

2018 DAVIDSON COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT

Davidson County Health Department,
Wake Forest Baptist Health Lexington
Medical Center, and Novant Health
Thomasville Medical Center

*Comprehensive
Secondary Data
and Community
Health Survey
Report*

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Involving a variety of people in the assessment process was vital to fully understand the community's perspective on health, determine what health issues the community deemed most important, and discern the perceptions held by Davidson County residents. To expand participation in the CHA/CHNA process, the Davidson County CHA/CHNA team worked very closely with the Davidson County Healthy Communities Coalition (DCHCC), a community coalition composed of agency and organization leaders and community policymakers. This coalition acted as the Steering Committee for this assessment, reflecting a broad understanding of county characteristics and resources available. We thank DCHCC members for their guidance and support.

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Teresa McKeon (The Arc of Davidson County)
Vickie McKiver (City of Thomasville Parks and Recreation)

Besides representatives from the organizations above, collaborators also included personnel from:

Daymark Recovery Services
Family Services of Davidson County

Thank you to our community for completing the survey or contributing information in other ways.

Independent public health consultants Sheila S. Pfaender and Annika Pfaender-Purvis provided secondary data collection and analysis, primary data analysis, and report development services to produce this comprehensive *2018 Davidson County Community Health Needs Assessment: Secondary Data and Community Health Survey Report*.

The community health assessment process was made possible by financial contributions from Novant Health Thomasville Medical Center, Wake Forest Baptist Health Lexington Medical Center, and the Davidson County Health Department.

INTRODUCTION

Local public health agencies in North Carolina (NC) are required to conduct a comprehensive Community Health Assessment (CHA) once every three or four years. The CHA is required of public health departments in the consolidated agreement between the NC Division of Public Health (NCDPH) and the local public health agency. Furthermore, a CHA is required for local public health department accreditation through the NC Local Health Department Accreditation Board (G.S. § 130A-34.1). As part of the US Affordable Care Act of 2011, not-for-profit hospitals are also now required to conduct a Community Health Needs Assessment (CHNA) once every three years. Recognizing that duplicate assessment efforts are a poor use of community resources, local health departments (LHDs) and not-for-profit hospitals across the state are developing models for collaboratively conducting the community health assessment process.

In Davidson County, the 2018 CHA/CHNA process included the two hospitals in the county: Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center. In counties that have a community health coalition, the CHA/CHNA partnership also usually includes that entity, which in Davidson County is the Davidson County Healthy Communities Coalition (DCHCC). The DCHCC is composed of agency and organization leaders and community policymakers. Thus, the members of the Davidson County CHA/CHNA “team” included representatives of the agencies and organizations that serve the health and human service needs of the local population, as well as representatives from businesses, communities of faith, schools and civic groups. The Davidson County Health Department provided staff to coordinate the project. The partners in Davidson County agreed to call the dual-purpose 2018 project by one name, the 2018 Davidson County Community Health Needs Assessment (CHNA).

The CHNA, which is both a process and a document, investigates and describes the current health status of the community, what has changed since the last assessment, and what still needs to change to improve the health of the community. The *process* involves the collection and analysis of a large range of data, including demographic, socioeconomic and health statistics, environmental data, hospital data, and professional and public opinion. The *document* is a summary of all the available evidence and serves as a resource until the next assessment. The completed CHNA serves as the basis for prioritizing the community’s health needs and culminates in planning to meet those needs.

The partners contracted with Sheila S. Pfaender, Public Health Consultant, and her team to assist in conducting the 2018 CHNA for Davidson County, following the guidance provided by the *Community Assessment Guidebook: North Carolina Community Health Assessment Process*, published by the NC Office of Healthy Carolinians/Health Education and the NC State Center for Health Statistics (June 2014 revision) and updates to it. The assessment also adheres to the current standards for community assessment stipulated by the NC Local Health Department Accreditation (NCLHDA) Program. An additional goal for this project was to meet the US Affordable Care Act/Internal Revenue Service Form 990 Schedule H requirements for not-for-profit hospitals in conducting a Community Health Needs Assessment (CHNA) as cited in the December 2014 Final Rule.

The CHNA Coordinator from the Davidson County Health Department worked with the consultant to develop a multi-phase plan for conducting the assessment. The phases included: (1) a secondary data research phase to identify, collect and analyze secondary demographic,

socioeconomic, health (including hospital) and environmental data; (2) a primary data research phase to collect and analyze data collected via an on-line community survey; (3) a data synthesis and analysis phase; (4) a period of data reporting and discussion among the project partners and the public, including issues prioritization exercises; and (5) a decision-making phase among partners. Upon completion of this work the assessment partners and the community have the tools they need to support developing plans and activities that will improve the health and well-being of the people living in Davidson County.

ASSESSMENT METHODOLOGY

In order to learn about the specific factors affecting the health and quality of life of Davidson County residents, the consultant tapped numerous readily available secondary data sources. For data on Davidson County demographic, economic and social characteristics sources included: the US Census Bureau; Log Into North Carolina (LINC); NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; NC Division of Aging and Adult Services; NC Department of Public Instruction; NC Department of Justice; NC Department of Juvenile Justice and Delinquency Prevention; NC Department of Administration; NC Division of Medical Assistance; NC Division of Child Development; NC State Board of Elections; NC Division of Health Services Regulation; and the Cecil B. Sheps Center for Health Services Research. The author has made every effort to obtain the most current data available at the time the report was prepared.

The primary source of health data for this report was the NC State Center for Health Statistics, including its County Health Data Books, Behavioral Risk Factor Surveillance System, and Vital Statistics and Cancer Registry units. Other health data sources included: US Centers for Disease Control and Prevention; NCDPH Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; National Center for Health Statistics; Healthy North Carolina 2020; NCDPH Nutrition Services Branch; UNC Highway Safety Research Center; NC Department of Transportation; and the NCDPH Oral Health Section, among other *public domain* sources. Other important *local* health data sources included the two hospitals in Davidson County.

Because in any community health assessment it is instructive to relate local data to similar data in other jurisdictions, Davidson County data is compared to like data describing the state of NC as a whole, as well as data from Randolph County, NC, a state-approved “peer” county. In some cases, Davidson County data is compared to US-level data, or to Healthy People/Healthy North Carolina 2020 goals or other standardized measures. Where appropriate, trend data has been used to show changes in indicators over time, at least since the most recent previous assessment three years ago, but sometimes further back than that.

Environmental data were gathered from public domain sources including: US Environmental Protection Agency, NC Department of Environmental Quality Divisions of Air Quality and Waste Management, and the Section of Environmental Health in NCDPH.

