

# **Increasing Economic Stability for Incarcerated Working-Aged People in Burke County, North Carolina**

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A Capstone Project submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment  
of the requirements for the degree of Master of Public Health in Leadership in Practice.

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## ABSTRACT

Diamond Black, Vanessa Ramlal, Caitlin Whitcomb & Alexander Zhang: *Increasing Economic Stability for Incarcerated Working-Aged People in Burke County, North Carolina*

(Under the direction of Sarah Diekman, 1st Reader, & W. Oscar Fleming, 2nd Reader)

In Burke County, North Carolina, previously incarcerated individuals have lower economic stability due to unemployment, lower education levels, and low socioeconomic status (Burke County Health Department, 2022). One year after exiting prison, 51% of formerly incarcerated individuals do not have a job and earn below the federal poverty line (NC Commerce, 2023). Evidence shows that well-established reentry processes including continuing education and steady employment reduce recidivism (NIJ, 2023). More educational training for incarcerated individuals results in lower rates of recidivism; less than a high school degree results in a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). We determined short, medium, and long-term focus goals, and established guidance for potential hurdles in building an incarceration education program. An education program for incarcerated individuals in Burke County will improve long-term health and economic stability by offsetting the social determinants that lead to nonviolent criminal behavior (Parker, 2022).

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## **Common Proposal**

### **Introduction**

Economic instability for incarcerated and previously incarcerated individuals results from poverty, unemployment, median household income, percent of income spent on living expenses, and recidivism. The incarcerated population who does not have adequate education and job training face economic challenges including chronic poverty, homelessness, and food insecurity (Parker, 2022). Individuals with a criminal record face legal limitations and social stigmas that prevent gainful employment. One year after exiting prison, 51% of formerly incarcerated individuals do not have a job and earn below the federal poverty line (about \$7,000 per year) (NC Commerce, 2023). Four years after incarceration, about 60% of all individuals are unemployed and earn less than the U.S. median wage (Prison Policy Initiative, 2022). As outlined in a Healthy People 2030 goal for economic stability among working-aged people, our recommendation is to launch a program that supports individuals seeking employment aged 16 to 64 (U.S. Department of Health and Human Services, 2024). Education methods focused on learning, social skill development, and vocational training combat recidivism, unemployment, and low income (Magee, 2021). Burke County has about an 88% high school graduation rate, compared with over 89% in the state overall (Burke County Public Schools, 2023). The majority of the employed population in Burke County have at least a high school degree, while less than 5% of incarcerated individuals have their high school degree (Statista, 2023). Providing additional education and job training resources for working-aged people who are currently and formerly incarcerated in Burke County, North Carolina, will increase individual, county, and state-wide financial constancy and overall well-being.

### **Social Determinants of Health Analysis (SDOH)**

Social determinants of health (SDOH) are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing stability, poverty, employment, and food security (CDC, 2023). Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (CDC, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann,

2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). Educational programs that address upstream tactics for increased employment through higher literacy and job training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

### **Contextual Analysis**

Unemployment and economic instability among incarcerated and previously incarcerated individuals are a wicked problem, with multiple complex social or cultural problems and an unknown number of potential solutions (Ramaswamy, 2022). This is evident in the causal loop diagram (CLD) formulated through this group's research, as seen in Appendix A, Figure 2, and the CLD reveals that to promote economic stability for incarcerated individuals, factors such as education will need to be addressed to affect actual change. The system leverage points, including system infrastructure, information flows, organizing principles and mindset, are crucial elements of understanding the component parts of addressing economic instability (Ramaswamy, 2022). System infrastructure is the increase of resources, educational programs, and information flows to aid sharing information about housing, employment, health care (Ramaswamy, 2022). Organizing principles fundamentally change the rules of the system by addressing harsh sentencing laws and unfair conviction policies. Similarly, the leverage point mindset can be difficult to adjust, as individuals maintain personal opinions and beliefs (Ramaswamy, 2022).

Several Burke County organizations aim to improve education among the formerly incarcerated. In 2018, the Burke County Sheriff's Department previously provided education tablets for Burke County inmates to increase employment (Royal, D. 2018). The United Way Burke County is a private organization that focuses on housing stability (Burke County United Way, 2020), and the Center for Community Transitions, focused on reentry and the

provision of resources to those formerly incarcerated (Center for Community Transitions, 2024). Additionally, the existing policy landscape provides visibility into possible long-term changes for the Burke County Health Department. In 2019, Burke County launched the Helping Achieve Recovery through Burke Opioid Use Reduction-Law Enforcement Assisted Diversion, or HARBOUR-LEAD program to help address substance abuse among low-level offenders (BurkeNC.org, 2019). In Burke County, individuals seeking treatment for substance use disorders are predominantly working-aged adults aged 19-60 (BSAN, 2023). Focusing on substance use treatment directly impacts economic stability because substance use is associated with a higher risk of job loss and unemployment, and the unemployed population has higher instances of relapses after treatment (Nolte, 2023). The FAFSA Simplification Act restored Pell Grant eligibility for confined or incarcerated individuals (Federal Student Aid, 2023). However, incarcerated students are not eligible for the Pell Grant if they are in a federal or state penal institution, which is about 30% of North Carolina's incarcerated population (Prison Policy Initiative, 2023). Pell Grant student aid is unavailable for incarcerated individuals who have defaulted on student loans, and new studies found that almost 100% of incarcerated individuals in the U.S. are in default on student loans (Edelman, 2023). Incarcerated individuals are also blocked from federal student loans, and most incarcerated individuals do not have an income or make less than \$1 per hour (Edelman, 2023). The Pell Grant policy requirements create a prohibitive environment for incarcerated individuals to break out of student loan debt, diminishing their access to better education, employment, and housing stability after release. The Fair Housing Act ensures that landlords or other housing agencies do not discriminate against individuals, which directly address biases for previously incarcerated individuals who struggle to obtain loans and homes (Civil Rights Division/ US Justice Department, 2023).

To improve economic stability through better inmate education programs for nonviolent offenders, the Burke County Commissioner can fulfill the reaccreditation process for Activity 24.3 to engage with local health department staff by engaging in orientation and continuous training through education activities (BurkeNC.gov, 2024). Our recommendation is to focus on building a group of education navigators, with one educator in each jail or prison that houses Burke County residents, who will be trained and responsible for the education of inmates (BurkeNC.gov, 2024). Continuous quality improvement (CQI) will be useful in creating and maintaining the training and education activities of Burke County education navigators. Pursuing a project of improved economic stability for the formerly incarcerated via education stands to further leverage improvements in the system of



economic stability in the county, and also provide a route towards reaccreditation for the Burke County Public Health Department.

### **Recommendation for Action**

We recommend working with the Executive Director from Burke County United Way as a key community member who has local experience and perspective for engagement when addressing the health inequities that incarcerated populations, stemming from the Director's extensive community volunteer experience, resources, and education experience (Burke County United Way, 2020). To engage with the Burke County United Way organization, we recommend building a relationship, hosting community meetings, and soliciting feedback to lay the foundation of a system design evaluation (Burke County United Way, 2020). We recommend using an experience-based codesign process, which will allow Burke County leaders to focus on the perspectives of the inmates and ensure retention rates in a transformative experience with jail administration, nearby higher education providers and formally incarcerated advocates in local major employers being invited to practice in the co-design process. By highlighting that the goal of this project is to benefit incarcerated individuals and employers, we will utilize personas user stories needs and quality characteristics to truly highlight who this project aims to help (Rice, 2023). To ensure the intended outcome of this incarceration education program, we recommend an ongoing data analysis data, tracking information, sharing for local leaders to ensure maximum community engagement, resource allocation, and inclusivity (Rice, 2023). Our recommendation is to focus on building a group of education navigators, at least one in each jail or prison with Burke County residents, who will be trained and then responsible for the education of inmates (BurkeNC.gov, 2024). Continuous quality improvement (CQI) will be useful in creating and maintaining the training and education activities of Burke County education navigators through tools such as brainstorming, benchmarking, and the Kaizen methodology (Schenck, 2022). Using the Lean Six Sigma strategy will help the Burke County Commissioners' office create short-term, medium-term, and long-term improvements for training and education (Schenck, 2022). Short-term goals to achieve the unmet activity will be to identify and train education navigators for each jail and prison and establish a meeting cadence and communication process. Medium-term goals will be to increase education programs and achievement for inmates based on pre-determined KPIs. Long-term goals will be to increase employment, increase economic stability, and decrease recidivism.

Paired with our recommended initiative we have identified policy changes that could potentially benefit the target population. To help the target population we identified three policies that may have negative impacts on

incarcerated individuals that could be changed to benefit them. We focused on the HARBOUR-LEAD project, The Fair Housing Organization initiative, and the Pell Grant. By creating a Pugh Matrix to rank the policies that would best effect change in our project, we selected the Fair Housing Organization Initiative because lawmakers propose eliminating background checks to combat discrimination for this target population (HUD Public Affairs, 2023). We recommend supporting this rule change to decrease discrimination against previously incarcerated individuals as well as offer more housing opportunities to this demographic (HUD Public Affairs, 2023). This policy is also recommended because this rule has already been proposed and will not cost Burke County financially but will simply need support from Burke County’s lawmakers (HUD Public Affairs, 2023).

### **Conclusion**

The social determinant of health, economic stability, should be a public health priority for the Burke County Commissioners due to the direct correlation between neighborhood and built environments and long-term health outcomes (ODPHP, 2021). Burke County policymakers are responsible for the equitable distribution of education and job training resources for vulnerable communities to promote long-term health success (Public Health Leadership Society, 2019). While Burke County goals for lowering incarceration rates or recidivism are not published publicly, two of the top five “focus areas” for the Burke County Commissioners and the Burke County Board of Health in the 2023-2024 fiscal year are community advancement and economic growth/sustainment, indicating a commitment from county leaders to invest in the improvement of unemployment (BurkeNC.org, 2024). The cost per inmate in Burke County is over \$6.6 million annually (NC Department of Adult Correction, 2022), and individuals have 84% higher earning potential with more than a high school diploma (APLU, 2024). The Burke County Board of Commissioners’ top initiatives for 2024 are improved employment, education, healthcare, and environmental sustainability, signaling the importance of dedicating resources to a population who is often overlooked but directly impacts the county’s economic outcomes (BurkeNC.org, 2024). We recommend that an upstream intervention begins while individuals are incarcerated for nonviolent crimes because increasing literacy and education attainment for the incarcerated population will have multi-generational economic impacts for Burke County. By supporting the reentry process for inmates through proactive education and job training while incarcerated, the Burke County Commissioner will address social determinants of health and improve economic stability.

# Appendix

## Appendix A:

### Appendix A.1: Educating the Incarcerated Rich Picture



Figure 2: Incarceration in Burke County, NC - Causal Loop Diagram

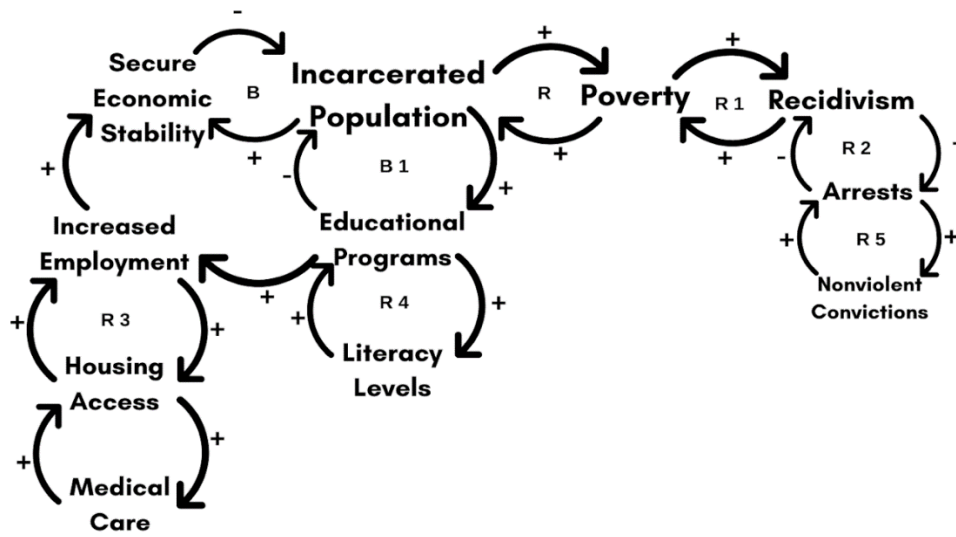


Figure 3: Educational Program - Shifting the Burden - Archetype

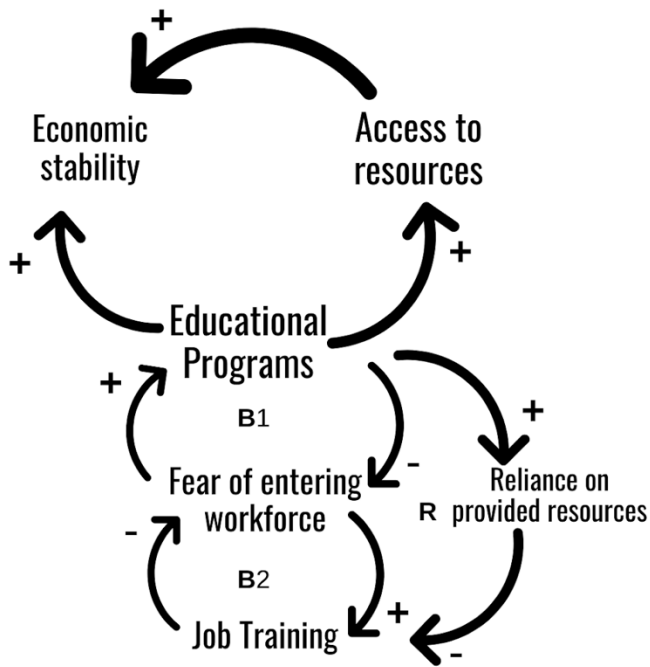


Figure 4: Presentation Slides

**Slide 1: Increasing Economic Stability for Incarcerated Working-Aged People in Burke County, North Carolina**  
Presented by: Diamond Black, Vanessa Ramal, Caitlin Whitcomb & Alexander Zhang  
Dr. Sarah Diekmann, Dr. Oscar Fleming

**Slide 2: Table of Contents**  
01. Introduction  
02. Methods  
03. Overview of SDOH  
04. Key Insights (from Concentration Deliverables 1 & 2)  
05. Recommendations  
06. Conclusion

**Slide 3: Introduction**  
01. Introduction  
Why Does Educating Incarcerated Individuals Benefit Burke County's Economic Stability?

**Slide 4: Benefits to Burke County Economic Stability**  
This initiative will target:  
1. Disproportionate Incarceration Rates by Race  
2. Homeless Rates  
3. Poverty and Unemployment Rates

**Slide 5: Benefits to Burke County Economic Stability**  
1. Disproportionate Incarceration Rates by Race  
In 2020, the population was 87,551 and, of this population, 5% were Black.

**Slide 6: Benefits to Burke County Economic Stability**  
2. Homeless Rates  
• The homeless rate continues to increase in Burke County.  
• In the 2020 Burke County Health Assessment, homeless rates were deemed an area of concern that needed attention.

**Slide 7: Benefits to Burke County Economic Stability**  
3. Poverty and Unemployment Rates  
Of the 5.6% unemployed population in Burke County:  
• 20% are American Indian or Alaskan Native  
• 17% are Black

**Slide 8: What led us to focus on this topic and target population?**  
• There is minimal data and research for this population's education levels in Burke County.  
• Social Determinants of Health prohibited economic success for previously incarcerated individuals.  
• Initiatives have been established in Burke County that target education for this population however have zero follow-up of success.  
How will this initiative aid Burke County and the target population?  
Increase Employment Rates, Increase Education Rates, Decrease Recidivism Rates, Decrease Homeless Population

**Slide 9: Methods**  
02. Methods  
Research and Evaluation for the Burke County Commissioner's Request on Economic Stability Improvement

**Slide 10: Methodology for Evaluating Economic Stability Levers**  
Request by County Commissioner  
Economic Stability Research in Burke County: Based on review of latest community health assessment  
Current and Past Policy Research in USA: Based on review of current policy interventions  
Current evaluation of Burke County Jail Education: Causal loop diagram, fishbone diagram, stakeholder analysis, and current research  
Synthesis of recommendations: Prior steps condensed and summarized into recommendations and insight

**Slide 11: Overview**  
03. Overview  
Social Determinants of Health for Incarcerated Individuals Related to Economic Stability

**Slide 12: What are Social Determinants of Health?**  
Education Access and Quality, Health Care and Quality, Neighborhood and Built Environment, Social and Community Context, Economic Stability

**Slide 13: Social Determinant of Health: Economic Stability**  
Bar chart showing employment and real median annual wage earnings for formerly incarcerated individuals vs all individuals in 2014.

