CHAPTER 3

SOCIAL & ECONOMIC FACTORS

INTRODUCTION

Factors like education, employment, income, family and social support, and community safety provide the foundation for health and well-being. These social and economic factors strongly determine where we live, the jobs we have, the people we interact with, and our day-to-day experiences. These factors are also highly inter-related. For example, educational attainment drives opportunities for employment, and thus income. Families with lower incomes have a higher likelihood of living in areas with poor quality schools and have fewer resources to send their children to college. People with higher incomes can choose safer communities to live in.

Social and economic factors drive all the topics that are covered throughout this report:

- Physical Environment – Our incomes often determine how close we live to areas for safe physical activity, the quality of our homes, our access to healthy foods, and distance from known risks (e.g., tobacco shops).
- Health Behaviors – Many social and economic factors create the opportunity, or lack of opportunity, for people to participate in behaviors that are important for supporting a healthy life.
- Clinical Care – People in low-income jobs often lack health insurance, decreasing access to the care they need. Areas of the state with fewer resources also tend to have less geographic access to health care providers.
- Health Outcomes – All of these factors combine to drive our health from birth to death, with people who face greater social and economic challenges suffering higher rates of morbidity and mortality.

Social and economic factors often have long-lasting impacts on families. Families who face social and economic challenges may lack equitable access to opportunities or the resources needed for social mobility, leaving their children with similar prospects for the future. In North Carolina, as in the rest of the country, people of color are disproportionately affected by these factors due to historical and current structural racism. The social and economic health indicators selected for HNC 2030 highlight the impact of structural racism in our society directly (e.g., school suspension and incarceration) and indirectly (e.g., poverty and unemployment).

Read an example below of how social and economic factors can impact an individual's opportunities to achieve health and well-being.[E] For each health indicator, this report includes recommended evidence-informed policies and practices to address that indicator of interest. We recommend community coalitions use multi-sector partnerships to pursue all the strategies recommended.

Social & Economic Factors and Health – Jennifer's Experience

Jennifer was raised by a single mother in a small, rural community in Western North Carolina. Her mother worked long hours at a minimum wage job and couldn't spend much time at home. Aside from the stress of her living situation, Jennifer had a learning disability that was never identified by her local schools and she barely got by with passing grades. When she was 16, she quit school to start working. Like her mother, her job had low wages and no opportunities for career advancement. A year after she quit school, Jennifer gave birth to her first daughter. The baby was born several weeks prematurely and needed to be cared for at home for longer than Jennifer's employer allowed her to be away from work. Now, Jennifer's mother is supporting her daughter and granddaughter by taking on another job. The stress of it all weighs on both Jennifer and her mother. Both deal with high blood pressure and struggle with depression. They don't see how they can change their situation and worry what opportunities the new baby will have as she grows up.

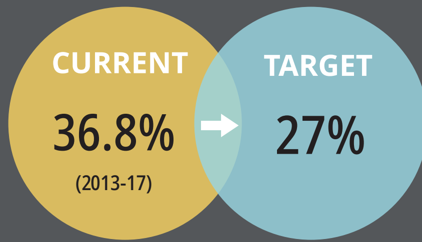
[E] *Examples are of hypothetical scenarios commonly faced by individuals with health-related social needs.*

HEALTH INDICATORS:

1. **INDIVIDUALS BELOW 200% FEDERAL POVERTY LEVEL (FPL)**
   Decrease the Number of People Living in Poverty
2. **UNEMPLOYMENT RATE**
   Increase Economic Security
3. **SHORT-TERM SUSPENSION RATE**
   Dismantle Structural Racism
4. **INCARCERATION RATE**
   Decrease the Incarceration Rate
5. **ADVERSE CHILDHOOD EXPERIENCES**
   Improve Child Well-Being
6. **THIRD GRADE READING PROFICIENCY**
   Improve Third Grade Reading Proficiency

HEALTH INDICATOR 1: INDIVIDUALS BELOW 200% FEDERAL POVERTY LEVEL (FPL)

DESIRED RESULT: DECREASE THE NUMBER OF PEOPLE LIVING IN POVERTY



DEFINITION
Percent of individuals with incomes at or below 200% of the FPL

DETAILS
Not applicable

NC PERCENT OF INDIVIDUALS BELOW 200% FPL (2013-17)
37%

2030 TARGET
27%

RANGE AMONG NC COUNTIES
Not Available

RANK AMONG STATES (2017)
39th*

DATA SOURCE
American Community Survey

STATE PLANS WITH SIMILAR INDICATORS
North Carolina Perinatal Health Strategic Plan[F]- indicator of addressing social and economic inequities for families

Early Childhood Action Plan[G]- Families living at or below 200% of FPL is a sub-target of all 10 goals in the Early Childhood Action Plan

*Rank of 1st for state with lowest percent of individuals below 200% FPL

Rationale for Selection:

Income level is a strong predictor of a person's access to resources and health status. Low income restricts access to quality housing, transportation, food, and education, which limits opportunities for people to live healthy lives. [F, G]

Context

Poverty is directly linked to negative health outcomes. Income is central to accessing resources needed to be healthy such as safe housing, nutritious food, education, and transportation, as well as health services and treatment. Income is one of the greatest predictors of disease and mortality rates.[21] Low-income adults have higher rates of heart disease, diabetes, stroke, and other chronic disorders than their wealthier counterparts.[22] Income is an even stronger predictor of health disparities than race when considering the rates of disease within racial/ethnic groups.[22] People below 200% of the Federal Poverty Level (FPL) are more likely to rate themselves in fair or poor health (20%), have higher rates of obesity (36%), and are more likely to be a current smoker (25%).[23] They have fewer medical care options, are more likely to be uninsured, and the upfront costs of services are a greater burden for them.[22] Mental health services can also be inaccessible for adults with low incomes.[24] Adults with family incomes below and near poverty experience more stress, particularly financial stress, which is detrimental to their overall health and well-being.

Lower-income earners are constrained in their options for where to live. Lower-cost housing tends to be in areas that are farther removed from services, require higher transportation costs, have overcrowding, and have greater exposure to hazardous toxins such as mold. These poor housing conditions correlate with the poor health conditions of low-income children such as asthma and elevated lead levels.[22]