Primary data gathering was also an important part of this assessment (including a community survey and issues prioritization exercises); methodologies for the primary data collection activities are discussed in separate sections of this report.

This report represents a topical synthesis of all the secondary and primary data researched in connection with the 2018 Davidson County CHNA project. It is intended to serve as the master data resource for guiding community deliberations about the most important health issues in Davidson County and how to solve them.

It should be noted at the onset that the consultant thoroughly cites and personally vouches for all data sources in the public domain. Finally, as is typical in all time-limited activities such as community health assessment, all data were mined at a point in time in the recent past and may not represent present conditions; therefore numbers, entity names, program titles, etc. that appear in the data may no longer be current.

This comprehensive report is available on-line in PDF format on the Davidson County Health Department's website.

CHAPTER ONE: DEMOGRAPHIC DATA

POPULATION CHARACTERISTICS

General Population Characteristics

The following general population characteristics of Davidson County, its peer county and the state of NC were based on US Census data estimates via the 2016 American Community Survey. As noted from the following table, in 2016:

- The population of Davidson County was 164,058.
- The population of Davidson County had a slightly higher percentage of females (51.2%) than males (48.8%).
- The overall median age in Davidson County was 41.9, 3.6 years older than the median age for NC as a whole.

**Table 1. General Demographic Characteristics
(2016 ACS Estimate)**

Location	2016 ACS Estimate							
	Total Population	Number Males	% Population Male	Median Age Males	Number Females	% Population Female	Median Age Females	Overall Median Age
Davidson County	164,058	80,049	48.8	40.6	84,009	51.2	43.1	41.9
Randolph County	142,588	70,281	49.3	40.2	72,307	50.7	41.9	41.1
State of NC	9,940,828	4,834,592	48.6	36.8	5,106,236	51.4	39.7	38.3
Source	a	a	a	b	a	a	b	a

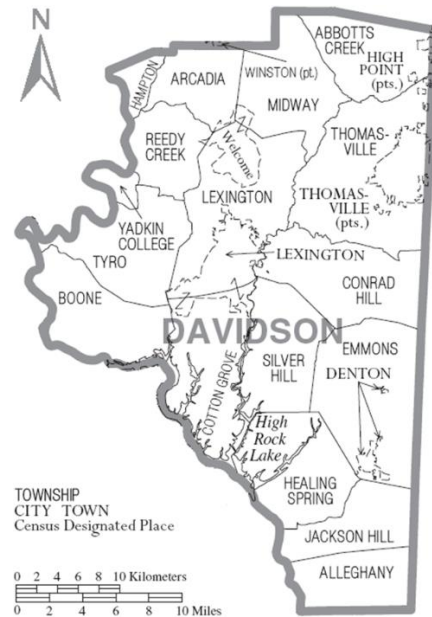
a - Table DP05: ACS Demographic and Housing Estimates, 2016 American Community Survey. US Census Bureau, American Fact Finder, <http://factfinder2.census.gov>.

b - Table S0101: Age and Sex. 2016 American Community Survey. US Census Bureau, American Fact Finder, <http://factfinder2.census.gov>.

Population by Township

As noted in the following figure and table, Davidson County is divided into 17 townships among which Thomasville Township and Lexington Township have the largest populations and Alleghany Township had the smallest. Hampton Township had the “oldest” median age (50.6 years), and Lexington Township the “youngest” (38.8 years).

Figure 1. Townships in Davidson County



**Table 2. Population by Township, Davidson County
(2016 ACS Estimate)**

Township	No. of Persons	% of County Population	Median Age
Abbotts Creek township	13,015	7.9	41.3
Alleghany township	690	0.4	45.1
Arcadia township	10,899	6.6	42.0
Boone township	4,951	3.0	38.9
Conrad Hill township	10,039	6.1	42.7
Cotton Grove township	8,051	4.9	47.2
Emmons township	6,947	4.2	43.9
Hampton township	1,332	0.8	50.6
Healing Spring township	2,901	1.8	44.2
Jackson Hill township	1,167	0.7	46.7
Lexington township	31,360	19.1	38.8
Midway township	12,986	7.9	43.7
Reedy Creek township	5,178	3.2	44.0
Silver Hill township	6,499	4.0	39.3
Thomasville township	38,779	23.6	41.8
Tyro township	8,366	5.1	43.0
Yadkin College township	898	0.5	40.2
Davidson County Total	164,058	100.0	41.9

Source: US Census Bureau, American Fact Finder, 2016 ACS, Table S0101, Age and Sex (by Township); <http://factfinder2.census.gov>

Population Growth

The next table illustrates that the Davidson County population grew by over 10% per decade from 1980 through 2010, but that this growth rate was expected to slow significantly in subsequent decades. Note that the Davidson County rate of growth was smaller than the comparable state population growth rate in every period covered by the table below.

Table 3. Decadal Population Growth (1980-2030)

Location	Number of Persons and Percent Change										
	1980	1990	% Change 1980-1990	2000	% Change 1990-2000	2010	% Change 2000-2010	2020 (Projection)	% Change 2010-2020	2030 (Projection)	% Change 2020-2030
Davidson County	113,162	126,677	11.9	147,250	16.2	162,878	10.6	170,091	4.4	180,032	5.8
Randolph County	91,300	106,546	16.7	130,471	22.5	141,752	8.6	147,555	4.1	157,165	6.5
State of NC	5,880,095	6,632,448	12.8	8,046,813	21.3	9,535,483	18.5	11,039,342	15.8	12,463,244	12.9

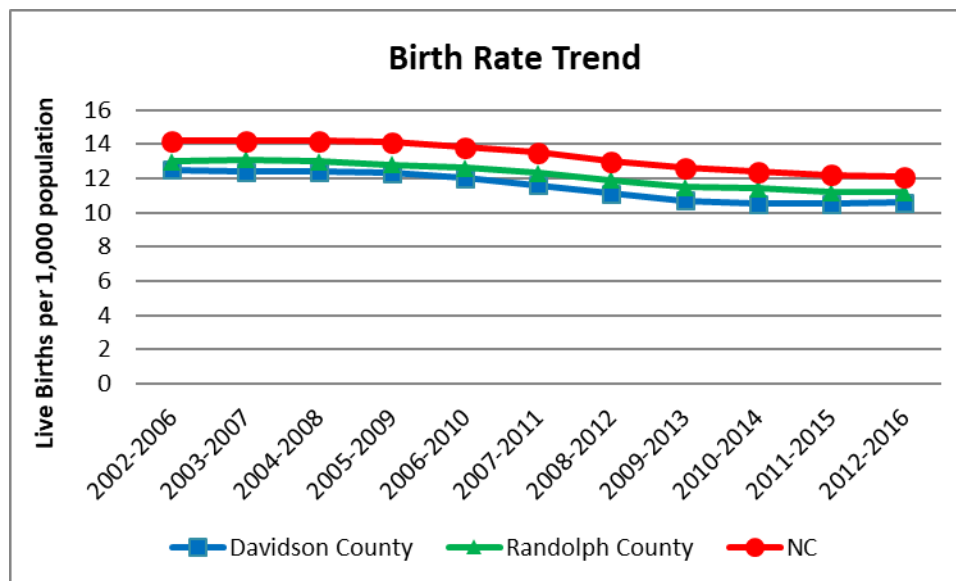
Note: percentage change is calculated.

Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population (Data Item 5001); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Birth Rate

Overall population growth is a function both of increase (via in-migration and birth) and decrease (via out-migration and death). The following figure illustrates that the birth rate has declined in NC and both counties in the comparison, but that all compared rates appear to be leveling.

Figure 2. Birth Rate Trend, Live Births per 1,000 Total Population (Five-Year Aggregates, 2002-2006 through 2012-2016)



Source: *Live Birth Rates per 1,000 Population*. NC State Center for Health Statistics, Health Data, County Level Data, County Health Data books 2008 through 2018. <http://www.schs.state.nc.us/schs/data/databook/>.

Population Density

As seen in the table below, population density in Davidson County has increased every decade since 1980, a trend projected to continue in the next two decades. The population density in Davidson County has been higher than the population density statewide since 1980.

**Table 4. Decadal Population Density
(1980-2030)**

Location	Persons per Square Mile					
	1980	1990	2000	2010 (Estimate)	2020 (Projection)	2030 (Projection)
Davidson County	206.39	229.39	266.68	293.76	307.81	325.80
Randolph County	115.74	135.30	165.71	186.14	187.57	199.78
State of NC	120.39	136.14	165.19	191.93	219.86	248.20

Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population Density (Data Item 5004); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Race and Ethnicity

The population of Davidson County is less diverse than the population of NC as a whole. In Davidson County as of a 2016 ACS estimate:

- Whites composed 86.5% of the total population; statewide the comparable figure was 69.2%.
- Blacks/African Americans composed 9.0% of the total county population; statewide the comparable figure was 21.5%.
- American Indians and Alaskan Natives composed 0.4% of the total population; statewide the comparable figure was 1.2%.
- Asians, Native Hawaiians and Other Pacific Islanders composed 1.3% of the total population; statewide the comparable figure was 2.7%.
- Hispanics/Latinos of any race composed 6.7% of the total population; statewide the comparable figure was 8.9%.

**Table 5. Population Distribution by Race/Ethnicity
(2016 ACS Estimate)**

Location	2016 ACS Estimates														
	Total	Number and Percent													
		White		Black or African-American		American Indian and Alaskan Native		Asian, Native Hawaiian and Other Pacific Islander		Some Other Race		Two or More Races		Hispanic or Latino of Any Race	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	164,058	141,859	86.5	14,750	9.0	669	0.4	2,228	1.3	1,973	1.2	2,579	1.6	10,989	6.7
Randolph County	142,588	123,509	86.6	8,752	6.1	637	0.4	1,575	1.1	5,761	4.0	2,375	1.7	15,468	10.8
State of NC	9,940,828	6,882,915	69.2	2,137,131	21.5	117,479	1.2	261,138	2.7	298,795	3.0	243,370	2.4	884,763	8.9

Source: Table DP05: ACS Demographic and Housing Estimates, 2016 American Community Survey. US Census Bureau, American Fact Finder, <http://factfinder2.census.gov>.

Race and Ethnicity by Township

The following information about racial and ethnic population diversity at the township level in Davidson County was derived from 2016 ACS data estimates presented in the table below.

- Lexington Township is home to the highest proportion of African Americans (18.9%) followed by Thomasville Township (14.2%).
- Silver Hill Township is home to the highest proportion of American Indians/Alaskan Natives (3.8%).
- Lexington Township is home to the highest proportion of Asian, Native Hawaiian or Other Pacific Islanders (3.2%) followed closely by Abbotts Creek Township (3.1%).
- Lexington Township is home to the highest proportion of Hispanics (11.6%), followed by Boone Township (9.3%) and Thomasville Township (9.0%).

**Table 6. Population by Race/Ethnicity, by Township
(2016 ACS Estimates)**

Township	Persons Self-Identifying as of One Race											Two or More Races		Hispanic or Latino (of any race)	
	Total Population	White		Black or African American		American Indian and Alaska Native		Asian, Native Hawaiian or Other Pacific Islander		Some Other Race					
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No	%
Abbotts Creek township	13,015	11,154	85.7	1,172	9.0	0	0.0	408	3.1	31	0.2	250	1.9	775	6.0
Alleghany township	690	690	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Arcadia township	10,899	10,227	93.8	284	2.6	40	0.4	36	0.3	91	0.8	221	2.0	428	3.9
Boone township	4,951	4,556	92.0	214	4.3	25	0.5	0	0.0	131	2.6	25	0.5	460	9.3
Conrad Hill township	10,039	9,792	97.5	5	0.1	29	0.3	49	0.5	72	0.7	91	0.9	205	2.0
Cotton Grove township	8,051	6,924	86.0	604	7.5	54	0.7	215	2.7	200	2.5	54	0.7	256	3.2
Emmons township	6,947	6,869	98.9	24	0.3	3	0.0	20	0.3	11	0.2	20	0.3	118	1.7
Hampton township	1,332	1,234	92.6	27	2.0	0	0.0	15	1.1	56	4.2	0	0.0	78	5.9
Healing Spring township	2,901	2,798	96.4	0	0.0	0	0.0	0	0.0	0	0.0	103	3.6	9	0.3
Jackson Hill township	1,167	1,147	98.3	0	0.0	0	0.0	0	0.0	0	0.0	20	1.7	0	0.0
Lexington township	31,360	22,892	73.0	5,935	18.9	109	0.3	1,003	3.2	556	1.8	865	2.8	3,634	11.6
Midway township	12,986	11,760	90.6	618	4.8	29	0.2	112	0.9	394	3.0	73	0.6	881	6.8
Reedy Creek township	5,178	4,990	96.4	15	0.3	16	0.3	23	0.4	102	2.0	32	0.6	161	3.1
Silver Hill township	6,499	6,027	92.7	126	1.9	247	3.8	0	0.0	22	0.3	77	1.2	244	3.8
Thomasville township	38,779	31,806	82.0	5,518	14.2	117	0.3	347	0.9	269	0.7	722	1.9	3,484	9.0
Tyro township	8,366	8,095	96.8	207	2.5	0	0.0	0	0.0	38	0.5	26	0.3	256	3.1
Yadkin College township	898	898	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Davidson County Total	164,058	141,859	86.5	14,750	9.0	669	0.4	2,228	1.3	1,973	1.2	2,579	1.6	10,989	6.7

Note: percentages are calculated from population figures.

