

# 2021 Forsyth County Community Health Assessment (CHA) Report



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Author Note

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This report is based on the work of the 2021 Forsyth County Community Health Assessment Steering Committee members: Robin Fischer (Winston-Salem/Forsyth County Schools), Bobby F. Kimbrough, Jr., (Forsyth County Sheriff's Office), Brent Montzinger (Forsyth County Emergency Medical Services), Pamela Oliver (Novant Health Forsyth Medical Center), Joshua Swift, chair, (Forsyth County Department of Public Health), and Denise Wade (Union Baptist Church).

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## Executive Summary

### Vision Statement

The 2021 Forsyth County Community Health Assessment (CHA) took place during the extraordinary circumstances of the COVID-19 pandemic. As with any CHA, this process is designed to gain an understanding of the most pressing health issues in the community and effect change through the Community Health Improvement Planning (CHIP) process. Community leaders who are best able to identify Forsyth County's health needs and health priorities guided this assessment process.

### Leadership

The 2021 CHA Steering Committee members represented the following community partners:

Partnerships	Number of Persons
Public Health Agency	2
Hospital/Health Care	1
EMS Provider	1
Law Enforcement	1
Public School System	1
Community Organization	3

#### *2021 Forsyth County Community Health Assessment (CHA) Steering Committee*

Name	Position/Role	Affiliation
Mr. Joshua Swift (chair)	Public Health Director Chair	Forsyth County Dept. of Pubic Health FC Community Child Protection Team/Child Fatality Prevention Team (CCPT/CFPT)
Ms. Robin Fisher	School Social Worker	Winston Salem/Forsyth County Schools
Mr. Bobby F. Kimbrough, Jr.	Sheriff	Forsyth County Sheriff's Office
Dr. Lovette Miller	Epidemiology & Surveillance Director	Forsyth County Dept. of Pubic Health
Mr. Matthew Motsinger	Mobile Intergrated Healthcare Coordinator Member	Forsyth County Emergency Medical Services Forsyth Regional Opioid & Substance Use Team
Dr. Pamela Oliver	Executive Vice President President Chair	Novant Health Novant Health Physician Network FC Infant Mortality Reduction Coalition
Rev. Denise Wade	Associate Minister	Union Baptist Church

### **Theoretical Framework/Model**

The socioecological model was used to analyze Forsyth County's population health because it is one of the best approaches for identifying and examining the factors that influence diverse populations' health outcome. This model focuses on the interactions between individuals and the environment in which they live, work, and play. The socioecological model employed includes the following levels of analysis: *individual, interpersonal, institutional, community and policy.*

### **Collaborative Process Summary**

Planning for the 2021 CHA began in 2020 during the COVID-19 pandemic. The pandemic significantly altered our timeline and process. For example, due to the pandemic, a Community Health Opinion (CHO) survey could not be conducted. Previously, the Forsyth County Department of Public Health contracted with the UNC Gillings School of Global Public Health to conduct the CHO survey. For this CHA, virtual meetings were conducted with community partners from November 2021 to February 2022 with participation from key community stakeholders on the steering committee. During Spring and Summer 2022, Community Health Improvement Plans (CHIP) will be developed for the identified health priorities.

### **Key Findings from the 2021 Community Health Assessment**

- Chronic Diseases (primarily heart diseases and cancers): The 2015-2019 overall 5-year rolling average chronic disease death rates for Forsyth County and North Carolina show a higher death rate due to chronic diseases in Forsyth County than the state.

- **Drug Overdose:** In 2020, there were 1,386 drug overdose deaths in Forsyth County. This number of drug overdose deaths for Forsyth County was equal to about 4.5% of North Carolina's drug overdose deaths in 2020.
- **Maternal and Infant health:** In 2019, 10.6% of Forsyth County resident births had a low birth weight in comparison to North Carolina's average of 9.3%. Also, in 2019, 12.2% of Forsyth County resident births were premature, 18.1% received inadequate prenatal care according to the Kotelchuck Index, and about 4.9% were born to mothers who smoked cigarettes. Forsyth County's infant mortality rate exceeded the state's infant mortality rate each year from 2016 to 2020.
- **Infant Mortality Disparity Ratio:** The infant mortality disparity ratio between White, Non-Hispanic/Latino infants and Black, Non-Hispanic/Latino infants ranged from a 5-year rolling average of 1.8 (2012-2016) to 2.8 (2016-2020). For the most recent period (2016-2020), Forsyth County's Infant Mortality Disparity Ratio (2.8) exceeded North Carolina's (2.6).
- **Mental Health:** Data from the 2019 Winston-Salem/Forsyth County Schools (WS/FCS) Youth Risk Behavior Survey (YRBS) shows that 22.5% of middle school students have *seriously considered attempting suicide*, 14.1% have *made a suicide plan*, and 11.5% had *attempted suicide at some point in their lives*.
- **Violence-related Behaviors:** Violent crime in Forsyth County increased from 651.3 per 100,000 population in 2016 to 912.5 per 100,000 population in 2020. During this period, Forsyth County's annual violent crime rate was almost double the state's annual violent crime rate.

## Health Priorities

The CHA Steering Committee will focus on the following health priorities with an emphasis on the social determinants that influence health outcomes.

- Infant Mortality
- Infant Mortality Disparity Ratio
- Youth Violence
- Chronic Disease
- Behavioral Health (Drug Overdose and Mental Health)

## Next Steps

Upon completion and dissemination of the 2021 CHA Report, two CHIPs will be developed and submitted to NC DHHS, Department of Public Health by September 5, 2022, and four (4) Forsyth County community working groups will be tasked with improving the remaining major health outcomes identified.

- The first CHIP will focus on plans to reduce the Infant Mortality (IM) Rate. At a minimum, the goal is to achieve the HNC 2030 (Forsyth County) target IM Rate of 6.0 by 2030. The second will focus on plans to reduce the Infant Mortality (B/W) Disparity Ratio. At a minimum, the goal is to achieve the HNC 2030 (Forsyth County) target B/W Disparity Ratio of 1.5 by 2030.
- The steering committee will recruit representatives from the Forsyth Community to form four (4) working groups. These working groups will seek to improve health outcomes in the areas of *mental health, youth violence, drug overdose, and chronic diseases*.

Joshua Swift,  
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## Forsyth County Community Health Assessment

The Forsyth County Community Health Assessment (CHA) is an ongoing collaborative process among community partners to identify major population health issues, and to guide the development and implementation of community health improvement plans to mitigate them. This resulting CHA Report is the result of the 2021 Forsyth County CHA Steering Committee’s review and discussion of the major population health issues identified.

### Steering Committee

Table 1 shows that the steering committee members were Forsyth County practitioners in community health, emergency services, faith ministry, law enforcement, public health, and public schools.

Table 1  
*2021 Forsyth County Community Health Assessment (CHA) Steering Committee*

Name	Position/Role	Affiliation
Mr. Joshua Swift (chair)	Public Health Director Chair	Forsyth County Dept. of Pubic Health FC Community Child Protection Team/Child Fatality Prevention Team (CCPT/CFPT)
Ms. Robin Fisher	School Social Worker	Winston Salem/Forsyth County Schools
Mr. Bobby F. Kimbrough, Jr.	Sheriff	Forsyth County Sheriff’s Office
Dr. Lovette Miller	Epidemiology & Surveillance Director	Forsyth County Dept. of Pubic Health
Mr. Matthew Motsinger	Mobile Intergrated Healthcare Coordinator Member	Forsyth County Emergency Medical Services Forsyth Regional Opioid & Substance Use Team
Dr. Pamela Oliver	Executive Vice President President Chair	Novant Health Novant Health Physician Network FC Infant Mortality Reduction Coalition
Rev. Denise Wade	Associate Minister	Union Baptist Church

### Forsyth County

Forsyth County is located in north central North Carolina. It is surrounded by Davidson, Davie, Guilford, Rockingham, Stokes, Surry and Yadkin counties. Forsyth County is approximately 413 square miles. Its major population centers include Bethania, Clemmons, Kernersville, Lewisville, Rural Hall, Tobaccoville, Walkertown, and Winston-Salem (county seat).

**Demography.** On April 1, 2020, an estimated 382,590 persons lived in Forsyth County (Table 2). This estimated count represented an increase of about 9.0% in Forsyth County's population from the April 2010 census. Between 2010 and 2020, Forsyth County's population became older and more diverse. Table 2 shows that while the percentage of residents < age 18

Table 2

*Forsyth County Summary Population Data, 2010 and 2020*

Population	4/1/2020	4/1/2010
Total Estimated Population	382,590	350,670
Persons <18 years of age	22.7%	23.6%
Persons ≥ 65 years of age	16.4%	14.7%
Female	52.7%	52.5%
White, non-Hispanic/Latino	56.3%	57.4%
Black, non-Hispanic/Latino	27.5%	27.2%
Hispanic/Latino	13.3%	12.7%
Asian, alone	2.6%	2.4%
American Indian and Alaskan Native, alone	0.9%	0.8%

Source: Bureau of Census, <https://www.census.gov/quickfacts/forsythcountynorthcarolina>

years declined from 23.6% (April 2010) to 22.7% (April 2020), the percentage of residents ≥ age 65 years increased from 14.7% to 16.4% during the same period. Table 2 shows also that between April 2010 and April 2020, the percentage of Black, Non-Hispanic/Latino residents increased from 27.2% to 27.5%, and the percentage of Hispanic/Latino residents increased from 12.7% to 13.3%. However, during the same period, the percentage of White, Non-Hispanic/Latino residents decreased from 57.4% to 56.3% (Table 2).

**Education.** In 2019, about 1 in 10 (10.8%) Forsyth County residents who were ≥ 25 years did not achieve a high school certificate or its equivalent (Table 3). About 1 in 3 (34.0%) Forsyth County resident who were ≥25 years of age had attained ≥ a *Bachelor's Degree* (Table 3). Finally, Table 3 shows also that Forsyth County's 2019 educational attainment statistics in some categories were slightly better than the state's.

Table 3

*Educational Attainment Among Populations  $\geq 25$  Years, Forsyth County and North Carolina, 2019*

Education Level	Forsyth County	North Carolina
< 9 <sup>th</sup> Grade	4.4%	4.5%
High School, No Diploma	6.4%	7.7%
High School Graduate or Equivalency	25.7%	25.7%
Some College, No Degree	21.1%	21.2%
Associate Degree	8.4%	9.7%
Bachelor's Degree	21.3%	20.0%
Graduate or Professional Degree	12.7%	11.3%

NC DHHS, Department of Public Health, State Center for Health Statistics

Source: U.S. Census Bureau, American Community Survey (ACS), 5-Year Estimate

Table ID: S1501

<https://data.census.gov/cedsci/table?q=forsyth%20county%20north%20carolina%20educational%20attainment&g=0400000US37&tid=ACSST5Y2019.S1501&hidePreview=false>

## Theoretical Framework

The socioecological model was used to analyze Forsyth County's population health because it was found to be one of the best ways to identify and examine the factors that influence health outcome at different social and ecological levels, and the ways in which they could be mitigated. Figure 1 shows that the socioecological model adapted consists of five (5) levels.