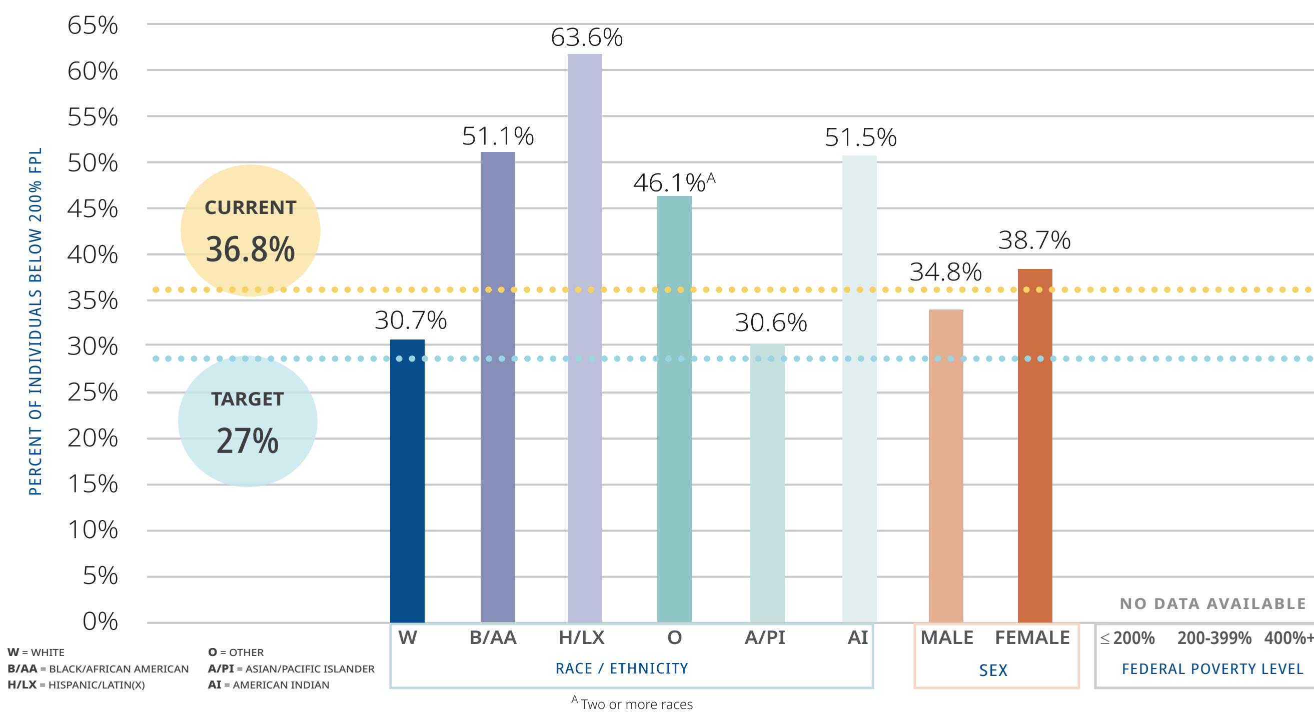
Children's health is positively correlated to parents' incomes, with children born to low-income mothers having a greater risk of low birth weight and higher rates of heart conditions, hearing problems, and intestinal disorders.[22] Controlling for children's health at birth, those born to lower income parents are less healthy in adulthood than their wealthier peers[25].

The five-year average of individuals below 200% FPL between 2013-17 in North Carolina was 37% compared to approximately 33% of families nationwide.[26] For 2019, 200% FPL for individuals was $24,980.[27]

[F] *North Carolina Department of Health and Human Services. North Carolina Perinatal Health Strategic Plan: 2016-2020. March 2016. https://whb.ncpublichealth.com/phsp/*
[G] *North Carolina Department of Health and Human Services. North Carolina Early Childhood Action Plan. February 2019. https://files.nc.gov/ncdhhs/ECAP-Report-FINAL-WEB-f.pdf*

FIGURE 5

Percent of individuals below 200% Federal Poverty Level across populations in North Carolina and distance to 2030 target



Disparities

Nationally, children are the most likely of any age group to live in poverty, with 38.8% of people under the age of 18 living under 200% of the FPL compared to 26.2% aged 18 to 64 and 30.1% aged 65 and older.[28] Whites make up the largest share of those living with incomes below 200% of the FPL (58%). However, people of color are disproportionately more likely to live in poverty. In North Carolina, half of American Indians (52%) and African American (51%) and 64% of Hispanic individuals have incomes below 200% of the FPL, compared to 31% of whites.

2030 Target and Potential for Change

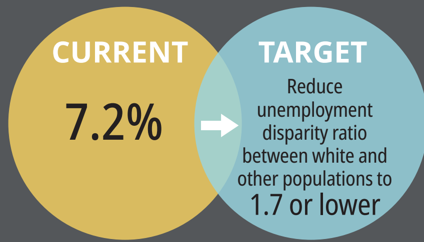
Although the percentage of individuals below 200% FPL has been decreasing slowly over the past decade, North Carolina ranks 39th out of 50 states in this indicator (single-year estimate, 2017).[29] The HNC 2030 group looked at averages in other states across the country and set an ambitious target of 27% of individuals living below 200% of the FPL by the end of the next decade. The state with the lowest percentage is New Hampshire at 16%, and many other states are around 25%. A faster decrease in the percentage than seen over the past decade will be seen as a success, even if the exact target is not met by 2030.

Levers for Change

- Raise the minimum wage to $15 per hour (Children's Defense Fund, 2019)
- Increase the state earned income tax credit
- Focus economic development on well-paying jobs
- Increase subsidized childcare
- Expand Medicaid eligibility
- Increase paid medical leave
- Improve teen pregnancy prevention
- Improve 3rd grade reading proficiency, high school graduation rates, and support and strengthen the community college system
- Reduce incarceration

HEALTH INDICATOR 2: UNEMPLOYMENT RATE

DESIRED RESULT: INCREASE ECONOMIC SECURITY



DEFINITION
Percent of population aged 16 and older who are unemployed but seeking work

DETAILS
Data based on 5-year average

NC UNEMPLOYMENT RATE (2013-17)
State overall: 7.2%;
Disparity ratios:
Black/white – 2.1
American Indian/white – 1.8

2030 TARGET
Reduce the unemployment disparity ratio between white and other populations to 1.7 or lower

RANGE AMONG NC COUNTIES
3.5 – 13.4%

RANK AMONG STATES (2017)
Not Available

DATA SOURCE
American Community Survey

STATE PLANS WITH SIMILAR INDICATORS
Not applicable

Rationale for Selection:

Employment opportunities are vital to providing income and, for many, health insurance. While the state's unemployment rate is at an all-time low overall, there are still communities and populations that face challenges finding employment opportunities

Context

As of 2018, North Carolina's unemployment rate has reached an all-time low of 3.9%. However, this figure masks significant disparities in access to economic opportunity as specific segments of the population face much higher rates, particularly rural residents and residents of color.

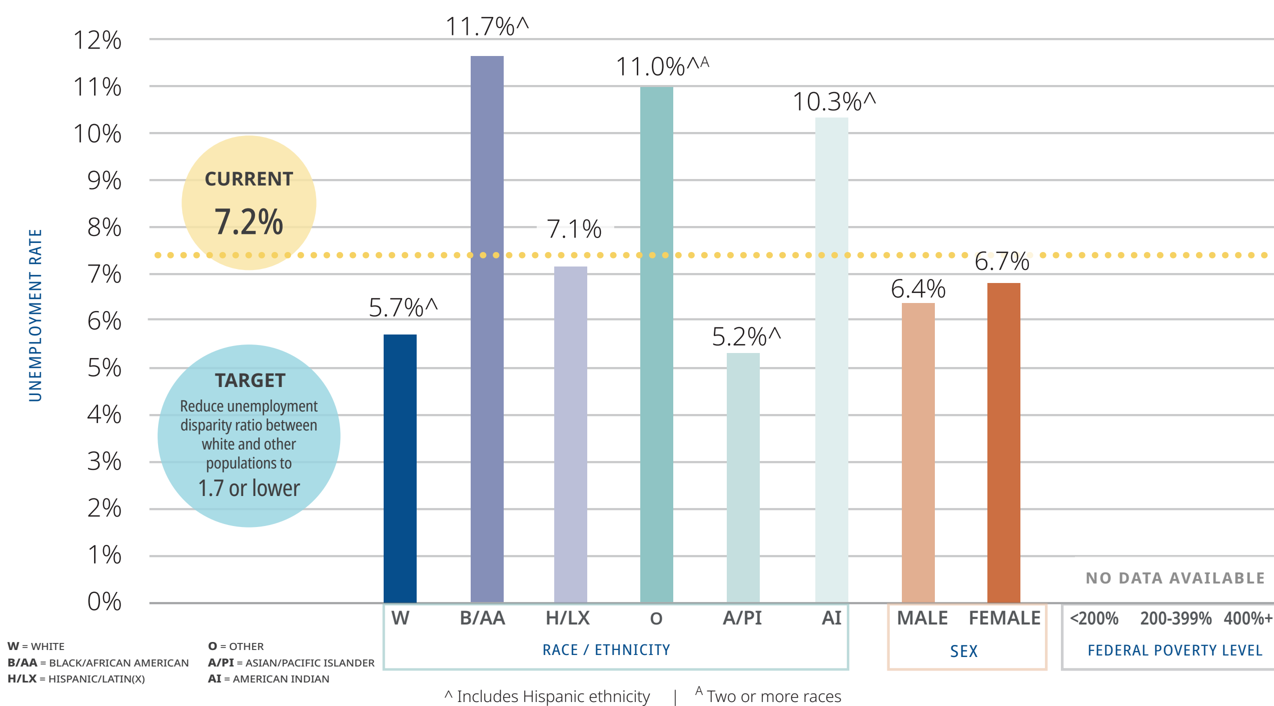
Though unemployment is not an orthodox measure of health, economic well-being is inextricably linked to health outcomes. Without the necessary savings to cushion against sudden unemployment, the lost source of income can push people into poverty. Loss of income poses clear financial barriers to accessing resources that protect and improve health. Furthermore, because employer insurance is the most common form of coverage, insuring 56% of the population, job loss can also mean a rise in the uninsured population.[28]

