



# The 2018 State of the County Health (SOTCH) Report Forsyth County, NC



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## Introduction

The 2018 Forsyth County State of the County Health (SOTCH) Report provides an overview of Forsyth County's population health since the 2017 Community Health Assessment (CHA). Thus, it reviews progress made in the 2017 Community Health Improvement Plans (CHIPs), as well as changes in major morbidity and mortality data. The SOTCH also highlights emerging issues and new initiatives.

## Priority Health Issues

Based on the 2017 CHA results, Community Health Improvement Plans (CHIP) were developed to improve oral health among populations ages 0-5 years, and sexual health among populations ages 15-24 years. During 2018, the Infant Mortality Reduction CHIP from the previous community health assessment cycle ended with the departure of lead staff and volunteers who had primary responsibility for its continued implementation.

The Infant Mortality Reduction Coalition is planning a new CHIP that is expected to continue to focus on reducing infant deaths. While there has been some successes based on the previous CHIP, Forsyth County's relatively high infant mortality rate continues to be a significant health issue. This new CHIP will be submitted to the Public Health Director in 2019, and it is expected to be implemented in 2019.

### **2017 CHIP #1: Oral Health**

**Goal:** Forsyth County will implement policies that support oral health among children ages 0-5 years who are enrolled in Medicaid.

Objectives to achieve this goal were implemented by the Forsyth County Department of Public Health (FCDPH), Wake Forest Baptist Medical Center (The Downtown Health Plaza) (DHP), The Forsyth County Department of Social Services (FCDSS), and Smart Start of Forsyth County in February 2019.

### **Progress made in 2018**

Based on continued partner discussions, the plan objectives were redefined after it was submitted in September 2018.

**Objective 1:** By December 2022, a 10% increase in the number of children ages 0-5 years who have received services at the Dental Center in the past 12 months.

**Objective 2:** By December 2022, a 30% increase in the percentage of mothers who know that if their children (ages 0-5 years) have Medicaid those children have covered dental care.

**Objective 3:** By December 2022, a 30% increase in the percentage of mothers enrolled in Medicaid who know that a child's first visit to the dentist should be by age 1 year.

**Objective 4:** By December 2022, a 20% increase in the percentage of students ages 3-5 years in Title I Elementary Schools who have seen a dentist in the past 12 months.

**Objective 5:** By December 2022, a 20% increase in the percentage of children who are enrolled in Medicaid, are in day care centers and have seen a dentist in the past 12 months.

**Objective 6:** By December 2022, a 10% decline in the percentage of students ages 3-5 years who attend Title I Elementary Schools, are enrolled in Medicaid and have dental caries.

**Objective 7:** By December 2022, a 10% decline in the percentage of children in day care centers who are enrolled in Medicaid and have dental caries.

**2017 CHIP #2: Sexual Health**

**Goal:** Forsyth County will implement initiatives to educate and increase awareness of Sexually Transmitted Infections (STI) prevention in individuals’ ages 13-24 years.

Objectives to achieve this goal were implemented by FCDPH, Winston-Salem State University (WSSU), Wake Forest University (WFU), Salem College and the University of North Carolina School of the Arts (UNCSA) in February 2019.

**Progress made in 2018**

Based on continued partner discussions, the plan objectives were more clearly stated after it was submitted in September 2018.

**Objective 1:** By July 2022, increase by 20% the number of education sessions (including printed information materials) that are conducted in partnership with universities (WSSU, WFU, Salem College and UNCSA) to provide STI education to students on campus.

**Objective 2:** By July 2022, increase by 20% the number of education sessions that the Forsyth County’s Teen Initiative Project (TIP) offers to individuals ages 13-24 years.

**Objective 3:** By July 2022, increase by 10% the number of providers that attend each Talk About STIs Coalition Meeting.

**Objective 4:** By July 2022, decrease by 10% the percentage of positive (a) chlamydia and (b) gonorrhea cases among residents ages 13-24 years.

**Objective 5:** By July 2022, increase by 30% the percentage of clients between ages 13-24 years who report that their medical provider talked to them about getting tested for chlamydia and/or gonorrhea.