Figure 1. (Ingram, et al., 2021).

Starting with the inner most level, the first is the individual level (for example, health status based on age and/or race/ethnicity) (Klasa, et al., 2021; von Philipsborn, et al., 2019), next is the interpersonal level (for example, the household environment) (Fitzgerald, et al., 2013).

Third is the institutional level (for example, school and work environments) (Fitzgerald, et al., 2013). Fourth is the community level (for example, neighborhood/community physical and social environments) (Fitzgerald, et al., 2013), and lastly, the policy level (for example, local agency policies and programs) (Fitzgerald, et al., 2013; Ingram, et al., 2021).

### **Limitation**

Due to the COVID-19 pandemic, a limitation of the 2021 Forsyth County CHA process was the inability to facilitate a safely conducted Community Health Opinion (CHO) Survey. Forsyth County's 2021 CHA goal of contracting with the UNC Gillings School of Global Public Health to conduct the CHO, as it had previously done in 2014, would have required the use of volunteers from surrounding colleges as well as other County agencies and partners at a time when much of the County's schools, agencies and businesses were operating remotely. Nevertheless, the Steering Committee is confident that the knowledge gained from the secondary data analysis is sufficient to guide the development of Community Health Improvement Plans (CHIP) for the next four (4) years.

## Chapter 2 Population Health

### Life Expectancy

Forsyth County's 3-year rolling average life expectancy at birth declined from 78.3 years (2014-2016) to 77.9 years (2017-2019) (Table 4). However, it exceeded the state's 3-year rolling average life expectancy during the same period (Table 4). Females (80.6 years), males (74.9

Table 4

*3-Year Rolling Average Life Expectancy at Birth in Forsyth County and North Carolina, 2014-2016 to 2017-2019*

Jurisdiction	2017-2019	2016-2018	2015-2017	2014-2016
Forsyth	77.9	77.9	77.9	78.3
North Carolina	76.7	77.0	77.0	77.4

Source: NC State Center for Health Statistics. <https://schs.dph.ncdhhs.gov/data/databook/>

years), White, Non-Hispanic/Latino populations (79.3 years), and Black, Non-Hispanic/Latino populations (74.9 years) who were born in Forsyth County during 2017-2019 had a longer life expectancy than each group at the state level (Table 5). However, Table 5 also shows that Forsyth County's most recent 3-year rolling average life expectancy based on gender was higher for females (80.6 years) than males (74.9 years), and for race/ethnicity, it was higher for the White, Non-Hispanic/Latino population (79.3 years) than the Black, Non-Hispanic/Latino population (74.9 years).

Table 5

*Three-Year Rolling Average Life Expectancy at Birth in Forsyth County and North Carolina based on Race/Ethnicity and Gender, 2017-2019*

Race/Ethnicity or Gender	Forsyth	North Carolina
Overall	77.9	76.7
Female	80.6	79.4
Male	74.9	74.0
Black, non-Hispanic/Latino	74.9	73.8
White, non-Hispanic/Latino	79.3	77.8

Source: NC State Center for Health Statistics. <https://schs.dph.ncdhhs.gov/data/databook/>

After declining from 78.3 years (2014-2016) to 77.9 years (2015-2017), Forsyth County's 3-year rolling average life expectancy has remained unchanged (Table 6). The decline in Forsyth County's 3-year average rolling life expectancy from 78.3 years to 77.9 years reflects the decline observed among its male population (from 76.0 years to 74.9 years), and Black, Non-Hispanic/Latino population (from 76.0 years to 74.9 years) during the same period (Table 6). In contrast, the 3-year rolling average life expectancy for its female population and White, Non-Hispanic/Latino population has remained relatively unchanged from 2014-2016 to 2017-2019 (Table 6). Forsyth County's female population has the highest 3-year rolling average life expectancy in Forsyth County from 2014-2016 to 2017-2019 (Table 6). The 3-year rolling average life expectancy for females has ranged from 80.4 years (2014-2016) to 80.6 years (2017-2019) (Table 6).

Table 6

*3-Year Rolling Average Life Expectancy at Birth in Forsyth County, NC based on Gender and Race/Ethnicity, 2014-2016 to 2017-2019*

	2017-2019	2016-2018	2015-2017	2014-2016
Overall	77.9	77.9	77.9	78.3
Female	80.6	80.3	80.2	80.4
Male	74.9	75.3	75.5	76.0
White, non-Hispanic/Latino	79.3	79.1	79.1	79.2
Black, non-Hispanic/Latino	74.9	75.5	75.5	76.0

Source: NC State Center for Health Statistics. <https://schs.dph.ncdhhs.gov/data/databook/>

## Maternal and Infant Health

**Live births.** Table 7 shows that Forsyth County's most recent 5-year rolling average live birth rate of 11.7 per 1,000 Population (2015-2019) was the same for both Forsyth County and the state. Forsyth County's live birth rate per 1,000 population declined from 12.4 (2012-2016) to 11.7 (2015-2019) (Table 7). During 2015-2019, the 5-year rolling average live birth rate

Table 7

*5-Year Rolling Average Trend in the Live Birth Rate per 1,000 Population, Forsyth County and North Carolina, 2012-2016 to 2015-2019*

Jurisdiction	2015-2019	2014-2018	2013-2017	2012-2016
Forsyth County	11.7	11.9	12.1	12.4
North Carolina	11.7	11.8	12.0	12.1

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

for Black, non- Hispanic/Latino populations (12.7) was the same for both jurisdictions (Table 8). However, Table 8 also shows that the 2015-2019 Forsyth County 5-year rolling average live birth rates for Hispanic/Latino, Other, Non-Hispanic/Latino, and White, Non-Hispanic/Latino populations were higher than the state's averages.

Table 8

*5-Year Rolling Average Live Birth Rate per 1,000 Population, Forsyth County and North Carolina, 2015-2019*

Population	Forsyth	North Carolina
Total	11.7	11.7
Black, Non-Hispanic/Latino	12.7	12.7
Hispanic/Latino	18.1	19.2
Other, Non-Hispanic/Latino	15.0	16.1
White, Non-Hispanic/Latino	9.5	9.9

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

Forsyth County's 5-year rolling average live birth rate for all race/ethnicities declined between 2012-2016 and 2015-2019 (Table 9). The lowest decline was among the White, Non-Hispanic/Latino population. The highest 5-year rolling average live birth rate decline was among the Hispanic/Latino population (Table 9).

Table 9

*5-Year Rolling Average Trend in the Live Birth Rate per 1,000 Population, Forsyth County, 2012-2016 to 2015-2019*

Population	2015-2019	2014-2018	2013-2017	2012-2016
Total	11.7	11.9	12.1	12.4
Black, Non-Hispanic/Latino	12.7	12.8	13.1	13.4
Hispanic/Latino	18.1	19.4	20.0	20.9
Other, Non-Hispanic/Latino	15.0	15.5	16.0	16.1
White, Non-Hispanic/Latino	9.5	9.7	9.7	9.9

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

**Risk factors at birth.** In 2019, 10.6% of Forsyth County resident births had a *low birth weight* in comparison to the state average of 9.3% (Table 10). Also, in 2019, 12.2% of Forsyth County resident births were *premature*, 18.1% received *inadequate prenatal care* according to the Kotelchuck Index, and about 4.9% were *born to mothers who smoked* (Table 10). Table 11

Table 10

*Select Risk Factors and Characteristics of Forsyth County and North Carolina Resident Births, 2019*

Risk Factors/Characteristics	Forsyth	North Carolina
Low Birth Weight (<2,499 grams)	10.6%	9.3%
Preterm (<37 Weeks Gestation)	12.2%	10.6%
Kotelchuck Index: Inadequate	18.1%	19.5%
Mother smoked	4.9%	7.6%

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

shows about 23% percent of Hispanic/Latino resident births were found to have received inadequate prenatal care. In fact,  $\geq 15.4\%$  of Forsyth County resident births for each race/ethnicity were found to have received inadequate prenatal care in 2019 (Table 11). Table 11 also shows that in 2019, Black, Non-Hispanic/Latino mothers had the highest percentage of births that were characterized by *low birth weight* (17.3%), *prematurity* (17.2%), and had been born to *moms who smoked* (7.1%).

Table 11

*Select Risk Factors and Characteristics of Forsyth County, NC Resident Births based on Race/Ethnicity, 2019*

Risk Factors/Characteristics	Overall	Black, non-H/L	Hispanic/Latino (H/L)	Other, non-H/L	White, non-H/L
Low Birth Weight (<2,499 grams)	10.6%	17.3%	7.5%	7.8%	8.0%
Preterm (<37 Weeks Gestation)	12.2%	17.2%	10.2%	9.1%	10.1%
Kotelchuck Index: Inadequate	18.1%	18.9%	22.8%	16.2%	15.4%
Mother smoked	4.9%	7.1%	0.7%	0.6%	5.6%

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

Low birth weight, preterm births, inadequate prenatal care, and moms who smoke while pregnant are birth risk factors and characteristics that have persisted among Forsyth County resident births from 2015 to 2019 (Table 12). Of note, from 2015 to 2019,  $\geq 10.3\%$  of Forsyth County resident births were found to have had a *low birth weight*,  $\geq 11.2\%$  were *preterm*,  $\geq 15.4\%$



of mothers received inadequate prenatal care, and  $\geq 4.9\%$  of mothers smoked during pregnancy

(Table 12).

Table 12

*Select Risk Factors and Characteristics of Forsyth County, NC Resident Births, 2016 to 2019*

Risk Factors/Characteristics	2019	2018	2017	2016
Low Birth Weight (<2,499 grams)	10.6%	10.4%	11.4%	10.3%
Preterm (<37 Weeks Gestation)	12.2%	12.1%	12.6%	11.2%
Kotelchuck Index: Inadequate	18.1%	16.7%	16.2%	15.4%
Mother smoked	4.9%	7.0%	7.4%	6.3%

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

**Infant mortality.** Forsyth County's infant mortality rate exceeded the state's infant mortality rate each year from 2016 to 2020 (Table 13). From 2016 to 2020, Forsyth County's infant mortality rate has ranged from a high of 9.8 (2017, 2019) to a low of 7.2 (2020) (Table 13). Table 14 shows that between 2016 and 2020, the Black, Non-Hispanic/Latino annual infant

Table 13

*Infant Mortality Rate, Forsyth County and North Carolina, 2017 to 2020*

Jurisdiction	2020	2019	2018	2017
Forsyth	7.2	9.8	8.3	9.8
North Carolina	6.9	6.8	6.8	7.1

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

mortality rate was generally higher than all other Forsyth County race/ethnicity populations. It has ranged from a high of 21.8 in 2019 to a low of 11.7 in 2020 (Table 14). In contrast, for the White, Non-Hispanic/Latino population, the infant mortality rate has ranged from a high of 7.3 in 2018 to a low of 3.7 in 2020 (Table 14).