> "Though unemployment is not an orthodox measure of health, economic well-being is inextricably linked to health outcomes. Without the necessary savings to cushion against sudden unemployment, the lost source of income can push people into poverty."

Beyond the financial strain, unemployment is correlated with adverse health outcomes related to stress. Treated as a stress-inducing event, the experience of unemployment increases vulnerability to stroke, heart attack, heart disease, and arthritis. Those laid off are more likely to have fair or poor health, have higher admissions to hospitals, and have a greater need for medical attention and medication.[30] For mental health issues such as distress, depression, anxiety, psychosomatic symptoms, subjective well-being, and self-esteem, one study found unemployed individuals were twice as likely to experience these problems compared to those who were employed.[31] Unemployment can also lead to increased unhealthy behaviors such as alcohol and tobacco consumption, poor diet, and less exercise which further exacerbates poor health and is compounded by limited income/resources to address illnesses.[32]

FIGURE 6

Unemployment across populations in North Carolina and distance to 2030 target



W = WHITE
B/AA = BLACK/AFRICAN AMERICAN
H/LX = HISPANIC/LATIN(X)
O = OTHER
A/PI = ASIAN/PACIFIC ISLANDER
AI = AMERICAN INDIAN

^ Includes Hispanic ethnicity | A Two or more races

Disparities

Rural North Carolinians face higher levels of unemployment and poverty and earn less than urban residents.[33] In some rural counties the unemployment rate is twice that of well-off metropolitan areas.[33]

Racial and ethnic disparities also exist, with unemployment rates for African Americans and American Indians nearly twice that of white populations (11.7%, 10.3%, and 5.7%, respectively, 2013-2017 average) and Hispanic populations also facing higher rates of unemployment (7.1%) as compared to the white population.[26] African Americans are also disproportionately represented in economically distressed rural areas. In 2018, unemployment in rural areas of the state was at 11.4% for African Americans and 5.9% for whites.[33]

People who have been incarcerated face very high rates of unemployment, with one analysis finding that 27% of this population is unemployed.[34] Contributing factors include limited numbers of reentry programs, employment and housing discrimination, and lack of qualifications and training for jobs earning a livable wage.

Levers for Change

- Increase workforce development efforts targeted to reach those who need it most
- Increase percentage of jobs that pay a living wage
- Improve personal finance credit scores and access to financial capital
- Expand transit options in rural and low-income communities, and increase access to affordable personal vehicles
- Increase access to affordable childcare
- Improve educational outcomes and increase participation in post-secondary education
- Support economic opportunities that provide full-time employment and grow local businesses
- Support "fair-chance" hiring policies

[H] This is largely due to seasonal employment patterns in agricultural industries. Unemployment is least severe in October hovering around 5% but spikes in December and January. This is true for all counties with high unemployment.

HEALTH INDICATOR 2: UNEMPLOYMENT RATE

DESIRED RESULT: INCREASE ECONOMIC SECURITY

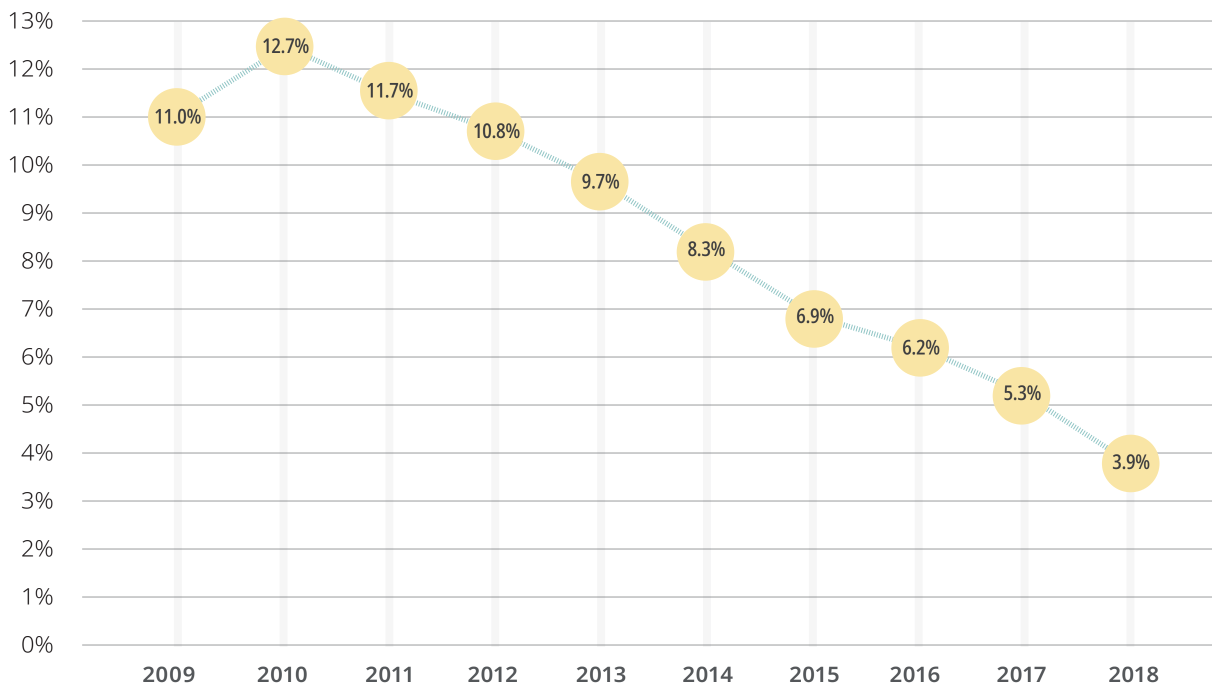
2030 Target and Potential for Change

The state unemployment rate has been falling for nearly a decade and is likely near the lowest rate possible without negative consequences to other economic factors (e.g., inflation). While the overall unemployment rate has been at an historically low level, the disparities seen across geography and race/ethnicity in the state are concerning and are the primary reason the HNC 2030 group selected this health indicator. To set the target for 2030, the group looked at averages across counties in the state and other states and disparities among different racial and ethnic groups. Setting a target to lower or maintain the unemployment rate was identified as an unrealistic goal due to the greater economic climate in the country. Therefore, the group focused on the racial/ethnic disparities in the state and selected a target for 2030 of reducing the disparity ratio[I] between white and other populations to a maximum of 1.7. The current disparity ratio between African Americans and whites in North Carolina is 2.1 and for American Indians it is 1.8.[J] This goal is relevant at both the state and county levels.