**Changes in the Data that Underpin Each Priority Health Issue’s Selection**

**Oral Health**

The 2017 CHA results showed that Title I schools had a higher percentage of students with dental caries than non-Title I schools. Based on the 2017/2018 data in **Table 1**, it would seem that there has been some improvement in the oral health of children who attend Title I schools from 2015/2016 to 2017/2018.

Table 1

	2017-2018		2016-2017		2015-2016	
	Non-Title 1 Schools	Title 1 Schools	Non-Title 1 Schools	Title 1 Schools	Non-Title 1 Schools	Title 1 Schools
≤5.0% of students with dental caries	42.9%	7.1%	33.3%	0.0%	38.1%	0.0%
>5.0% to ≤10.0% of students with dental caries	33.3%	32.1%	42.9%	39.3%	38.1%	39.3%
>10.0% to ≤15.0% of students with dental caries	23.8%	50.0%	14.3%	39.3%	14.3%	39.3%
>15.0% of students with dental caries	0.0%	10.7%	9.5%	21.4%	9.5%	21.4%

However, there continues to be a noticeable difference in the oral health of students who attend non-Title I and Title I schools. For example, in 2015/2016 and 2016/2017, more than 15 % of students at 21% of Title I schools (5 out of 28 Title 1 schools) had dental carries. In contrast, only at 10% of non-Title I schools (2 out of 21 non-Title I schools) were more than 15% of students found to have dental carries during both school years.

During the 2017/2018 school year, the percentage of Title I schools that had more than 15% of students with dental carries declined from the previous two school years high of 21% (5 out of 28 schools) to 11% (3 out of 28 schools). However, at non-Title I schools during the same period, the percentage of non-Title I schools that had more than 15% of students with dental carries declined from 10% (2 out of 21 non-Title I schools) to 0%.

Although disparity in oral health remains between Title I and non-Title I school students, one significant change that could have contributed to improve oral health among these groups is FCDPH's Dental Hygienists' program that screens all elementary school children, refers them for care when a need is shown to exist, and engages and educates parents about their children's oral health. This program is the basis for one the objectives of the 2017 Oral Health CHIP that seeks to improve access to oral healthcare for Medicaid recipients age 0-5 years.

### Sexual Health

The results of the 2017 CHA showed that chlamydia is a significant health issue among Forsyth County populations  $\leq 24$  years of age, and in particular, among females of this age group. **Table 2** shows that similar to previous years, in 2017, 66% of all new chlamydia cases in Forsyth County were among populations  $\leq 24$  years of age, and of those case counts, more than 70% were female.

**Table 2**

New Chlamydia Cases, Forsyth County, NC					
2013 to 2017					
Year	Total	Age $\leq 24$ years, Total		Age $\leq 24$ years, Females only	
	# of cases	# of cases	% of total cases	# of cases	% of total age $\leq 24$ years cases
2017	2,526	1,701	67.3%	1,212	71.3%
2016	2,622	1,750	66.7%	1,246	71.2%
2015	2,465	1,686	68.4%	1,237	73.4%
2014	2,463	1,693	68.7%	1,260	74.4%
2013	2,416	1,735	71.8%	1,280	73.8%

Source: NCEDSS. Current as of February 22, 2019  
2018 data will be finalized after 6/30/2019

It is unclear how much the persistently high case counts are due to poor sexual health decisions and/or increased testing. In early 2016, FCDPH's POSSE (Prevent Ongoing Spread of STIs Everywhere) expanded its program to provide HIV and other sexually transmitted diseases' education and screening in churches, jails, universities, homeless shelters, nightclubs, and community health fairs in the county. This expansion was built on their standard program of targeted advertising of safe sex practices, and enhanced targeted testing.

One sub-group that POSSE has had limited contact with are middle and high school students. Their responses to the Youth Risk Behavior Survey's (YRBS) sexual health questions suggest that the Sexual Health CHIP could have a positive impact on improving their health outcome (Figures 1 and 2).

For example, based on responses to the 2017 Winston-Salem/Forsyth County (WS/FC) High School YRBS, **Figure 1** shows that 1 in 4 (24.7%) was sexually active, and of those who were sexually active, only one-half (56.1%) used a condom the last time that they had sexual intercourse.