Table 14

*Infant Mortality Rate based on Race/Ethnicity for Forsyth County, NC, 2017 to 2020*

Population	2020	2019	2018	2017
Overall	7.2	9.8	8.3	9.8
Black, Non-Hispanic	11.7	21.8	12.0	15.0
Hispanic/Latino	8.4	7.1	6.9	23.8
Other, Non-Hispanic/Latino	6.5	2.1	*	*
White, Non-Hispanic/Latino	3.7	5.5	7.3	4.5

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

**Infant mortality disparity ratio.** Forsyth County’s Infant Mortality Disparity Ratio has ranged from a 5-year rolling average of 1.8 (2012-2016) to 2.8 (2016-2020) (Table 15). Except for the most recent period, Forsyth County’s 5-year rolling average Infant Mortality Disparity Ratio has been mostly lower than the state’s for the previous 4 review periods (Table 15). For the most recent period, Forsyth County’s Infant Mortality Disparity Ratio (2.8) exceeded the state’s (2.6) (Table 15).

Table 15

*5-Year Rolling Average Infant Mortality Disparity Ratio, Forsyth County and North Carolina, 2013-2017 to 2016-2020*

Jurisdiction	2016-2020	2015-2019	2014-2018	2013-2017
Forsyth	2.8	2.4	2.1	2.2
North Carolina	2.6	2.5	2.4	2.4

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

## Chronic Diseases and Related Health Conditions

**Chronic diseases.** The 2015-2019 overall 5-year rolling average chronic disease death rates for Forsyth County and North Carolina show a higher death rate due to chronic disease in Forsyth County (783.4) than the state (780.0) (Table 16). Forsyth County’s cancer death

Table 16

*5-year Rolling Average Race/Ethnicity-Specific and Sex-Specific Age-adjusted Leading Causes of Death, Forsyth County and North Carolina, 2015-2019*

Cause of Death	Forsyth	North Carolina
Overall	783.4	780.0
Cancer: All sites	157.9	158.0
Heart Diseases	147.0	157.3
Chronic Lower Resp. Diseases	45.3	44.0
Unintentional Injuries	45.0	39.3
Cerebrovascular Diseases	44.2	42.7

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

rate (157.9) almost equaled the state’s 5-year rolling average death rate for cancer (158.0) (Table 16). Although, Forsyth County’s 5-year rolling average heart disease death rate (147.0) was lower than the state’s (157.3), its death rate due to chronic lower respiratory diseases (45.3),

unintentional injuries (45.0), and cerebrovascular diseases (44.2) exceeded the state's 5-year rolling average death rate for each of those diseases (Table 16).

Table 17 shows that although the 5-Year Rolling Average Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates for *cancer* and *chronic lower respiratory diseases* have declined from 2012-2016 to 2015-2019. However, the rates for *heart diseases*, *unintentional injuries*, and *cerebrovascular* diseases have increased from 2012-2016 to 2015-2019 (Table 17).

Table 17

*The 5-Year Rolling Average Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Leading Causes of Death Due to Chronic Diseases and Related Health Conditions, Forsyth County, NC, 2012-2016 to 2015-2019*

Chronic Diseases & Related Health Conditions	2015-2019	2014-2018	2013-2017	2012-2016
Overall	783.4	782.2	784.9	779.7
Cancer (all sites)	157.9	161.4	165.1	168.4
Heart Diseases	147.0	146.2	146.7	144.4
Chronic Lower Resp. Diseases	45.3	46.6	46.7	46.8
Unintentional Injuries	45.0	41.1	36.4	33.3
Cerebrovascular Disease	44.2	43.6	43.6	42.4

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

A review of Forsyth County's 5-Year Rolling Average Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates due to cancer (all sites) and heart diseases from 2012-2016 to 2015-2019 shows that although deaths due to cancer have declined among White, Non-Hispanic/Latino and Black, Non-Hispanic/Latino populations, they are still higher among the Black, Non-Hispanic/Latino population (Table 18). Similarly, although deaths due to heart

Table 18

*Health Disparity Based on the 5-Year Rolling Average Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Top Two Leading Causes of Death, Forsyth County, NC, 2010-2014 to 2015-2019*

5-Year Rolling Average Years	Cancer (all sites)		Heart Diseases	
	WNHL*	BNHL*	WNHL	BNHL
2015-2019	151.9	193.1	139.7	181.1
2014-2018	157.6	188.8	138.1	181.8
2013-2017	162.3	190.5	137.7	188.9
2012-2016	165.4	196.7	134.8	188.3

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

\*WNHL: White, Non-Hispanic/Latino, BNHL: Black, Non-Hispanic/Latino

diseases have increased among the White, Non-Hispanic/Latino population, for the same period, fewer White, Non-Hispanic/Latino residents than Black, Non-Hispanic/Latino residents have

died from heart diseases (Table 18).

**Drug/medicine overdose.** Table 19 shows that between 2017 and 2021, the number of drug/medicine overdose cases seen in the Forsyth County's Emergency Departments (ED) fluctuated between 942 and 1,101. However, from 2019 to 2021, about 5,356 Emergency Departments' visits were averted through Forsyth County Emergency Medical Services' use of Naloxone to treat individuals who were experiencing drug/medicine overdose distress at home or

Table 19

*Emergency Department Visits due to Drug/Medicine Overdose, Forsyth*

Year	2021	2020	2019	2018	2017
Total	1,101	942	1,019	1,066	1,101

Source: NC Detect, February 2, 2022

\* ED visits in Forsyth County were limited to COVID-19-related visits for most of 2020 and 2021.

elsewhere in the County (Table 20). In 2020, there were 1,386 drug overdose deaths in Forsyth County (Table 21). Forsyth County's 2020 drug overdose deaths represented 4.5% of North Carolina's 2020 drug overdose deaths.

Table 20

*Total Naloxone Dispensed to Forsyth County Residents by Forsyth County Emergency Medical Services, 2019-2021*

Year	2021	2020	2019
Total	2,267	1,771	1,318

Source: Forsyth County Emergency Medical Services, February 2, 2022

Table 21

*2020 Drug Overdose Deaths for Forsyth County and North Carolina*

Jurisdiction	Forsyth County	North Carolina
Total	1,386	30,584

Source: National Center for Health Statistics, National Vital Statistics System, Provisional County-Level Drug Overdose Death Counts, <https://www.cdc.gov/nchs/nvss/vsrr/prov-county-drug-overdose.htm>.

**Mental health.** The number of depression-related Emergency Department (ED) visits from 2017 to 2019 exceeded 5,000 each year. Depression-related ED visits in 2020 (2,950) and 2021 (4,243) were probably lower than previous years because for most of both years, COVID-

19-related ED policies limited ED services to COVID-19 emergencies at both of the major hospitals (Table 22).

Table 22

*Number of Depression-related Emergency Department Visits, Forsyth County, NC, 2017-2021\**

	2021	2020	2019	2018	2017
Total	4,243	2,950	5,436	6,428	5,160

Source: NC Detect

\*For 2020 and 2021, the number of depression-related ED visits is likely to be understated because ED Visits were limited to COVID-19 related illnesses.

***Middle and high school students’ mental health.*** Based on responses to the 2019 High School and Middle School Youth Risk Behavior Surveys, students from the 6th through the 12th grade reported experiencing poor mental health in the 12 months prior to the survey or at some point in their lives (Tables 23 and 24). For example, 35.3% of Forsyth County high school students, and 28.7% of its middle school students have *experienced feeling sad or hopeless continuously for 2 weeks or more in the 12 months prior to the survey* (Tables 23 and 24). The percentage of the state’s high school sample (36.3%) and middle school sample (29.9%) who reported *feeling sad or hopeless continuously for 2 weeks or more in the 12 months prior to the survey* were higher than Forsyth County’s (Tables 23 and 24).

Table 23

*Psychological Health Risk Indicators, 2019 Youth Risk Behavior (YRBS) High School Results, WS/FC Schools and North Carolina*

Issues/Concerns/Indicators	2019	
	WS/FC	NC
Felt sad or hopeless continuously for two weeks or more in the past 12 months	35.3%	36.3%
Of the students who felt sad...those who would most likely talk to their parents or other adult family member	21.6%	19.9%
Seriously considered attempting suicide during the past 12 months	19.7%	18.9%
Made a suicide plan during the past 12 months	15.0%	15.4%
Attempted suicide during the past 12 months	11.5%	9.7%
Suicide attempt in the past 12 months that resulted in injury that required treatment by nurse or doctor	4.1%	3.0%

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) High School Results  
 NC Department of Public Instructions, 2019 NC Youth Risk Behavior Survey Results for High Schools, <https://www.dpi.nc.gov/search/ncdpi?keys=yrebs>

Table 24

*Psychological Health Risk Indicators, 2019 Youth Risk Behavior (YRBS) Middle School Results, WS/FC Schools and North Carolina*

Issues/Concerns/Indicators	2019	
	WS/FC	NC
Felt sad or hopeless continuously for two weeks or more in the past 12 months	28.7%	29.9%
Of the students who felt sad...those who would most likely talk to their parents or other adult family member	27.3%	29.7%
Ever seriously considered attempting suicide during the past 12 months	22.5%	23.4%
Ever made a suicide plan during the past 12 months	14.1%	16.3%
Ever attempted suicide during the past 12 months	12.4%	11.5%

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) Middle School Results  
 NC Department of Public Instructions, 2019 NC Youth Risk Behavior Survey Results for Middle Schools, <https://www.dpi.nc.gov/search/ncdpi?keys=yrebs>

More Forsyth County high school students (21.6%) than the state's high school sample (19.9%) reported that they would talk to their parents or other adult family member about how they were feeling (Table 23). However, Forsyth County middle school students (27.3%) were less likely than the state middle school sample (29.7%) to talk to talk to their parents or other adult family member about how they were feeling (Table 24).