Source: Table DP05: ACS Demographic and Housing Estimates, 2016 American Community Survey. US Census Bureau, American Fact Finder, <http://factfinder2.census.gov>.

Age

Regarding the age (and gender) distribution of the Davidson County population according to 2016 ACS estimates shown in the following table:

- In terms of both numbers and percent, the largest segments of the population in Davidson County were the age groups 50-54 and 55-59.
- Persons 65 years of age or older composed 16.7% of the population in Davidson County, and 14.7% of the population of NC; persons 19 years of age and younger composed 25.0% of the population in Davidson County, and 25.8% of the population of NC.

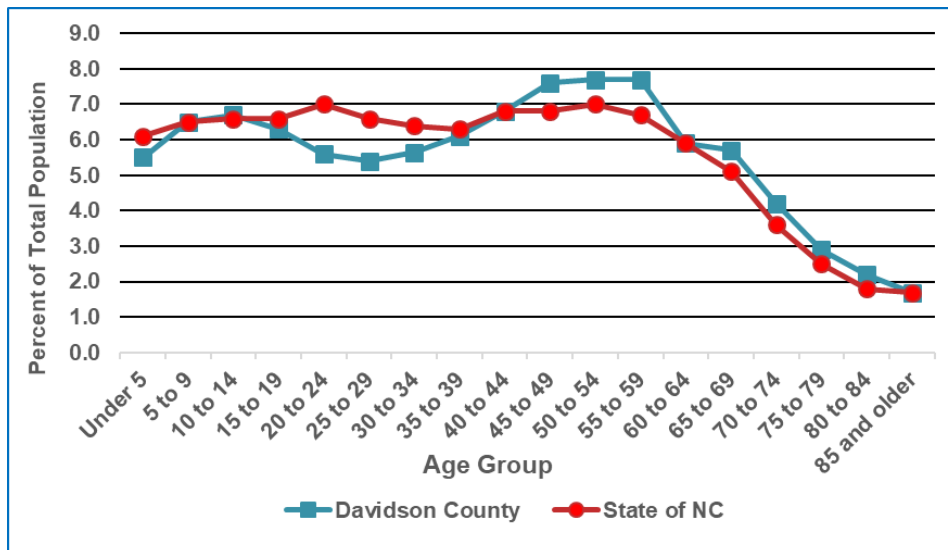
**Table 7. Population Distribution by Age and Gender, Number and Percent
(2016 ACS Estimate)**

Age Group	Davidson County						North Carolina					
	No. in Population			% of Total Population			No. in Population			% of Total Population		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All ages	164,058	80,049	84,009	100.0	48.8	51.2	9,940,828	4,834,592	5,106,236	100.0	48.6	51.4
Under 5	9,050	4,571	4,479	5.5	5.7	5.3	605,960	308,419	297,541	6.1	6.4	5.8
5 to 9	10,587	5,030	5,557	6.5	6.3	6.6	644,338	327,504	316,834	6.5	6.8	6.2
10 to 14	10,969	6,015	4,954	6.7	7.5	5.9	651,637	334,349	317,288	6.6	6.9	6.2
15 to 19	10,302	5,263	5,039	6.3	6.6	6.0	658,761	335,985	322,776	6.6	6.9	6.3
20 to 24	9,108	4,658	4,450	5.6	5.8	5.3	695,460	357,209	338,251	7.0	7.4	6.6
25 to 29	8,818	4,312	4,506	5.4	5.4	5.4	654,782	323,879	330,903	6.6	6.7	6.5
30 to 34	9,184	4,487	4,697	5.7	5.6	5.6	639,604	313,902	325,702	6.4	6.5	6.4
35 to 39	10,021	4,979	5,042	6.1	6.2	6.0	629,372	308,695	320,677	6.3	6.4	6.3
40 to 44	11,115	5,365	5,750	6.8	6.7	6.8	678,386	331,349	347,037	6.8	6.9	6.8
45 to 49	12,475	6,162	6,313	7.6	7.7	7.5	679,360	332,474	346,886	6.8	6.9	6.8
50 to 54	12,682	6,239	6,443	7.7	7.8	7.7	694,539	336,936	357,603	7.0	7.0	7.0
55 to 59	12,607	6,185	6,422	7.7	7.7	7.6	661,578	315,303	346,275	6.7	6.5	6.8
60 to 64	9,750	4,688	5,062	5.9	5.9	6.0	587,721	275,657	312,064	5.9	5.7	6.1
65 to 69	9,330	4,482	4,848	5.7	5.6	5.8	507,599	237,951	269,648	5.1	4.9	5.3
70 to 74	6,893	3,145	3,748	4.2	3.9	4.5	356,619	161,973	194,646	3.6	3.4	3.8
75 to 79	4,833	2,068	2,765	2.9	2.6	3.3	252,615	108,736	143,879	2.5	2.2	2.8
80 to 84	3,577	1,416	2,161	2.2	1.8	2.6	178,355	71,641	106,714	1.8	1.5	2.1
85 and older	2,757	984	1,773	1.7	1.2	2.1	164,142	52,630	111,512	1.7	1.1	2.2

Source: Table B01001: Sex by Age (for numbers) and Table S0101: Age and Sex (for percentages). 2016 ACS 5-year estimates. U.S. Census Bureau, American FactFinder website: <http://factfinder2.census.gov>.

The next figure compares the age distribution of the NC population to the age distribution of the population in Davidson County according to 2016 ACS estimates. In Davidson County there was a smaller proportion of persons in most age groups under the age of 44 and a larger proportion of persons over the age of 44 than demonstrated in the state age distribution profile.

**Figure 3. Population Distribution by Age, Davidson County and NC
(2016 ACS Estimate)**



Source: Table B01001: Sex by Age (for numbers) and Table S0101: Age and Sex (for percentages). 2016 ACS 5-year estimates. U.S. Census Bureau, American FactFinder website: <http://factfinder2.census.gov>. Percentages are calculated.

Age by Township

According to 2016 ACS data presented in the table below:

- Conrad Hill Township had the highest proportion of persons under the age of 18 (26.0%), followed by Silver Hill Township (25.1%) and Yadkin College Township (25.0%).
- Hampton Township had the highest proportion of persons ages 65 and older (22.9%), followed by Cotton Grove Township (22.4%) and Emmons Township (22.3%).