**Slide 14: Social Determinant of Health: Economic Stability**  
Bar chart showing racial disparities in North Carolina prison and jail incarceration rates.

**Slide 15: Key Insights**  
04. Key Insights  
Programs, Policies, Engagement, Accountability, and Leadership Strategies

**Slide 16: Key Insights: Existing Policy Landscape**  
Direct Policy: Local Government (63% of people in jail/prison have substance use disorders (SUD), 30% inmates with SUD receive treatment services), Indirect Policy: Federal Level (FAFSA Simplification Act - Pell Grant, 30% inmates in federal/state institutions, 100% inmates in default on student loans). HARBOUR-LEAD Project supports treatment and recovery services to reduce recidivism. Federal Student Aid is limited based on federal/state institution and student debt, blocking education pathways. A long-term goal is to focus on substance use disorders, student loans, and discriminatory policies.

**Slide 17: Key Insights: Existing Policy Landscape**  
The Fair Housing Initiative Programs (FHIP). With these initiatives being developed the U.S. Department of Housing and Urban Development (HUD) created The Fair Housing Act, which ensures that landlords or other housing agencies do not discriminate against individuals. However, there is a background check that applicants have to undergo to get approved to participate in the initiative.

**Slide 18: Key Insights: Existing Policy Landscape**  
Pugh Matrix table with columns: Community Support, Cost to State, Feasibility of Community Implementation, Impact, Community Support, Political Support, Sustainability, Score.

Community Support	Cost to State	Feasibility of Community Implementation	Impact	Community Support	Political Support	Sustainability	Score
High	Low	Yes	High	Yes	Yes	High	Medium
Medium	Medium	Yes	Medium	Yes	Yes	Medium	Low
Low	High	No	Low	No	No	Low	Low

Figure 4: Presentation Slides (Continued)

**Key Insights: Quality Improvements**

**Quality 2**

Unmet Activity 24.3: *The local health department staff shall participate in orientation and ongoing training and continuing education activities.*

→ Create Education Navigators for all jail/prison locations with Burke County residents and develop a COI process to coordinate efforts that align on engagement, preparedness for implementations, retention/turnover, training capacity, case managers for education in each location

- Near-term focus: Identify Education Navigators for inmates
- Medium-term focus: Increase education achievement
- Long-term focus: Increase employment and economic stability, decrease recidivism

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**Key Insights: System Complexity**

- Incarceration and its relationship with economic stability is a wicked problem.
- System leverage points include:
  - System infrastructure
  - Information flows
  - Organizing principles
  - Mindsets

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**Key Insights: Systems Co-Design**

**Using a Co-Design Process to Address Complexity**

- Working with involved stakeholders to detect and address hidden issues
- Creating infrastructure to address complexity with diversity from within Burke County by Burke County

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**Key Insights: Engaging Stakeholders**

**Identifying Key Stakeholders**

- Analyzed community members who may be helpful of interested in this initiative
- Developed a stakeholder analysis matrix
- Identify which stakeholders would be best for this project

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**Key Insights: Engaging Stakeholders**

Stakeholder	Power	Area of Interest	Project Phase	Engagement approach	Engagement Tools
Sheriff of Burke County	High power	Public	All	Collaborative	Initial face-to-face interview and highlight benefits
Director of United Way of Burke County	Low Power	Community	All	Collaborative	Initial face-to-face interview and highlight benefits
Center for Community Transitions	Low power	Community	All	Collaborative	Initial face-to-face interview and highlight benefits

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**Key Insights: Engagement Methods for Leadership**

**Engagement of community partners**

Burke County United Way Executive Director

**Engagement Facilitators**

- Shared goals
- Aligned community engagement principles

**Engagement Methods**

- Relationship building
- Community meetings
- Asking for feedback

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**05. Recommendations**

Moving Forward with Education Incarcerated Individuals in Burke County, NC

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**1 Short- and Medium-term Focuses**

1. COI processes should establish education navigators for all jails and prisons
2. Relationship building with key stakeholders + local partnerships + increased information flows = program success

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**1 Short- and Medium-term Focuses**

1. COI processes should target education alignment for all jails and prisons
2. Relationship building with key stakeholders + local partnerships + increased information flows = program success

**2 Long-term Focuses**

1. All inmate educators should follow KPIs for student success, academic quality, and civic engagement
2. Establish diversity, increase community involvement & feedback sessions

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**1 Short- and Medium-term Focuses**

1. COI processes should target education alignment for all jails and prisons
2. Relationship building with key stakeholders + local partnerships + increased information flows = program success

**2 Long-term Focuses**

1. All inmate educators should follow KPIs for student success, academic quality, and civic engagement
2. Establish diversity, increase community involvement & feedback sessions

**3 Potential Hurdles**

SDOH can be addressed through policy changes including:

1. Less discrimination for student loan access, low credit scores, and housing access
2. Increased support for substance use disorders and education while incarcerated

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**06. Conclusion**

Why Does This Population Matter for Economic Stability and Public Health?

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**1 Employable Population:**

- Most incarcerated individuals from Burke County are working-aged
- Incarcerated individuals make up 13% of unemployed population in Burke County

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**1 Employable Population:**

- Most incarcerated individuals from Burke County are working-aged
- Incarcerated individuals make up 13% of unemployed population in Burke County

**2 Education Impacting Employment:**

- Most employed people in Burke County have at least a high school degree
- Less than 5% of incarcerated individuals in Burke County have a high school degree

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**1 Employable Population:**

- Most incarcerated individuals from Burke County are working-aged
- Incarcerated individuals make up 13% of unemployed population in Burke County

**2 Education Impacting Employment:**

- Most employed people in Burke County have at least a high school degree
- Less than 5% of incarcerated individuals in Burke County have a high school degree

**3 Preventing Recidivism:**

- Individuals without a high school degree have a 60% recidivism rate
- Recidivism drops to 19% with any college degree, 5% with a bachelor's degree, 0% with a master's degree

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**1 Employable Population**

**2 Education Impacting Employment**

**3 Preventing Recidivism**

Investing in education of incarcerated individuals leads to an economically stable workforce.

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**References**

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**Thank You!**

Are there any questions?

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## **Appendix B: Diamond Black's Individual Assignments**

### **Appendix B.1: Diamond Black Individual SDOH Analysis**

#### **SDOH**

Social determinants of health (SDOH) are environmental conditions that directly impact an individual's well-being (Office of Disease Prevention and Health Promotion, 2024). SDOH environmental conditions include where individuals are born, live, work, and spend free time, such as hobbies or worship (Office of Disease Prevention and Health Promotion, 2024). When discussing SDOH, five domain objectives are analyzed: economic stability, healthcare access and quality, education and quality, neighborhood-built environment, and social and community context (Social Determinants of Health Workgroup - Healthy People 2030, 2024.). These objective domains are interconnected and focus on how critical upstream factors are when decreasing health disparities among communities to create and maintain healthy populations (Social Determinants of Health Workgroup - Healthy People 2030, 2024). SDOH includes safe housing, education, income, transportation, neighborhood, and food access. SDOH can lead to health disparities and inequities (Social Determinants of Health Workgroup - Healthy People 2030, 2024). Other social determinants may be affected if a social factor negatively impacts an individual (Social Determinants of Health Workgroup - Healthy People 2030, 2024.).

Economic stability and social context objectives are directly impacted by socioeconomic positions, which refer to money and resources someone has (Centers for Disease Control and Prevention, 2019). Socioeconomic factors demonstrate how social determinants can affect each other (Centers for Disease Control and Prevention, 2019). For instance, someone's socioeconomic status can be impacted by education and occupation (Centers for Disease Control and Prevention, 2019). If someone needs adequate education, this could impact their economic stability and affect their housing, transportation, neighborhood, and food access.

#### **Geographic and Historic Context:**

In North Carolina's mountain region, Burke County homes 90,418 individuals. Of this population, 49.7% of individuals are women and 50.3% are men (Burke County, NC, 2024). When analyzing the population by age, 81.3% of individuals in Burke County are 18 and over (Burke County, NC, 2024). In 2020, Healthy Communities of North Carolina research showed that 6.6% of Burke County's population is unemployed (Novant Health, 2024). Of

this 6.6%, 20.1% are American Indian or Alaskan Native, and 17.4% are black (Novant Health, 2024). Even employed individuals need help in Burke County; 40.5% of the population lives below 200% FPL (Novant Health, 2024). Due to poverty and unemployment, the homeless rate continues to increase in Burke County (Burke County, NC, 2024). In the 2020 Burke County Health Assessment, Homeless rates were deemed an area of concern that needed attention (Burke County, NC, 2024).

Burke County has a smaller population than surrounding counties, but in 2019, it was reported that per 100,000 people, 870 individuals were incarcerated, and 179 individuals were in jail (Vera, 2023). In 2019, North Carolina's felony charges consisted of 16.4% of them violent offenses, and 83.6% of the crimes were nonviolent (Hatton, R., Tyner, C., & Smith, J., 2020). Narrowing down to Burke County, it was found that in 2019, violent felonies per 100,000 population was 202 (Hatton, R., Tyner, C., & Smith, J., 2020). The leading Nonviolent misdemeanor offense of 2019 in North Carolina was Misdemeanor larceny (Hatton, R., Tyner, C., & Smith, J., 2020). Misdemeanor larceny knowingly possesses stolen goods with the value of the property under 1000 (Arnold & Smith PLLC, 2024). There is no data on Burke County's leading nonviolent offense, but this information on the NC gives a perspective of what Burke County's data may look like.

### **Priority Population:**

After analyzing the impact of socioeconomic status on individuals, it is essential to research different populations in communities, such as incarcerated individuals (Johnson, D, 2020). The US has the highest incarceration rate in the world as of the 1970s (Johnson, D, 2020). Research shows that the increase in incarceration rates in the US was impacted by policy changes that enlarged the range of what is considered an offense while also creating longer sentences for these offenses (Johnson, D, 2020). These policy changes begin to criminalize individuals for socioeconomic issues such as living in poverty (Johnson, D, 2020). As mentioned previously, Burke County's most common offense is Misdemeanor larceny. What was predominantly stolen in 2019 is unknown, but these could range from food, water, toiletries, or other items improving life quality. With this increase in incarceration rates, jails, and prisons disproportionately contain African Americans and different individuals of color (Johnson, D, 2020). African American individuals, in particular, and people of color undergo a tougher criminal process compared to white people (Vera, 2023). In Burke County, data shows that the total population of African Americans is 7%, and 14% of African Americans are incarcerated in Burke County (Vera, 2023). This means that

more African Americans are incarcerated than free in Burke County. Also, in 2020, in Burke County, the highest incarceration rate was among black people, and the race with the lowest incarceration rate was white people (Novant Health/ Community Care of NC/ Kate B. Reynolds Charitable Trust, 2024). There is no data on the linkage between Burke County's incarceration rate and education. Studies show that in NC, 11.6% of people without a disability who do not complete high school are incarcerated. However, 17.5% of individuals with a disability are incarcerated (Berger-Gross, A. 2020).

### **Measures of SDOH:**

Burke County has a limited amount of data on the correlation between incarcerated individuals and economic and educational factors however, it is something that North Carolina is currently researching (Smith, J. 2024). The North Carolina Department of Commerce recently created The NC Reentry Outcome Reporting System (Smith, J. 2024). This online tool shows the employment rate, income, and what type of jobs formally incarcerated people are landing (Smith, J. 2024). This tool also allows you to analyze the data by gender, race, and year of release (Smith, J. 2024). The goal of this tool is to stop the chances of people reoffending and resulting in incarceration by helping people find jobs (Smith, J. 2024). Because this tool uses data from 1997 to the present day, it allows people to look at trends of what jobs are accessible to formally incarcerated people (Smith, J. 2024). This tool has identified that people released from jail or prison have very low incomes (Smith, J. 2024). Only 49% of people released from prison found jobs, leaving 61% jobless (Smith, J. 2024). Data from the tool shows that the median range of people fortunate to find a job only received \$7,500 in annual salary (Smith, J. 2024).

### **Importance/ Rationale:**

Making the target population nonviolent incarcerated individuals will significantly impact Burke County. Nonviolent offenders include individuals who have committed crimes involving property, drugs, and public offenses but did not involve physical harm to the victim (Durose, M. R., & Mumola, C. J. 2004). Approximately 10,000 individuals are released from incarceration a week, which makes 650,000 individuals released yearly from state and federal (Johnson, D, 2020). Ensuring released individuals have all the resources needed for a good quality of life is essential. This will aid in decreasing homelessness, an area of concern for Burke County (2022 Burke Community

Health Assessment, 2024). Making this the target population will, in turn, also help burke county with poverty, mental health, socioeconomic status, food asses, and more.

My organization would like to propose a program to help incarcerated individuals. This program will be available to nonviolent offenders. This program is created to help this targeted population increase employment rates through educational programs.

The program aims to

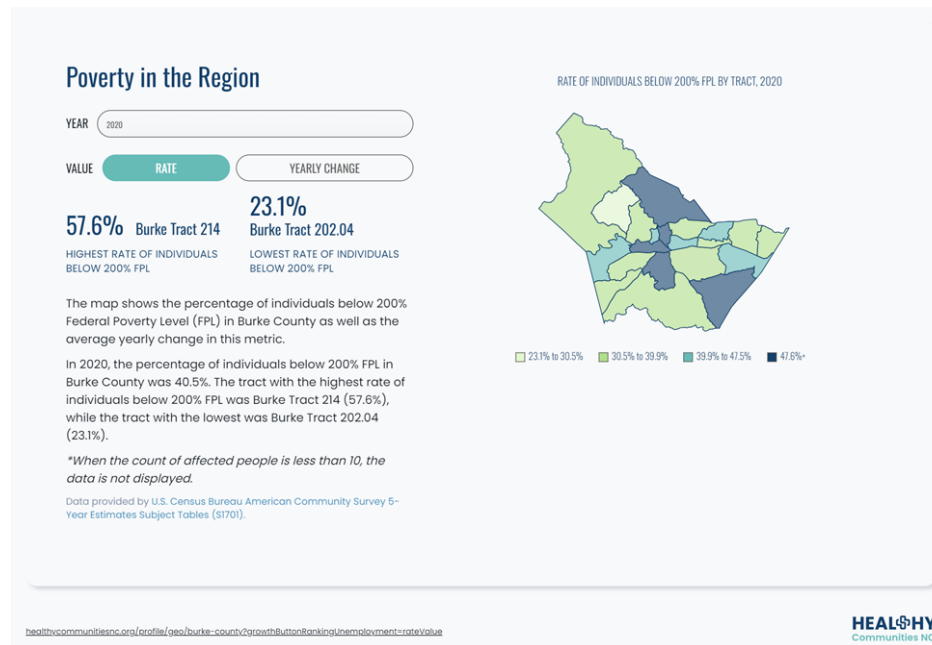
- Increase employment among participants by 50% over two years
- Increase participants' median income by 20%.
- Increase 50% of participants reading level to 8th-grade reading level.
- Decrease the amount spent on housing and utilities to 30% or lower of the total income for 5% of participants.

To measure the progress of the goals, we will analyze the unemployment rates of the group before they were incarcerated. This information will be compared to the participants' unemployment rates after completing the program. Once this data is collected, we will compare the employment rates to those of the US. At the program's start, every participant will complete a reading/literacy competency to gain a baseline. A final reading/literacy competency assessment will be done at the program's end and compared to the participants' initial scores.

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## Appendix B.1.a: Incarceration by Race and Ethnicity & Poverty in Region Graphic



## **Appendix B.2: Diamond Black's Deliverable 1**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security (CDC, 2023). Economic stability connects interrelated health factors that impact an individual's ability to maintain a healthy life, safe neighborhood and built environment, community involvement, and social connection (ODPHP, 2021). Of the social determinants of health, economic stability is a chief concern for Burke County, North Carolina.

Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (Centers for Disease Control and Prevention, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and 2 of every 3 households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the recidivism rate; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism at 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). When previously incarcerated individuals are employed, communities benefit due to decreased poverty rates and stronger family relationships (Parker, 2022). Educational programs that address upstream tactics for increased employment through higher literacy and job training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

Potential partners we will consider are the Sheriff of Burke County, the executive director of United Way of Burke County, and the Center for Community Transitions. The ranking of the stakeholder analysis will be located in Appendix 1. A stakeholder analysis matrix is a visual diagram that maps stakeholders based on their level of interest, impact, and other characteristics (Angela, 2024). The ranking of the stakeholder matrix in Appendix 1 was based on the stakeholder's level of power and interest.

The sheriff's position is one of the oldest offices of the nation's law and justice system (*NC sheriffs' Association*, 2024). Sheriffs are responsible for law enforcement, jail/corrections, and court duties (*NC sheriffs' Association*, 2024). The sheriff of Burke County is Robert "Banks" Hinceman (Burke County- All About Advancing, 2024). It is important to have Sheriff Hinceman as a partner because he can inform us about what programs already exist to help inmates. For instance, in 2018, a program was developed in Burke County that provided 42 tablets to the Department of Corrections to offer education and other services to the inmates (Royal, D. 2018). The tablet contains 1000 hours of educational information that could help inmates with GED preparation, Job interview preparation, and life skills (Royal, D. 2018). However, no updated information can be found on this program. A factor that could influence the sheriff to participate in the program is that it may aid in decreasing the recidivism rate of Burke County. Although Burke County's 2022 health assessment mentions that Burke County is currently aiming to lower its recidivism rate, no data on the recidivism rate is accessible (2022 Burke Community Health Assessment, 2024). Another factor is that decreasing the recidivism rate can decrease the spending Burke County uses on jails and prisons as well as the cost of incarceration to offenders and their families (FOLEY, K., WEBSTER, R., FARRELL, M., & WALTER, J., 2018). The 2022-2023 approved budget for the jail was 5,749,295 (Burke County- All About Advancing, 2024). However, the department requested 7,012,270. A 191,000 budget was requested for equipment (not specified what kind of equipment) but was denied (Burke County- All About Advancing, 2024). With decreased recidivism rates, they may be able to use the unspent funding on areas of need such as equipment.

The executive director of United Way in Burke County would be a great partner. Maureen "Mo" Schwind began her journey as executive director in January 2019 (Burke County United Way, 2024). United Way is an organization whose mission is to "Build a stronger Burke County community by empowering self-sufficiency, increasing housing stability, and fostering opportunities and success for youth." (Burke County United Way, 2024).



The United Way of Burke County surveys every 4 years to determine what areas they will focus on (Burke County United Way, 2024). This current focus is housing stability, self-sufficiency, and A.L.I.C.E families (Burke County United Way, 2024). A.L.I.C.E stands for “Asset Limited, Income Constrained, Employed” (Burke County United Way, 2024); and is for families who are employed but have to make difficult financial decisions (Burke County United Way, 2024). Having Schwind as a partner will be beneficial because this organization will aid us in reaching out to the target populations and understanding their needs. This partnership will also be beneficial because the United Way in Burke County may have resources they are willing to provide to incarcerated individuals. Two factors that would influence Schwind to partner with this initiative is that one of their focuses for their year plan is housing stability which this program also focuses on. Another factor is that the success of the incarcerated participants may influence other United Way organizations to help their local incarcerated population. There are 1800 United Way Organizations in the US that could potentially help incarcerated individuals (Aloha United Way, 2024).

Lastly, the Center for Community Transition (CCT) would be a great stakeholder. CCT is a nonprofit organization based in Charlotte NC (Center for Community Transitions, 2024). It was founded in 1974, and the goal of this non-profit is to strengthen the community and reduce recidivism by providing people with criminal records and their families with tools and resources to rebuild their lives (Center for Community Transitions, 2024). Although this non-profit is based in Charlotte NC this would be a great way to reach out to previously incarcerated individuals. By connecting with previously incarcerated individuals, we can understand what resources they had when being released and what resources and tools would have been helpful. A downfall is that this non-profit is based in Charlotte NC so previously incarcerated individuals from Charlotte may have a different need than those in Burke County. Unfortunately, no resources are found on organizations that aid incarcerated individuals in Burke County.

To ensure the efficiency of this program, I would ask each stakeholder if they are willing to work together to help the incarcerated community. This is essential because ensuring no one in the partnership is biased against this population is important. Unconscious biases could alter the results of the intervention. Unconscious bias is when someone has social stereotypes about certain groups of people and is not consciously aware of it (University of California San Francisco, 2024). An additional question would be how interested they are in this program.

Understandably, every stakeholder is busy, and this initiative may take up extra time. Still, ensuring all partners are committed to the program to ensure success and efficiency is important. In conclusion, the strengths of this program are that it will aid Burke County in decreasing the homeless population and increasing employment, education, and annual income in the community. A weakness of this partnership is that selecting stakeholders with little internet will hinder the advancement of incarcerated individuals.

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**Appendix B.2.a: Stakeholder Engagement Matrix**

**Stakeholder Engagement Matrix**

Stakeholder	Power	Areas of Interest	Project Phase	Engagement approach	Engagement Tools
Sheriff Robert “Banks” Hinceman.	High power	Politics	All	Collaborative	Initial face-to-face interview and highlight benefits
Maureen “Mo” Schwind,	Low Power	Community	All	Collaborative	Initial face-to-face interview and highlight benefits
Center for Community Transitions	Low power	Community	All	Collaborative	Initial face-to-face interview and highlight benefits

### **Appendix B.3: Diamond Black Deliverable 2:**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security (CDC, 2023). Economic stability connects interrelated health factors that impact an individual's ability to maintain a healthy life, safe neighborhood and built environment, community involvement, and social connection (ODPHP, 2021). Of the social determinants of health, economic stability is a chief concern for Burke County, North Carolina.

Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (Centers for Disease Control and Prevention, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and 2 of every 3 households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the recidivism rate; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism at 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). When previously incarcerated individuals are employed, communities benefit due to decreased poverty rates and stronger family relationships (Parker, 2022). Educational programs that address upstream tactics for increased employment through higher literacy and job training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

### **HARBOR-LEAD Project (Policy 1)**

Burke County ranks number two in North Carolina for the highest death rate caused by drug overdoses (Novant Health/ Community Care of NC/ Kate B. Reynolds Charitable Trust, 2024). Due to the issue of substance abuse, the HARBOR-LEAD project was developed to help individuals between the ages of 18-65 with a diagnosis of opioid use disorder (OUD) (The Bureau of Justice Assistance, 2024). This program provides a program coordinator or a treatment provider to individuals with OUD who will conduct a comprehensive clinical assessment to help create a treatment schedule for the individual (The Bureau of Justice Assistance, 2024). This program offers daily treatment, recovery support, and prevention services for 8 hours, four days a week (The Bureau of Justice Assistance, 2024). A benefit to this program is that individuals can receive a referral from law enforcement, substance use treatment, social services, and correctional facilities (The Bureau of Justice Assistance, 2024). This is beneficial because the target population of non-violent incarcerated individuals could be referred to this program (The Bureau of Justice Assistance, 2024). A disadvantage to this program is that it only consists of 5 team members: a program coordinator, a LEAD coordinator, a social worker, and two full-time staff members (The Bureau of Justice Assistance, 2024). This limited staffing poses the question is there a limit on the number of people that can be referred to this program. I propose that the HARBOR-LEAD Project expand by receiving more funding to provide adequate staffing for Burke County.

### **Housing and Urban Development Proposed Rule-Change (Policy 2)**

The US Department of Housing and Urban Development (HUD) is a federal agency that implements policies and programs in America to provide housing and living environmental needs to US citizens (U.S. Department of Housing and Urban Development, 2021). HUD created a program called The Fair Housing Organization Initiative (FHIP) (U.S. Department of Housing and Urban Development, n.d.). FHIP allows organizations and nonprofits focusing on fair housing to receive funding to assist individuals with quality housing (U.S. Department of Housing and Urban Development, n.d.). FHIP has 4 initiatives within the organization that continue to provide fair housing and housing education to the community (U.S. Department of Housing and Urban Development, n.d.). To ensure the effectiveness of the initiatives, HUD created the Fair Housing Act, which ensures that landlords and other housing agencies do not discriminate against individuals (Civil Rights Division/ US Justice Department, 2023). This means that landlords and housing agencies are not allowed to make housing unavailable due to someone's race, religion, sex, disability, familial status, or national origin (Civil Rights Division/ US Justice

Department, 2023). For individuals to qualify for this initiative, they must meet the requirements of the non-profit housing organization (Civil Rights Division/ US Justice Department, 2023). Among the requirements is a background check that applicants must undergo to get approved to participate in the initiative (HUD Public Affairs, 2023). Recently there are being debates on conducting a background check on individuals and whether it is considered a form of discrimination under civil rights laws (HUD Public Affairs, 2023). On Oct. 30, 2023, a notice of a proposed rulemaking was published that the federal register would eliminate the agency's restrictions on fair housing testers who have a prior felony conviction or particular convictions (HUD Public Affairs, 2023). If this rulemaking is enforced it will benefit Burke County's community because incarcerated individuals will have access to more housing programs which will eliminate a barrier that individuals with a criminal history have to undergo which will decrease reentry also known as recidivism (HUD Public Affairs, 2023). A disadvantage to this initiative is that if the rulemaking is not enforced discrimination among individuals will continue (Civil Rights Division/ US Justice Department, 2023). Continuing this rulemaking could impact Burke County by causing the homeless population to continue to increase. For this policy, I propose that Burke County support the removal of the background check requirement to ensure that the previously incarcerated community is not being discriminated against and may receive fair housing.

### **Second Chance Pell Program (Policy 3)**

On July 1st, 2023, a policy was implemented that allowed incarcerated Americans to regain access to the Pell Grant (Edelman, J. 2023). A Pell Grant is a federal program for low-income families that offers financial assistance to undergraduates (Federal Student Aid, 2024). This Pell Grant is similar to a loan but does not have to be paid back (Federal Student Aid, 2024). For almost 30 years incarcerated individuals did not qualify to receive Pell Grant to pay for education (Edelman, J. 2023). Implementing the Second Chance Pell Program will allow incarcerated individuals to pursue postsecondary programs that will aid in finding jobs and supporting their families when they are released (Department of Justice Archive, 2023). Data shows that incarcerated people who complete correctional education programs are 43% less likely to return to prison compared to individuals who did not participate in the programs (Department of Justice Archive, 2023). The benefit of the Second Chance Pell Program being available to incarcerated individuals is that it will aid in economic stability when released from incarceration. Although this is a step toward decreasing recidivism rates (Zoukis. C, 2023), a downfall is that individuals who already have student loans will be left out (Edelman, J. 2023). I propose an expansion of the Second Chance Pell



Program that offers resources to individuals who already have student loans to ensure everyone can receive a chance to get an education once they are not incarcerated.

Analyzing the three policies with a Pugh Matix, I have concluded that HUD's proposed rule change on policy change for background checks not being a requirement would best benefit Burke County. The three policies were analyzed by cost to state, feasibility of community implementation, impact, community support, political support, and sustainability (Figure 1 in Appendix). When considering the cost to the state, the HUD-proposed rule change was the better option. Since this is a federal policy change fighting to be implemented, the only resource needed is for Burke County Commissioners and representatives to support this rulemaking. Along with the HUD-proposed rule change ranking as the best policy, this policy demonstrates equity to ensure fairness and justice among everyone (National Association of Colleges and Employers, 2024). It is important to focus on equity and not just equality (providing equal resources to all) because when referring to equity it requires the ability to understand that everyone is not offered the same resources or starts at the same place in life (National Association of Colleges and Employers, 2024). Knowing this creates an understanding that adjustments should be made for people who do not have the privilege of certain resources such as housing and education (National Association of Colleges and Employers, 2024).

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**Appendix B.3.a: Pugh Matrix**

Evaluation Criteria	HARBOUR-LEAD	FHOI Initiative	Second Chance Pell Grant
Cost to State	Would cost the state money	Would not cost the state money	Would cost the state money
Feasibility of Community Implementation	Yes	Yes	Yes
Impact	Impactful	Impactful	Some incarcerated people may not qualify
Community Support	Yes	May lack community support due to landlord receiving less in rent	Due to the possibility that incarcerated individuals may not qualify community support may be low.
Political Support	Yes	Yes	Yes
Sustainability	May not be sustainable	Sustainable	Sustainable
SCORE	Middle	Best	Worst

## **Appendix C: Vanessa Ramlal's Individual Assignments**

### **Appendix C.1: Vanessa Ramlal's Individual SDOH Analysis**

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

According to Healthy People 2030, “Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affects a wide range of health, functioning, and quality-of-life outcomes and risks”. These determinants can be grouped into five domains that include, education access and quality, health care access and quality, neighborhood and built environment, social and community context and lastly economic stability.

The SDOH selected to be highlighted and expanded on is economic stability. Centers for Disease Control and Prevention (CDC) states, “economic stability includes key issues such as poverty, employment, food security, and housing stability” (CDC, 2023). A short-term impact on health outcomes is someone having the capability to purchase healthy foods can mean their risk of serious health conditions like obesity and diabetes are lowered. On the other hand, a long-term impact through affording secure and safe housing is the reduction in harmful exposures such as lead or mold, that can lead to chronic disease and injury. The ability to afford basic necessities for living such as healthy foods, housing and healthcare are essential to one's well-being and aiding in the achievement of economic stability can reduce the proportion of people living in poverty.

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

Burke County was founded in 1777 and has an estimated total population of 90,418. Its racial distribution consists of 81.20% White, Non-Hispanic, 6.50% Black, Non-Hispanic, 6.70% Hispanic/Latinx, 3.70% Asian and .90% American Indian. (2022 Burke Community Health Assessment). Some of the issues surrounding economic stability in Burke County include poverty, unemployment, housing affordability and food insecurity. The 2021 US Census Bureau, American Community Survey revealed that the total persons living in poverty in Burke County was 15,490. (Office of State Budget and Management).

Additionally, in 2020 the percentage of individuals aged 16 and older who are in the labor force, but unemployed was 6.6% of the population. Data revealed no major differences in the unemployment rate by sex, as the female unemployment rate was 6.4%, while the male unemployment rate was 6.2%. (Healthy Communities NC). The 2022 Burke Community Health Assessment noted that homelessness has been a concern over the last several years. Even though there has been the creation of a Homeless Taskforce to understand and provide solutions, if there

“continues to be a lack of affordable housing, increasing rate of poverty, a deficiency of access to mental health and substance use services, and high inflation costs, homelessness will continue to be an issue” (2022 Burke Community Health Assessment).

In 2019, it was recorded that “13.6% of households have at least 1 of the four severe housing problems such as overcrowding (>1 occupant per room), high housing costs (monthly housing costs  $\geq$  50% of monthly income), or lack of adequate kitchen or plumbing facilities, as defined by the U.S. Department of Housing and Urban Development. (Healthy Communities NC).

In order to combat some of the challenges present, Burke County’s Board of Commissioners adopted a new plan in October 2022 called The Blueprint Burke Plan, “a plan for growth in the county, including growth in the population of permanent residents and continued economic expansion”. In more detail, there is “hope to retain the young people with educational opportunities along with providing meaningful careers in new and traditional industries, as well as attract new residents from larger neighboring metropolitan areas with more affordable housing, abundant natural beauty, a thriving local economy and a high standard of living” (Burke Strategic Land Use Plan).

#### **Priority Population:**

The population of interest for this Social Determinant of Health factor, economic stability, are those incarcerated in both the jail and prison systems that fall within the working age group. Overall, the focus is to increase employment among those incarcerated via educational programs. The intervention will begin during incarceration and later expand to those on parole and/or probation. Healthy People 2030 lists a very similar goal under economic stability which states, “increase employment in working-aged people - SDOH-02 and it goes on to explain the working-age population are those aged 16 to 64 years old” (U.S. Department of Health and Human Services).

The incarcerated population when re-entering society face challenges surrounding poverty, unemployment, housing affordability and food insecurity (Parker, 2022). Due to a criminal record coupled with a lack of educational attainment, landing a job can be grueling. For some, in order to make ends meet or to simply survive, there is the likelihood of committing a crime once more. “In order to decrease the high rate of recidivism for people leaving the prison system, it is important that these individuals be able to obtain employment that is considered high-quality, stable, and long-term. This has proven difficult as research has found that unemployment rates for this group is five times that of the general population” (Parker, 2022). Educational programs can lead to improved literacy,

achievement of a high school diploma, interview practice and even resume help. All of which are essential and beneficial when seeking employment to financially support themselves.