*Suicide plans and attempted suicide among high school and middle school students.*

More Forsyth County high school students than the state's high school sample reported that they had *seriously considered attempting suicide in the past 12 months* (19.7%), had *attempted suicide during the past 12 months* (11.5%), and that their *suicide attempt in the past 12 months had resulted in an injury that required treatment by a doctor or nurse* (4.1%) (Table 23). Similar to the state's high school sample (15.4%), 15.0% of Forsyth County high school students reported that they had *made a suicide plan in the 12 months prior to the survey* (Table 23). In contrast, a lower percentage of Forsyth County middle school students than the state's middle school sample reported that they had *ever seriously considered attempting suicide* (22.5%) or *ever made a suicide plan* (14.1%) (Table 24). Yet, a higher percentage of Forsyth County middle school students (12.4%) than the state's middle school sample (11.5%) reported that they *had attempted suicide at some point in their lives* (Table 24).

*Association between mental health and academic achievement among middle and high school students.* The 2019 YRBS results show that in Forsyth County, poor mental health is significantly associated with poor academic performance among high school and middle school students (Tables 25 and 26). For example, Forsyth County's high school and middle school students who reported feeling sad or helpless  $\geq 2$  weeks in the past 12 months prior to the survey were significantly associated with receiving poor grades. However, unlike Forsyth County high

school students who made a suicide plan or attempted suicide, Forsyth County middle school students who reported these behaviors were not associated with receiving poor grades (Tables 25 and 26).

Table 25

*Academic Achievement and Psychological Health Risk Indicators, 2019 Youth Risk Behavior Survey (YRBS) High School Results, Winston-Salem/Forsyth County Schools*

Indicators	A's	B's	C's	D/F's	Significant Association*
Felt sad or hopeless continuously for two weeks or more in the past 12 months	27.8%	35.3%	39.6%	60.9%	Yes
Of the students who felt sad, ...those who would most likely talk to their parents or other adult family member about how they were feeling	23.4%	20.6%	25.2%	11.0%	No
Seriously considered attempting suicide during the past 12 months	16.1%	22.8%	14.4%	35.6%	Yes
Made a suicide plan during the past 12 months	10.9%	15.4%	16.3%	29.5%	Yes
Attempted suicide during the past 12 months	7.3%	11.9%	12.2%	28.7%	Yes
Suicide attempt in the past 12 months resulted in injury that required treatment by nurse or doctor	2.1%	4.9%	3.4%	12.9%	Yes

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for High School Students

\*Confidence Interval: 95%, based on logistic regression analysis controlling for sex, race/ethnicity, and grade level,  $p < 0.05$

Table 26

*Academic Achievement and Psychological Health Risk Indicators, 2019 Youth Risk Behavior Survey (YRBS) Middle School Results, Winston-Salem/Forsyth County Schools*

Indicators	A's	B's	C's	D/F's	Significant Association*
Felt sad or hopeless $\geq 2$ weeks continuously during the past 12 months	23.5%	29.3%	33.7%	34.4%	Yes
Ever seriously considered attempting suicide	17.6%	23.0%	27.2%	23.8%	Yes
Ever made a suicide plan	10.6%	13.9%	16.1%	12.0%	No
Ever attempted suicide	7.4%	12.2%	16.1%	13.1%	No

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for Middle School Students

\*Confidence Interval: 95%, based on logistic regression analysis controlling for sex, race/ethnicity, and grade level,  $p < 0.05$

*Trends in mental health behavior among Forsyth County high school and middle school students.* The percentage of Forsyth County high school students who reported *feeling sad or hopeless continuously for  $\geq 2$  weeks in the 12 months prior to the survey* decreased from 36.3% in 2017 to 35.3% in 2019 (Table 27). In contrast, the percentage of Forsyth County middle school students who *reported feeling sad or hopeless continuously for  $\geq 2$  weeks in the 12 months prior to the survey* increased from 23.71% in 2017 to 28.7% in 2019 (Table 28).

Of the Forsyth County high school students who reported feeling sad or hopeless continuously for  $\geq 2$  weeks in the 12 months prior to the survey, the percentage who would tell

Table 27

*Trends in Psychological Health Risk Indicators, High School Youth Risk Behavior Survey (YRBS) Results, Winston-Salem/Forsyth County Schools, 2017-2019*

Indicators	2019	2017
Felt sad or hopeless continuously for two weeks or more in the past 12 months	35.3%	36.3%
Of the students who felt sad...those who would most likely talk to their parents or other adult family member...	21.6%	19.9%
Seriously considered attempting suicide during the past 12 months	19.7%	18.9%
Made a suicide plan during the past 12 months	15.0%	15.4%
Attempted suicide during the past 12 months	11.5%	9.7%
Suicide attempt in the past 12 months that resulted in injury that required treatment by nurse or doctor	4.1%	3.0%

Source:

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for High School Students

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for High School Students

Table 28

*Trends in Psychological Health Risk Indicators, Middle School Youth Risk Behavior Survey (YRBS) Results, Winston-Salem/Forsyth County Schools, 2017-2019*

Indicators	2019	2017
Felt sad or hopeless continuously for two weeks or more in the past 12 months	28.7%	23.7%
Of the students who felt sad...those who would most likely talk to their parents or other adult family member...	27.3%	31.8%
Ever seriously considered attempting suicide during the past 12 months	22.5%	23.2%
Ever made a suicide plan during the past 12 months	14.1%	15.4%
Ever attempted suicide during the past 12 months	12.4%	12.7%

Source:

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for Middle School Students

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for Middle School Students

their parents or other adult family member about how they were feeling increased from 19.9% (2017) to 21.6% (2019) (Table 27). However, Table 28 shows that of the Forsyth County middle school students who *reported feeling sad or hopeless continuously for  $\geq 2$  weeks in the 12 months prior to the survey*, the percentage who would tell their parents or other adult family member about how they were feeling declined from 31.8% (2017) to 27.3% (2019). The percentage of Forsyth County high school students who *seriously considered attempting suicide in the past 12 months, attempted suicide in the past 12 months, and whose suicide attempt resulted in injury that require treatment by nurse or doctor* increased from 2017 to 2019 (Table 27). In 2019, the percentage of Forsyth County middle school students who *ever seriously considered attempting suicide* (22.5%), *ever made a suicide plan* (14.1%), and *ever attempted suicide in the 12 months before the survey* (12.4%) decreased from the 2017 survey results (Table 28).



**Violence.** The violent crime rate in Forsyth County increased from 651.3 per 100,000 Population in 2016 to 912.5 per 100,000 Population in 2020 (Table 29). From 2016 to 2020, Forsyth County’s yearly violent crime rate was almost double that of the state’s for the same period (Table 29).

Table 29

*Violent Crime Rate per 100,000 Population, Forsyth County and North Carolina, 2016-2020*

Jurisdiction	2020	2019	2018	2017	2016
Forsyth	912.5	768.4	660.2	702.2	651.3
North Carolina	451.6	406.8	356.6	384.8	375.0

Source: North Carolina State Bureau of Investigation

***Middle and high school students’ violence-related behaviors and/or experiences.*** Based on responses to the 2019 *Youth Risk Behavior Surveys*, students from the 6<sup>th</sup> through the 12<sup>th</sup> grade reported experiencing/displaying violence-related behavior in the *30 days* or *12 months* prior to the survey, and/or at some point in their lives (Tables 30 and 31). For example, about 1

Table 30

*Violent Behavior Experiences/Indicators, 2019 Youth Risk Behavior (YRBS) High School Results, WS/FC Schools and North Carolina*

Violence-related Experiences/Indicators	2019	
	WS/FC	NC
Skipped school for $\geq 1$ of the past 30 days because he or she felt unsafe at school	9.7%	13.6%
Electronically bullied in the past 12 months	12.6%	14.8%
Bullied on school property in the past 12 months	15.7%	18.9%
Been in a physical fight (anywhere) on $\geq 1$ times during the past 12 months	25.4%	23.7%
Been in a physical fight on school property $\geq 1$ times during the past 12 months	9.0%	7.4%
Threatened or injured with a weapon on school property $\geq 1$ times during the past 12 months	7.6%	7.2%
Carried a weapon, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	15.0%	15.9%
Carried a weapon on school property, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	1.9%	2.7%
Carried a gun (not for hunting or target shooting) on $\geq 1$ days of the past 30 days	6.4%	7.0%

Source:

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) High School Results  
 NC Department of Public Instructions, 2019 NC Youth Risk Behavior Survey Results for High Schools, <https://www.dpi.nc.gov/search/ncdpi?keys=yrebs>

Table 31

*Violent Behavior Experiences/Indicators, 2019 Youth Risk Behavior (YRBS) Middle School Results, WS/FC Schools and North Carolina*

Violence-related Experiences/Indicators	2019	
	WS/FC	NC
Skipped school for $\geq 1$ of the past 30 days because he or she felt unsafe on the way to school and/or at school	4.9%	6.6%
Ever been electronically bullied (texting, Facebook, Instagram, other social media)	20.10%	22.0%
Ever been bullied on school property	38.9%	42.6%
Ever been in a physical fight	50.0%	47.2%
Threatened or injured by someone with a weapon (such as a gun, knife, or club) on school property during the past 12 months	5.2%	5.7%
Ever carried a weapon, such as a gun, knife, or club	28.6%	31.4%

Source:

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) Middle School Results  
 NC Department of Public Instructions, 2019 NC Youth Risk Behavior Survey Results for Middle Schools, <https://www.dpi.nc.gov/search/ncdpi?keys=yrebs>

in 6 (15.7%) of Forsyth County high school students, and about 1 in 20 (38.9%) of its middle school students reported being *bullied on school property in the past 12 months before the survey* (Tables 30 and 31). The percentage of the state’s high school sample (18.9%) and middle school sample (42.6%) who reported being *bullied on school property* were higher than Forsyth County’s (Tables 30 and 31). About 1 in 6 (15.0%) Forsyth County high school students reported that they *carried a weapon, such as a gun, knife, or club on  $\geq 1$  days of the past 30 days prior to the survey* (Table 30), and about 1 in 3 (28.6%) Forsyth County middle school students reported *carrying a weapon, such as a gun, knife, or club at some point in their lives* (Table 31).

*Association between violence-related behaviors and/or experiences and academic achievement among middle and high school students.* The 2019 WS/FCS YRBS results show that in Forsyth County most *violence-related behaviors and/or experiences* are significantly associated with poor academic performance among Forsyth County’s high school (Table 32) and middle school students (Table 33). For example, Forsyth County high school students who reported that they had *carried a weapon, such as a gun, knife, or club on  $\geq 1$  days of the past 30 days* prior to the survey (Table 32), and middle school students who reported *carrying a weapon, such as a gun, knife, or club* at some point in their lives (Table 33) were *significantly associated* with receiving poor grades.