Overall unemployment rate between counties will continue to be an important factor to address in coming years, particularly in rural areas. The HNC 2030 target of reducing disparities among racial/ethnic groups can encourage even those counties with the lowest unemployment rates to look more deeply at the rates across populations in the county.

FIGURE 7

Percent of population in North Carolina aged 16+ unemployed but seeking work, not seasonally adjusted, one-year average



Source: American Community Survey. Employment Status, 1-Year Estimates.

[I] *A disparity ratio is determined by dividing a rate or percentage for one group by the rate or percentage for another group. Ratios above 1.0 indicate disparities between the two groups. For example, an unemployment disparity ratio of 1.5 would indicate that a group is 1.5 times more likely to be unemployed than the comparison group.*

[J] *Calculations based on 5-year unemployment averages from the American Community Survey.*

DISMANTLE STRUCTURAL RACISM

The disparities we often see in health outcomes for people of color are rooted in the historical and continued structural racism found in our society that have resulted in inequitable opportunities for healthy lives. Conscious and unconscious bias and stereotyping of people of color remains pervasive, influencing policies and institutions at the federal, state, and local levels.[35] This includes housing, education, and transportation policies that have either explicitly or implicitly resulted in discriminatory practices (e.g., redlining in housing, segregated schools, high-interest loan practices).

The impacts of structural racism are numerous, including unemployment, fewer educational resources, harsher punishments in schools and the judicial system, intergenerational poverty, and the accumulated stress of discrimination regardless of socioeconomic status (i.e., "weathering").[18] These issues encompass many of the upstream causes of the poor health outcomes that are seen for people of color. Correcting these injustices will require acknowledgement and understanding of the issues, and intentional work to change them. Two HNC 2030 indicators serve as measures of structural racism: short-term suspensions from school and incarceration rate. These are not the only possible measures closely related to structural racism. Other indicators selected for HNC 2030 are also affected by the experiences that people of color have as a result of structural racism, although they were not chosen explicitly for that reason.

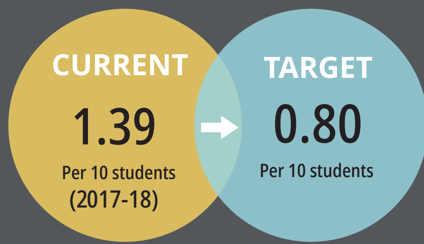
> "Structural racism refers to the way public policies, institutional practices, cultural representations, and other social norms interact to generate and reinforce inequities among racial and ethnic groups."[12,11]

Structural Racism Example - School-to-Prison-Pipeline

The school-to-prison-pipeline refers to "the system of policies and practices that push students out of school and into the juvenile and adult criminal systems" (Youth Justice Project: Pipeline). Entry into the pipeline includes experiencing suspension, expulsion, truancy, drop-out, engagement with School Resource Officers, and court involvement (Youth Justice Project: Pipeline). There is extensive research and growing recognition of the linkage between early interaction and future entanglement in the criminal justice system. For example, suspension from school is linked with lower educational achievement and higher likelihood of involvement with the criminal justice system in the future (Rosenbaum, 2018). Youth of color, particularly boys, face disproportionately higher rates of school-based discipline and are therefore put at greater disadvantage for future interactions with the justice system.

HEALTH INDICATOR 3: SHORT-TERM SUSPENSION RATE

DESIRED RESULT: DISMANTLE STRUCTURAL RACISM



DEFINITION

Number of out-of-school short-term suspensions in educational facilities for all grades per 10 students

DETAILS

Includes Kindergarten – 12th grade; short-term suspension is 10 days or less; data reflect total numbers of short-term suspensions that may include multiple suspensions per student

NC SHORT-TERM SUSPENSIONS (2017-18)

1.39 per 10 students

2030 TARGET

0.80 per 10 students

RANGE AMONG NC LOCAL EDUCATION AGENCIES

0.0 – 8.22 per 10 students

RANK AMONG STATES

Not Available

DATA SOURCE

NC Department of Public Instruction

STATE PLANS WITH SIMILAR INDICATORS

North Carolina Perinatal Health Strategic Plan[K] - indicator of addressing social and economic inequities

Rationale for Selection:

In the education system, children of color are disproportionately punished through mechanisms like short-term suspension from school. These punishments inhibit academic achievement and open a gateway that can, in time, lead to subsequent involvement with the justice system. Limitations in academic achievement can have lifelong effects on health and well-being.[K]

Context

Exclusionary discipline (i.e., suspensions and expulsions) is a strong predictive factor for negative outcomes in students' academic achievement and high school completion. Some of the negative student outcomes associated with suspension include:

- lower academic performance,
- higher rates of dropout,
- failure to graduate on time,
- lower academic engagement, and
- continued targeting for future disciplinary action.[36]

"In North Carolina, on average, there were 3 short-term suspensions for every 10 African American students compared to less than 1 short-term suspension for every 10 white and Hispanic students."

These negative educational outcomes can have lifelong impacts on health as those with less education have more challenges finding employment that provides a living wage and have decreased levels of social supports. It is estimated that each additional year of education leads to around 11% more in annual income and high-paying jobs are more likely to provide benefits such as health insurance and paid leave.[37]

Besides missing important class time essential for academic success, suspensions also force students to miss out on extracurricular activities key to accumulating the social experiences just as necessary for a high-quality life.

Disparities

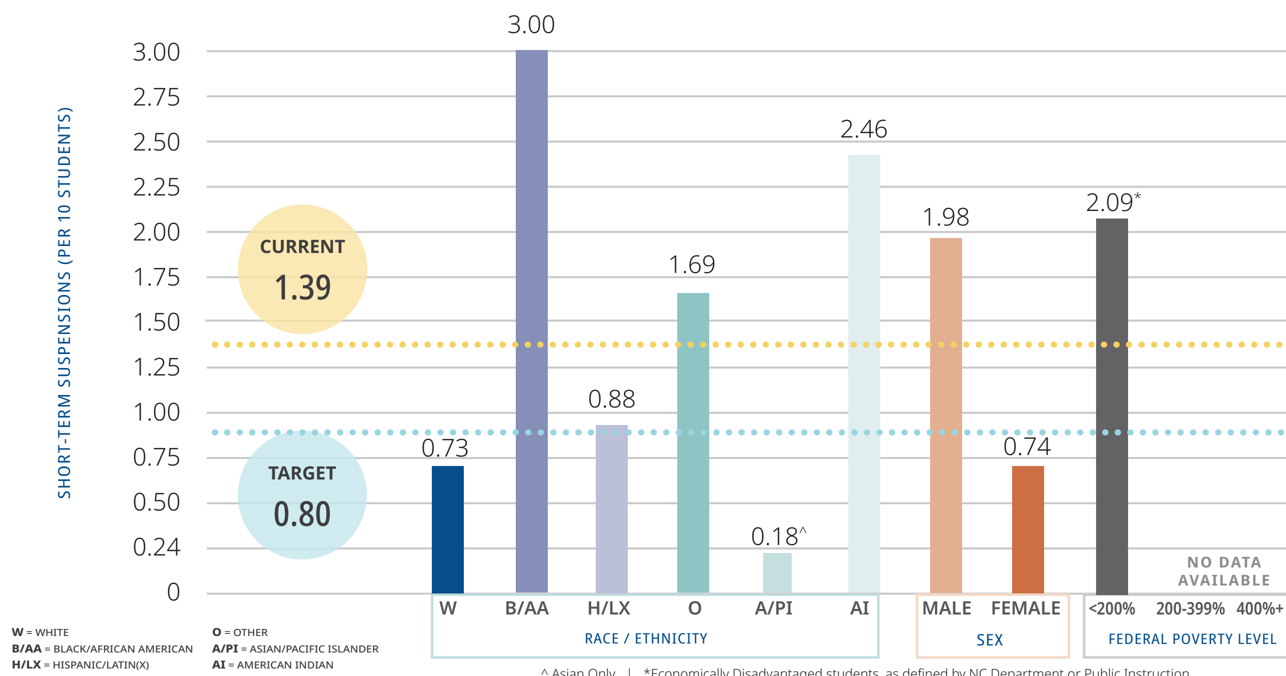
Across the nation, students of color are suspended and expelled at higher rates than their peers even though studies have shown no difference in behavior among students by race/ethnicity.[38] In North Carolina, on average, there were 3 short-term suspensions for every 10 African American students compared to less than 1 short-term suspension for every 10 white and Hispanic students (**See Figure 9**).[39]