As shown in figure 2, data collected from 2019 revealed that Burke County had 307 individuals in jails and 564 in prisons resulting in a total of 871 incarcerated. “Although the terms “jail” and “prison” are commonly used interchangeably, jails are locally run facilities that primarily hold people who are arrested and are awaiting a resolution to their case, while prisons are state or federal institutions where people who have been convicted of crimes are sent to serve sentences of imprisonment” (Vera, 2023).

#### **Measures of SDOH:**

Educational resources and easy accessibility while incarcerated can lead to individuals obtaining employment upon release, which in turn improves their self-confidence, poverty rates decrease as taxes are collected on earned income, improved health outcomes and build stronger families and communities. As shown in figure 2, “the most common educational levels obtained by the working population in 2021 were High School or Equivalent (2.13M), Some college (1.85M), and bachelor’s degree (1.58M)” (Data USA, n.d.). *\*Data is only available at the state level, North Carolina\**.

There has been research and data collected from other programs to show the positive impact that education can have on the incarcerated population. Through the implementation of educational programs, our team aims to measure the following:

- Increased those employed in this group by 50% over a 2-year period.
- Increase median income by 10-20%
- Increase literacy levels to at least 8th grade level for 50% of participants.
- Decrease the amount spent on housing and utilities to be 20% or lower of total income for 5% of participants.
- Increase the prevalence of high school diplomas and two-year degrees in previously incarcerated individuals.

The opportunity to aid in the advancement of the incarcerated while improving literacy and overall educational attainment can impact communities and generations to come. “Prisoners are significantly less educated than the general population of adults. When looking at the educational level of inmates, it is clear there is a deep need for education. It’s twice as common for inmates to have only a grade eight education or less, and a high

percentage of prisoners don't have a high school diploma or equivalent or a college education" (Zoukis Consulting Group, 2023).

#### **Rationale/Importance:**

The Social Determinant of Health factor, economic stability, should be a public health priority as it can have a domino effect on other areas such as social and community context, neighborhood and built environment and overall contributes to the well-being of Burke County's residents. Increasing employment among those incarcerated through educational programs can result in re-entry to the workforce which in turn boosts the economy. "Individuals who did not complete high school were rearrested at the highest rate—60.4 percent—while those who had a college degree were rearrested at a rate of 19.1 percent." (Bender, 2024). Additionally, the incarcerated obtaining employment ensures that they are better able to acclimate to society as well as support themselves. As a result of this, there is an unlikely chance of recidivism occurring. "Communities also benefit when people with a criminal record find good jobs. Poverty rates decrease, taxes are collected on earned income, and families are strengthened as the collateral effects of incarceration are minimized" (Parker, 2022). Investing in the economic stability of the incarcerated allows for proactive intervention and in the long run supports a robust and well-trained workforce.



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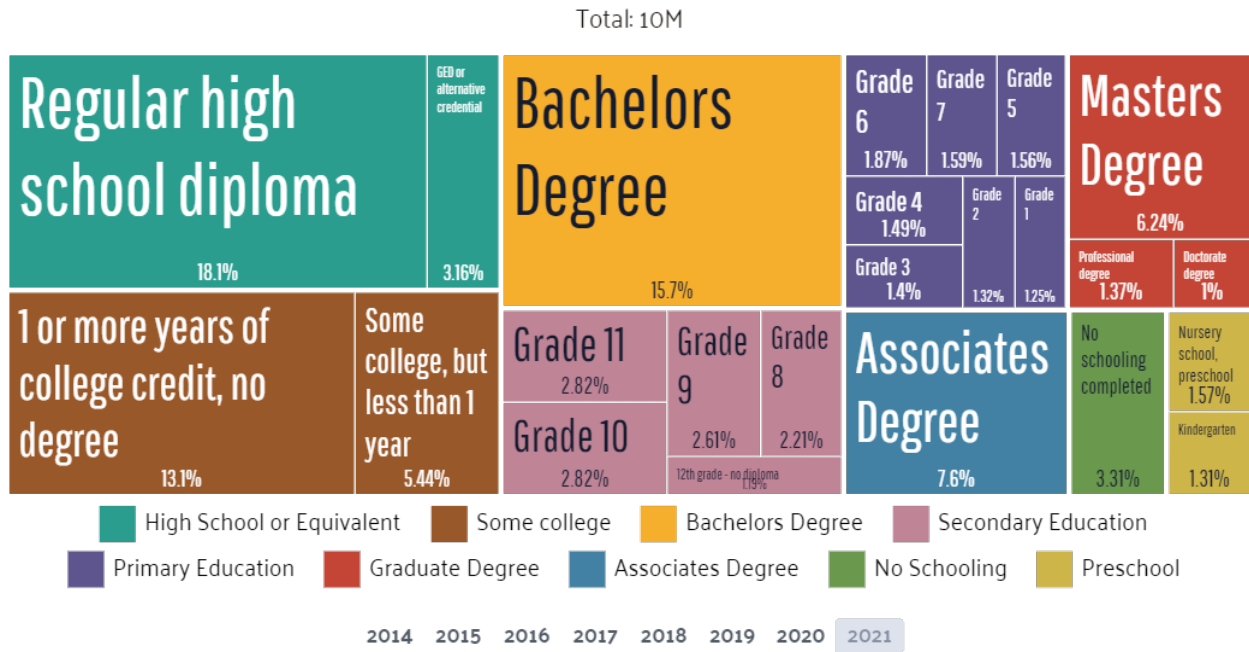
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**Appendix C.1.a: Number of People Incarcerated in Burke County, North Carolina, U.S.**



(Vera, 2023).

**Appendix C.1.b: Education Levels in the U.S. 2014-2021**



(Data USA, n.d.).

## **Appendix C.2: Vanessa Ramlal's Deliverable 1**

### **Systems Deliverable 1 | System Complexity Analysis**

#### **Overview of the SDOH and policy/program context**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security (CDC, 2023). Economic stability connects interrelated health factors that impact an individual's ability to maintain a healthy life, safe neighborhood and built environment, community involvement, and social connection (ODPHP, 2021). Of the social determinants of health, economic stability is a chief concern for Burke County, North Carolina.

Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (Centers for Disease Control and Prevention, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and 2 of every 3 households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023).

### **Description of a system and the area of concern**

The system at the focal point of it all is the system to advance employment through educational attainment within the incarcerated population in Burke County. Specifically, the working age population, which Healthy People 2030 has listed under a similar goal relating to economic stability which states, “increase employment in working-aged people - SDOH-02 and it goes on to explain the working-age population are those aged 16 to 64 years old” (U.S. Department of Health and Human Services). The area of concern within that system selected to center on is poor economic stability of those recently incarcerated and reentering the workforce in Burke County.

Incarceration and its relationship with economic stability is a wicked problem, which is defined as “complex social or cultural problems with an unknown number of potential solutions” (William & Mary, 2023).

There are quite a few characteristics of wicked problems as listed below:

- Wicked problems have no stopping rule - cannot just say “problem solved”.
- Solutions to wicked problems are not right or wrong.
- Every wicked problem is essentially novel and unique.
- Overall problems that are difficult or impossible to solve because of complex interdependencies. The use of the term “wicked” denotes resistance to resolution.

(Ramaswamy, 2022).

Within Burke County, increasing employment among those incarcerated via educational programs is a challenging problem to tackle and one that cannot be easily solved due to the complex interdependencies present. Educational programs can aid in the advancement of individuals and better support them obtaining a job, but the poverty levels as well as housing affordability in Burke County is an issue that impacts a newly released individual from jail or prison. The 2021 US Census Bureau, American Community Survey revealed that the total persons living in poverty in Burke County was 15,490, representing 18.1% of the total population which is higher than the national average of 12.6%. (Office of State Budget and Management). Additionally, according to the 2022 Burke Community Health Assessments, if there “continues to be a lack of affordable housing, increasing rate of poverty, a deficiency of access to mental health and substance use services, and high inflation costs, homelessness will continue to be an issue” (2022 Burke Community Health Assessment).

### **Map the complexity of the system - Causal Loop Diagram**

There are many key factors influencing the specific social determinant of health, economic stability. Incarceration in Burke County, NC in relation to education attainment is a wicked problem that revolves around factors at multiple levels. The path to one's incarceration is based on their physical environment and living conditions along with a combination of personal experiences and circumstances that have transpired over time. Some of those factors at the individual level include education, health status/behaviors, income, and personal beliefs. There are then those categorized as social or physical which are one's community, neighborhood, family life, workplace, and overall built environment. Lastly, there are structural and institutional factors such as policies regarding housing and medical access, convictions, along with policies surrounding incarceration. As noted in Figure 1, the rich picture, there are additional factors that trickle into overall incarceration and the attainment of employment following time served. Some of those include wage gaps, systemic racism, food affordability, literacy, as well as criminal records.

The causal loop diagram, depicted in Figure 2 demonstrates the relationship each variable shares and further displays their connectedness. One of the main examples represented is the reinforcing association of incarcerated populations and poverty. As poverty increases, so does the incarcerated population and vice versa. Therefore, with increased poverty, there is a greater likelihood of recidivism occurring and so on the cycle continues. One relevant system archetype that may be at work in the system of economic stability is illustrated in Figure 3 - shifting the burden. Educational programs being provided for those incarcerated is just one part of the puzzle and can provide a short-term solution to a very deep and complex issue. Providing educational programs to the incarcerated population, specifically those of the working age can lead to increased education levels which can in turn result in greater employment. Implementing educational programs is not a long-term solution because for some living in poverty may still not obtain a well-paying job to sustain a proper lifestyle, forcing them to turn to crime. While the educational programs can be beneficial, for some it cannot solve their financial burdens thus only shifting the burden.

### **Summarize the case for transformation**

The system leverage points that are evident and can be expanded further about educating the incarcerated in an effort to increase employment includes system infrastructure, information flows, organizing principles and mindset. To begin with, system infrastructure means increased resources and educational programs which can promote economic stability. The advancement of a single individual, them obtaining a job, understanding financial

literacy, and budgeting can impact their families and overall allow them to escape poverty. To aid in the transition from incarceration to the outside world, information flows, providing those recently released with information about housing, employment, health care and more. The bigger challenge comes with organizing principles such as changing the rule of the system and addressing harsh sentencing laws and other unfair conviction policies. The leverage point mindset can also pose a challenge as individuals will continue to have their own opinions and viewpoints. Attempting to change attitudes and misconceptions can be an uphill climb but it can be improved through the hiring of previously incarcerated individuals in the workforce. By doing so, structural racism and the fear mindset can slowly fade away and communities can strive to be more welcoming.

The development of the causal loop diagram highlighted and emphasized how interconnected the variables all are. The work to improve employment in the recently incarcerated population through educational programs is just one slice of the pie, but nonetheless can lead to drastic changes towards economic stability and overall well-being.

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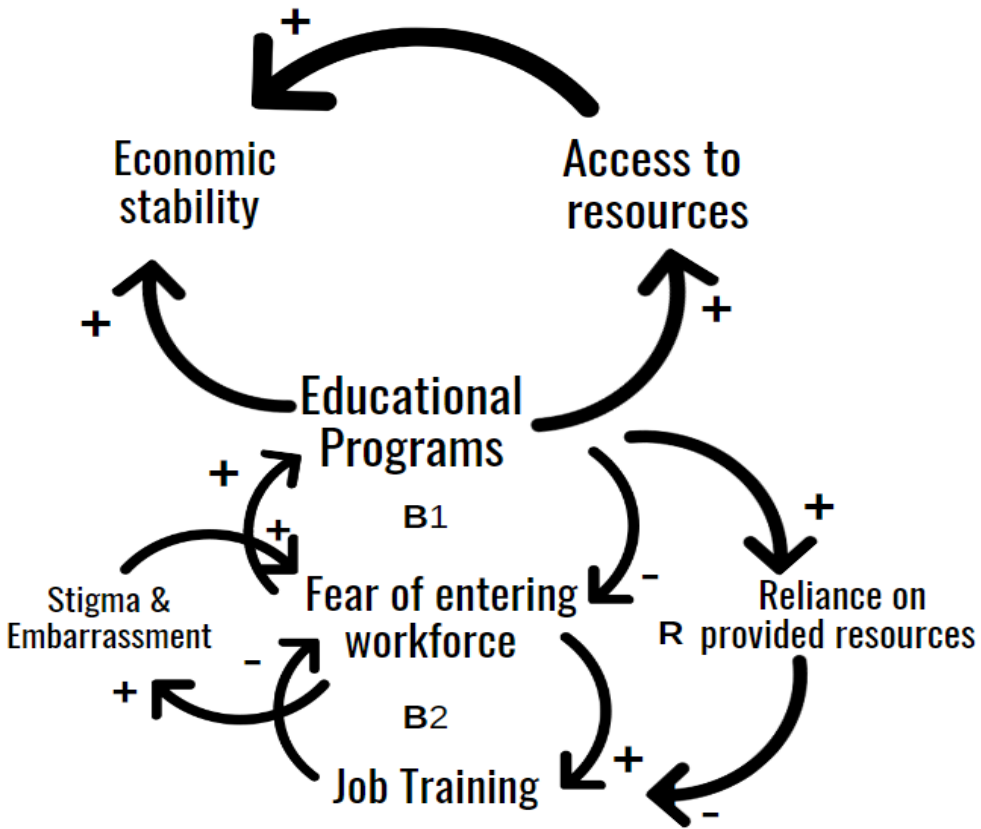
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Appendix C.2.a: Educating the Incarcerated Rich Picture





Appendix C.2.c: Educational Program - Shifting the Burden - Archetype



## **Appendix C.3: Vanessa Ramlal's Deliverable 2**

### **Engagement Deliverable 2 | Recommendations for Action**

#### **Overview of the SDOH and County Context**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security (CDC, 2023). Economic stability connects interrelated health factors that impact an individual's ability to maintain a healthy life, safe neighborhood and built environment, community involvement, and social connection (ODPHP, 2021). Of the social determinants of health, economic stability is a chief concern for Burke County, North Carolina.

Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (Centers for Disease Control and Prevention, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and 2 of every 3 households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). When previously incarcerated individuals are employed, communities benefit due to decreased poverty rates and stronger family relationships (Parker, 2022). Educational programs that address upstream factors for increased employment through higher literacy and job

training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

### **Engagement Strategy - Purpose/Rationale**

Increasing employment among those incarcerated via educational programs in Burke County is a complex and challenging task that will benefit from the partnerships of different community actors and members. The engagement of community partners has many benefits that include, an increase in the likelihood that projects or solutions will be widely accepted, the creation of more effective solutions, improvement in citizens' knowledge and skills in problem solving, empowering and integration of people from different backgrounds, the creation of local networks of community members and the increase of trust in community organizations and governance (Bassler, 2008).

Community partner engagement can aid in addressing health equity that the incarcerated population grapple with. When everyone has a fair and just opportunity to attain their highest level of health, that is health equity. Health equity can be achieved by focused and ongoing societal efforts to address historical and contemporary injustices; overcome economic, social, and other obstacles to health and healthcare; and eliminate preventable health disparities (Centers for Disease Control and Prevention, 2022). When thinking about the importance of community partner engagement we can refer to a systems thinking perspective which states, "no matter what your problem is, it is affected by a system of interconnected elements and we change something about the system, so it produces better outcomes" (Rice, 2023). Community engagement involves many moving parts and contributions of many in order for it to work well and be sustainable.

### **Community/Priority Partner Selection**

The community partner analysis included Burke County's Sheriff, the executive director of Burke County United Way and the Western Piedmont Community College president. The selected community partner is Burke County United Way executive director. The executive director is a key partner based on their experiences and connections that range from extensive volunteer experience to working in government positions and at the community college. The organization is one that is rooted in community, focused on meeting community needs through generous funds and input from a wide variety of community stakeholders. Burke County United Way envisions a community where all Burke County individuals and families are equipped to live independently and thrive (Burke County United Way, n.d.).