Table 32  
*Academic Achievement and Violence-related Experiences/Indicators, 2019 Youth Risk Behavior Survey (YRBS) High School Results, Winston-Salem/Forsyth County Schools*

Violence-related Experiences/Indicators	A’s	B’s	C’s	D/F’s	Significant Association*
Skipped school for $\geq 1$ of the past 30 days because he or she felt unsafe at school	5.1%	9.5%	15.0%	18.8%	Yes
Electronically bullied in the past 12 months	10.1%	13.2%	12.2%	25.6%	Yes
Bullied on school property in the past 12 months	15.0%	15.3%	15.8%	23.1%	No
Been in a physical fight (anywhere) on $\geq 1$ times during the past 12 months	15.2%	22.6%	35.0%	57.4%	Yes
Been in a physical fight on school property $\geq 1$ times during the past 12 months	4.7%	7.3%	14.0%	29.9%	Yes
Threatened or injured with a weapon on school property $\geq 1$ times during the past 12 months	4.1%	9.1%	9.3%	16.2%	Yes
Carried a weapon, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	9.3%	13.7%	23.7%	31.9%	Yes
Carried a weapon on school property, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	1.4%	1.2%	3.7%	4.6%	Yes
Carried a gun (not for hunting or target shooting) on $\geq 1$ days of the past 30 days	4.6%	4.6%	7.9%	15.7%	Yes

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for High School Students

\*Confidence Interval: 95%, based on logistic regression analysis controlling for sex, race/ethnicity, and grade level,  $p < 0.05$

Table 33  
*Academic Achievement and Violence-related Behaviors, 2019 Youth Risk Behavior Survey (YRBS) Middle School Results, Winston-Salem/Forsyth County Schools*

Violence-related Experiences/Indicators	A's	B's	C's	D/F's	Significant Association*
Skipped school for $\geq 1$ of the past 30 days because he or she felt unsafe on the way to school and/or at	3.3%	3.5%	3.9%	8.8%	Yes
Ever been electronically bullied (texting, Facebook, Instagram, other social media)	18.0%	20.4%	19.7%	25.7%	No
Ever been bullied on school property	37.6%	38.8%	35.8%	43.8%	Yes
Ever been in a physical fight	34.0%	52.7%	62.8%	59.5%	Yes
Threatened or injured by someone with a weapon (such as a gun, knife, or club) on school property during	5.4%	5.2%	5.1%	3.6%	No
Ever carried a weapon, such as a gun, knife, or club	23.8%	28.5%	29.0%	41.8%	Yes

Source: Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 Winston-Salem/Forsyth County (WS/FC) Youth Risk Behavior Survey (YRBS) Results for Middle School Students

\*Confidence Interval: 95%, based on logistic regression analysis controlling for sex, race/ethnicity, and grade level,  $p < 0.05$

*Trend in violence-related behaviors and/or experiences among Forsyth County high school and middle school students.* The percentage of Forsyth County high school students who *had been in a physical fight (anywhere) on  $\geq 1$  times during the past 12 months* increased from 21.0% in 2017 to 25.4% in 2019 (Table 34). Similarly, the percentage of Forsyth County middle school students who *had been in a physical fight at some in their lives* increased from 47.2% in 2017 to 50.0% in 2019 (Table 35). The percentage of Forsyth County high school students who *carried a weapon, such as a gun, knife, or club on  $\geq 1$  days of the past 30 days* increased from 14.7% in 2017 to 15.0% in 2019 (Table 34). However, the percentage of Forsyth County middle school students who *had ever carried a weapon, such as a gun, knife, or club (anywhere)* decreased from 31.4% in 2017 to 28.6% in 2019 (Table 35).

Table 34  
*Trends in Violence-related Experiences/Indicators, High School Youth Risk Behavior Survey (YRBS) Results, Winston-Salem/Forsyth County Schools, 2017-2019*

Violence-related Experiences/Indicators	2019	2017
Electronically bullied in the past 12 months	12.6%	13.0%
Bullied on school property in the past 12 months	15.7%	17.0%
Been in a physical fight (anywhere) on $\geq 1$ times during the past 12 months	25.4%	21.0%
Been in a physical fight on school property $\geq 1$ times during the past 12 months	9.0%	6.5%
Threatened or injured with a weapon on school property $\geq 1$ times during the past 12 months	7.6%	6.1%
Carried a weapon, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	15.0%	14.7%
Carried a weapon on school property, such as a gun, knife, or club on $\geq 1$ days of the past 30 days	1.9%	4.4%
Carried a gun (not for hunting or target shooting) on $\geq 1$ days of the past 30 days	6.4%	5.8%

Source:  
 Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) High School Results  
 Forsyth County Department of Public Health, Epidemiology & Surveillance Unit, 2017 WS/FC Schools Youth Risk Behavior (YRBS) High School Results

Table 35

*Trends in Violence-related Experiences/Indicators, Middle School Youth Risk Behavior Survey (YRBS) Results, Winston-*

Violence-related Experiences/Indicators	2019	2017
Ever been electronically bullied (texting, Facebook, Instagram, other social media)	20.1%	22.0%
Ever been bullied on school property	38.9%	42.6%
Ever been in a physical fight	50.0%	47.2%
Threatened or injured by someone with a weapon (such as a gun, knife, or club) on school property during the past 12 months	5.2%	5.7%
Ever carried a weapon, such as a gun, knife, or club	28.6%	31.4%

Source:

Forsyth County Department of Public Health, Epidemiology &amp; Surveillance Unit, 2019 WS/FC Schools Youth Risk Behavior (YRBS) High School Results

Forsyth County Department of Public Health, Epidemiology &amp; Surveillance Unit, 2017 WS/FC Schools Youth Risk Behavior (YRBS) High School Results

## Infectious Diseases

**COVID-19.** Forsyth County's first Coronavirus 2019 (COVID-19) cases were identified in March 2020. However, by September 2020, there was COVID-19 community spread across all zip codes, race/ethnicities, and age groups (See Appendices A and B). The rapid spread of COVID-19 among Forsyth County's population influenced changes in the structure of everyday business operations, schools, and household functioning. These changes included the required use of mask in County buildings, and hybrid home/office work schedules.

For calendar year 2020 and 2021, Forsyth County's reported number of COVID-19 cases and reported number of COVID-19 deaths were  $\leq 4.9\%$  of the state's reported number of COVID-19 cases and deaths (Table 36).

Table 36

*COVID-19 Cases and Deaths, Forsyth County and North Carolina, 2020-2021*

Jurisdiction	2021		2020	
	Cases	Deaths	Cases	Deaths
Forsyth County	44,809	380	24,027	309
North Carolina	1,147,122	11,745	539,545	8,001

Source:

NCDHHS, NC COVID-19 Dashboard, Data Behind the Dashboards, <https://covid19.ncdhhs.gov/dashboard/data-behind-dashboards>

**Sexual health.** The COVID-19 pandemic's negative impact on chlamydia, gonorrhea, HIV, and syphilis investigation and reporting is likely to have influenced the 2020 data for each disease. The available data should be used cautiously. Based on available data, in 2020, Forsyth County's reported chlamydia (775.3), gonorrhea (845.8) and HIV (12.4) rates per 100,000 population were higher than the state's (Table 37).

Table 37  
*Newly Diagnosed Chlamydia and Gonorrhea Rates for Forsyth County and North Carolina based on Year of Diagnosis, 2020<sup>1,4</sup>*

	Chlamydia		Gonorrhea		HIV <sup>2</sup>		Early Syphilis <sup>3</sup>			
	Cases	Rates	Cases	Rates	Cases	Rates	Primary & Secondary		Early, non-primary, non-secondary	
							Cases	Rates	Cases	Rates
Forsyth	2,976	775.3	3,232	845.8	40	12.4	38	9.9	26	6.8
North Carolina	64,342	607.0	28,014	264.3	1,079	12.0	1,263	11.9	1,079	10.2

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit

Source:

NC DHHS, DPH, HIV/STD/Hepatitis Surveillance Unit, 2020 NC STD Surveillance Report, <https://epi.dph.ncdhhs.gov/cd/stds/figures/2020-STD-AnnualReport-Final-v2.pdf>, Accessed January 4, 2022.  
 NC DHHS, DPH, HIV/STD/Hepatitis Surveillance Unit, 2020 NC HIV Surveillance Report, <https://epi.dph.ncdhhs.gov/cd/stds/figures/2020-HIV-AnnualReport-Final.pdf>, Accessed January 4, 2022.

<sup>1</sup>2020 data should be treated with caution due to reduced availability of testing caused by the COVID-19 pandemic. Data is italicized for this reason.

<sup>2</sup>HIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).

<sup>3</sup>Early syphilis is defined as having primary, secondary, or early non-primary non-secondary (formerly early latent) syphilis.

<sup>4</sup>Rates are expressed per 100,000 population

Between 2016 and 2020, Forsyth County's chlamydia and gonorrhea rates per 100,000 population increased from 708.3 and 282.7 to 775.3 and 400.4, respectively (Table 38). The decline in the case count, and thus, the rates for HIV and Early Syphilis are shown in Table 38 but should be used cautiously because there were limited testing and investigations in Forsyth County beginning in the 2<sup>nd</sup> Quarter of 2020.

Table 38

*Newly Diagnosed Chlamydia, Gonorrhea, and Early Syphilis Annual Rates for Forsyth County, NC based on Year of Diagnosis, 2016-2020<sup>1,3</sup>*

	2020		2019		2018		2017		2016	
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
Chlamydia	2,976	775.3	3,232	845.8	2,847	750.8	2,533	673.8	2,631	708.3
Gonorrhea	1,537	400.4	1,570	410.9	1,167	307.8	966	257.0	1,050	282.7
HIV (all stages)	40	12.4	82	25.6	64	20.2	66	21.0	81	26.2
Early Syphilis <sup>2</sup>										
Primary & Secondary	38	9.9	60	15.7	54	14.2	57	15.2	53	14.3
Early, non-primary, non-secondary	26	6.8	40	10.5	46	12.1	25	6.7	38	7.5

Source:

NC DHHS, DPH, HIV/STD/Hepatitis Surveillance Unit, 2020 NC STD Surveillance Report, <https://epi.dph.ncdhhs.gov/cd/stds/figures/2020-STD-AnnualReport-Final-v2.pdf>  
 NC DHHS, DPH, HIV/STD/Hepatitis Surveillance Unit, 2020 NC HIV Surveillance Report, <https://epi.dph.ncdhhs.gov/cd/stds/figures/2020-HIV-AnnualReport-Final.pdf>

<sup>1</sup>2020 data should be treated with caution due to reduced availability of testing caused by the COVID-19 pandemic. Data is italicized for this reason.

<sup>2</sup>HIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).

<sup>3</sup>Early syphilis is defined as having primary, secondary, or early non-primary, non-secondary (formerly early latent) syphilis.