**Table 8. Population by Age, by Township
(2016 ACS Estimates)**

Township	Percent of Total Population						
	<18	18-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65 Years and Over
Abbotts Creek township	23.9	6.4	10.4	14.8	15.5	13.7	15.3
Alleghany township	24.9	13.0	1.0	10.7	18.4	18.3	13.6
Arcadia township	23.3	6.2	9.9	15.2	16.1	13.2	16.0
Boone township	23.5	8.7	11.7	15.6	18.5	11.8	10.2
Conrad Hill township	26.0	5.4	10.8	10.1	15.4	15.6	16.7
Cotton Grove township	14.6	9.5	8.6	10.3	17.3	17.7	22.4
Emmons township	19.7	5.8	11.8	15.2	14.3	10.9	22.3
Hampton township	16.7	5.0	7.9	9.2	21.8	16.6	22.9
Healing Spring township	21.8	7.5	9.8	12.6	16.7	17.6	13.9
Jackson Hill township	17.6	9.2	8.9	8.0	24.5	16.0	15.9
Lexington township	23.2	8.6	12.9	12.9	12.5	12.4	17.5
Midway township	21.3	7.0	11.4	11.5	17.0	14.0	17.7
Reedy Creek township	24.4	7.4	7.9	12.9	19.8	13.3	14.3
Silver Hill township	25.1	8.2	13.7	10.5	11.9	17.4	13.1
Thomasville township	22.7	7.7	11.3	13.2	15.3	13.1	16.6
Tyro township	22.1	10.2	7.8	12.5	16.2	12.9	18.1
Yadkin College township	25.0	21.6	0.0	21.7	13.5	8.6	9.6
Davidson County Total	22.7	7.7	11.0	12.9	15.3	13.6	16.7

Source: Table S0101: Age and Sex, 2016 American Community Survey. US Census Bureau, American Fact Finder, <http://factfinder2.census.gov>.

Elderly Population

Because the proportion of the Davidson County population age 65 and older is larger than the proportion of that age group statewide, it merits closer examination. The population segment age 65 and older often requires more and different health and social services than the rest of the population and understanding how that population will change in coming years will be an important consideration in planning to meet the county's future health and human service needs. The following information regarding the elderly population was extracted from the following table, which contains 2000 and 2010 US Census figures and current projections for the years 2020 and 2030 from the NC Office of State Budget and Management.

- According to the ACS estimate, the population aged 65 and older in Davidson County totaled 27,390 in 2016.
- The number of persons in all age groups in Davidson County age 65 and older will increase through the year 2030, when the number of persons in the county age 65 and older is projected to reach 36,812.
- Though the proportions of all segments of the elderly population will grow, the segment expected to grow by the largest proportion between 2010 and 2030 is the age group 75-84, which is predicted to grow by 79% over that period.
- The proportion of the segment age 65-74 will grow by 63% over the same period, and the proportion of the segment age 85 and older will grow by 61%.

Table 9. Growth Trend for the Elderly (Age 65 and Older) Population, by Decade (2010 through 2030)

Location	2010 Census								
	Total Population (2010)	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Davidson County	162,878	23,388	14.4	13,583	8.3	7,350	4.5	2,455	1.5
Randolph County	141,752	19,949	14.1	11,451	8.1	6,221	4.4	2,277	1.6
State of NC	9,535,483	1,234,079	12.9	697,567	7.3	389,051	4.1	147,461	1.5
Source	2	2	2	2	4	2	4	2	4

Location	2020 (Projected)								
	Total Projected Population	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Davidson County	170,091	35,799	21.0	18,543	10.9	9,601	5.6	2,977	1.8
Randolph County	147,555	31,782	21.5	15,738	10.7	8,229	5.6	2,771	1.9
State of NC	10,619,432	1,789,725	16.9	1,063,143	10.0	533,546	5.0	193,036	1.8
Source	3	3	4	3	4	3	4	3	4

Location	2030 (Projected)								
	Total Projected Population	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Davidson County	180,032	36,812	20.4	22,080	12.3	13,166	7.3	3,960	2.2
Randolph County	157,165	32,772	20.9	18,607	11.8	11,582	7.4	3,786	2.4
State of NC	11,759,744	2,355,463	20.0	1,272,905	10.8	807,850	6.9	274,708	2.3
Source	3	3	4	3	4	3	4	3	4

Sources:

2 - US Census Bureau, American FactFinder. *Profile of General Population and Housing Characteristics: 2010 (DP-1)*;

<http://factfinder2.census.gov>.

3 - Sex and Single Years of Age (2020-2030). North Carolina Office of State Budget and Management County/State Population Projections website: <https://www.osbm.nc.gov/demog/county-projections>.

4 - Percentages calculated using age group population as numerator and total population as denominator

Population Speaking Limited English

The foreign-born population in a community is one that potentially does not speak English, and so is of concern to service providers.

In NC, the greatest proportion of the increase in foreign-born persons is represented by immigrants of Hispanic origin; however, statewide there has also been an influx of foreign-born immigrants from Southeast Asia.

According to 2016 ACS data summarized in the table below:

- There were an estimated 8,969 foreign-born residents residing in Davidson County in 2016.
- The largest influx of the foreign-born population in Davidson County—3,253 persons—arrived between 2000 and 2009. The population of foreign-born residents grew little after 2010.

**Table 10. Growth of the Foreign-Born Population
(Before 1990 through 2016)**

Location	Number of Persons Arriving				
	Total	Before 1990	1990-1999	2000-2009	After 2010
Davidson County	8,969	2,637	2,648	3,253	431
Randolph County	10,080	2,661	3,781	2,732	816
State of NC	878,755	223,966	233,323	299,799	121,667

Source: Table B05005: Year of Entry by Nativity and Citizenship Status in the United States. 2016 ACS Estimate. US Census Bureau, American Fact Finder. <http://factfinder2.census.gov>.

Linguistic Isolation

“Linguistic isolation”, reflected as an inability to communicate because of a lack of language skills, can be a barrier preventing foreign-born residents from accessing needed services. The US Census Bureau tracks linguistically isolated households according to the following definition:

A linguistically isolated household is one in which no member 14 years and over (1) speaks only English, or (2) speaks a non-English language and speaks English "very well". In other words, all members 14 years old and over have at least some difficulty with English.

The following information about linguistically isolated households is derived from the 2016 ACS estimates presented in the next table.

- Of the 64,064 Davidson County households included in the statistic, an estimated 4,484 (7.0%) spoke a language other than English. An estimated 1,187 of these households were linguistically isolated; in 84% of these cases the isolated residents were Spanish-speaking.