Additionally, parts of their mission are to promote self-sufficiency, support and offer services to A.L.I.C.E. families (Asset limited, income constrained, employed - families who work and still have to make difficult financial decisions everyday) and increase housing stability, which the incarcerated population can benefit greatly from (Burke County United Way, n.d.). Burke County United Way highlights 14 community issues (Figure 1) and majority of them are issues our team hopes to address or shed light on with educational programs for the incarcerated. A few of the community issues are reading proficiency, affordable housing, homelessness, and workforce development. When thinking about program design, implementation and evaluation, United Way is seasoned with community outreach efforts as they have programs, events community groups as well as outside partnerships that drive financial support, therefore making them an ideal affiliate. The partnership is one that can be fruitful and impactful as our program supports the mission of Burke County United Way, and the collaborative efforts by both parties can lead to effective change in the lives of those incarcerated.

### **Engagement Barriers and Facilitators**

There are various factors that are likely to influence, positively and/or negatively, the partner's participation in efforts to address the selected social determinant of health - economic stability. One community engagement facilitator and one that is crucial between the team's project and Burke County United Way are the shared goals that are interconnected. United Way has a focus on root issues ensuring that they are targeting the right problems to solve needs, building strategic partnerships which entails them working with local government, for-profit and nonprofit partners to unite people and resources in building a stronger Burke County community and lastly mobilizing the community, allow them to be the change agent. (Burke County United Way, n.d.). Similarly, our team also has an overarching goal of tackling root sources of the problem in an effort to create effective and long-lasting change for those incarcerated and their families. Getting to the core of why poverty exists and strategizing ways such as the implementation of educational programs to combat it are similarities with Burke County United Way and our project team. Stated on their Return of Organization Exempt from Income Tax form is a brief description of the organization's mission, "connecting your gifts to accountable organizations working to eliminate poverty" (Burke County United Way, 2023). The joint partnership of our project team and Burke County United Way can be a powerhouse in eliminating poverty and improving the livelihoods of the population at hand.

Another facilitator of the partner's participation is aligned community engagement principles. The nine principles include clarity of engagement, culture, build trust, accept collective self-determination, partner, respect

diversity, develop capacity, be flexible and be committed. (Rice, 2023). Burke County United Way has demonstrated many of these principles throughout and therefore they can easily support this target population and address their needs. Apart from providing aid and support to those experiencing housing instability and homelessness, the organization connects individuals to many resources ranging from criminal justice and legal services as well as basic necessities to income support and employment along with mental health and substance use disorder services.

On the other hand, one barrier that may be present in regard to the partner's participation are misconceptions and bias about the incarcerated population. One article titled, "Stigma of the Scarlet Letter: Formerly incarcerated candidates fight dangerous hiring bias", shared that after being incarcerated, candidates looking for work are up against all kinds of bias, discrimination and even abuse (Douglas, 2023). It was recorded that 25%-40% of formerly incarcerated people have a job after a year of being released – with the average annual income for prisoners on release sitting at \$19,610 (Douglas, 2023). Additionally, research shows that up to 89% of formerly incarcerated people who are rearrested are unemployed at the time (Douglas, 2023). Burke County United Way can possibly have these biases, preventing them from working with this vulnerable population. Currently, many of the programs are focused on youth support such as reading, school supplies and toys. However, based on their track record, employment attainment and financial empowerment are areas of focus for them, and a partnership is much likely to develop.

### **Engagement Methods**

Community engagement strategies are long-term, relationship building, asks - What can the organization and community accomplish together?, the whole community benefits and it's a process that is connecting and cyclical for all involved (Narayanan, 2023). Three engagement methods for the selected community partner, Burke County United Way, are relationship building, community meetings, and asking for feedback. Collaborating with stakeholders for this project means utilizing nearby partners and resources, such as the Western Piedmont Community College. The method of relationship building occurs throughout all phases but is the foundation and essential during the design phase as shown in Figure 2. Additionally, the method of community meetings can take place at central meeting points such as the community center, allowing for all to join. These meetings allow for greater understanding (improve phase) of how efforts can be made to improve economic stability. In person meetings also strengthen solidarity and trust, and help with organizational processes such as problem solving,



decision making, information sharing and capacity and leadership development (Belshe, 203). Lastly, there is the engagement method of asking for feedback. Sometimes deemed a difficult thing to do, it is one that can be done privately through surveys at the individual level and can provide greater insight to open the doors for improvement and sustainability. Obtaining community feedback enables organizations to be more responsive and fluid and can measure community satisfaction while highlighting that community opinions are valued (Engagement Hub, 2023).

The engagement of community partners is essential to build and sustain the advancement of the incarcerated population, thus resulting in greater change regarding economic stability, leading to the enhancement of community and individual health.

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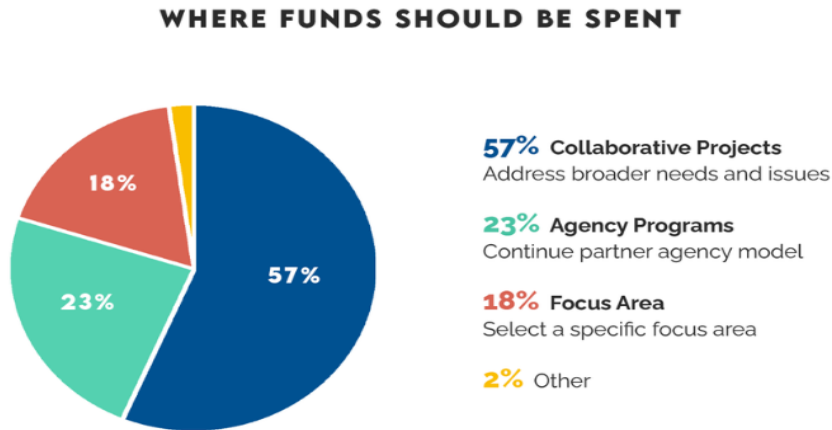
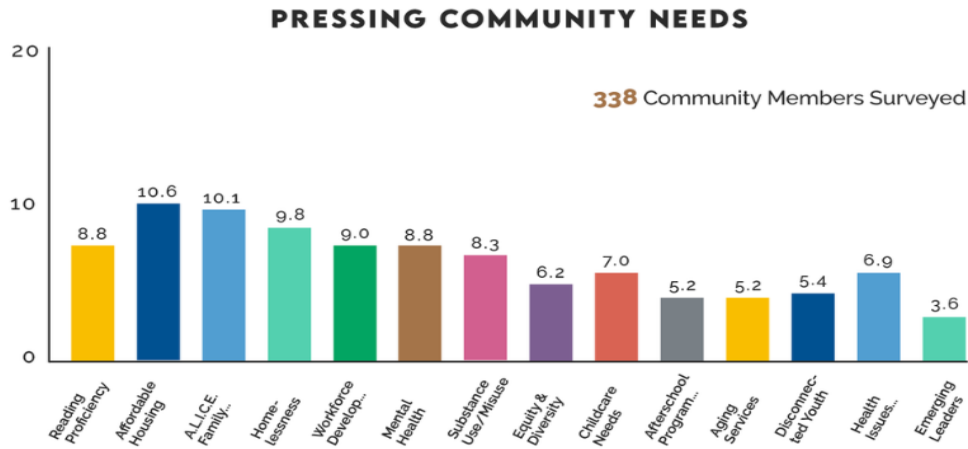
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**Appendix C.3.a: Burke County United Way: Community Needs and Funds**



**Appendix C.3.a: Engagement Table**

**Engagement Table: Methods, Facilitator/Barrier, Format and Timing**

Engagement Method	Related Facilitator(s) / Barrier(s)	Format	Timing
Relationship Building	Western Piedmont Community College	Group/Organizational level	Design
Community Meetings	Community Center as meeting place	Group	Improve
Asking for Feedback	Utilizing surveys/in person meetings	Individual	Sustain/Scale

## **Appendix D: Caitlin Whitcomb’s Individual Assignments**

### **Appendix D.1: Caitlin Whitcomb’s Individual SDOH Analysis**

#### **Increasing Economic Stability for Incarcerated and Previously Incarcerated Working-Aged People through Education and Employment Training in Burke County, North Carolina**

##### **Definition of Terms:**

For this paper, “jail” will be defined as a place for people for awaiting trial and for people serving short-term sentences, “prison” will be defined as a place for people serving long-term sentences, and “incarceration” will refer to people confined in either a jail or prison (Merriam-Webster, 2023). The term “recidivism” will refer to the relapse into criminal behavior (Merriam-Webster, 2023). The term “nonviolent offenders” refers to people who committed property, drug, and public order criminal offenses that did not involve harm to another person (U.S. DOJ, 2004). This paper will use the definitions of race and ethnicity as defined by the U.S. Census Bureau (Census.gov, 2023). “Employment” will include all forms of paid work, and “poverty” will be defined as an individual or household’s income level at or below the federal threshold (Health.gov, 2021).

##### **Social Determinants of Health:**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The intersection of race, ethnicity, socioeconomic status, and educational attainment increases incarceration rates, ultimately causing poorer health outcomes and economic instability for marginalized communities. Poverty is associated with a 42% mortality rate and individuals who have spent at least ten years living in poverty have a 71% higher risk of mortality than their peers (Kunzmann, 2022). Unemployment is associated with higher cases of suicide, opioid addiction, depression, and mortality (Pratap, 2021). Economic instability, including high housing costs and low household income, is directly associated with higher instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and two of every three households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021).

North Carolina's history of criminal punishment in the 19<sup>th</sup> and early 20<sup>th</sup> centuries established disproportionate punishments for Black men and women (American Civil Liberties Union, 2022). While non-discriminatory policing efforts gained traction in the late 20<sup>th</sup> century, racist disciplinary processes continue in North Carolina (American Civil Liberties Union, 2022). In North Carolina, Black and American Indian/Alaskan Native residents receive 10% to 13% higher write-ups and disciplinary legal action than their peers, leading to higher health risks (Becker, 2021). Previously incarcerated individuals have higher instances of asthma, high blood pressure, obesity, infectious diseases, arthritis, life-threatening sexually transmitted diseases, and serious mental health disorders health than non-incarcerated individuals (ODPHP, 2021). Previously incarcerated individuals have a 3.5 times higher mortality rate than their peers due to higher instances of suicide, substance overdose, cardiovascular disease, and cancer (Binswanger, et. al., 2007). This paper will focus on education and employment levers to increase economic stability for incarcerated and previously incarcerated residents in Burke County, North Carolina.

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

Economic instability for incarcerated and previously incarcerated individuals is impacted by poverty, unemployment, median household income, percent of income spent on living expenses, and recidivism. Burke County is a rural region with about 88,000 residents and has a racial/ethnic composition of about 81% White residents, about 6% Black residents, about 4% Asian residents, and about 3% Hispanic residents (Data USA, 2022). Burke County has more than an 18% poverty rate, compared with about 13% in North Carolina overall and about 12% in the U.S. (Statista, 2023). A leading indicator of poverty is the percentage of one's income spent on housing and utilities: studies show that households who spend more than 30% of their income on housing and utilities are cost-burdened and spending more than 50% are severely cost-burdened, as shown in Appendix A (NLIHC, 2021). In Burke County, the median household income is about \$48,000, compared with about \$66,000 in the state overall (Census Bureau, 2023). Burke County's median property value is over \$128,000 compared with \$234,900 in the state overall, indicating property values outpace household income in the county and in the state (Census Bureau, 2023). Almost 13% of Burke County residents have severe housing problems and more than 24% of residents are not homeowners (Data USA, 2022).

In Burke County, the unemployment rate is 3% (Burke Community Health Assessment, 2022). Black residents have an almost 6% unemployment rate and American Indian/Alaskan Native residents have about 4% unemployment, compared with 3.5% in the state overall (NC DHHS, 2023). The highest percentage of employed

individuals in the U.S. are 35 to 44 years old (80%) and individuals who are 25 to 34 years old (79%), as shown in Appendix B (Healthy People, 2023). The majority of inmates in North Carolina are aged 31 to 45 years old, as shown in Appendix C, and 92% of arrests in Burke County are from working-aged people (Federal Bureau of Prisons, 2024). A leading indicator for employment is education level; the highest percentage of employed individuals in the U.S. have a four-year degree or more (84%), followed by some college or associate degree (75%), then high school graduation (69%), signaling that the majority of working-age people with more education have more employment success (Healthy People, 2023). Burke County has about an 88% high school graduation rate, compared with over 89% in the state overall (Burke County Public Schools, 2023). The majority of the employed population in Burke County have at least a high school degree, while less than 5% of incarcerated individuals have their high school degree (Statista, 2023). Increasing education for incarcerated individuals in Burke County will help increase employment rates and economic stability.

#### **Priority Population:**

North Carolina has the sixth-highest jail population in the U.S. and the second-highest number of prison facilities in the U.S. (NIC, 2021). In North Carolina, 617 people per 100,000 are incarcerated, outpacing global incarceration rates, as shown in Appendix D (Prison Policy Initiative, 2023). Burke County's arrest rate is almost 88% higher than the national average (Infotracer.com, 2024). In Burke County and North Carolina, Black and American Indian/Alaska Natives are disproportionately represented in jails and prisons, three times that of White residents, as shown in Appendix E (Prison Policy Initiative, 2023). Studies show that 70% of prisoners in the U.S. are nonviolent offenders, with more than 50% for nonviolent drug charges and 10% for immigration violations (Zoukis, 2023). Existing programs in North Carolina focus on eliminating racist laws and discriminatory policies through shorter-term sentences, changes in repeal processes, shifts in sentencing for nonviolent or juvenile offenders, reintegration resources, and better substance use disorder and mental health support (NC Department of Health and Human Services, 2023).

Individual economic instability due to low education and chronic unemployment causes higher rates of recidivism, leading to economic costs at the national, state, and county level. Reducing recidivism through higher education efforts will reduce the U.S. prison budget by \$60 billion annually (Zoukis, 2023). North Carolina has a prison budget of over \$2 billion annually, the fourth-highest prison budget in the U.S. (NIC, 2020). The cost per inmate in Burke County is over \$6.6 million annually (NC Department of Adult Correction, 2022). Burke County

taxpayers also spend more than \$650,000 to house inmates in neighboring counties (The True Citizen, 2024). By empowering incarcerated individuals with more skills for future employment opportunities with higher incomes, Burke County will benefit through improved community health outcomes and economic stability.

#### **Measure of Social Determinants of Health:**

One year after exiting prison, 51% of formerly incarcerated individuals do not have a job and earn below the federal poverty line (about \$7,000 per year), as shown in Appendix F (NC Commerce, 2023). Four years after incarceration, about 60% of all individuals are unemployed and earn less than the U.S. median wage (Prison Policy Initiative, 2022). The more educational training and certification previously incarcerated individuals receive, the lower the rates of recidivism; individuals who do not complete a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for individuals with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor's degree drops recidivism to about 5%, a master's degree reduces recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023).

An incarceration education program will include ongoing data analysis, data tracking, and information sharing for local leaders to ensure maximum community engagement, resource allocation, and inclusivity (Rice, 2023). Measures to evaluate the effectiveness of this program for all participants will include goals to increase in literacy by 50%, increase median income by 20%, increase employment by 50%, and decrease the amount spent on housing and utilities by 5%, outlined in Appendix G. Baseline economic stability data will be collected before starting the program using a Small Area Income and Poverty Estimates (SAIPE) program combined with a data aggregator tool from the U.S. Census Bureau (Census.gov, 2021). Data collection will include all Burke County inmates (housed in and out of Burke County) to capture each person's employment history, individual median income, living wages, percent of salary spent on housing and utilities, education level (including schools attended, literacy level, math abilities, and English-language skills).

#### **Rational and Importance:**

Creating employment pathways for previously incarcerated individuals will help offset the social determinants that lead to nonviolent criminal behavior including lower education levels and low socioeconomic status. After exiting prison, 95% of individuals return to their home communities and the majority of incarcerated individuals are working-aged (NC DAC, 2024). The total targeted population of inmates from Burke County will be



less than 500, making the sample size large enough for future project planning but small enough for reasonable budgeting (Vera Institute of Justice, 2023). The program can leverage existing grants such as the One North Carolina Fund, which aims to improve economic outcomes for communities through targeted employment programs, wage minimums, and health standards (North Carolina Department of Commerce, 2022). North Carolina has existing dedicated academic and vocational programs that partner with state colleges and institutions to offer state-run prison education, post-secondary education programs for state-run prisons, community schools for incarcerated youth or youth who have been incarcerated, and rehabilitation and reentry programs for residents exiting prison (NC DAC, 2024). By supporting the reentry process for inmates through proactive education and job training while incarcerated, Burke County leadership can decrease the cost of housing inmates and improve health outcomes for its community.