<sup>4</sup>Rates are expressed per 100,000 population

## Summary

Overall, Forsyth County's population health has declined. Much of this decline is evidenced by the lowering of the its life expectancy rate. Forsyth County's 3-year rolling average life expectancy declined from 78.3 years (2014-2016) to 77.9 years (2017-2019). In 2017-2019, the 3-year rolling average life expectancy for the White, Non-Hispanic/Latino population (79.3 years) was higher than the Black, Non-Hispanic/Latino population (74.9 years). The major health issues that are likely to have contributed to the overall decline in life expectancy as well as the

health disparity noted are poor maternal and infant health, chronic diseases (primarily cancers and heart diseases), mental health, violence-related behaviors and experiences, and drug overdose. For example, for each White, Non-Hispanic/Latino infant who dies, almost three (2.8) Black, Non-Hispanic/Latino infant dies. Also, the Black, Non-Hispanic/Latino population disproportionately experience heart diseases than the White, Non-Hispanic/Latino population.

## Chapter 3

### Household Environment

#### Poverty

From 2015 to 2019, about 1/3 of Forsyth County households in each year were headed by a single parent (Table 39). Table 40 shows that similar to the state, 13% or 1 in 8 persons lived in poverty in Forsyth County during 2020. Almost 1 in 5 (18.8%) individual children age 0-17 years, and 1 in 5 (18.5%) families with children age 5 to 17 years lived in poverty in Forsyth County (Table 40).

Table 39

*Single Parent Households with Children <5 years as a Percentage of Households, Forsyth County, NC*

Year	2019	2018	2017	2016	2015
% of Single Parent Households	38.5%	36.7%	36.7%	37.4%	37.1%

Source: Federal Reserve Bank of St. Louis, Economic Data, <https://fred.stlouisfed.org/release/tables?rid=412&eid=360498#snid=360532>

**Table 40**

*Poverty, Forsyth County and North Carolina, 2020*

Variable	Forsyth	North Carolina
Persons in poverty, all ages	13.0%	12.9%
% in Poverty, Age 0-17 years (individual children)	18.8%	17.9%
% in Poverty with children Age 5-17 years (Families)	18.5%	17.0%

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program, Release date: December 2021, 2020 Poverty and Median Household Income Estimates-Counties, States, and National <https://www.census.gov/quickfacts/fact/table/NC,forsythcountynorthcarolina/EDU685219#EDU685219>

From 2014 to 2018, more than one-half (50%) of Forsyth County's births were to mothers who had Medicaid (Table 41). More than 40% (1 in 5) of Forsyth County mothers also qualified for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Table 41). WIC provides low-income pregnant, breastfeeding, and non-breastfeeding postpartum mothers, as well as their infants and children who are ≤5 years of age with access to supplemental foods. It also provides nutrition education and health care referrals to qualified mothers, infant and children (USDA 2022). Along with residency and an identified nutritional need, to qualify for WIC, an eligible child's family or mother's family income must be less than 185% of the U.S. Poverty Income Guidelines (USDA 2022).

**Table 41***Percent of Births to Medicaid and WIC Mothers, Forsyth County and North Carolina, 2014-2018*

Jurisdiction	2018		2017		2016		2015		2014	
	Medicaid	WIC	Medicaid	WIC	Medicaid	WIC	Medicaid	WIC	Medicaid	WIC
Forsyth	57.7	42.3	59.0	45.0	58.4	45.9	56.6	47.2	58.4	41.0
North Carolina	54.2	39.9	55.0	42.3	54.7	43.4	54.8	45.4	54.4	42.9

Source: NC DHHS, State Center for Health Statistics, <https://schs.dph.ncdhhs.gov/data/databook/CD7D-Medicaid-WIC-Births.html>

**Spoken language.** During 2015-2019, a language other than English was spoken in almost 1 in 7 or about 15% of Forsyth County's households (Table 42). In contrast, only in about 1 in 8 or 12% of the state's household was a language other than English spoken (Table 42).

**Table 42***Language, Forsyth County and North Carolina, 2015-2019*

	Forsyth	North Carolina
% of Households where a language other than English is spoken at home	14.7%	11.8%

Source: Bureau of Census, Quick Facts, Forsyth County and North Carolina,

<https://www.census.gov/quickfacts/fact/table/NC,forsythcountynorthcarolina/EDU685219#EDU685219>

**Education.** In 2019, about 1 in 3 (36.9%) Forsyth County babies were born to mothers who had ≤ a high school degree/GED (Table 43). Similar to the state, in Forsyth County, the highest percentage of babies were born to mothers who had ≤ a high school degree/GED were Hispanic/Latino (Table 43). For both Forsyth County and the state, Black, Non-Hispanic/Latino babies were the second highest percentage of babies who were born to mothers who had ≤ a high school degree/GED (Table 43).

**Table 43***The Percentage of Babies born to Mothers who have an Education level of High School Graduate/GED or Less, Forsyth County and North Carolina, 2019*

Jurisdiction	Overall	Black, non-Hispanic/Latino	Hispanic/Latino	Other, non-Hispanic/Latino	White, non-Hispanic/Latino
Forsyth	36.9%	38.9%	73.3%	19.4%	19.6%
North Carolina	37.7%	45.7%	66.4%	23.4%	26.3%

Source: NC DHHS, State Center for Health Statistics

<https://schs.dph.ncdhhs.gov/data/databook/BirthIndicators-CHDB21/Forsyth.pdf><https://schs.dph.ncdhhs.gov/data/databook/BirthIndicators-CHDB21/NorthCarolina.pdf>

Table 44 shows that between 2015 and 2019, the percentage of babies in Forsyth County who were born to mothers who had ≤ a high school degree/GED were between 36.5% and 40.2% (between 1 in 2 and 1 in 3 babies). Based on race/ethnicity, Hispanic/Latino (>73% or 3 in 4 babies) and Black, Non-Hispanic/Latino (>36% or 1 in 3 babies) populations had the highest percentage of babies who were born to mothers who had ≤ high school degree/GED from 2015



to 2019. White, Non-Hispanic/Latino and Other, Non-Hispanic/Latino populations had the lowest percentage of babies who were born to mothers who had  $\leq$  high school degree/GED from 2015 to 2019 (Table 44).

**Table 44**

*The Percentage of Babies Born to Mothers who reside in Forsyth County, NC & have an Education Level of High School Graduate/GED or Less, 2015-2019*

Population	2019	2018	2017	2016	2015
Overall	36.9%	36.5%	39.2%	38.1%	40.2%
Black, non-Hispanic/Latino	38.9%	37.6%	40.8%	39.3%	45.5%
Hispanic/Latino	73.3%	73.4%	77.1%	79.7%	80.1%
Other, non-Hispanic/Latino	19.4%	16.0%	24.8%	23.0%	24.5%
White, non-Hispanic/Latino	19.6%	21.5%	21.4%	21.3%	21.5%

Source: NC DHHS, Department of Public Health, State Center for Health Statistics

## Summary

Based on the most recent household data, in 2019, almost 1 in 3 Forsyth County households were headed by a single parent, and almost 1 in 5 families with children age 5 to 17 years, lived in poverty. One in three babies were born to a mother who had  $\leq$  a high school degree/equivalency. A language other than English was spoken in almost 1 in 7 households, and about 1 in 5 births were to mothers who qualified for WIC.

## Chapter 4

### School and Work Environments

#### Schools and Colleges

**Winston-Salem/Forsyth County Schools (WS/FCS).** The Winston-Salem/Forsyth County School System is the 4<sup>th</sup> largest in North Carolina (WS/FCS, 2022). It includes 41 elementary schools, 15 middle schools, 18 high schools, and 7 specialty schools (WS/FCS, 2022). WS/FCS serves over 53,000 students each year (WS/FCS, 2022). During the 2021/2022 school year, about 33.6% of the students were identified as White, Non-Hispanic/Latino, 29.8% as Black, Non-Hispanic/Latino, 28.4% as Hispanic/Latino, 5.4% as Multiracial, 2.5% as Asian, and less than 1% as American Indian or Native Hawaiian/Pacific (WS/FCS, 2022).

The school system has implemented a variety of student support programs that aim to reduce violence, alcohol, tobacco and other drug use (ATOD), and bullying (WS/FCS, 2022b, 2022c). It has also implemented *Inspire340*, a program that aims to help students to remain in school (WS/FCS, 2022d).

***Inspire340.*** The Inspire340 program is one of WS/FCS's most significant programs because it provides 'wraparound services' to schools within the school district that serve at risk populations. The program is guided by representatives from schools, businesses, and community partners. The goal of the program is to develop implementable strategies that will improve social and educational outcomes for students. Some of the schools that have benefited from this program include Diggs-Latham Elementary School, Gibson Elementary, Hall-Woodward Elementary, Ibrahim Elementary, Petree Elementary, Philo-Hill Magnet, and Winston-Salem Preparatory Academy (WSFCS, 2022d).

***Testing Scores.*** From 2016 to 2019, WS/FC students have performed about the same or slightly better than the state on the SAT and ACT proficiency tests (Tables 45 and 46).

**Table 45***SAT scores for Winston-Salem/Forsyth County Schools (WS/FCS) and North Carolina, 2016 to 2019*

Jurisdiction	SAT Scores			
	2019	2018	2017	2016
WS/FC Schools	1,095	1,090	1,079	1,003
North Carolina	1,091	1,090	1,074	997

NC DHHS, Department of Public Health, State Center for Health Statistics

Source: <https://ncreports.ondemand.sas.com/src/?county=Forsyth>**Table 46***ACT scores for Winston-Salem/Forsyth County Schools (WS/FCS) and North Carolina, 2016 to 2019*

Jurisdiction	ACT Proficiency			
	2019	2018	2017	2016
WS/FCS	53.9%	57.1%	58.4%	56.7%
North Carolina	55.8%	57.9%	58.8%	59.9%

NC DHHS, Department of Public Health, State Center for Health Statistics

Source: <https://ncreports.ondemand.sas.com/src/?county=Forsyth>

**Post-secondary schools.** Post-secondary schools in Forsyth County include Forsyth Technical Community College (FTCC), University of North Carolina School of the Arts (UNSCA), Wake Forest University (WFU), and Winston-Salem State University (WSSU). This CHA Report focuses primarily on FTCC to illustrate the academic support and non-traditional opportunities available to Forsyth County residents. As previously noted in the introduction, about 10% of Forsyth County residents who are  $\geq 25$  years did not attain a high school diploma or its equivalent.

***Forsyth Technical Community College (FTCC).*** Forsyth Technical Community College (FTCC) is an accredited 2-year college that began its operations in 1960 (FTCC, 2022a). It offers vocational, skilled trade and corporate training, continuing education and personal enrichment classes, as well as 2-year college transfer programs and 2-year degree programs (FTCC, 2022b). FTCC participates in/offers support and mentorship programs to assist interested individuals to achieve their goals. Its support and mentorship programs include *Career & College Promise*

(CCP), the *Minority Male Success Initiative Program*, and the *Learn and Earn Apprenticeship Program (LEAP)* (FTCC, 2022c).