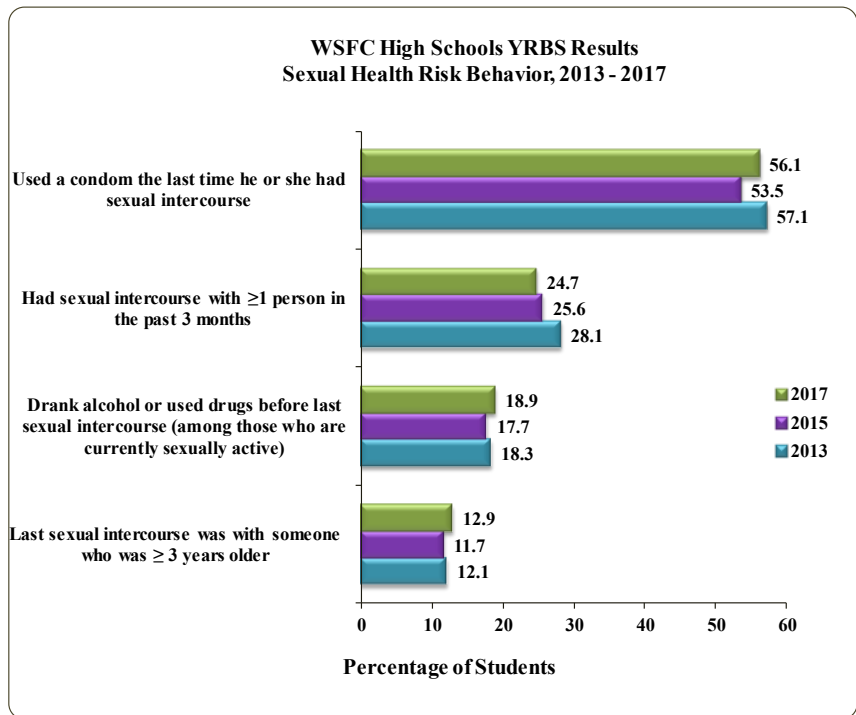
**Figure 1**

Also, in 2017, Figure 1 shows that among students who were sexually active:

- ◆ 1 in 5 (18.9%) has had alcohol or used drugs before his or her last sexual intercourse
- ◆ 1 in 8's (12.9%) last sexual intercourse was with someone 3 or more years older than him or her.

Trends in these sexual health risk indicators among WSFC high school students from 2013 to 2017 shows that :

- ◆ The percentage of high school students who have used a condom the last time that they had sexual intercourse has remained relatively unchanged.
- ◆ There was a 12.1% decrease in the percentage of high school students who have been sexually active from 28.1% to 24.7%.
- ◆ The percentage of high school students who have had alcohol or used drugs before their last sexual intercourse (among those who are currently sexually active) remained relatively unchanged.
- ◆ The percentage of high school students whose last sexual intercourse was with someone who was  $\geq 3$  years older remained relatively unchanged.