#### **Disciplinary Critique:**

Education methods focused on learning, social skill development, and vocational training combat recidivism, unemployment, and low income (Magee, 2021). Burke County policymakers are responsible for the equitable distribution of education and job training resources for vulnerable communities to promote long-term health success (Public Health Leadership Society, 2019). Previously incarcerated individuals who do not have adequate education and job training face difficulty obtaining employment after release from prison and jail. Individuals with a criminal record face legal limitations and social stigmas that prevent gainful employment. All Burke County inmate records are public records, including arrest records without convictions, meaning any employer can easily pull criminal track records for previously incarcerated individuals without any context for the case (including but not limited to systemic racism, ethnic biases of jurors, judges, or police officers) (Infotracer, 2024). The opportunity to provide additional education and job training resources for working-aged people who are currently and formerly incarcerated in Burke County will increase individual, county, and state-wide financial constancy and overall well-being.

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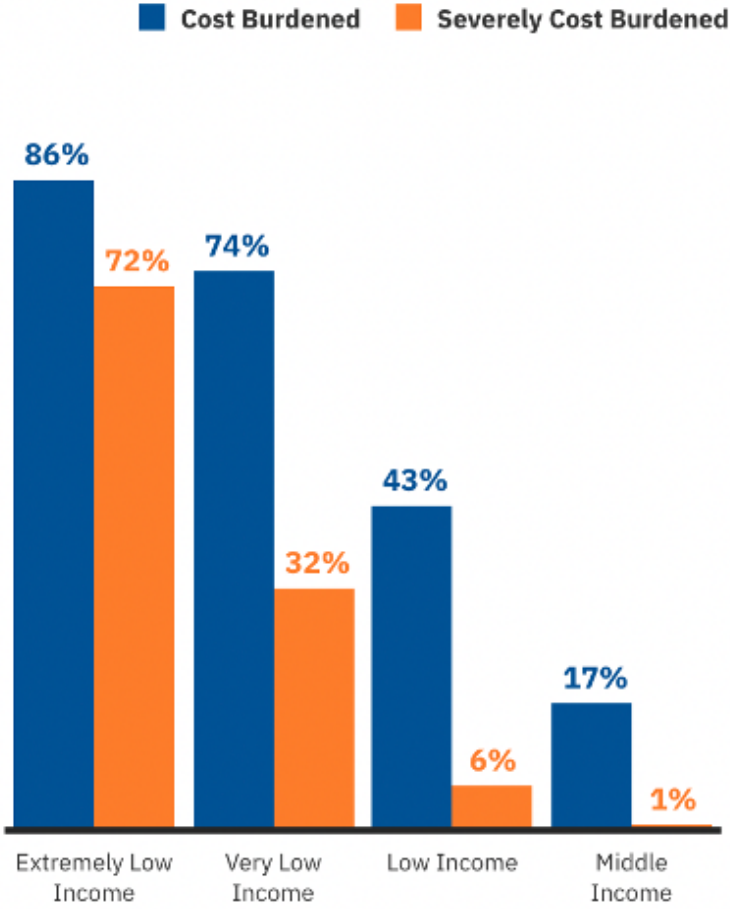
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**Appendix D.1.a: Appendix A. Housing Cost Burden by Income Group in North Carolina, 2021**  
**Housing Cost Burden by Income Group in North Carolina, 2021**



**Note:** Renter households spending more than 30% of their income on housing costs and utilities are cost burdened; those spending more than half of their income are severely cost burdened.

**Source:** NLIHC tabulations of 2021 ACS PUMS

Source: NLIHC, 2021.

**Appendix D.1.b: Appendix B. Employment-Population Ratio for Working-Age Population by Age Group, 2018-2021**

**Employment-Population Ratio for Working-Age Population by Age Group, 2018-2021**

Population	2018	2019	2020	2021
16-19 years	29.4%	27.7%	30.2%	31.4%
20-24 years	66.0%	62.2%	60.4%	64.1%
25-34 years	78.6%	76.9%	75.2%	79.0%
35-44 years	79.9%	78.8%	76.6%	80.1%
45-54 years	78.9%	78.5%	76.3%	78.8%
55-64 years	63.7%	63.2%	61.8%	63.8%

Source: Healthy People, 2023.

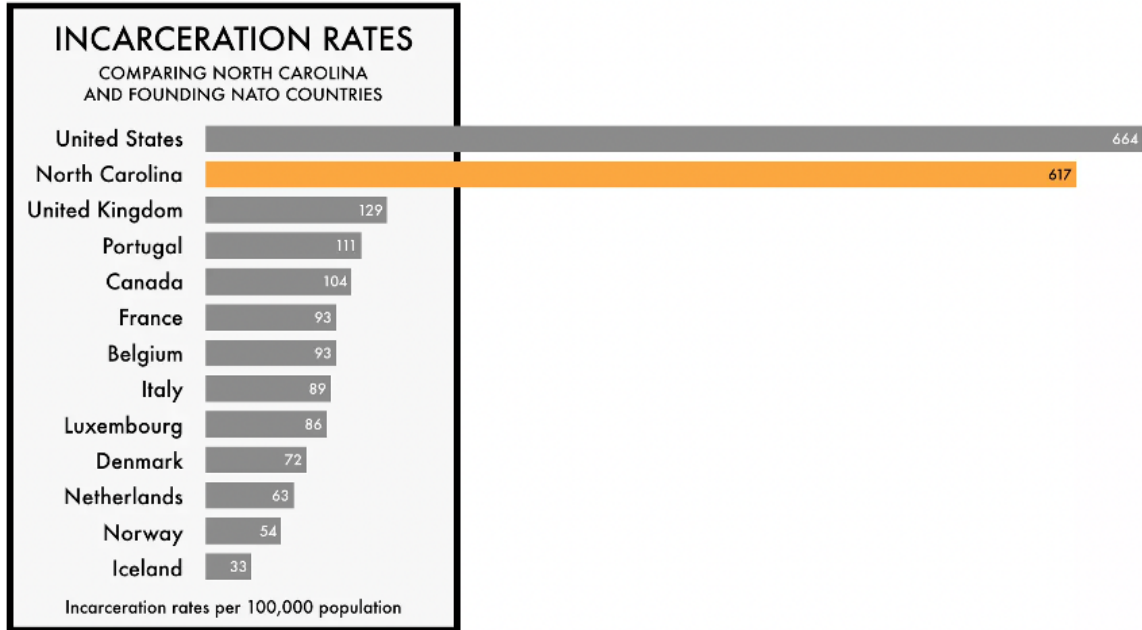
**Appendix D.1.c: Appendix C. Age Range Population of Inmates in North Carolina, 2024**

**Age Range Population of Inmates in North Carolina, 2024**

Population>	Number of Inmates	Percent of Inmates
Under 18 years	15	0.0%
18-21 years	1,443	0.9%
22-25 years	7,146	4.6%
26-30 years	17,703	11.3%
31-35 years	26,271	16.8%
36-40 years	27,527	17.6%
41-45 years	26,412	16.9%
46-50 years	18,744	12.0%
51-55 years	13,099	8.4%
56-60 years	8,457	5.4%
61-65 years	5,113	3.3%
Over 65 years	4,579	2.9%

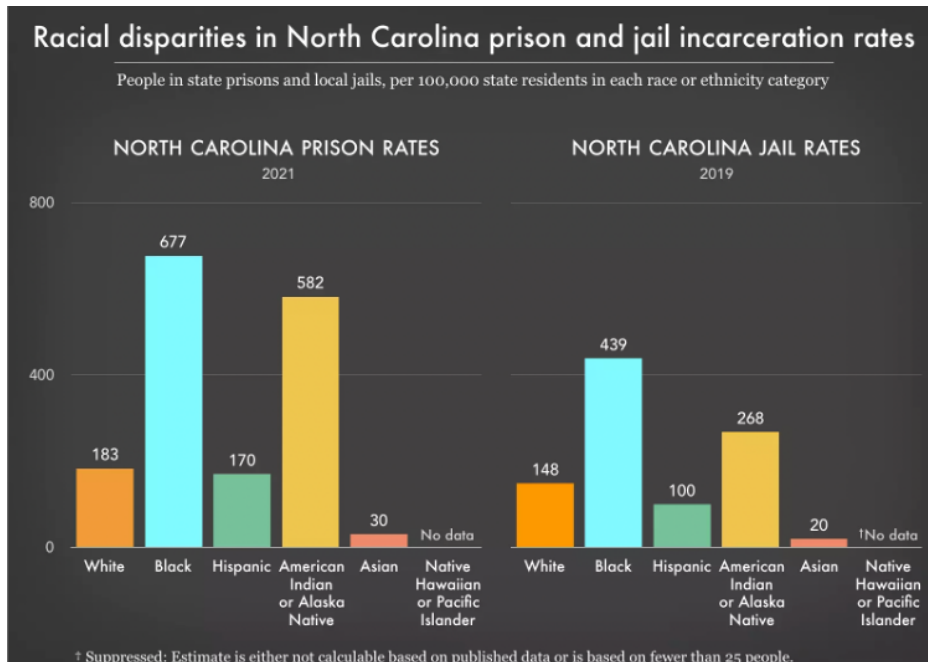
Source: Federal Bureau of Prisons, 2024.

**Appendix D.1.d: Appendix D. Incarceration Rate in North Carolina, the U.S., and Globally, 2021**  
**Incarceration Rate in North Carolina, the U.S., and Globally, 2021**



Source: Prison Policy Initiative, 2023.

**Appendix D.1.e: Appendix E. Race/Ethnic Background of North Carolina Inmates, 2021**  
**Race/Ethnic Background of North Carolina Inmates, 2021**

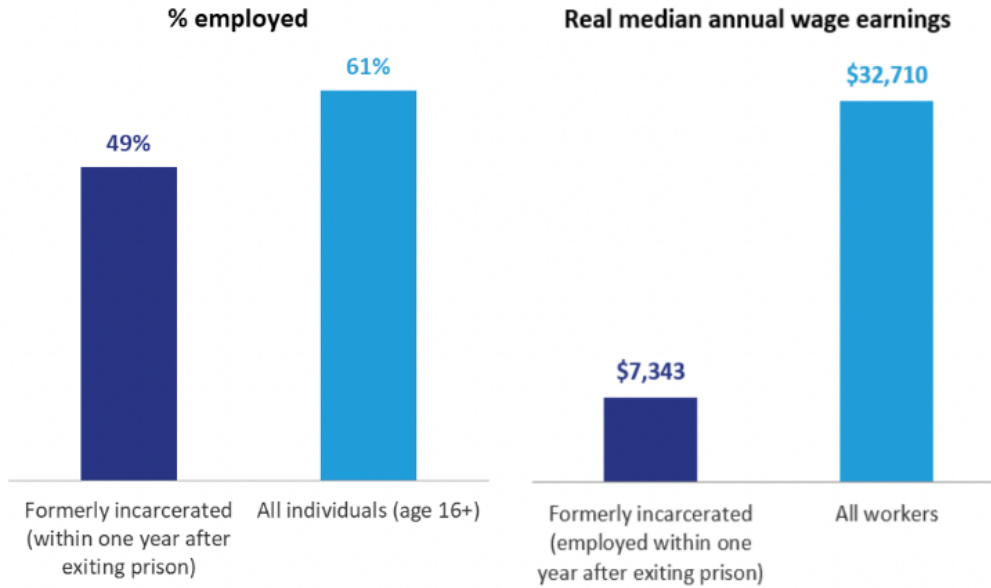


Source: Prison Policy Initiative, 2023.



## Appendix D.1.f: Appendix F. Employment Rates and Wage Earnings After Exiting Prison in North Carolina, 2021

Employment and wage outcomes in North Carolina (2021)



NC Department of Commerce, Labor & Economic Analysis Division (LEAD)

Source: analysis of data from North Carolina Common Follow-up System and US Census Bureau

Source: North Carolina Commerce, 2023.

**Appendix D.1.g: Appendix G. Economic Stability Program Measures for Inmates and Previously Incarcerated Individuals through Education Program in Burke County, NC, 2024-2025**

**Economic Stability Program Measures for Inmates and Previously Incarcerated Individuals through Education Program in Burke County, NC, 2024-2025**

<b>Goal</b>	<b>Data Metric Before Program</b>	<b>Data Metric After Program</b>	<b>Data Resource</b>
Increase literacy level to at least 8 <sup>th</sup> grade for 50% of inmate participants	Baseline literacy level	End-of-program literacy level	Data collection through interviews and school records
Increase in previously incarcerated individuals' median income by 20%	Baseline income before incarceration	End-of-program income	Data collection through interviews (to capture untaxed pay) and public records
Increase employment in previously incarcerated individuals by 50%	Employment status and type 1-month after incarceration (e.g., temporary, part-time, full-time)	Employment status and type 12-months after incarceration (e.g., temporary, part-time, full-time)	Data collection through interviews (to capture temporary jobs) and public records
Decrease the amount of total income spent on housing and utilities for 5% of participants (total spend will be 30% or lower)	Baseline percent of income spent on housing and utilities prior to incarceration	End-of-program percent of income spent on housing and utilities prior to incarceration	Data collection through public housing records and combined with income

## **Appendix D.2: Caitlin Whitcomb's Deliverable 1**

### **Analysis of Two Policy Factors that Affect Economic Stability for Incarcerated and Previously Incarcerated Working-Aged People in Burke County, North Carolina**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes stable housing, income, employment, and food security (CDC, 2023). In Burke County, North Carolina, economic instability is associated with higher instances of incarceration due to social determinants of education, employment, and income (Burke County Health Department, 2022). Education level also directly influences employment; the highest percentage of employed individuals in the U.S. have a four-year degree or more (84%), followed by some college or associate degree (75%) (Health.gov, 2023). The majority of the employed population in Burke County have at least a high school degree, while less than 5% of incarcerated individuals have their high school degree (Statista, 2023). One year after exiting prison, 51% of formerly incarcerated individuals do not have a job and four years after incarceration, about 60% of all individuals are unemployed and earn less than the U.S. median wage (Prison Policy Initiative, 2022). Burke County's arrest rate is almost 88% higher than the national average (Infotracer.com, 2024) and in the U.S., more than two-thirds of previously incarcerated individuals are rearrested within three years (Staff, 2019). Evidence shows that well-established reentry processes including employment, social connection, physical health, and substance use support reduce recidivism (NIJ, 2023).