*Career & College Promise (CCP)*. Through the CCP program, qualified students of high school age who live in Forsyth County, can attend FTCC tuition free if they are registered to pursue two-or four-year degrees, certificates, or diplomas that follow a specific path. For example, students who choose to pursue the one or two-year transfer program can transfer to any college in the University of North Carolina System or participating private institution to complete their studies (FTCC, 2022c).

*Minority Male Success Initiative*. North Carolina's Minority Male Success Initiative (MMSI) in community colleges is a 3-year program that is meant to increase the retention rate of minority males and the completion of their chosen program. To achieve this goal, the program provides guidance and support to each program participant at every stage of his college career (FTCC, 2022c).

*Learn and Earn Apprenticeship Program (LEAP)*. The Learn and Earn Apprenticeship Program (LEAP) partners FTCC with employers to allow students who have a high school degree or its equivalent to attend classes at FTCC while getting on the job training in the manufacturing industry. Students are enrolled in a group of course that would allow them to earn an Associate in Applied Science degree. Students who have completed this program can earn their state and national journeyman or journeywoman credential (FTCC, 2022c).

## **Work**

Major employment sectors in the county are schools and colleges, financial services, government, health care, and manufacturing (Table 47). The majority of Forsyth County work opportunities are in the health care industry. Atrium Health Wake Forest Baptist (Level I Trauma

Center) and Novant Health Forsyth Medical Center are the major employers (Winston-Salem Chamber of Commerce, 2021).

**Table 47***Major Employers, Forsyth County, NC as of May 2021*

<i>Employer</i>	<i>Number of Employees</i>	<i>Industry</i>
Atrium Health Wake Forest Baptist	18,570	Health Care
Novant Health Forsyth Medical Center	11,010	Health Care
Winston Salem/Forsyth County Schools	5,500	Public Education
BB&T/Truist	4,000	Financial Services
Wells Fargo	3,500	Financial Services
Reynolds American	2,500	Tobacco Manufacturing
Hanesbrands	2,400	Clothing
City of Winston Salem	2,287	Government
Wake Forest University	2,270	Higher Education
Forsyth County	2,127	Government

Source: Winston-Salem Chamber of Commerce

<https://www.winstonsalem.com/economic-development/local-data/major-employers/>

## Summary

The WS/FCS is the 4<sup>th</sup> largest in North Carolina. Its students' standardized testing scores are equivalent to the state average or better. The school system has implemented student support programs that are focused on retention, as well as bullying, and alcohol, tobacco, and other drug use prevention. FTCC has a range of programs for students who would like to attend college and independently chart their own path, or for others who need a good support system in their first 2-years of college, or for those who would like the opportunity to get on the job training while earning a degree in Applied Science. The health care industry is the major employment sector in Forsyth County. Other major employment sectors include education, financial services and government.

## **Chapter 5**

### **Neighborhood or Community Physical and Social Environments**

#### **Parks and Recreation Areas**

**Forsyth County-administered Parks and Recreation Areas.** Forsyth County-administered parks and recreation centers are located in different on relatively large tracts of land throughout the County. They include C. G. Hill Memorial Park, Horizon’s Park, Joanie Moser Memorial Park, Kernersville Lake Park, Old U.S. 421 River Park, Tanglewood Park, Triad Park (joint project with Guilford County), Union Cross Park (first Forsyth County developed park), and Walkertown Community Park (See Appendix C).

**City of Winston-Salem-administered Parks, Recreation Areas, and Greenways.** City of Winston-Salem manages “79 parks that include 51 picnic shelters, 47 playgrounds, 43 soccer fields, 47 softball fields, 109 tennis courts, 8 pools, 6 volleyball courts, 25 basketball courts and a football field” (Taken from City of Winston-Salem 2022) (Appendix D).

#### **Summary**

Appendices C and D show that the Forsyth County and City of Winston-Salem-administered parks and recreation areas provide residents with a range of places for solitary or group physical and/or social activities.

## Chapter 6

### Local Agency Policies and Programs

#### Chronic Diseases and Other Health Conditions

**North Carolina Minority Diabetes Prevention Program.** The North Carolina Minority Diabetes Prevention Program (NC MDPP) is a free diabetes statewide prevention program (NC MDPP, 2022). In Forsyth County, the Department of Public Health and Atrium Health Wake Forest Baptist Hospital are partnered to teach CDC lifestyle classes to minority and other at risk populations. The program aims to reduce the risk of individuals with prediabetes developing Type 2 diabetes or other chronic diseases such as heart diseases (NC MDPP, 2022).

**Forsyth Regional Opioid & Substance Use Team (FROST).** The Forsyth Regional Opioid & Substance Use Team (FROST) is a regional multidisciplinary team that aims to reduce drug abuse/overdose through intervention and education (FROST, 2022). It operates from the Department of Public Health, and is responsible for the distribution of Naloxone to community partners and the public (FROST, 2022). Naloxone is a medication that reverses the effects of opioids or overdose. The Department of Public Health instituted a *Distribution Standing Order* for Naloxone that would build on the North Carolina statewide Standing Order for Naloxone distribution without prescription. FROST's Naloxone distribution program includes educational course that teaches about opioid overdose and how to correctly administer Naloxone (FROST, 2022). FROST member/partners include hospitals, law enforcement, substance use/abuse support services, and colleges in the region (FROST, 2022).

#### Maternal and Infant Health

**Care Management for at Risk Children (CMARC).** The Care Management for at Risk Children (CMARC) program is an early childhood care management for at risk children who are

≤5 years of age (NC DHHS, undated a). The goals of this program are to help to ensure that children are raised in a healthy, safe, and nurturing environment, to improve the care of children by linking them to other services that will meet their needs as well as those of their family, and to support children so that they can reach their developmental potential (NC DHHS, undated a). To qualify for this program, a child and/or his or her family must satisfy one of the following requirements:

- Be a foster care placement
- Have a complex, chronic, and/or a long term medical condition
- Be a family who has social concerns and/or is having difficulty functioning daily
- Be a recent hospital or NICU patient or frequently visit the Emergency Department due to chronic medical conditions

**Care Management for High Risk Pregnancies (CMHRP).** Care Management for High Risk Pregnancies (CMHRP) is a Medicaid program that is located in the Department of Public Health. It that promotes healthy mothers and healthy babies (NC DHHS, undated b). This program provides care management services to women who have high risk pregnancies by pairing them with a social worker or a registered nurse during pregnancy (NC DHHS, undated b). This support ends about two (2) months after the baby is born. The assigned social worker or registered nurse will review the provider's prenatal plan for a healthy pregnancy, assist the client in managing medicines, help to arrange transportation to medical appointments, assist the client in identifying and registering for childbirth, breastfeeding as well as parenting and baby safety education classes (CMHRP, undated b). Some of the ways in which pregnant women can qualify for this program are to:

- Have a history of pre-term birth



- Have previously delivered a child who had a low birth weight
- Have multiple gestation
- Have or have had a pregnancy with fetal complications
- Have a chronic condition that may complicate pregnancy
- Have or have had a history of tobacco or substance abuse
- Have a physician who has requested a care management assessment

**Forsyth County Infant Mortality Reduction Coalition (FCIMRC).** The FCIMRC is a community partnership that is located in the Forsyth County Department of Public Health. Its vision is that all babies born in Forsyth County will be healthy and thrive (FCIMRC, 2022). Thus, its mission is to reduce infant mortality by educating the community about how to prevent infant death and advocating for systems and policy changes that support healthy birth outcomes (FCIMRC, 2022). Some of FCIMRC's current goals include:

- Implement safe sleep daily messaging through social media platforms
- Implement a social media campaign such as a 30 second video to be displayed in hospitals, pediatric and OB/GYN offices
- Raise public awareness through the annual Walk a Mile to Save our Babies Event for Infant Mortality Awareness month (September) and SIDS Awareness Month (October)

FCIMRC members include AmeriHealth Caritas, Atrium Wake Forest Baptist Health, Forsyth County Department of Public Health, HealthCare Access, ImprintsCares, March of Dimes, Newborns in Need, Novant Health Forsyth Medical Center, Novant Health Today's Woman, Outreach Alliance, Parenting PATH, Piedmont Health Services & Sickle Cell Agency, PowerUp, Smart Start, and Wake Forest School of Medicine (FCIMRC, 2022).

**Nurse Family Partnership (NFP).** The Nurse Family Partnership program is an evidenced-based nurse home visiting program for first time, low income pregnant women and their families (NFP, 2021). The goals of the program are to improve pregnancy outcomes, child health and development, as well as the economic self-sufficiency of the family (NFP, 2021). Starting during the first trimester and continuing until the baby is age two years old, the program provides weekly or twice per month nurse home visits with the new mother (NFP, 2021). To qualify for this program, the new mother must meet all of the following requirements:

- Live in Forsyth County
- Be pregnant with her first child
- Is in the first trimester
- Income level satisfies Medicaid or WIC requirements

**Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).**

This program is located in the Forsyth County Department of Public Health. WIC is available to pregnant, breastfeeding and postpartum women, infants and children up to age five (WIC, undated). In Forsyth County, WIC has partnered with Head Start to increase service to vulnerable populations. To qualify for WIC in Forsyth County, the woman, infant or child must:

- Live in Forsyth County
- Be at nutritional risk
- Have a family income less than 185% of the U.S. Poverty Income Guidelines. A person receiving Medicaid, Work First Families Assistance (TANF), or assistance from the NC Food and Nutrition Services automatically meets the income eligibility requirement

## Summary

For this CHA cycle, Forsyth County's major health issues are identified as chronic diseases (primarily heart diseases and cancers), drug overdose, maternal and infant health, mental health, and violence-related behaviors. In 2019, about 1 in 10 (10.8%) Forsyth County adults who were  $\geq 25$  years of age had less than a High School Diploma or its Equivalent. In 2020, about 1 in 8 persons (13% of total population) lived in poverty.

The 2021 CHA finds that Forsyth County's residents are likely to experience a different quality of life based on race/ethnicity and/or gender. For example, for 2017-2019, the 3-year Rolling Average Life Expectancy at birth overall in Forsyth County was 77.9 years. During the same period, it was 80.6 years for females, and 74.9 years for males. Also, based on race/ethnicity, it was 79.3 years for White, Non-Hispanic/Latino populations but 74.9 years for Black, Non-Hispanic/Latino populations.

Forsyth County has a wide range of prevention and improvement health programs. While most are centered on maternal and infant health, relatively newer programs such as those administered through the Forsyth Regional Opioid & Substance Use Team (FROST) and the North Carolina Minority Diabetes Prevention Program (NC MDPP) can significantly improve the County's population health outcome for drug overdose and chronic diseases.