North Carolina's suspension data reveal other stark disparities across different groups of students, including American Indian and multiracial students who are more likely to be suspended than their white, Asian, and Hispanic peers. Children receiving special education services account for 24% of all suspensions.[39] Boys receive the majority of suspensions, representing half of school populations but nearly two-thirds of suspensions. However, African American and American Indian girls had notably higher rates of suspension than their white peers, receiving 1.81 and 1.36 suspensions per 10 students, respectively, compared to 0.30.[39]

[K] *North Carolina Department of Health and Human Services. North Carolina Perinatal Health Strategic Plan: 2016-2020. March 2016. https://whb.ncpublichealth.com/phsp/*

FIGURE 8

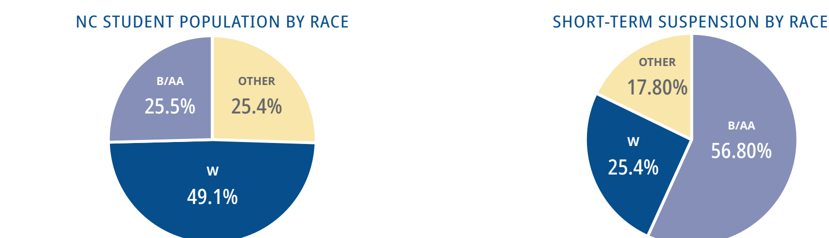
Short-term suspension rates across populations in North Carolina and distance to 2030 target



^ Asian Only | *Economically Disadvantaged students, as defined by NC Department or Public Instruction

FIGURE 9

North Carolina Student Population and Short-Term Suspensions by Race



Source: Youth Justice Project. The State of Discipline in NC Schools. April 2018. http://youthjusticenc.org/2018/04/11/state-of-discipline/

2030 Target and Potential for Change

The HNC 2030 group considered the current data across student race/ethnicity as a primary method for target setting. With white, Hispanic, and Asian around or below 0.80 suspensions per 10 students, this was chosen as the target for all students. Meeting this target is largely dependent upon eliminating the disparities we see in the use of short-term suspension for African American and American Indian students. With the growing understanding of disproportionate use of exclusionary discipline approaches, the group felt confident that significant movement toward the target could be achieved in the next decade.

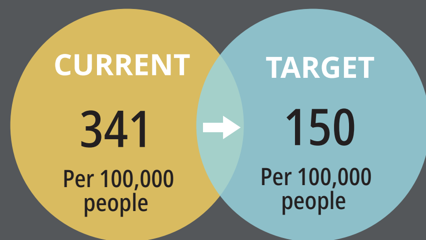
Levers for Change

(Kostyo et al, 2018)

- Train teachers, administrators, school resource officers, and others working with students on implicit bias
- Develop collaborative learning groups for schools to share best practices
- Include suspension rate in measures of school quality
- Develop statewide system of restorative justice programs
- Provide informational resources for schools on how to reduce disciplinary actions
- Promote non-exclusionary approaches to discipline

HEALTH INDICATOR 4: INCARCERATION RATE

DESIRED RESULT: DECREASE THE INCARCERATION RATE



DEFINITION
Incarceration in North Carolina prisons per 100,000 population

DETAILS
Rate based on jurisdictional population with sentences greater than one year

NC INCARCERATION RATE (2017)
341 per 100,000 people

2030 TARGET
150 per 100,000 people

RANGE AMONG NC COUNTIES
NOT APPLICABLE

RANK AMONG STATES
21st*

DATA SOURCE
US Bureau of Justice Statistics

STATE PLANS WITH SIMILAR INDICATORS
Not Applicable

*Rank of 1st for state with lowest incarceration rate

Rationale for Selection:

People of color, notably African American men, are imprisoned at disproportionate rates and tend to face harsher punishment for similar crimes as their white counterparts. There are enormous health, social, and economic consequences of incarceration for both the imprisoned person, their families, and our communities.

Context

Incarceration is a key health indicator for its sweeping effects on communities, families, and individuals. Communities with high rates of incarceration are affected by damage to social networks and family ties, increased poverty and crime, and reduced life expectancy.[40] High rates of incarceration weaken communities and contribute to adverse health outcomes.[41] For much of the 20th century, the incarceration rate in the United States (and internationally) averaged 110 inmates per 100,000 persons. A shift in U.S. crime policy at the local, state, and federal levels toward mandatory lengthy jail and prison sentences in the 1980s led to the prison boom (450 inmates per 100,000 persons) or mass incarceration.

Families with an incarcerated adult member face economic hardships including housing insecurity, difficulty meeting basic needs, and increased use of public assistance.[35] Incarceration of a parent is a traumatic experience for a child, increasing their risk of depression and anxiety, antisocial behavior, substance abuse, involvement with crime, disengagement from school, and risky sexual behaviors.[35] (See Adverse Childhood Experiences, **Pages 46-47**)

Inmates are likely to develop chronic conditions such as hypertension, diabetes, arthritis, and asthma and are more at risk of contracting communicable diseases such as HIV, hepatitis C, and tuberculosis. Incarcerated individuals experience poor diets (high calorie, high fat, low nutrient density foods), low sanitation standards, presence of infestations, inmate violence, excessive use of force by officers, sexual violence, and lack of social connection.[43] Inmates are also at higher risk of dying from a drug overdose or suicide. These risk factors are exacerbated by conditions upon reentry into society such as limited resources, less educational attainment, disadvantages in employment, absence of drug rehabilitation resources, and unstable housing. Without proper rehabilitation, released into a less structured environment, and significantly disadvantaged due to their criminal records, the formerly incarcerated often fall into poverty and reoffend.