In the U.S., 63% of people in jail and 58% of people in prison have a substance use disorder (SAMHSA, 2022). Approximately 75% of jail inmates report regular use of any drug before conviction, and prison inmates are more likely than non-incarcerated peers to use substances in the month before their arrests (Bronson, 2020). In the U.S., more than 50% of prisoners are incarcerated for nonviolent drug charges (Zoukis, 2023) and less than 30% of inmates with substance use disorders receive treatment during or after incarceration (Bronson, 2020). One policy that directly impacts the economic stability for incarcerated individuals is the Burke County substance abuse program for non-violent offenders, called the HARBOUR-LEAD project (Helping Achieve Recovery through Burke Opioid Use Reduction-Law Enforcement Assisted Diversion), (BurkeNC.org, 2019). Burke County's HARBOUR-LEAD project supports low-level offenders who voluntarily pursue treatment and recovery services and supports

families of substance users (BurkeNC.org, 2019). Focusing on substance use treatment directly impacts economic stability because substance use is associated with a higher risk of job loss and unemployment, and the unemployed population has higher instances of relapses after treatment (Nolte, 2023). In Burke County, individuals seeking treatment for substance use disorders are predominantly working-aged adults aged 19-60 (BSAN, 2023). The HABROUR-LEAD grant was approved by the Burke County Board of Commissioners and the Burke County Recovery Court to reduce recidivism (BurkeNC.org, 2019). This is a “little p” policy because it is enacted at the local government level through the Burke County Health Department and is enacted through community partnerships with the Burke Council on Alcohol and Chemical Dependence, Burke Community Paramedicine, and local behavioral and family counseling community partners (Burke County Board of Commissioners, 2020). Studies show that the more education incarcerated individuals receive, the lower the rates of recidivism; having less than a high school degree causes a 60% recidivism rate, whereas recidivism drops to 19% for individuals with any college degree, a bachelor’s degree drops recidivism to about 5%, and a master’s degree reduces recidivism to 0% (Zoukis, 2023). However, accessing student loans and further education while incarcerated is difficult (Edelman, 2023). One policy that indirectly affects the economic stability of incarcerated individuals in Burke County is the FAFSA Simplification Act (Federal Student Aid, 2023). The U.S. Congress passed the FAFSA Simplification Act leading to the U.S. Department of Education’s implementation of the Pell Grant, a Federal Student Aid award given to undergraduate students who demonstrate financial need (U.S. Department of Education, 2022). The FAFSA Simplification Act restored Pell Grant eligibility for confined or incarcerated individuals in the 2023-2024 award year and, if awarded, students do not need to repay the loan (Federal Student Aid, 2023). Student aid accessibility is a “Big P policy” and opens up educational pathways for incarcerated individuals that were previously closed to them. However, stipulations of the FAFSA Simplification Act policy have diminished the effectiveness of providing more education to incarcerated individuals; incarcerated students are not eligible for the Pell Grant if they are in a federal or state penal institution, which is about 30% of North Carolina’s incarcerated population (Prison Policy Initiative, 2023). Pell Grant student aid is unavailable for incarcerated individuals who have defaulted on student loans, and new studies found that almost 100% of incarcerated individuals in the U.S. are in default on student loans (Edelman, 2023). Incarcerated individuals are also blocked from federal student loans, and most incarcerated individuals do not have an income or make less than \$1 per hour (Edelman, 2023). Defaulted student loans remain on an individual’s credit history, impacting future economic endeavors such as receiving mortgage loans or being an

attractive candidate for hire (Federal Student Aid, 2024). The Pell Grant policy requirements create a prohibitive environment for incarcerated individuals to break out of student loan debt, diminishing their access to better education, employment, and housing stability after release. Given the low employment opportunities for less educated individuals in Burke County, debt collection creates worse economic stability for previously incarcerated individuals.

The Burke County Board of Commissioners is led by five members who serve four-year terms, and the current board's top initiatives for 2024 are improved employment, education, healthcare, and environmental sustainability (BurkeNC.org, 2024). The Burke County Board of Health meeting on February 7, 2024, outlined the Board of Commissioners' strong focus on the, "[mitigation of] substance use disorder and [improvement of] mental health," to mitigate what has been called a "substance use epidemic" (BurkeNC.org, 2024). Thom Tillis and Ted Budd, North Carolina's Senators, sit on the Economic Policy, Federal Rights, Employment and Primary Health Committees, all of which have influence over economic stability related to incarcerated individuals, education, and public health (Senate.gov, 2023). Additionally, Senator Tillis' platform focuses on investing in programs that improve homelessness, incarceration, and public education, and Senator Budd's platform focuses on employment, education, and the opioid crisis (Senate.gov, 2023). While Burke County leaders do not provide publicly shared goals for lowering incarceration rates, recidivism, or student loan debt, two of the top five "focus areas" for the Burke County Commissioners and the Burke County Board of Health in the 2023-2024 fiscal year are community advancement and economic growth/sustainment, indicating a commitment from county leaders to invest in the improvement of unemployment (BurkeNC.org, 2024). Promoting substance use support and education for incarcerated individuals will directly aid Burke County residents in shifting their employment prospects (BurkeNC.gov, 2024).

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### **Appendix D.3: Caitlin Whitcomb’s Deliverable 2**

#### **Understanding the Value of Reaccreditation of the Burke County Health Department Through the Lens of Continuous Quality Improvement (CQI): Education Initiative for Incarcerated Individuals**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing stability, poverty, employment, and food security (CDC, 2023). Education attainment and occupation level directly impact an individual’s socioeconomic status, short- and long-term health outcomes (CDC, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor’s degree drops recidivism to about 5%, a master’s degree puts recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). Educational programs that address upstream tactics for increased employment through higher literacy and job training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

Our program recommends that the Burke County Commissioner improve economic stability through better inmate education programs for nonviolent offenders. Our recommendation originally focused on Activity 25.2 as part of the reaccreditation process but after further research and analysis, our recommendation is to focus on Activity 24.3 as the unmet activity to achieve better reentry results for previously incarcerated individuals (BurkeNC.gov, 2024). As part of the reaccreditation process for the Burke County Public Health Department, fulfilling Activity 24.3 will entail, “the [participation of] local health department staff... in orientation and on-going training and continuing education activities” (BurkeNC.gov, 2024). Factors that influence limited training for local health department staff

related to continuing education activities are based on funding limitations, easy facilitation of training, system restraints and other priorities for the Burke County Health Department (BurkeNC.gov, 2024). While many Burke County inmates are housed in jails and prisons outside of Burke County, after exiting prison, 95% of individuals return to their home communities (NC DAC, 2024). Our recommendation is to focus on building a group of education navigators, at least one in each jail or prison with Burke County residents, who will be trained and then responsible for the education of inmates (BurkeNC.gov, 2024). Continuous quality improvement (CQI) will be useful in creating and maintaining the training and education activities of Burke County education navigators. We recommend using three tools to generate specific change ideas: brainstorming, benchmarking, and the Kaizen methodology (Schenck, 2022). Brainstorming will be the first tool in the process of improving the reaccreditation of the Burke County Health Department for Activity 24.3 to understand the current training and learning landscape for the education navigators. Brainstorming for this CQI is an effective approach because it drives improvements by tapping into a wide array of ideas, by equalizing the input from all parties, and by giving leaders a sense of themes of ideas (HubPages, 2023). Brainstorming sessions should include a variety of viewpoints involved in every step of training and educating, including program coordinators at the jails and prisons, current incarceration educators in North Carolina (who may be able to advise building a new program), formerly incarcerated individuals, Burke County reentry coordinators, the Burke County Public Health Director, and Burke County's Public Health/Health Education Officer (BurkeNC.gov, 2024). Benchmarking for CQI integrates careful preparation, monitoring key indicators, and inclusion of cross-functional visits throughout the process (Ettorchi-Tardy, 2012). Establishing benchmarking metrics for the education navigators for CQI monitoring, including inmate engagement, educator preparedness, educator retention, and training capacity, will then lead to Key Performance Indicators (KPIs) that the education navigators can track within the student population. Program leaders can regularly compare structure, activities, processes, and outcomes against the established KPIs for education (Ettorchi-Tardy, 2012) by following categories that other prisons have used successfully, including student success, academic quality, and civic engagement (IHEP, 2023). The Kaizen methodology focuses on daily improvements across teams or, in this case, across education navigators in each jail or prison (Pedroto, 2024). The Kaizen Institute categorizes CQI changes that focus on shared vision and objectives, gaps in workstreams for more effective partnerships, willingness to change for customers and teams, higher cross-team engagement, and execution planning (Kaizen Institute, 2024). Using the Kaizen methodology, participants in the Burke County training and education process will understand the shared

vision of improving economic stability through education and will use clear objectives to build up programs for each of their institutions (Kaizen Institute, 2024). Establishing education navigators is the main change idea to break down barriers of education for incarcerated individuals, and ongoing CQI through brainstorming, benchmarking, and the Kaizen methodology will create frameworks for the unmet activity.

By using the Lean Six Sigma strategy, a combination of the Lean Thinking and Six Sigma methods, the Burke County Commissioners' office can create short-term, medium-term, and long-term improvements for training and education (Schenck, 2022). Lean Thinking builds accountability, trust, and standards across an organization that focuses on the customer, or in this case, the education navigators fulfilling the unmet activity in Burke County (Schenck, 2022). Lean Thinking eliminates waste to improve the efficiency and quality of processes, or in this instance, the practice of bringing educators together across jails and prisons, implementing training and education programs, and matching the education needs of individuals with resources (Schenck, 2022). The five main principles of Lean Thinking are to specify value, identify the value stream, create flow, pull from the customer, and seek perfection (Schenck, 2022). For Burke County leaders, this will mean specifying the roles, responsibilities, and meetings for education navigators, engaging with trainees and educators, gathering feedback from education navigators, then reiterating processes based on feedback and results. The Six Sigma QI Method focuses on eliminating variability and defects by utilizing the DMAIC circular process model where you define, measure, analyze, improve, and control the events of a program (Schenck, 2022). The Six Sigma strategy reduces defects in a system, and in this case, education navigators will have the same tools, resources, and support for training and on-going education (Schenck, 2022). The define phase will outline metrics of success for education navigators, the same as the benchmarking metrics mentioned above, and eventually broaden to include student success metrics. The measure phase will determine the timeline for education navigators to be trained, then move into the analyze phase which reviews possible blockers for goal achievement (pulling from the brainstorming sessions and the Kaizen evaluation) (Langley, 2009). The improve and control phases will focus on testing the performance and scalability of on-going training and education for the unmet activity (Langley, 2009).

Program evaluation, process evaluation, and change management throughout the CQI process will impact the sustainability of the education navigators working in tandem to achieve this goal (Gyamfi, 2023). Short-term goals to achieve the unmet activity will be to identify and train education navigators for each jail and prison and establish a meeting cadence and communication process. Medium-term goals will be to increase education programs and

achievement for inmates based on pre-determined KPIs. Long-term goals will be to increase employment, increase economic stability, and decrease recidivism. To scale this program, the short- and medium-term goals would lead to the long-term goals, and the tools and improvement models described above will be applied for on-going education. The importance of scalability is taking small actions that build on each other, and our recommendation for the Director of the Burke County Health Department is to engage with education navigators regularly and iterate based on feedback (Schenck, 2022).

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## **Appendix E: Alexander Zhang's Individual Assignments**

### **Appendix E.1: Alexander Zhang's Individual SDOH Analysis**

#### **SDOH**

A social determinant of health is defined in the Healthy People 2030 report published by the DHS as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affects a wide range of health, functioning, and quality-of-life outcomes and risks”. Particularly, the SDOH of economic stability is defined as a combination of poverty and employment status by that same report published by the DHS. It was identified as a particular area of development as it directly influences people’s ability to care for themselves and their children. Whether it be through keeping themselves housed, purchasing healthy foods, or being able to afford quality health insurance, the broad consensus across the literature reviewed by the DHS acknowledges that economic stability, particularly in the form of employment, has a direct impact on the health of the people: “Those who are unemployed report feelings of depression, anxiety, low self-esteem, demoralization, worry, and physical pain. Unemployed individuals tend to suffer more from stress-related illnesses such as high blood pressure, stroke, heart attack, heart disease, and arthritis.”

For Burke County, unemployment disproportionately affects its Black population. According to the latest community health assessment published by the Burke County Health Department in 2022, the current unemployment rate in Burke County sits at 3%, or around 1,215 people of Burke County’s total workforce of 40,502. Relatively speaking, this places Burke County at the 34th highest unemployment rate in NC out of 100 counties, though this data is only available for the year 2020 according to the Health Communities NC Database. Previous measures to address unemployment in the county have involved the development of educational resources according to the CHA, with notable local institutions such as Western Piedmont Community College and the Foothills Higher Education Center offering college-level education in both baccalaureate, master, and associate degrees in a variety of fields.

Of particular interest in Burke County is the incarcerated and formerly incarcerated populations. Current data suggests that nationally, approximately 60% of formerly incarcerated individuals are unemployed (Wang & Bertram, 2022). While there is no county-level data available for this specific measure for Burke County, county-level data on the incarcerated population in Burke County listed in the Healthy Communities NC database suggests a total incarcerated population of 271 individuals in Burke County jails as of 2020, ranking Burke County as 47th out of 97 in terms of NC County incarcerated populations. Of these individuals, 16.6% of them are Black, despite Blacks

only making up 6% of the population of Burke County according to the CHA. Additionally, the general unemployment rate for Blacks in Burke County sits at 17.4% in comparison to non-Hispanic White's 5.6% (See Appendix 1), again as of 2020 according to Healthy Communities NC. Based on previous figures, it stands to reason that when the 271 incarcerated individuals in Burke County are eventually released, which they will as they are serving sentences of 2 years or less, they will make up 13.3% of the county's unemployed population. This is despite them making up 6.7% of the total workforce, doubling their relative impact on county-level unemployment.

In pursuit of this goal, we propose that the county partner with local education institutes to provide education to non-violent offenders serving time in Burke County jails. We further propose the following measures be used to determine the scale of the project's success:

- Increased employment in this group by 50% over 2 years
- Increase median income by 20%
- Increase literacy level to at least 8th grade for 50% of participants
- Decrease the amount spent on housing and utilities to 30% or lower of total income for 5% of participants
- Increase prevalence of high school diploma/2 year degree in previously incarcerated individuals

By providing the incarcerated with education, they will be able to secure economic stability for themselves and their families.

The disproportionate level of unemployment among the formerly incarcerated in Burke County, who are also disproportionately Black, means it stands to reason that incarcerated and formerly incarcerated individuals should be a priority for increasing economic stability. They represent underserved, underprivileged people who present the best opportunity to lower unemployment in the county and thus better the livelihoods of those living in the county. Especially for those whom society has dealt some of the worst hands.



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## Appendix E.1.a: Unemployment by Race, Ethnicity, Age in 2020



[healthycommunitiesnc.org/profile/geo/burke-county](https://healthycommunitiesnc.org/profile/geo/burke-county)

**HEALTHY**  
Communities NC

## **Appendix E.2: Alexander Zhang's Deliverable 1 Quality 1**

A social determinant of health is defined in the Healthy People 2030 report published by the DHS as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affects a wide range of health, functioning, and quality-of-life outcomes and risks” (DHS, 2020). Particularly, the SDOH of economic stability is defined as a combination of poverty and employment status by that same report published by the DHS (DHS, 2020). It was identified as a particular area of development as it directly influences people’s ability to care for themselves and their children. Whether it be through keeping themselves housed, purchasing healthy foods, or being able to afford quality health insurance, the broad consensus across the literature reviewed by the DHS acknowledges that economic stability, particularly in the form of employment, has a direct impact on the health of the people: “Those who are unemployed report feelings of depression, anxiety, low self-esteem, demoralization, worry, and physical pain. Unemployed individuals tend to suffer more from stress-related illnesses such as high blood pressure, stroke, heart attack, heart disease, and arthritis” (DHS, 2020).

Our specific project is provisionally titled the “Burke County Re-entry Education Initiative”, aiming to improve the process of re-entry for non-violent offenders currently incarcerated in Burke County Jails via increasing education levels for incarcerated persons. Specifically, this initiative plans to work with local educational institutions to provide education to incarcerated individuals in Burke County, improving economic stability by providing a population that is known to suffer from disproportionate unemployment (Wang & Bertram, 2022) with education which they can use to find meaningful employment (Riddell & Song, 2011). This would further help the Burke County Public Health Department earn accreditation by fulfilling Activity 25.2 of the 2022 Reaccreditation Site Visit Report by Jarrel et. al, as partnerships with local educational institutions would be established through this project, enabling further cooperation and opportunity for working with said local institutions for research and or evaluations (Jarrel et. al, 2022).