The Steering Committee has chosen to continue its work to improve Forsyth County's population health by identifying working groups that will focus on reducing violence (youth), improving mental health (youth), and reducing chronic diseases among the population.

Forsyth County is committed to achieving its *HNC 2030 County Level Population Health* goals of achieving a 6.0 *infant mortality rate*, and a 1.5 *infant mortality disparity ratio*.

Community Health Improvement Plans will be submitted for both to NC DHHS, Department of Public Health in September 2022.

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Appendix A  
Zip Code Distribution of Forsyth County, NC Residents who Received a COVID-19 Lab Test as of September 5, 2020\*

Zip Code <sup>1</sup>	Area	Estimated Pop. Count <sup>2</sup>	% of Pop who have been Tested <sup>1</sup>	% of Pop who Tested positive <sup>4</sup>	% of Pop who were Tested and had a Positive Diagnosis <sup>4</sup>	Rate per 1,000 Pop for FC Pop who have been tested	Rate per 1,000 Pop for FC Positive
27009	Belews Creek	2,647	10.5%	0.5%	4.3%	105.0	4.5
27010	Bethania	359	10.6%	0.6%	5.3%	105.8	5.6
27012	Clemmons	20,563	18.0%	1.3%	7.3%	180.4	13.1
27023	Lewisville	13,999	11.3%	1.0%	9.0%	112.5	10.1
27040	Pfafftown	10,893	13.5%	1.0%	7.5%	135.1	10.2
27045	Rural Hall	3,216	40.5%	4.8%	11.9%	404.9	48.2
27050	Tobaccoville	2,680	16.6%	1.0%	6.3%	166.0	10.4
27051	Walkertown	5,150	19.2%	1.7%	8.7%	192.4	16.7
27101	Winston-Salem	18,901	16.2%	1.5%	9.2%	161.7	14.9
27103	Winston-Salem	33,208	14.7%	1.6%	11.0%	147.2	16.2
27104	Winston-Salem	28,485	14.4%	1.4%	10.0%	143.9	14.4
27105	Winston-Salem	39,568	16.2%	2.5%	15.4%	161.7	24.8
27106	Winston-Salem	45,015	13.9%	1.7%	12.2%	139.4	17.1
27107	Winston-Salem	46,963	14.3%	2.1%	14.8%	142.7	21.1
27109	Winston-Salem	2,539	1.2%	0.7%	63.3%	11.8	7.5
27127	Winston-Salem	34,138	16.0%	2.0%	12.7%	160.2	20.3
27284	Kemersville	51,136	11.1%	1.2%	10.9%	111.4	12.1
		359,460	14.6%	1.7%	11.7%	145.8	17.0

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit

<sup>1</sup> Excludes areas of High Point, Germanton and King that are in Forsyth County

<sup>2</sup> Estimated population counts for zip codes are from the Bureau of Census, Census Data by Zip Code. Except for Belews Creek (2012 population estimate), all other estimates are for

<sup>3</sup> Differences in total number of residents tested (121) and total number of residents who had a positive lab (81) are due to incomplete street addresses and/or zip codes that were omitted because the majority of their populations are in neighboring counties. CVS's total number of tests completed for Forsyth County residents are excluded from the total number

<sup>4</sup>Totals may be off due to rounding

\* First published in Swift\_COVID-19 Surveillance for Forsyth County, NC as of September 5, 2020

Appendix B  
 Race/Ethnicity-specific Summary Statistics for Forsyth County, NC COVID-19 Positive Lab Results Based on Age Groups as of September 5, 2020\*

Race/Ethnicity/Age Groups	Asian		Black, non-Hispanic/Latino		Hispanic/Latino		White, non-Hispanic/Latino		Unknown <sup>1</sup>		Total	
	Case Count	%	Case Count	%	Case Count	%	Case Count	%	Case Count	%	Case Count	%
≤14yrs	4	2.7%	69	7.6%	388	13.1%	75	6.1%	66	7.0%	602	9.7%
15-24 yrs	21	14.1%	132	14.6%	605	20.4%	242	19.7%	234	24.7%	1,234	19.9%
25-34 yrs	26	17.4%	166	18.4%	576	19.4%	202	16.5%	163	17.2%	1,131	18.3%
35-44 yrs	35	23.5%	132	14.6%	660	22.3%	149	12.2%	133	14.0%	1,110	17.9%
45-54 yrs	36	24.2%	139	15.4%	436	14.7%	167	13.6%	128	13.5%	906	14.6%
55-64 yrs	16	10.7%	119	13.2%	203	6.9%	175	14.3%	109	11.5%	622	10.1%
≥65 yrs	11	7.4%	147	16.3%	92	3.1%	216	17.6%	113	11.9%	580	9.4%
Unknown					2	0.1%			2	0.2%	4	0.1%
<b>Total</b>	<b>149</b>	<b>100.0%</b>	<b>904</b>	<b>100.0%</b>	<b>2,962</b>	<b>100.0%</b>	<b>1,226</b>	<b>100.0%</b>	<b>948</b>	<b>100.0%</b>	<b>6,189</b>	<b>99.9%</b>

Forsyth County Department of Public Health, Epidemiology & Surveillance Unit

<sup>1</sup>Unknown cases: The provider did not complete the race/ethnicity section of the electronic testing requests to authorized laboratories.

\*First published in Swift\_COVID-19 Surveillance for Forsyth County, NC as of September 5, 2020

## Appendix C

*Forsyth County-administered Parks and Recreation Areas as of December 31, 2021*

Name and Location	Estimated Size	Amenities
C. G. Hill Memorial Park Pfafftown, NC 27040	125 acres	Fishing, Picnic Tables, Walking Trails, Restrooms
Horizon's Park Rural Hall, NC 27045	492 acres	Picnic Shelter, Picnic Tables, Nature & Hiking Trails, Mountain Bike Trails, Dog Park, Disc Golf, Volleyball, Softball, Horseshoes, Playground, Restrooms
Joanie Moser Memorial Park Lewisville, NC 27023	N/A	Picnic Shelter, Walking Trails, Volleyball, Horseshoes, Softball, Playgrounds, Tennis Court, Basketball, Restrooms
Kernersville Lake Park Kernersville, NC 27284	160 acres	Fishing, Picnic Shelter, Nature Trail, Volleyball, Horseshoes, Playground, Pedal Boats, Row Boats, Restrooms
Old U.S. 421 River Park	n/a	Fishing, Picnic Tables, Walking Trails, Volleyball, Swings, Horseshoes, River Access, Restrooms
Tanglewood Park Clemmons, NC 27012	1,100 acres	Aquatic center, horse stables, many rental facilities, Campground, the Manor House Bed & Breakfast, Tanglewoof Dog Park, BMX track, two golf courses, two lakes, tennis courts and an RV park
Triad Park Joint venture: Forsyth & Guilf	430 acres	Amphitheater, the Carolina Field of Honor, the Patriot Disc Golf Course, an indoor rental facility, picnic shelters, horseshoe pits, volleyball courts, walking trails
Union Cross Park 1935 Union Cross Rd Winston-Salem, NC 27107	15 acres	softball facilities, a picnic shelter, tennis courts, a sand volleyball court, basketball court, playgroup horseshoe pits
Walkertown Community Park 2701 Darrow Rd Walkertown, NC 27051	28 acres	Youth baseball, soccer, and tennis, sheltered picnic area, picnic area

Source: <https://www.forsyth.cc/Parks/>







Park Location/Amenities by Ward

Appendix D  
City of Winston-Salem Parks and Recreation Location  
as of December 31, 2020, Page 3 of 4

Ward	Park Classification	Year Acquired	Acreage	Recreation Center	PARK FACILITIES												Notes																			
					Drinking Fountains	Restrooms	Child Play Areas	Spray Ground	Greenway	Walking Trails	Parking Lot	Open Play Area	Amphitheater / Stage	Lake/Pond	Concession Stand	Soccer Fields		Tennis Courts	Pickleball	Chickadee (Tennis)	Boocoe Courts	Cricket Pitch	Horseshoe Pits	Basketball Courts	Volleyball Courts	Ball Diamonds	Golf Courses	Fitness / Par Course	Off-Street Trail Access	Track	Picnic Shelter	Picnic Shelter (Power)	Barbecue Grills	Medical Outlets		
1	Open Space	1973	0.292596																																	Phoebus Drive, Luther Street Park is undeveloped
2	Open Space	1973	10.7852																																2989 Woodcroft Dr., Winston-Salem, NC 27103	
3	Neighborhood	1920	10.7852																																2000 Park Plaza, Winston-Salem, NC 27107	
4	Community	1960	6.08401																																200 Grandville Dr., Winston-Salem, NC 27101	
5	District	1966	6.50679																																1471 W. Clemmonsville Rd., Winston-Salem, NC 27127	
6	Open Space	2019	93.53005																																2301 W. Clemmonsville Rd., Winston-Salem, NC 27127	
7	Open Space	2019	2																																2630 Konnak Drive, Winston-Salem, NC 27127	
8	Neighborhood	1958	24.2																																1803 W. Lenoir St., Winston-Salem, NC 27127	
9	Open Space	2019	12.44																																0 Swing Court, Winston-Salem, NC 27127	
10	District	1962	7.04																																1480 Broad St., Winston-Salem, NC 27127	
11	District	1962	77.6068																																	
SUBTOTAL (11 TOTAL PARKS)			235.473366	140.647796																																



Ward	Park Classification	Year Acquired	Acreage	Recreation Center	PARK FACILITIES												Notes																					
					Drinking Fountains	Restrooms	Child Play Areas	Spray Ground	Greenway	Walking Trails	Parking Lot	Open Play Area	Amphitheater / Stage	Lake/Pond	Concession Stand	Soccer Fields		Tennis Courts	Pickleball	Chickadee (Tennis)	Boocoe Courts	Cricket Pitch	Horseshoe Pits	Basketball Courts	Volleyball Courts	Ball Diamonds	Golf Courses	Fitness / Par Course	Off-Street Trail Access	Track	Picnic Shelter	Picnic Shelter (Power)	Barbecue Grills	Medical Outlets				
1	Neighborhood	1950	6.27657																																			
2	Neighborhood	1971	26.4573																																			
3	Community	1963	9.17651																																			
4	Undeveloped	2020	3.35																																			
5	Regional	1998	226.2																																			
6	Neighborhood	1959	224.357																																			
7	Community	1960	27.4645																																			
8	Undeveloped	1950	4.91159																																			
9	Neighborhood	1971	13.8862																																			
10	Neighborhood	1971	812.58607																																			
SUBTOTAL (10 TOTAL PARKS)			1507.4458	7.82																																		



Source: City of Winston-Salem, <https://www.cityofws.org/DocumentCenter/View/18379/Parks-Inventory-2021>