Disparities

Application of law enforcement and sentencing has led to disproportionate incarceration rates, with African Americans making up 52% of the total incarcerated population, but only 22% of the state population.[44,45] For example, although drug use is lower among African Americans and rates of trafficking are not different based on race/ethnicity, African Americans are 6.5 times more likely to be incarcerated for drug-related offenses.[35] Numerous studies have shown systematic differences exist in outcomes for people of color from arrest, case processing, sentencing, and parole, all of which increase their likelihood of serving time in jail or prison.[35]

FIGURE 10

Incarceration rates across populations in North Carolina and distance to 2030 target

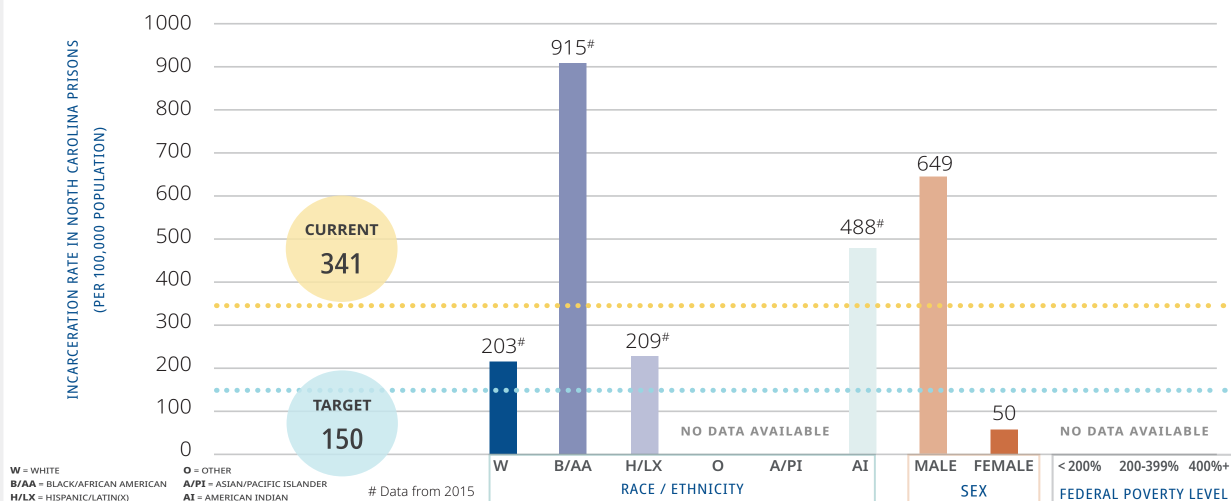
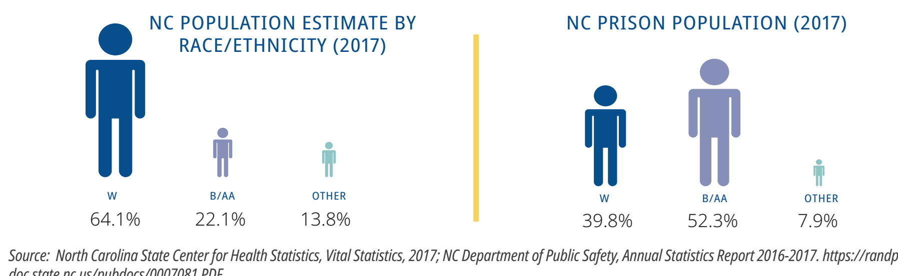


FIGURE 11



Source: North Carolina State Center for Health Statistics, Vital Statistics, 2017; NC Department of Public Safety, Annual Statistics Report 2016-2017. https://randp.doc.state.nc.us/pubdocs/0007081.PDF

Incarceration rates across North Carolina's counties also show disparities in the state. Figures from 2015 show the highest incarceration rate for African Americans was in Graham County with 2,864 per 100,000 African American residents (compared to 279 per 100,000 for whites) and for American Indians at 3,426 per 100,000 American Indian residents in Gates County (compared to 174 per 100,000 for whites).[47] In North Carolina, 17% of inmates have mental illnesses (3-4 times more than the general public).[44]

2030 Target and Potential for Change

North Carolina currently has the 21st lowest incarceration rate of the 50 states and the rate has been declining over the past decade. With this trend and considering the lowest state rate (Massachusetts – 120 per 100,000), the HNC 2030 group selected an aggressive target of 150 people incarcerated per 100,000 population. Meeting this target will be very challenging and is almost entirely dependent upon sharply reducing the disparities we see in the disproportionate incarceration of African American and American Indian populations. While rates have been trending down, faster decreases in these trends in the next decade will be viewed as a success.

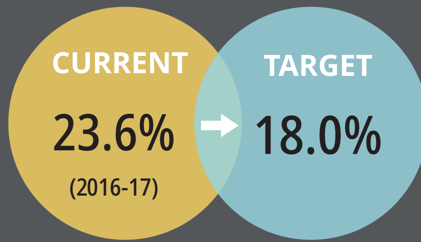
Levers for Change

(National Research Council, 2014)

- Revise current criminal justice policies to reduce the rates of incarceration
- Improve conditions and programs in jails and prisons to reduce harmful impact and foster successful reintegration into community
- Improve educational outcomes, particularly for boys of color
- Reduce intergenerational and neighborhood poverty
- Improve access to treatment for substance use disorders, physical illnesses, and mental illnesses
- Increase employment opportunities and job training programs in disadvantaged communities
- Implement standardized, evidence-based programs to reduce recidivism

HEALTH INDICATOR 5: ADVERSE CHILDHOOD EXPERIENCES

DESIRED RESULT: IMPROVE CHILD WELL-BEING



DEFINITION

Percent of children who have experienced two or more of the following:

- Hard to get by on money
- Parent/guardian divorced or separated
- Parent/guardian died
- Parent/guardian served time in jail
- Saw or heard violence in the home
- Victim/witness of neighborhood violence;
- Lived with anyone mentally ill, suicidal, or depressed;
- Lived with anyone with alcohol or drug problem;
- Often treated or judged unfairly due to race/ethnicity

DETAILS

Measure relies on parental report of experiences or aspects of their children's lives

NC CHILDREN WITH 2+ ACES (2016-17)

23.6%

2030 TARGET

18.0%

RANGE AMONG NC COUNTIES

Not Available

RANK AMONG STATES

32nd*

DATA SOURCE

Children's National Health Survey

STATE PLANS WITH SIMILAR INDICATORS

Early Childhood Action Plan[L] - indicator of safe and nurturing relationships

*Rank of 1st for state with lowest percent of children with 2+ ACEs

Rationale for Selection:

Children's experiences of adversity and trauma can have lifelong impacts on health and well-being. Trauma-informed and resilience building practices are gaining attention and are being implemented to help children overcome their experiences and circumstances.[L]

Context

Children thrive in safe, stable, and nurturing environments. Adverse experiences, such as exposure to trauma, violence, or neglect during childhood, increase the likelihood of poor physical and mental health as a child grows up.[48] The more Adverse Childhood Experiences (ACEs) an individual has, the greater the risk for health-related challenges in adulthood. This includes a higher risk for coronary heart disease, stroke, asthma, and chronic obstructive pulmonary disease, much higher risk of depression, higher rates of risky health behaviors like smoking and heavy drinking, and more socioeconomic challenges.[49] Research has shown that exposure to these Adverse Childhood Experiences (ACEs) can impact children's neurobiological development, negatively affecting their learning, language, behavior, and physical and mental health. Decreasing childhood exposures to trauma, building resilience, strong relationships with caregivers, and providing safe, stable environments can help children overcome the impact of ACEs.