**Table 11. Household Language by Linguistic Isolation
(2016 ACS Estimates)**

Location	Total Households	% Non-English Speaking Households	2016 ACS Estimate							
			Spanish		Other Indo-European languages		Asian and Pacific Island languages		Other languages	
			Total	Limited English Speaking	Total	Limited English Speaking	Total	Limited English Speaking	Total	Limited English Speaking
Davidson County	64,064	7.0	3,219	1,001	458	44	729	109	57	33
Randolph County	54,884	9.2	4,473	1,163	521	66	20	47	24	0
State Total	3,775,581	10.9	250,178	71,684	82,310	8,447	60,128	13,418	19,987	2,788
Source	1	2	1	1	1	1	1	1	1	1

Sources:

1 - *Household Language by Household Limited English Speaking Status (C16002)*, 2016 ACS 5-Year Estimates. U.S. Census Bureau, American FactFinder website: <http://factfinder2.census.gov>.

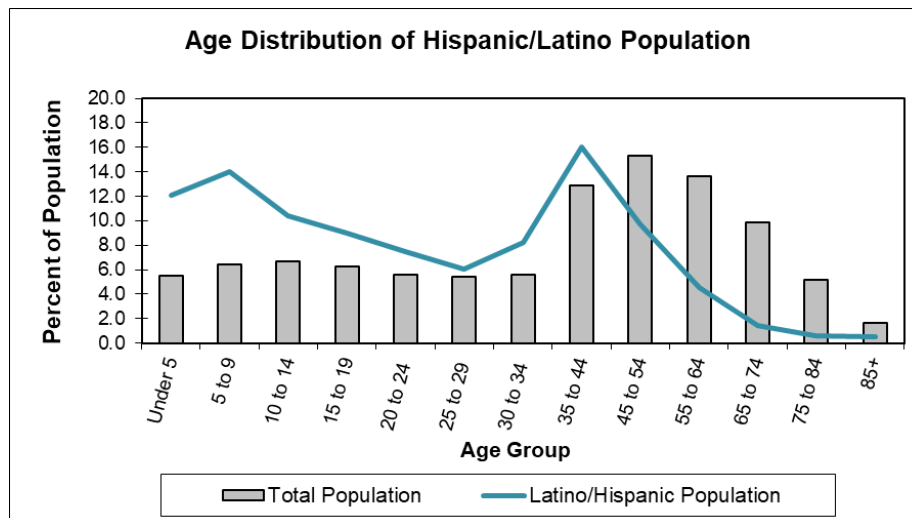
2 - Calculated

Age Distribution of the Latino Population

The following figure depicts the population profiles, by age group, of the total Davidson County population and the Hispanic/Latino population in the county. These data are based on 2016 ACS Estimates.

- In Davidson County all age groups age 44 and under were present in higher proportions in the Hispanic/Latino population than in the overall county population. There were lower proportions of Hispanics/Latinos in all the other age groups.
- The highest proportions of the Hispanic/Latino population in Davidson County occurred in the Under 5 and 35-44 age groups.

**Figure 4. Population Distribution by Age, Hispanics/Latinos and Overall Davidson County
(2016 ACS Estimate)**



Sources:

Overall Davidson County Population: Table B01001: Sex by Age (for numbers) and Table S0101: Age and Sex (for percentages). 2016 ACS 5-year estimates. U.S. Census Bureau, American FactFinder website: <http://factfinder2.census.gov>.

Hispanic/Latino Population in Davidson County: Table B01001: Sex by Age (Hispanic or Latino). 2016 ACS Estimate. US Census Bureau, American Fact Finder. <http://factfinder2.census.gov>. Percentages are calculated.

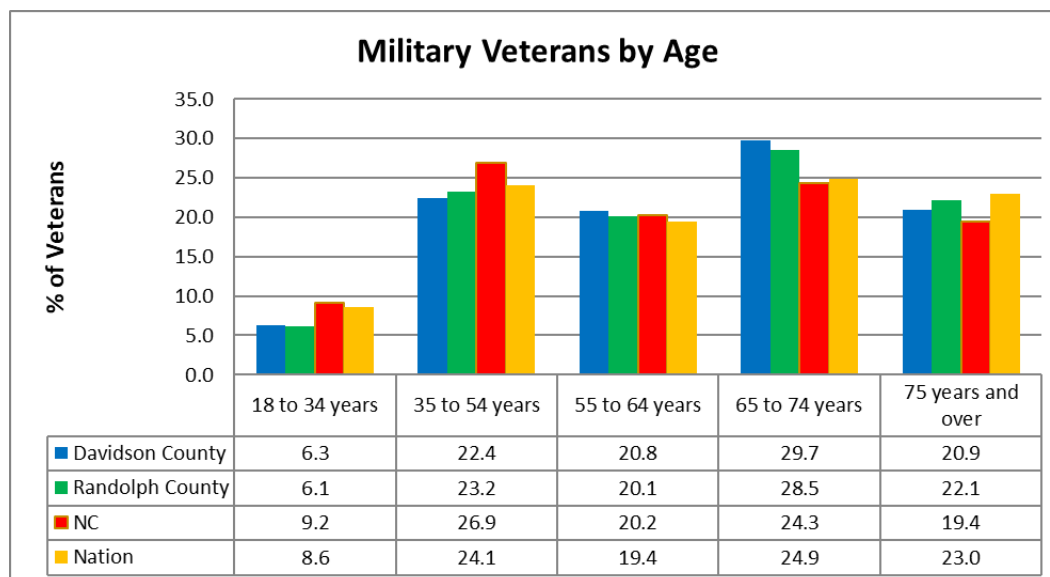
Special Populations

Military Veterans

A population group that sometimes needs special health services is military veterans. The next table summarizes estimates regarding that population for the aggregate period 2012-2016.

- Veterans composed 8.5% of Davidson County's overall adult civilian population in the period cited, lower than the NC (9.0%) and Randolph County (8.7%) averages, but higher than the national average (8.0%) (1).
- Larger proportions of the veterans in Davidson County (and Randolph County) were age 65 and older (50.6%) than in NC as a whole (43.7%), or nationally (47.9%).
- The Veterans Administration Medical Center nearest to Davidson County is the W.G. (Bill) Hefner VA Medical Center in Salisbury, NC. Others are located in Asheville, Durham, and Fayetteville, NC. VA Outpatient Clinics are located in Fayetteville, Greenville, Hickory, and Raleigh, NC; Community-Based Outpatient Clinics serving veterans are located in Charlotte, Durham, Elizabeth City, Franklin, Goldsboro, Hamlet, Jacksonville, Kernersville, Morehead City, Pembroke, Raleigh, Rutherfordton, Supply, and Wilmington, NC; and Vet Centers are located in Charlotte, Fayetteville, Greensboro, Greenville, Jacksonville, Raleigh, and Spindale, NC (2).