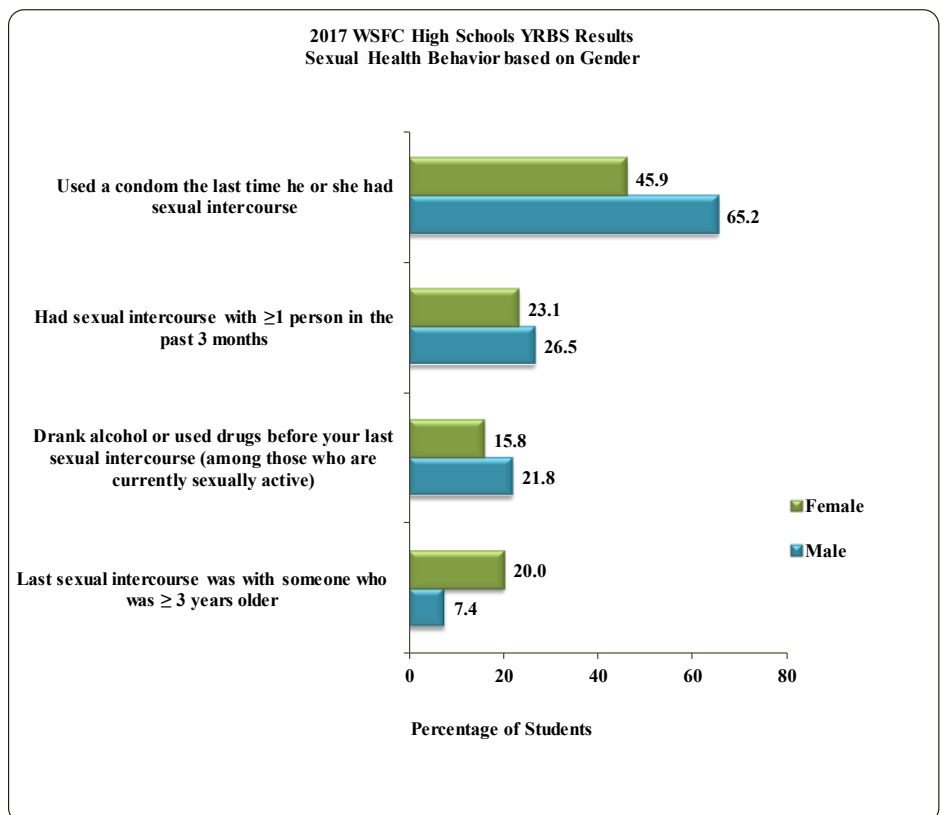


**Figure 2**

Among students who were sexually active as of the 2017 WS/FC YRBS, **Figure 2** shows that female high school students were more likely than male high school students to have had their last sexual intercourse with someone who was 3 or more years older than they were.

**Figure 2** also shows that among students who were sexually active, female high school students were less likely than male high school students to

- ◆ have used a condom during their last sexual intercourse
- ◆ have had a drink alcohol or use drugs before their last sexual intercourse



## Major Morbidity and Mortality

### Morbidity

Cancer is one of the major health issues in Forsyth County. In comparison to previous years, 2,207 new cancer cases were projected for 2019. From 2015 to 2019, the projected total number of new cases increased by 6.8% from 2,067 to 2,207. In 2019, there were projections for cancers of the lung/bronchus (325), female breast (397), prostate (255), and colon/rectum (168) (Table 3).

**Table 3**

<b>Projected Number of New Cancer Cases Forsyth County, NC 2015-2019</b>					
	<b>Total</b>	<b>Lung/Bronchus</b>	<b>Female Breast</b>	<b>Prostate</b>	<b>Colon/Rectum</b>
<b>2019</b>	<b>2,207</b>	<b>325</b>	<b>397</b>	<b>255</b>	<b>168</b>
<b>2018</b>	<b>2,161</b>	<b>319</b>	<b>386</b>	<b>259</b>	<b>167</b>
<b>2017</b>	<b>2,117</b>	<b>315</b>	<b>376</b>	<b>262</b>	<b>164</b>
<b>2016</b>	<b>2,096</b>	<b>313</b>	<b>370</b>	<b>268</b>	<b>165</b>
<b>2015</b>	<b>2,067</b>	<b>309</b>	<b>359</b>	<b>278</b>	<b>167</b>

Source: State Center for Health Statistics

Table 4 show that in comparison to most peer counties and the state, Forsyth County had the highest preliminary cancer incidence rate for 2013-2017. Only Guilford County exceeded Forsyth County's overall cancer incidence rate. Forsyth County's site specific rate for lung/bronchus exceeded all peer counties and the state. Its site specific rate for colon/rectum (67.2) exceeded those of all peer counties but it was slightly lower than State of North Carolina's. In general, Forsyth County's 2013-2017 site specific rates for melanoma, female breast, cervix/uterus, and prostate were lower than some peer counties but higher than others.

**Table 4**

<b>Preliminary 2013-2017 Cancer Incidence Rates<sup>1</sup> for Select Sites per 100,000 Population Forsyth, Peer Counties &amp; State of North Carolina</b>						
	<b>Forsyth</b>	<b>N.Carolina</b>	<b>Durham</b>	<b>Guilford</b>	<b>Mecklenburg</b>	<b>Wake</b>
<b>Site/Overall Rate</b>	<b>486.1</b>	<b>470.0</b>	<b>456.1</b>	<b>488.6</b>	<b>454.4</b>	<b>462.8</b>
<b>Colon/Rectum</b>	<b>35.9</b>	<b>36.0</b>	<b>32.2</b>	<b>34.0</b>	<b>33.8</b>	<b>31.5</b>
<b>Lung/Bronchus</b>	<b>67.2</b>	<b>66.0</b>	<b>51.3</b>	<b>65.1</b>	<b>52.6</b>	<b>50.7</b>
<b>Melanoma (Skin)</b>	<b>23.7</b>	<b>25.3</b>	<b>19.0</b>	<b>29.9</b>	<b>20.9</b>	<b>28.1</b>
<b>Female Breast</b>	<b>171.3</b>	<b>160.2</b>	<b>174.1</b>	<b>186.0</b>	<b>174.0</b>	<b>169.9</b>
<b>Cervix/Uterus</b>	<b>5.7</b>	<b>6.9</b>	<b>5.7</b>	<b>6.1</b>	<b>6.5</b>	<b>5.4</b>
<b>Prostate</b>	<b>117.7</b>	<b>111.9</b>	<b>111.3</b>	<b>125.9</b>	<b>136.9</b>	<b>122.2</b>