The internal customers for this process would be the inmates of Burke County jails, and they will primarily see improvement through education opportunities which can lead to gainful employment. The external customers for this process would be: potential employers in Burke County, the Burke County Public Health Department and Burke County Education Institutes. Potential employers in Burke County benefit from the program through an expanded pool of educated potential employees. The Public Health Department will benefit through both decreasing a significant source of unemployment and meeting one of their activities for accreditation via Activity 25.2 via

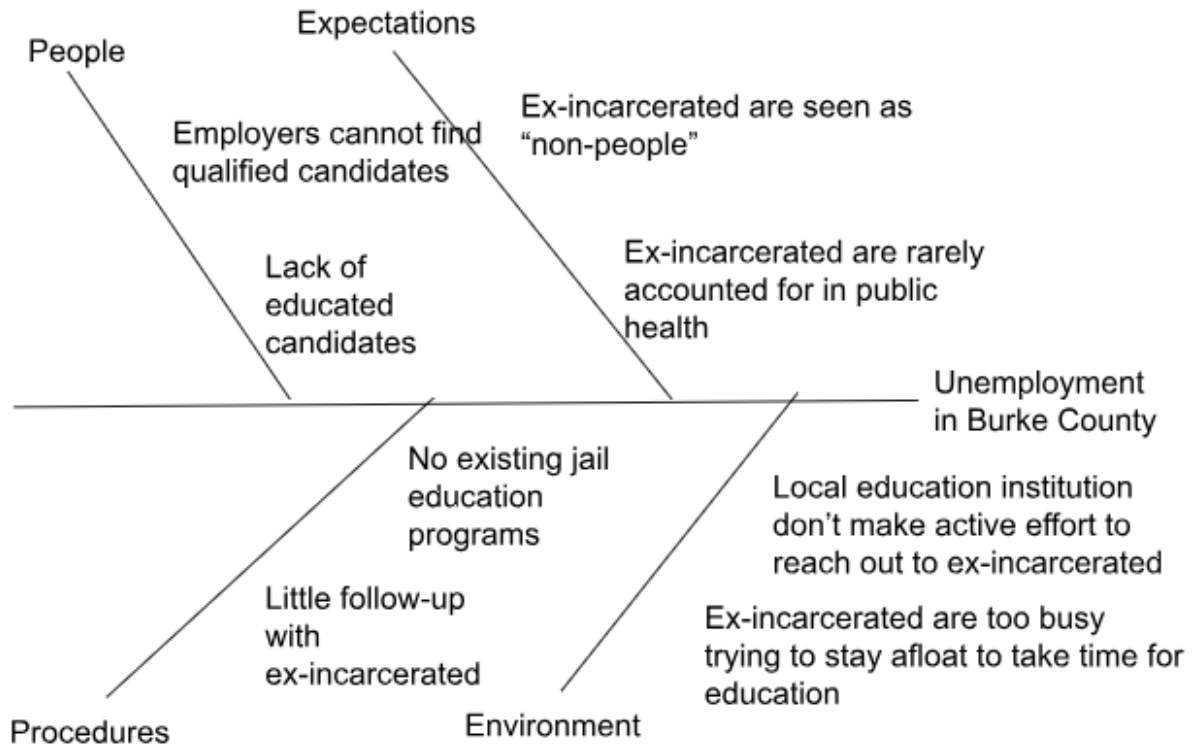
working with local education institutions. And local education institutes will benefit through an increased number of alumni as well as direct financial support from Burke County Public Health as part of this project's funding.

Potential project measures for this initiative would fall under the primary categories of outputs, outcomes, process metrics, and balancers. For outputs, the number of incarcerated and formerly incarcerated holding either vocational certificates, 2 year degrees, or GED's would be one logical measurement, alongside the number of formerly incarcerated individuals that have improved their resumes compared to their baseline, as this program seeks to directly output educated individuals with the direct output of increasing employment among said individuals. For outcomes, measures of unemployment among the formerly incarcerated population of Burke County would be appropriate as the primary objective of the project. Specific process metrics could include the enrollment rate for the program among incarcerated individuals, ongoing education performance indicators for incarcerated individuals in the program, specifically pass/fail rates, GPAs, attendance records, as well as overall graduation rates, as these would provide a good window into the exact effectiveness of the program's primary process of education. As for balancing measures, two metrics to watch out for would be median salaries among employed individuals who took part in the programs, as their nature as ex-incarcerated individuals may lead to employers underpaying them despite their qualifications. Another more short term balancing measure would be the number of drop-outs and or fail-outs among the incarcerated enrolled in the program, as they would indicate some potential failings or unintended consequences of the program.

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Appendix E.2.a: Appendix 1: Fishbone Diagram for Burke County Unemployment



### **Appendix E.3: Alexander Zhang's Deliverable 2 Systems 2**

#### **SDOH Summary**

Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care access and quality, neighborhood and built environments, and social and community contexts (ODPHP, 2021). The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security (CDC, 2023). Economic stability connects interrelated health factors that impact an individual's ability to maintain a healthy life, safe neighborhood and built environment, community involvement, and social connection (ODPHP, 2021). Of the social determinants of health, economic stability is a chief concern for Burke County, North Carolina.

Education attainment and occupation level directly impact an individual's socioeconomic status, short- and long-term health outcomes (Centers for Disease Control and Prevention, 2019). Economic stability directly impacts health through a variety of means; poverty is associated with a 42% mortality rate (Kunzmann, 2022), unemployment is directly correlated with higher suicide, addiction, depression, and mortality rates (Pratap, 2021), high housing costs and low income are associated with high instances of high-risk obesity, substance use disorders, anxiety, and serious mental health disabilities (Frasquilho, 2015). In the U.S., 80% of incarcerated individuals are from low socioeconomic backgrounds, 67% are Black, American Indian/Alaskan Native, or Latinx, and 2 of every 3 households with an incarcerated family member cannot meet their basic needs (Law Journal for Social Justice, 2021). For previously incarcerated individuals, employment leads to higher quality success and lower rates of recidivism, but obtaining employment is five times more difficult with a criminal record (Parker, 2022). More educational training and certification for previously incarcerated individuals results in lower rates of recidivism; those without a high school degree have a 60% recidivism rate, whereas recidivism drops to 19% for those with any college degree (Bender, 2018). The higher the education level and training, the lower the rate of recidivism; completing a bachelor's degree drops recidivism to about 5%, a master's degree puts recidivism to 0%, and vocational training decreases the recidivism rate to 30% (Zoukis, 2023). When previously incarcerated individuals are employed, communities benefit due to decreased poverty rates and stronger family relationships (Parker, 2022). Educational programs that address upstream tactics for increased employment through higher literacy and job training will improve economic stability for previously incarcerated individuals and ultimately enhance the health of Burke County.

## **Co-design Scope and Objectives**

As part of our recommendations regarding our proposed project in Burke County, we would also suggest the implementation of a co-design process. Co-design involves stakeholders participating in the design process of the intervention that concerns them (Vargas, 2022), and is a key means to help promote one of the main ethical values in public health in the form of public participation (Lee, 2020). In particular, we recommend an Experience Based Co-design processes be used for this particular project, as there is a significant need to focus on the inmate perspective and ensuring that their concerns and experience are prioritized, similar to the patient-centered focus that this co-design process is meant to address (Raynor, 2020).

As part of this co-design process, we believe certain community partners should be prioritized for having a role in the process. These partners would be jail administrators, local higher education providers, formerly incarcerated advocates, and local major employers. Jail administrators would be the ones hosting the program physically and would have significant concerns that would need to be addressed in order to get the project off the ground. Local higher education providers would be the ones providing the materials in question and would have the best idea for what kinds of education would be most practical to offer in the setting of a county jail. Formerly incarcerated advocates would be able to offer perspectives on what kinds of programs would interest incarcerated peoples, as well as how to sell the program to incarcerated peoples and how to best retain them and ensure they complete the program. Finally, local employers will have a good idea as to what kinds of degrees/certifications are in demand in the area, particularly for formerly incarcerated individuals (Sunlight Foundation, 2024).

## **Personas, User Stories, Needs and Quality Characteristics**

Ideally, the goal of the project is meant to specifically benefit both incarcerated individuals as well as local employers. To that end, we have developed some examples of both of these to show the kinds of people this project aims to help.

- Sam is a 36 year old recently incarcerated individual serving a 1.5 year sentence for a non-violent offense. They are not strangers to the criminal justice system, but this is the first time they are serving a jail sentence, and they are at a critical point in their life where they are thinking about how to change their life moving forward after being sentenced. They are particularly concerned over how they're going to make a living once they get out, with a jail sentence on their record and having to make a living, be it legally or illegally.



- Winston is a 43 year old head of a local construction company who is looking to expand their business in Burke County. He is open to hiring formerly incarcerated individuals, having already regularly employed such individuals before, but is unable to offer positions that don't require some form of certificate or specialized training, such as electricians or plumbers. He doesn't believe he has the money to get people trained and is skeptical of offering that training to new hires, particularly if they have only just been released from jail.

We constructed a journey map for Sam in Appendix 1 in order to visualize what our ideal process would look like from the perspective of a participant. Using the Kano model, which aims to identify and prioritize consumer needs (Qualtrics, 2023) on the examples provided above, we identified several needs to prioritize for both employers and incarcerated individuals. At a must-be level, there is proper accreditation for offered programs in order to ensure that programs actually provide a meaningful difference in employability for employers and incarcerated individuals. At a one-dimensional level, the program must offer a sense of transformation, to help incarcerated individuals feel that their life trajectory has changed for the better, and to help signal to employers that these individuals have in fact turned a new leaf. And finally, at an attractive level, the program should be able to provide references and or recommendations for incarcerated individuals to use in their future employment and for future employers to base their evaluations off of. In short, we aim to assess the satisfaction, validity, and reliability of the program in order to ensure that incarcerated individuals and employers are seeing a meaningful improvement in employment and economic stability.

### **Design Brief**

The objective of our co-design process is for the selected stakeholders to come together using experience based co-design to focus on the experience of incarcerated individuals going through this education program. Focus should be placed on determining how to set-up and obtain accreditation for the programs offered, ensuring that the experience is considered transformative by both incarcerated individuals and employers, and on providing adequate references and recommendations for incarcerated individuals to seek employment in their new field.

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**Appendix E.3.a: Appendix 1: Journey Map for Sam**

Sam enters jail	Sam enters the program	Sam reconsiders plans after his sentence through the program	Sam completes the program and earns a degree/certificate from an accredited program	Sam finishes his sentence	Sam finds employment
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## Appendix F: PowerPoint Presentation Script

1. **Vanessa** - Good evening, everyone, our presentation is focused on increasing economic stability for incarcerated, working-aged people in Burke County, North Carolina. It is presented by myself, Vanessa Ramlal, Diamond Black, Caitlin Whitcomb and Alexander Zhang.
2. **Vanessa** - Our table of contents include the introduction, methods, overview of the social determinant of health, key insights, recommendations and lastly our conclusion.
3. **Diamond** - To begin we would like to highlight why educating incarcerated individuals will benefit Burke County's economic stability.
4. **Diamond**: This initiative will benefit Burke County by targeting disproportionate incarceration rates by race, homeless rates, and poverty and unemployment rates.
5. **Diamond**: In 2020 Burke County's population was a little over 87,000 people of which 5% of the population were Black. The blue line on this graph demonstrates that Black individuals of Burke County are disproportionately incarcerated.
6. **Diamond**: In Burke County's 2020 Health assessment it was identified that homeless rates continue to rise and have been officially deemed an area of concern for Burke County.
7. **Diamond**: In 2020 6.6% of Burke County's population was disproportionately unemployed including 20% of American Indian or Alaska Native and 17% of Black individuals. Analyzing by region, Burke County's highest percentage of individuals below 200% Federal Poverty Line was 57.6% and the lowest in the region was 23.1%.
8. **Diamond**: What led us to focus on this topic and population? -There is limited data on the education levels of this target population, Social Determinants of Health prohibited economic success of this target population, and Initiatives have been put in place to help this population but have no follow-up data on its progress. This initiative will increase employment and education rates while also decreasing recidivism rates and the homeless population.
9. **Alex** - Next, we'll go over the methods we used to research and evaluate our proposal.
10. **Alex** - Our methods went as follows: First we researched economic stability in Burke County, next we investigated past and current relevant policies in the US, then we did an evaluation of jail education in Burke County, then we synthesized our recommendations.
11. **Vanessa** - Here we will dive deeper into the social determinants of health for incarcerated individuals and how it is related to economic stability.
12. **Vanessa** - Social determinants of health are the physical and psychological environments that impact individual and community health, classified into five categories: economic stability, education access and quality, health care and quality, neighborhood and built environments, and social and community contexts.
  - a. Of the social determinants of health, economic stability is a chief concern for Burke County.
  - b. The Centers for Disease Control and Prevention (CDC) states that economic stability includes housing, income, employment, and food security.
  - c. Education attainment and occupation level directly impact an individual's socioeconomic status, as well as short- and long-term health outcomes.
13. **Vanessa** - For previously incarcerated individuals, employment leads to higher quality success and lower
14. rates of recidivism, but obtaining employment is five times more difficult with a criminal record. With more educational training and certification, employment is obtained which in turn leads to decreased poverty rates and stronger family relationships.
15. **Vanessa** - When we look closely at the racial disparities in North Carolina's incarceration rates, we see that those who are Black are incarcerated at higher numbers followed by American Indian or Alaska Native, compared to those who are White or Asian. With proactive educational interventions we can aid in decreasing these numbers.
16. **Caitlin**: We reviewed existing programs, legislature, and stakeholders to understand what exists and where there are areas for improvement.
17. **Caitlin**: We first evaluated existing policies: the Burke County HARBOUR-LEAD project supports low-level offenders who voluntarily pursue substance use recovery services, and the Pell Grant offers student aid for inmates but has limiting stipulations. Previously incarcerated individuals with SUDs, student debt,

and lower education levels have a higher risk of job loss from addiction relapse and unemployment, making these topics important for future policy change and something we recommend that Burke County addresses in the long-term.

18. **Diamond**- Another policy we analyzed was The Fair Housing Act. This Act eliminates bias and discrimination against individuals from housing agencies and landlords. This is important because discrimination still occurs by making individuals undergo a background check which can affect their chances of receiving housing through certain initiatives. The US Department of Housing and Urban Development proposed a rule to remove criminal conviction restrictions in 2023.
19. **Diamond**- We analyzed the three policies with a Pugh Matrix and ranked them from best to worst. We decided the HUD proposed rule to eliminate background checks would best suit this initiative because it will be no cost to Burke County, is sustainable, and would only need support.
20. **Alex** - One of our insights regarding quality improvement is the establishing education navigators for the program to increase academic achievement and promote employment and stability and to decrease recidivism in the short, medium, and long terms respectively
21. **Vanessa** - The system at the focal point of it all is the system to advance employment through educational attainment within the incarcerated population.
  - a. Based on the causal loop diagram we can see how much of a wicked problem this is which is defined as a complex social or cultural problem with an unknown number of potential solutions.
  - b. The system leverage points are as follows:
  - c. -system infrastructure means increased resources and educational programs
    - i. information flows means providing those recently released with information about housing, employment, health care and more
    - ii. The bigger challenge comes with organizing principles such as changing the rules of the system and addressing harsh sentencing laws and other unfair conviction policies.
  - d. -The leverage point mindset can also pose a challenge as individuals will continue to have their own opinions and viewpoints.
22. **Alex** - In order to address that complexity, we recommend a co-design process to combat complexity with diversity and establish the infrastructure for that in Burke County
23. **Diamond**: After analyzing community members, potential partners we will be considering are the Sheriff of Burke County, the executive director of United Way of Burke County, and the Center for Community Transitions.
24. **Diamond**: For the stakeholders matrix we analyzed the potential community partners and determined the power, areas of interest, project phases they would be involved in, engagement approach, and engagement tools. These characteristics aided us in choosing a community partner.
25. **Vanessa** - The engagement of community partners has many benefits therefore our selected community partner is Burke County United Way's Executive Director.
  - a. United Way envisions a community where all individuals and families are equipped to live independently and thrive. Additionally, parts of their mission are to promote self-sufficiency, support and offer services to families who are financially struggling. They also aim to increase housing stability, which the incarcerated population can benefit greatly from.
  - b. With shared goals and aligned community engagement principles, Burke County United Way is an ideal community partner and through engagement methods of relationship building, community meetings and asking for feedback we can enhance the work done and have a partnership that is fruitful and impactful.
26. **Caitlin**: Here are recommendations on how to move forward with an incarceration education initiative in Burke County
27. **Caitlin**: Based on our findings, we recommend that in the near-term, the Burke County Health Department establishes continuous quality improvement processes to create alignment between all jails/prisons with Burke County inmates and build partnerships between local residents and organizations.
28. **Caitlin**: In the long-term, educators should follow key performance indicators, and build a diverse ecosystem by incorporating feedback at every stakeholder level to scale and maintain this program.
29. **Caitlin**: Potential hurdles will continue to stem from social determinants of health including disparities in education access, student debt, housing, and substance use disorders.
30. **Caitlin**: In conclusion, here is why this population matters for the economic stability and public health of Burke County

31. **Caitlin:** The majority of Burke County individuals are working-aged, and a large percentage of the unemployed population have been previously incarcerated.
32. **Caitlin:** education levels directly impact employment: while most employed people in Burke County have a high school degree, less than 5% of the incarcerated population has a high school degree.
33. **Caitlin:** Education levels also impact recidivism: without a high school degree, the recidivism rate is 60%, but can drop to 0% with a masters degree.
34. **Caitlin:** Investing in upstream strategies to prevent recidivism through education will benefit an underserved population, improve public health outcomes, and create an economically stable workforce in Burke County.
35. **Alex:** references
36. **Alex:** Thank you! Are there any questions?