ACC objectives.
- g. RCHD agrees to provide a meeting space for the ACC partners to convene, including for the purpose of Steering Committee meetings, and to record all decisions and actions agreed upon in such meetings, which they will distribute to all ACC partners within one week following any meeting.
- h. RCHD will give assistance for the recruitment and training necessary to meet the needs and quality assurance outlined in the mutually agreed upon ACC objective.
- i. To the extent that they are able, each ACC partner will make opportunities, programs, research, and resources relevant to the ACC objective available for use by the ACC.
- j. To the extent that they are able, ECE staff will give honest feedback and share personal perspectives related to their student body that are relevant to the ACC objective and its implementation.
  - i. ECE staff will agree to be shadowed during a minimum of four pre-determined, mutually agreed upon school days, by members of the Steering Committee, to gain understanding of the needs and unique challenges of preschool-aged children in the county.
- k. Although independent, each ACC partner will work together as a unified group towards common goals pertaining to ACC objective.
- l. RCHD agrees to facilitate ongoing community and parent communication and feedback relating to the ACC objective; input from community stakeholders and

parents will be used to inform the design and implementation of the food and nutrition education intervention

- m. To the extent they are able, ACC partners agree to incorporate previous evidence-based practice to inform the design of an education-based intervention; design will pay particular attention to inclusion of diversity and multiculturalism through different pedagogical methods and teaching activities; design will embrace the intersectionality and historical perspectives that influence how different races, ethnicities and cultures approach eating and sharing meals.<sup>98 99</sup>
  - i. ECE staff agrees to provide experiential feedback on proposed teaching methods and activities, in the context of their classroom challenges, needs, and student-body makeup, to determine what approaches are most and least likely to be effective in the Robeson County ECE setting.
- n. By end of Month 6, ACC members will establish a cohesive partnership and Steering Committee to collectively work toward the creation and implementation of hands-on, multi-sensory food and nutrition education for children in Robeson County under the age of 5;
  - i. All members will ratify this Memorandum of Understanding (MOU) by conclusion of Month 2.
  - ii. Each partner organization will appoint two individuals to represent their ACC group within one week of ratifying this MOU.
    - 1. These representatives are responsible for attending at least one ACC meeting on behalf of their organization before the conclusion of Month 6.



- o. By end of Year 1, ACC will identify and investigate potential food and nutrition education interventions for implementation, evaluate and prioritize these interventions, and determine specific action steps.
  - i. A detailed action plan to implement education intervention among children ages 0-4 in Robeson County, NC will be established by Year 1.
- p. By end of Year 2, ACC will leverage collective resources, skills and ideas to implement the action plan developed in Year 1.
  - i. ACC will launch education-based Pilot intervention by end of Year 2.
- q. By end of Year 2, and each subsequent month following, time-series evaluation will be conducted by RCHD to measure Pilot intervention efficacy.
  - i. A change from baseline of nutritional competency among preschoolers will be assessed through time-series surveys, completed on a monthly basis, starting at the end of Year 2.
  - ii. A change in fruit and vegetable uptake from baseline among preschoolers will be determined using a Veggie Meter, an innovative, non-invasive tool which measures a person's fruit and vegetable intake through body levels of indicator nutrients.<sup>100 101</sup>
  - iii. RCHD will compile evidence into monthly reports to be distributed to each ACC partner.
- r. Education-based Pilot intervention will conclude at the End of Year 3.
  - i. Best practices, lessons learned, and suggested revisions will be considered and discussed by ACC, until all parties are satisfied.

- ii. Mutually-agreed up revisions will be documented and disseminated among ACC partners, and to community members and parents of Robson County; recommendations for how to fulfill these revisions are included.

B. Budgets and sources of finances for the activity:

- a. Grant allocations obtained for the purpose of the ACC shall be distributed as determined by the granting agency, or on such equitable basis as may be agreed upon by all partners. RCHD will oversee the equitable disbursements of allocated funds.
- b. Each ACC partner shall continue under the control of its own officers and boards of directors of trustees, and each shall remain solely responsible for all aspects of the management of its own affairs.
- c. The costs attributable to fulfilling individual programmatic responsibilities, duties and partnerships unaffiliated with ACC objectives shall remain the financial responsibility of each individual partner's institution.

C. Detained management of intellectual property rights and publications

- a. All ACC partners agree to encourage staff to participate in research projects and program learning and to provide facilities and access to data for use of the ACC in accordance with its own capabilities and needs.
- b. Any publications as the result of the ACC initiative by members of the ACC shall acknowledge all ACC partners

## **LIAISON**

- A. The Director of RCHD will serve as the liaison for implementing this MOU. All activities conducted under the auspices of this MOU must have the endorsement of the liaison. Liaison shall notify all ACC partner representatives should a new person be named to the position. Any representative of an ACC partner group must notify the liaison if they wish to relinquish their role, and the replacement representative must be approved by the liaison; the replacement representative will sign below the former representative's signature, once liaison's approval has been granted.