Source: State Center for Health Statistics

<sup>1</sup>Age-Adjusted to the 2000 US Census

## Mortality

**Table 5** shows that in Forsyth County, the top five leading causes of death for 2013-2017 remain cancer, heart diseases, chronic lower respiratory diseases (CLRD), stroke, and unintentional injuries. It also shows that Forsyth County's 2013-2017 death rates due to cancer, CLRD, stroke and unintentional injuries exceeded all peer counties' and the state's.

**Table 5**

Comparison of Forsyth County's Leading Causes of Death with State of NC and Peer Counties Data 2013-2017 Race/Ethnicity-specific and Sex-specific Age-adjusted Rates per 100,000 Population <sup>1</sup>						
	Forsyth	North Carolina	Durham	Guilford	Mecklenburg	Wake
<b>Cancer: All sites</b>	165.1	164.0	155.1	156.7	142.7	141.7
<b>Heart Diseases</b>	146.7	159.8	130.7	138.2	129.9	120.3
<b>CLRD</b>	46.7	45.5	28.1	35.4	30.7	28.4
<b>Stroke</b>	43.6	43.2	36.2	43.0	38.6	38.6
<b>Unintentional Injuries</b>	36.4	34.6	25.9	35.1	24.3	25.9

<sup>1</sup>Standard = Year 2000 U.S. Population

Although there have been some improvement in Forsyth County's death rates due to cancer and CLRD, there is cause for concern regarding the increase in the death rates due to heart diseases, stroke and unintentional injuries (**Figure 3**).

**Figure 3**

To illustrate, between 2010-2014 and 2013-2017, death rates due to:

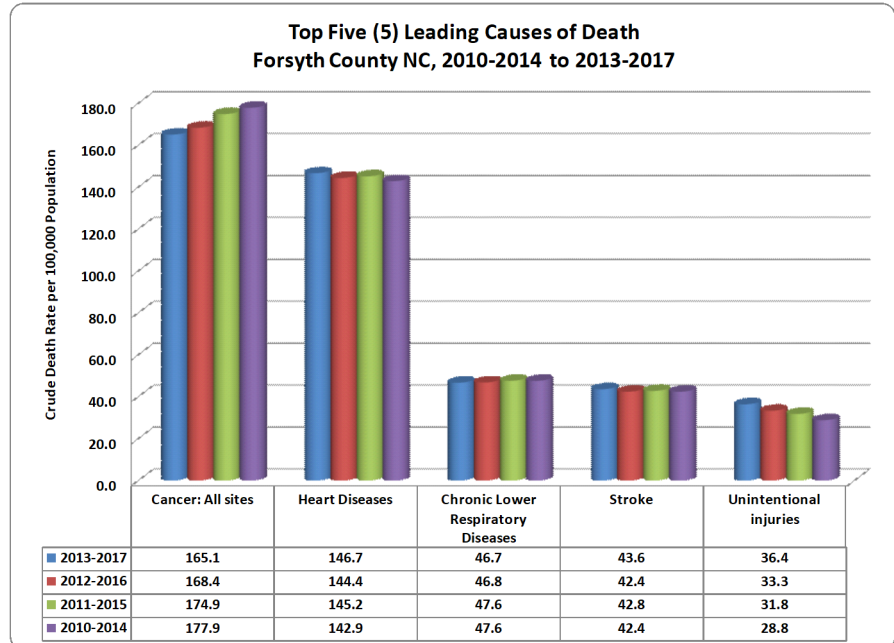
- ◆ Cancer decreased by 7.5%
- ◆ Heart disease increased by 2.7%
- ◆ CLRD decreased by 1.9%
- ◆ Stroke increased by 2.8%
- ◆ Unintentional injuries increased by 26.4%

Much of the changes in Forsyth County's unintentional injuries' death rate is attributed to opioid overdose, and the majority of those deaths are related to heroin, fentanyl, or fentanyl analogues. For example, in 2017 Forsyth County had 66 unintentional opioid-related death, with 82.4% of those deaths being related to heroin, fentanyl or fentanyl analogues.