**Figure 5. Veteran Status of Population
(2016 ACS Estimate)**



Source: US Census Bureau, American Fact Finder. Veteran Status, 2016 American Community Survey 5-Year Estimate. Table S2101: Veteran Status; <http://factfinder2.census.gov>.

Blind/Visually Impaired Population

The table below presents the number of blind and visually-impaired persons in the three jurisdictions being compared.

Table 12. Blind/Visually Impaired Populations (2017)

Location	Number Blind/Visually Impaired (2017)
Davidson County	264
Randolph County	209
State of NC	22,610

Source: Log into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 520);

http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

Special Needs Registry

In order to assist residents with special needs in the event of an emergency, county Emergency Management Officials and their community partners develop a special needs registry to help emergency workers know about residents that may have difficulties managing for themselves during a disaster such as a hurricane, flood, winter storm, power outage, disease outbreak or other catastrophic event. Persons volunteer to be included on the registry and have the choice to accept or decline assistance when it is offered.

It appears that there is no Special Needs Registry in Davidson County (3).

CIVIC ENGAGEMENT

Electoral Process

One measure of a population's engagement in community affairs is its participation in the electoral process. The following two tables summarize current voter registration and historical voter turnout data. It should be noted that turnout in any election is at least partially determined by the voters' interest and investment in the persons or issues on the ballot at that time.

Registered Voters

- The proportion of the overall voting age population registered to vote in Davidson County as of December 31, 2017 was 80.9%, lower than the state percentage of 85.9% but marginally higher than the Randolph County percentage of 80.4%.

**Table 13. Registered Voters, by Race/Ethnicity, Number and Percent
(As of December 31, 2017)**

Location	Estimated Voting Age Population 2017	Number and Percent of Voting Age Population Registered to Vote ¹											
		Total		White		Black		American Indian		Hispanic		Other	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	130,915	105,967	80.9	91,199	86.1	9,964	9.4	267	0.3	1,602	1.5	4,537	4.3
Randolph County	112,370	90,362	80.4	79,869	88.4	5,665	6.3	276	0.3	4,552	5.0	2,544	2.8
State of NC	7,959,289	6,838,698	85.9	4,735,732	69.2	1,511,599	22.1	56,060	0.8	176,127	2.6	535,307	7.8
Source:	a	b	c	b	c	b	c	b	c	b	c	b	c

Note: The total number of registered voters reported by the NC State Board of Elections is based on the sum of registrations by party affiliation, and does not necessarily equal the sum of registrations by race. Therefore, the sum of the percentages does not equal 100%.

Sources:

a - Log Into North Carolina (LINC) Database, Topic Group Government, Voters and Elections, Voting Age Population (Data Item 1714), 2017; http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

b - NC State Board of Elections, Voter Registration, Voter Statistics, Voter Registration Statistics, <https://vt.ncsbe.gov/RegStat/>.

c - Percentages are calculated

Voter Turnout

Note that voter turnout tends to be higher in elections that include a presidential race, such as those shown here. Voter turnout in every year shown was higher in Davidson County than statewide in 2004 and 2016 and lower than statewide in 2008 and 2012.

**Table 14. Voter Turnout in General Elections
(2004, 2008, 2012 and 2016)**

Location	%Registered Voters that Voted			
	2004	2008	2012	2016
Davidson County	65.12	69.64	67.62	70.01
Randolph County	64.41	69.76	66.57	69.19
State of NC	63.42	71.90	68.17	68.27

Source: Log Into North Carolina (LINC) Database, Topic Group Government, Voters and Elections, Percent of Registered Voters Voting in General Election (Data Item 1717), Years as noted.

http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

RELIGIOUS LIFE

The fabric of a community is often maintained and repaired through its citizens' participation in organized religion. Increasingly, health and human service providers have come to realize that the faith community can be an important partner in assuring the health and well-being of at least its members if not larger segments of the population.

The following table lists the religious bodies in Davidson County as of 2010. This data shows that there was a broad range of options for exploring faith and religion within the county at the time the data were collected. This data was mined in 2013; no update is available at the source.

**Table 15. Religious Bodies in Davidson County
(2010)**

Religious Bodies in Davidson County	Tradition	Family	Number of Congregations	Number of Adherents
African Methodist Episcopal Zion Church	Black Protestant	Methodist/Pietist	5	774
Assemblies of God	Evangelical Protestant	Pentecostal	5	661
Bahá'í	Other	Other Groups	0	41
Buddhism, Theravada	Other	Other Groups	1	396
Catholic Church	Catholic	Catholicism	2	2,412
Christian and Missionary Alliance	Evangelical Protestant	Holiness	2	565
Church of God (Cleveland, Tennessee)	Evangelical Protestant	Pentecostal	5	751
Church of God of Prophecy	Evangelical Protestant	Pentecostal	4	168
Church of Our Lord Jesus Christ of the Apostolic Faith, Inc.	Black Protestant	Pentecostal	1	---
Church of the Brethren	Evangelical Protestant	European Free-Church	1	88
Church of the Nazarene	Evangelical Protestant	Holiness	1	40
Churches of Christ	Evangelical Protestant	Baptist	5	385
Community of Christ	Other	Latter-day Saints	1	137
Congregational Holiness Church	Evangelical Protestant	Pentecostal	1	16
Convention of Original Free Will Baptists	Evangelical Protestant	Baptist	2	301
Episcopal Church	Mainline Protestant	Episcopalianism/Anglicanism	2	325
Evangelical Association of Reformed, and Congregational Christian Churches	Evangelical Protestant	Presbyterian-Reformed	1	---
Evangelical Lutheran Church in America	Mainline Protestant	Lutheran	9	2,379
Evangelical Methodist Church	Evangelical Protestant	Methodist/Pietist	1	---
Friends United Meeting*	Mainline Protestant	European Free-Church	1	66
International Pentecostal Holiness Church	Evangelical Protestant	Pentecostal	3	735
Jehovah's Witnesses	Other	Adventist	3	---
Moravian Church in America--Southern Province	Mainline Protestant	Methodist/Pietist	1	79
National Association of Free Will Baptists	Evangelical Protestant	Baptist	7	884
National Baptist Convention, USA, Inc.	Black Protestant	Baptist	2	612
National Missionary Baptist Convention, Inc.	Black Protestant	Baptist	1	184
Non-denominational	Evangelical Protestant	----	36	7,786
Pentecostal Fire-Baptized Holiness Church	Evangelical Protestant	Pentecostal	3	---
Presbyterian Church (U.S.A.)	Mainline Protestant	Presbyterian-Reformed	5	968
Presbyterian Church in America	Evangelical Protestant	Presbyterian-Reformed	1	450
Progressive National Baptist Convention, Inc.	Black Protestant	Baptist	1	343
Salvation Army	Evangelical Protestant	Holiness	1	181
Seventh-day Adventist Church	Evangelical Protestant	Adventist	3	236
Southern Baptist Convention	Evangelical Protestant	Baptist	49	17,677
United Church of Christ	Mainline Protestant	Presbyterian-Reformed	16	4,267
United Methodist Church	Mainline Protestant	Methodist/Pietist	59	19,949
United Pentecostal Church International	Evangelical Protestant	Pentecostal	1	---
Wesleyan Church	Evangelical Protestant	Holiness	9	1,931
Total			251	65,787