While two-thirds of people have at least one ACE, the more ACEs a child accumulates the more at risk to chronic disease and risky health behaviors they become.[48] In North Carolina, almost 1 in 4 children ages 0-17 has experienced two or more ACEs, including 18% of children ages 0-5.[M,50]

Disparities

Factors associated with greater risk of two or more ACEs for children in North Carolina include:

- Living arrangements: living with a caregiver other than their parents, those in non-married two parent households, and those in single mother households[50]
- Income: children in low-income households
- Care Needs: Children with complex health care needs or emotional, behavioral, or developmental issues
- Race and ethnicity: African American or Other, non-Hispanic (i.e., not white, Asian, or Hispanic)

2030 Target and Potential for Change

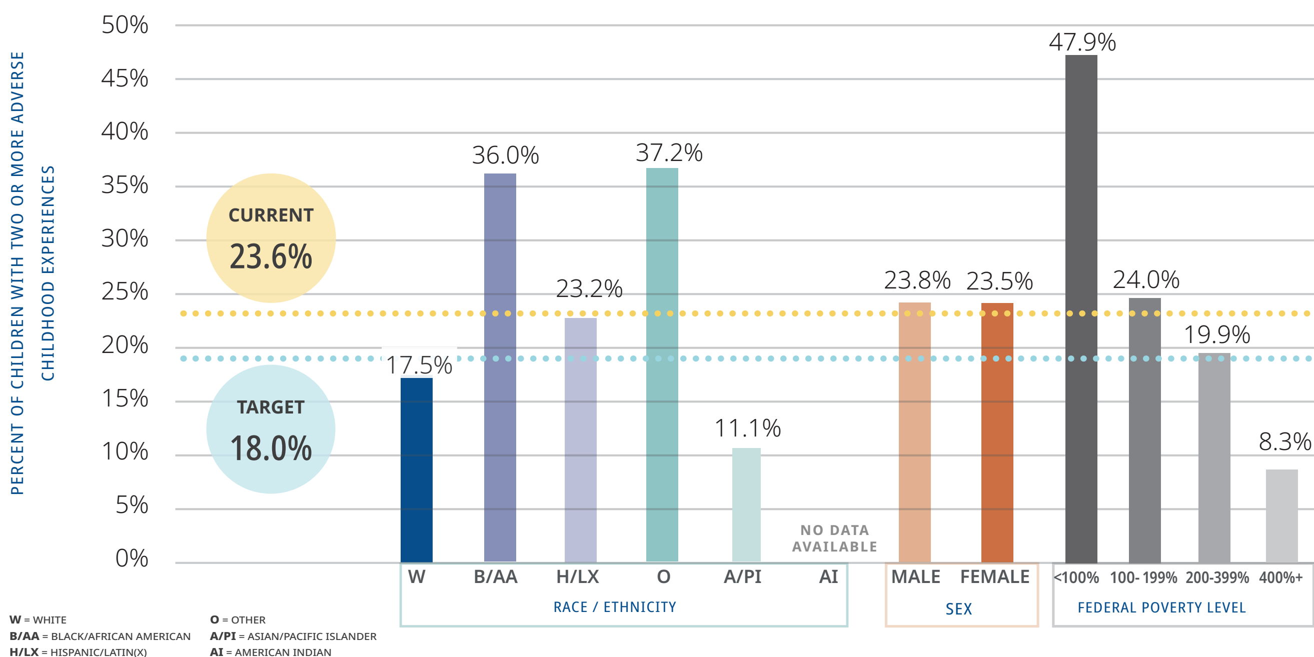
North Carolina is currently tied at 32nd of the 50 states in the number of children with two or more ACEs, with 23.6% of children (with 1st representing the lowest percent of children with two or more ACEs). Aiming for a 25% decrease in this number by 2030, the HNC work group chose a target of 18.0% of children with two or more ACEs. In setting the ambitious target, they took into account data for the states with the lowest averages (2016-17 - California: 14.8%; Maryland: 15.6%; New Jersey: 15.6%), and the United States average (20.5%).

[L] *North Carolina Department of Health and Human Services. North Carolina Early Childhood Action Plan. February 2019. https://files.nc.gov/ncdhhs/ECAP-Report-FINAL-WEB-f.pdf*

[M] *Data collected through the Children's National Health Survey by parent report of the experiences of their children.*

FIGURE 12

Percent children with two or more Adverse Childhood Experiences across populations in North Carolina and distance to 2030 target

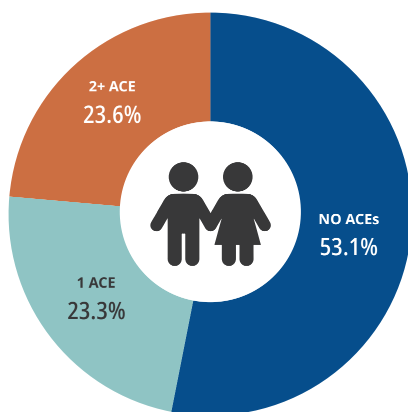


W = WHITE
B/AA = BLACK/AFRICAN AMERICAN
H/LX = HISPANIC/LATIN(X)
O = OTHER
A/PI = ASIAN/PACIFIC ISLANDER
AI = AMERICAN INDIAN

Due to societal forces that entrench ACEs in the lives of many people with lower incomes and people of color, reaching the selected target will be challenging. Movement toward the target will be viewed as a success in decreasing childhood exposure to trauma. At the same time, negative impacts on the children experiencing these challenges can be mitigated by increasing trauma-informed practices in medical, educational, and other settings, and implementing strategies and programs to support families and children and foster resilience.

FIGURE 13

ACEs Among Children in North Carolina, 2016-17



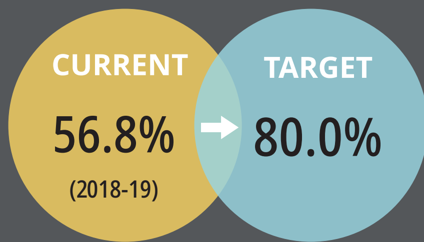
Source: Children's National Health Survey

Levers for Change

- Increase minimum wage and employment opportunities
- Increase opportunities for trauma-informed parenting support
- Expand community and domestic violence prevention initiatives
- Increase access to behavioral health treatment
- Increase access to evidence-based parenting programs and home visiting programs

HEALTH INDICATOR 6: # THIRD GRADE READING PROFICIENCY

DESIRED RESULT: **IMPROVE THIRD GRADE READING PROFICIENCY**



DEFINITION

Percent of children reading at a proficient level or above based on third grade End of Grade exams

DETAILS

Proficiency defined as Level 3 or higher

NC THIRD GRADE READING PROFICIENCY (2018-19)

56.8%

2030 TARGET

80.0%

RANGE AMONG NC LOCAL EDUCATION AGENCIES

24.6 – 81.7%

RANK AMONG STATES

Not Applicable

DATA SOURCE

NC Department of Public Instruction

STATE PLANS WITH SIMILAR INDICATORS

Early Childhood Action Plan[O]- indicator of learning and children being ready to succeed

Every Student Succeeds Act Consolidated State Plan[N]– Measure of progress: State Level Reading Grades 3-8

Rationale for Selection:

Reading proficiency is a strong predictor of educational and other health-related outcomes. Children who are not proficient in reading by the end of third grade face greater challenges in subsequent years of their education. Large disparities exist for African American, Hispanic, and American Indian children.[N,O]

Context

Early reading proficiency is a key indicator for academic and career success. Third grade is a pivotal point in primary education, because, up until third grade, children are learning to read; after third grade, children must be able to read to learn. Therefore, students who do not meet third grade reading proficiency requirements are at risk of being left behind. In North Carolina, over 40% of students, or more than 53,000 each year, are not reading on grade level by the end of third grade. These children are at increased risk for ongoing academic difficulties, leaving school without a diploma, and fewer employment prospects.[51]

> "Children who have low reading proficiency are more likely to drop out of school before graduation, which can have lifelong economic consequences, including low-wage jobs and limited access to health care."