While peer counties have experienced similar or greater increases in their unintentional injuries' death rate for the same period, it is not known the extent to which the increases observed are due to opioid-related deaths (**See Table 6**).

**Table 6**

Comparison of Forsyth County's Unintentional Injuries Death Rate to State of NC and Peer Counties' Data 2010-2014 & 2013-2017 Race/Ethnicity-specific and Sex-specific Age-adjusted											
Forsyth		North Carolina		Durham		Guilford		Mecklenburg		Wake	
2013-2017	2010-2014	2013-2017	2010-2014	2013-2017	2010-2014	2013-2017	2010-2014	2013-2017	2010-2014	2013-2017	2010-2014
36.4	28.8	34.6	29.6	25.9	23.6	35.1	29.9	24.3	7.2	25.9	19.4





## Emerging Health Issues

One major emerging issue for Forsyth County is the number of middle school students who are seen in the Emergency Departments (ED) for suicide ideation and/or or self-harm. **Table 7** shows that in the 2016/2017 school year, middle school students accounted for about 10% of suicide & self harm-related ED visits. During the 2017/2018 school year, the percentage of suicide & self harm-related ED visits for middle school students increased from 10% to 14% of all such visits.

**Table 7**

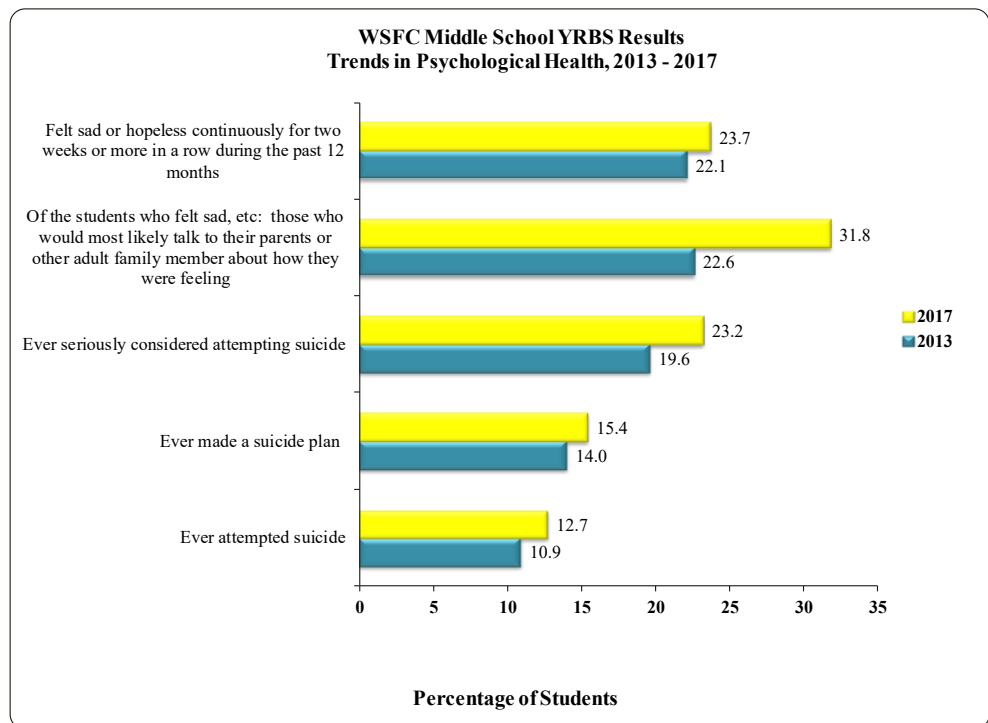
Suicide & Self Harm-Related Emergency Department Visits, Forsyth County, NC		
	07/01/2017- 06/30/2018	07/01/2016- 06/30/2017
Total Suicide & Self Harm-Related ED Visits	560	567
Suicide & Self Harm-Related <b>MS Students'</b> ED Visits	78	59
Suicide & Self Harm-Related <b>MS Students'</b> ED Visits as a % of Total Suicide & Self Harm-Related ED Visits	14%	10%

While the factors that are driving these observances remain unclear, some of the responses to the 2017 WS/FCS YRBS' middle school psychological health questions demonstrate that a relatively high percentage of students in this age group are experiencing psychological health issues.