## **RENEWAL, TERMINATION & AMENDMENT**

- B. This MOU shall remain in force for a period of three years from the date of the last signature, which should be obtained no later than April 24, 2020. This MOU may be extended by the written consent of the parties, with two signatories to represent each of the six partner groups, with the Director of RCPH signing as both the MOU liaison and a signatory representative of the RCHD.
- C. This MOU may be revised by the written consent of the partners, with one signatory from each ACC partner group to represent the approval of the ACC. Any updates and amendments to the MOU will be clearly marked in a contrasting color so all signatories are aware of the changes before adding their signature of approval.
- D. This MOU may be terminated by any party by giving written notice to the liaison and all other ACC partners at least 180 days in advance of the stated termination date.

E. Prior to the completion of the initial term of this MOU, RCHD will assess the impact and effectiveness of this ACC and report their recommendations for future agreements to the respective representatives of each ACC partner group.

In witness thereof, the parties have offered the signatures of two signatories, representative of each partner group, and the ACC liaison:

**SIGNATURES OF MOU PARTNERS:**


## SPECIFIC OUTREACH TO A KEY STAKEHOLDER – KERN

*Slide Presentation [excerpt] and Corresponding Script*



*Annaliese M. Kern:*

I want to welcome the representatives of the Child and Adult Care Food Program of North Carolina with us today and discuss what your organization would contribute to this ACC. Given your longstanding involvement serving the nutritional needs of preschool children in Robeson County, we hope that with your partnership, the ACC can gain valuable insight on USDA standards for preschool meals as well as learn from your unparalleled experience implementing preschool based food programming in diverse communities across North Carolina. We also believe that your participation will have the added benefit of supporting your own program mission through the ACC's development of cross-sector infrastructure and resources dedicated to the eradication of food insecurity among Robeson preschoolers.



State of North Carolina  
**Child and Adult Care Food Program**

[logo] Retrieved from [http://www.capefear tutoring.com/CFImages/cacfp\\_logo.gif](http://www.capefear tutoring.com/CFImages/cacfp_logo.gif)

- Financial assistance to serve USDA-certified nutritious meals and snacks to preschoolers during school day
- Ensures consistent, affordable, nutritious food in preschool & daycare settings, where preschoolers spend majority of waking & meal hours
- Most preschool and daycare centers in Robeson County eligible for CACFP meal and snack reimbursement

*Annaliese M. Kern:*

As demonstrated in the previous slides, the Robeson community disproportionately suffers from a high prevalence of poverty and food insecurity, meaning that most preschool and daycare programs in the county qualify to receive financial reimbursements from your organization to cover the cost of serving every student a USDA-certified meal and snack each school day. This not only makes nutritious food consistently affordable, but also consistently accessible to Robeson preschoolers.

## NCCACFP's Role in the ACC & Ending Preschool Food Insecurity



Provide guidance & logistical support for ACC intervention development & implementation



Ensure USDA compliance, accessibility & consistency



Offer financial insight



Contribute to relationship and network building among community stakeholders

*Annaliese M. Kern:*

Thus, we hope that North Carolina Child and Adult Care Food Program can provide guidance and logistical support to the ACC to create an intervention that meets USDA-nutritional standards, and ensures the same accessibility and consistency that your own food program offers. We also hope to gain your financial insight on how to fund and support a far-reaching and inclusive food and nutrition program, like yours, and to leverage your rapport with preschool and daycare centers, parents, and government officials across Robeson County to build relationships as well as gain buy-in and trust from community stakeholders who will likely be affected by the ACC and its intervention.



Annaliese M. Kern:

Furthermore, we would love to learn and integrate your experience forming educational opportunities and activities with diverse organizations like *Eat Smart, Move More*; *Early Sprouts*; *Ready Set Grow*; and other programs under the *Farm to CACFP*. We believe these partnerships highlight your experience addressing childhood nutrition with creative, non-traditional, multicultural and hands-on approaches that we, too, hope to embody in our ACC intervention, working collectively to address the multiple dimensions and complex etiologies of early childhood food insecurity and malnutrition.





## Shared Goals for **Greater Impact**

Shared goal – ending preschool food insecurity

New minds working for a solution

Development of infrastructure and resources to combat preschool food insecurity

**Greater success and reach of current and future NCCACFP endeavors**

Getty Images [image] Retrieved from nbclafino.com

*Annaliese M. Kern:*

Ultimately, the ACC wants to leverage your organization's dedication and experience to addressing food insecurity, as well as your expert understanding of the complex nature of preschool nutritional needs. Your professional and community networks and your built rapport with North Carolina community stakeholders will also add value to the ACC. But we also believe that our shared resolve – of the ACC and the Child and Adult Care Food Program – to end food insecurity among Robeson preschoolers will naturally work to support your own organization's interests, not just the ACC. With interdisciplinary expertise and resource-sharing among our partners, as well as financial support from the local health department, the ACC can develop infrastructure and community assets that will, no doubt, reinforce the valuable work you have already achieved in Robeson County, and further the success of any work the Child and Adult Care Food Program undertakes in the future. Helping to make your goal, and our goal, a shared reality through an ACC partnership.

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