For those who are not achieving grade-level reading by the end of third grade, disadvantages will compound as they grow older. Children who have low reading proficiency are more likely to drop out of school before graduation, which can have lifelong economic consequences, including low-wage jobs and limited access to health care.[51,52] Literacy levels have been linked to increased risk of hospitalization and numerous adverse health outcomes.[53] Studies show people with lower literacy levels are more likely to miss school, smoke, have depressive symptoms as a child, have severe asthma, and are less likely to breastfeed their children.[54]

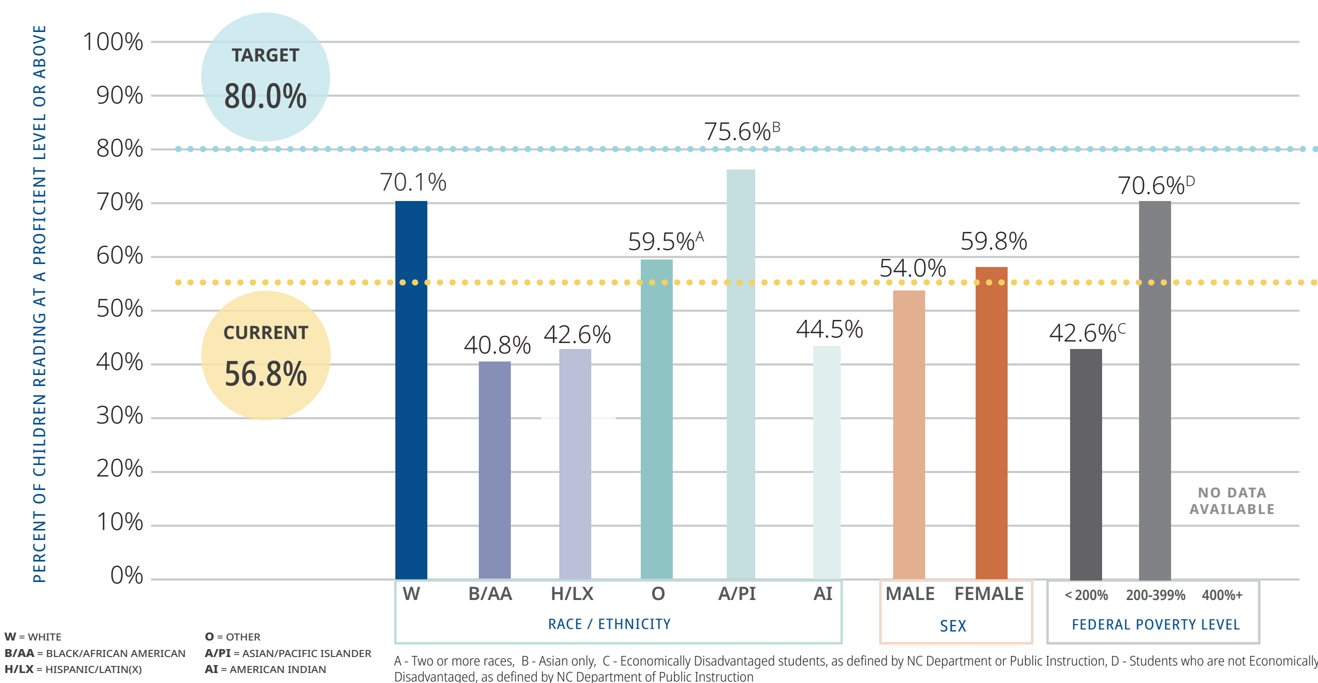
Disparities

In the 2018-19 school year, only 4 in 10 students from economically disadvantaged families[P] and children in foster care were reading at or above grade level at the end of third grade.[39] Around 40% of African American, American Indian, and Hispanic third graders were reading at or above third grade level compared to 70% and 76% of white and Asian students, respectively. Children who had disabilities (23.0%), were English learners[Q] (27.7%), or who were homeless (32.8%) were least likely to be proficient in reading. Performance varies widely by school district. Seventy percent or more of students are at or above proficient on the third grade reading assessment in five school districts (Camden, Chapel Hill-Carrboro City, Elkin City, Polk, and Madison) while ten fall below 40% (Bertie, Edgecombe, Greene, Halifax, Nash-Rocky Mount, Northampton, Scotland, Warren, Washington, and Weldon).

[N] *Consolidated Plan for the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act. September 2017. http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf*
[O] *North Carolina Department of Health and Human Services. North Carolina Early Childhood Action Plan. February 2019. https://files.nc.gov/ncdhhs/ECAP-Report-FINAL-WEB-f.pdf*
[P] *"Economically disadvantaged" indicates those students eligible for free and reduced-price lunch under the National School Lunch Program (NSLP) for agency reporting purposes (NCDPI, 2017).*
[Q] *Students who are in the process of learning English.*

FIGURE 14

Percent children who are proficient in reading at the end of third grade across populations in North Carolina and distance to 2030 target



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A - Two or more races, B - Asian only, C - Economically Disadvantaged students, as defined by NC Department or Public Instruction, D - Students who are not Economically Disadvantaged, as defined by NC Department of Public Instruction

2030 Target and Potential for Change

The HNC 2030 group reviewed data across several years and all Local Education Agencies (LEAs) to develop a target for third grade reading proficiency. Over the past five years, proficiency rates have declined from 60.2% in the 2013-14 school year to 55.9% in 2017-18, with a slight increase to 56.8% in 2018-19. Across LEAs, the highest proficiency rate is in Camden County at 82%; only four other LEAs (Chapel Hill-Carrboro City, Elkin City, Polk, and Madison) have proficiency rates between 74-77%. Despite this, the HNC 2030 group chose to select an ambitious target to make a statement to state and local leaders about how critically important reading proficiency is to lifelong health and well-being. Turning the trend and making improvements toward the goal of 80% of children reading at a proficient level by 2030 will be considered a success. Making a change in recent trends will be largely dependent upon eliminating the disparities we see in proficiency rates for African American, Hispanic, and American Indian students.

Levers for Change

(North Carolina Early Childhood Action Plan, 2019)

- Expand access to NC Pre-K, 4-, and 5-star early learning programs and other high-quality early childhood programs, particularly for children who are homeless, in foster care, are from immigrant families, or who have disabilities or other special healthcare needs
- Increase funding to public schools and early learning programs that serve children with the highest barriers to success, including children from low-income families and people of color
- Improve the rigor and responsiveness of birth through third grade teacher and administrator preparation programs
- Raise wages to attract, recruit, and retain highly qualified birth through third grade teachers
- Increase access to home visiting programs for young children
- Expand use of evidence-based literacy programs connected to health care (e.g., Reach Out and Read)

DEVELOPMENTAL MEASURES

The social and economic factors measure below is one that the HNC 2030 group feels is important to population health but does not have reliable or robust data available at this time. A description of the data needed for this measure is listed as "developmental data needs." State and local public health or other entities should consider identifying methods for collecting this data.

Developmental Progress at Kindergarten Entry

The quality of educational systems is typically evaluated through student achievement and outcome measures, such as end of grade exam scores, drop-out, and graduation rates. These are important indicators for schools, yet the building blocks for learning begin much earlier. Students who enter Kindergarten at a deficit compared to their peers may face ongoing challenges throughout their years of education and can experience poor outcomes. A child's readiness for Kindergarten is dependent on a variety of cognitive, social, and behavioral factors.

The North Carolina Department of Public Instruction's (NC DPI) Office of Early Learning is currently implementing a Kindergarten Entry Assessment (KEA). The KEA was developed with input from teachers, parents, and other stakeholders and includes five domains that are consistent with research and expertise in the area of school readiness: approaches to learning, cognitive development, emotional-social development, health and physical development, and language development and communication.[55] For the 2017-18 school year, 49.9% of children entering Kindergarten were assessed as ready for Kindergarten.[56]

Developmental data needs:

- The comprehensive KEA has been implemented across the state since the 2016-2017 school year. Currently data are available for individual elementary schools, but not at the district level. As the assessment results continue to be analyzed and explored, local and statewide practitioners and policymakers should consider how these data can be used to inform decisions that can better support incoming students and the educators and staff who serve them.