**Figure 4**

Based on their responses to the YRBS, **Figure 4** shows that among middle school students in 2017, about:

- ◆ 1 in 4 (23.7%) has felt sad or hopeless continuously for two weeks or more
- ◆ 1 in 3 (31.8%) who has felt sad or hopeless ..., would most likely talk to his or her parents or other adult family member about how he or she was feeling
- ◆ 1 in 4 (23.2%) has seriously considered attempting suicide at some point in his or her life
- ◆ 1 in 7 (15.4%) has made a suicide plan at some point in his or her life
- ◆ 1 in 8 (12.7%) has attempted suicide at some point in his or her life



**Figure 4** also shows that from 2013 to 2017:

- ◆ There was a 10.0% increase in the percentage of middle school students who have made a suicide plan at some point in their lives from 14.0% to 15.4%.
- ◆ There was a 16.5% increase in the percentage of middle school students who have attempted suicide at some point in their lives from 10.9% to 12.7%.
- ◆ There was a 7.2% increase in the percentage of middle school students who have felt sad or hopeless continuously for two weeks or more in a row from 22.1% to 23.7%.
- ◆ There was a 40.7% increase in the percentage of middle school students who would talk to their parents or other adult family member if they felt sad or hopeless from 22.6% to 31.8%.
- ◆ There was an 18.4% increase in the percentage of middle school students who at some point in their lives have seriously considered attempting suicide from 19.6% to 23.2%.

**Figure 5**

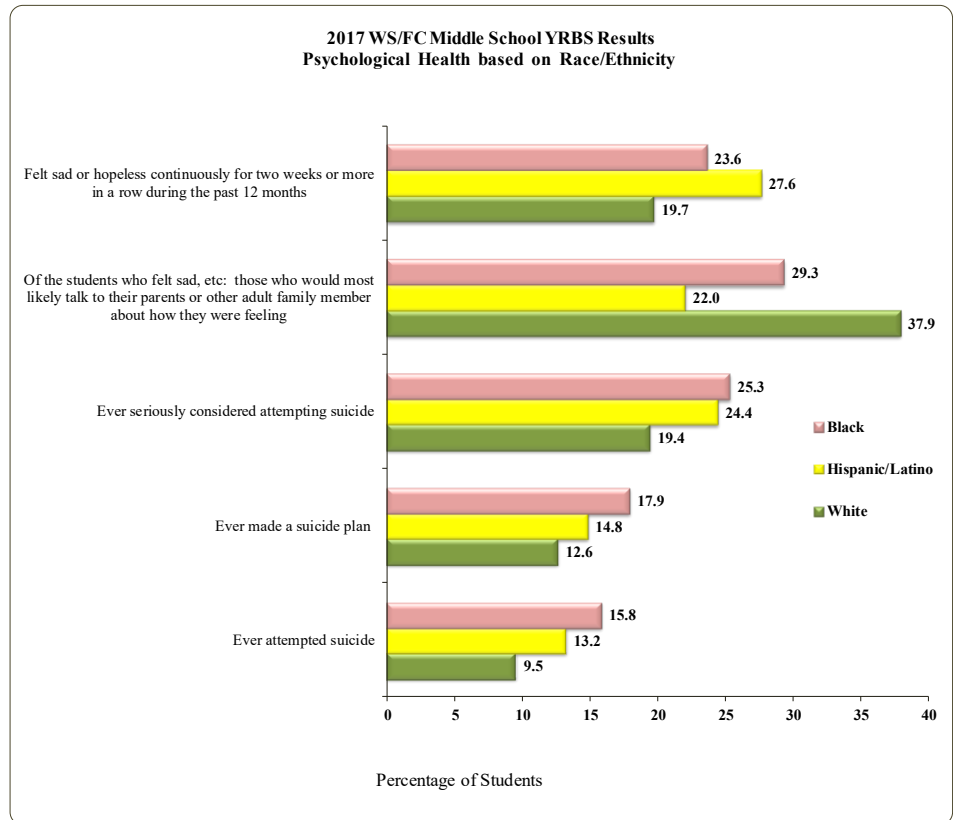
Also, based on the 2017 WS/FC YRBS responses, **Figure 5** shows that :

Hispanic/Latino middle school students were more likely than Black, non-Hispanic or White, non-Hispanic middle school students to have felt sad or hopeless continuously for two weeks or more **but** less likely than Black, non-Hispanic or White, non-Hispanic middle school students to talk to their parents or adult family member about how they were feeling.

**Figure 5** shows also that Black, non-Hispanic middle school students

were more likely than Hispanic/Latino or White, non-Hispanic middle school students to:

- ◆ have seriously considered attempting suicide at some point in their lives
- ◆ have made as suicide plan at some point in their lives
- ◆ have ever attempted suicide at some point in their lives



## New Initiatives

### **Oral Health**

In 2018, the Department of Public Health received a grant from the Kate B. Reynolds Foundation to support a school-based dental sealant program that is designed to address the underutilization of sealants to prevent tooth decay among financially disadvantaged and underserved children. This grant allows the department to provide screening and preventive dental treatments (child prophylaxis (cleaning), sealants, and fluoride) to approximately 3,000 students who are enrolled in the Winston-Salem/Foryth County Title 1 schools.

One major benefit of the department's sealant project is that it is done in the schools. Those locations eliminate the transportation and work time-off barriers that parents/guardians cited as barriers to accessing better oral health care during the last community health assessment.

### **Maternal & Infant Health/Infant Mortality**

In 2018, the Department of Public Health received a grant from the Kate B. Reynolds Foundation to support the Nurse-Family Partnership of Forsyth (NFP) program. The NFP program aims to improve pregnancy outcomes, child health and development, and the economic self-sufficiency of the family. It is an evidenced-based nurse home visit program for first time, low income pregnant women and their families. Home visits begin early in the pregnancy and continues until the baby's 2nd birthday. In general, first time mothers must live in Forsyth County, be early in the pregnancy, and qualifies for Medicaid or Women, Infants, and Children (WIC) Food and Nutrition Services. NFP conducts home visits weekly or twice per month from early in the pregnancy to baby's 2<sup>nd</sup> birthday.

### **Mental Health & Drug Abuse Support**

In 2018, the Department of Public Health received a grant from the Winston-Salem Foundation to support the work of the Stepping Up Process to End Recidivism or SUPER program. SUPER is a national initiative to reduce the number of persons with mental illness in jails. The SUPER program focuses on women who are incarcerated in the Forsyth County Detention Center. SUPER provides screening, transition planning, and support to women who have mental health or substance use disorders. The goals of SUPER are to link participants to all identified resources, successfully graduate participants one year post-release, and reduce the likelihood of participants returning to the criminal justice system. This grant will be used to assist with participants transportation cost.

### **Emergency Overdose: Local Mitigation to the Opioid Crisis**

In 2018, the Department of Public Health received a grant to implement strategies from the North Carolina Opioid Action Plan that will prevent fatal and non-fatal opioid overdoses, increase access and linkages to care services for the most vulnerable populations, and build local capacity to respond to the overdose epidemic. This grant will be used to expand the county's syringe exchange programs (SEPs) through partnerships between the Department of Public Health, the Department of Social Services, faith communities, pharmacies, community-based non-profit organizations, or other potential host organizations with experience working with people directly impacted by drug use.

## Sources

- 2017. 2013-2017 Leading causes of death. NC SCHS.
- 2019. North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT).
- 2019. North Carolina Electronic Disease Surveillance System (NC EDSS).
- 2017. Projected new cancer cases and deaths for selected sites by county. NC SCHS.
- 2018. Projected new cancer cases and deaths for selected sites by county. NC SCHS.
- 2017. Winston–Salem/Forsyth County 2017 High School Youth Risk Behavior Survey.
- 2017. Winston–Salem/Forsyth County 2017 Middle School Youth Risk Behavior Survey