Source: Association of Religious Data Archives (ARDA), US Congregational Membership: Reports, County Membership Report, Browse Reports, Counties; <http://www.thearda.com/rcms2010/>.

COMMUNITY SERVICES AND ORGANIZATIONS

Law Enforcement

Davidson County Sheriff's Department

The Davidson County Sheriff's Department is headquartered at Davidson County Government offices in Lexington and serves the whole of the county. Units within the department include:

- **Animal Control** – The Animal Control unit is responsible for picking up domesticated animals, enforcing the Davidson County animal ordinance, and investigating animal cruelty complaints.
- **Civil Division** - The Civil Division, as the enforcement arm of the NC General Court of Justice, is responsible for the service of court-issued orders for civil judgements, subpoenas, jury pool notification, and courtroom security in the District and Superior Court sessions in Davidson County.

- **Detention Center/Jail** - The Davidson County Sheriff's Office is responsible for the care and custody of inmates incarcerated at the Davidson County Jail. It provides a safe, sanitary environment for inmates, visitors and staff while maintaining security for the community. Approximately 6,000 inmates are booked into the detention facility each year; the average daily population at the jail exceeds 280 inmates.
- **Patrol Division** - The Sheriff's Office provides law enforcement services 24 hours-a-day, every day of the year. The primary provider of this service is the Patrol Division, which places one or more deputies into all areas of the county. These deputies are trained to provide information, assistance, and resolution to problems which may require their attention.
- **Specialized Units**
 - **K-9 Unit** - The mission of the Canine Unit is to enhance the Department's efforts in crime prevention and detection, criminal apprehension, officer safety, and service to the community. The Sheriff's Office K-9 Unit consist of four patrol handler/K-9 teams, one School Resource handler/K-9 Team, one handler/K-9 Team specially trained in explosive detection, and one Narcotics Unit handler/K-9 Team. The Canine Unit is capable of providing assistance in several critical areas including, but not limited to: Officer protection, apprehension of suspects, psychological deterrent to suspect aggression, searching for suspects, evidence retrieval, lost children and adults and other general law enforcement duties in patrol, detention and the courts.
 - **Sheriff's Emergency Response Team** - The Sheriff's Emergency Response Team is led by a team leader and assistant team leader. Members on the team have a variety of specialized training including breaching, less-lethal munitions, chemical munitions and precision marksman operations. The Team is equipped and trained to respond to any tactical situation, including barricaded suspects, hostage situations, search/arrest warrant operations, dignitary protection missions, terrorist events, incidents involving weapons of mass destruction and any other tactical operation that may arise.
 - **Honor Guard** - The Honor Guard provides military honors at funeral and burial services for a current or retired sworn or non-sworn officer, for officers from other jurisdictions who are killed in the line of duty, and for other special ceremonies designated by the Sheriff.
 - **Motorcycle Unit** - The primary focus for the Motorcycle Unit Team is on community-oriented programs and assisting other uniformed officers. The Motorcycle Team conducts escorts involving governmental or dignitary personnel, funerals and other special events which are approved by the Sheriff, such as holiday parades. The Team also participates in community based events such as National Night Out and other school and neighborhood based community outreach programs.
 - **Lake Patrol** – The waterways of Davidson County includes 365 miles of shore line. Davidson County Sheriff's Office Lake Patrol Unit provides security on and around county waterways and shorelines, and regularly patrols High Rock Lake.
- **Technical Services Division** - The Technical Services Division consists of units which provide specialized support services to the citizens of Davidson County, including:
 - Administrative Office Support
 - Animal Control
 - Evidence and Property Control
 - Records
 - Sex Offender Registry Unit

- Crime Scene Investigation personnel
- Telecommunication
- School Resource Officers (4).

Police Departments in Davidson County

Each of the three largest municipalities in Davidson County--Lexington, Thomasville and Denton--maintain their own police departments.

Lexington Police Department

The Lexington Police Department is made up of three divisions: Uniformed, Investigations, and Administration. The department consists of 54 sworn officers, 11 civilians, 5 reserve officers and 4 school guards. While each has specific areas of responsibilities, all work together to ensure Lexington is a safe place to live.

- **Uniformed Division** – The Uniformed Division is responsible for providing 24-hour protection by responding to 911 emergency calls, enforcing traffic laws, and investigating traffic crashes. Each patrol team is made up of a lieutenant, a sergeant and 6 officers. Special Operations of this unit include addressing neighborhood problems, traffic complaints, school security, animal issues and parking enforcement.
- **Investigations Division** – The Investigation Division is responsible for investigating major crimes and drug investigations. The division is made of two teams, detectives and vice. Each team has a lieutenant, a sergeant and seasoned officers with experience in their field. Detectives handle serious crime including murder, rape, robbery, burglary, larceny, aggravated assault, auto theft and fraud. Vice is responsible for drug, alcohol and prostitution violations (5).

Thomasville Police Department

The Thomasville Police Department is structured into three bureaus: Administrative Bureau, Investigative/Support Services Bureau and Field Operations Bureau.

- **Administrative Bureau** - The Chief of Police directs and is responsible for the control of all police department operations in accordance with ordinances, policies and regulations established by the City of Thomasville and the City Manager. The Chief of Police reports to the City Manager. The Chief of Police exercises direct supervision over two Deputy Chiefs of Police, the Administrative Assistant, the Research, Planning and Analysis Unit, and the Professional Standards Division.
- **Investigative/Support Services Bureau** - The following components of the department are assigned to this bureau:
 - *Records Management*
 - *Criminal Investigations Unit* - The Criminal Investigations Unit is composed of six investigators that are responsible for conducting follow-up investigations of reported offenses. The Criminal Investigations Unit is responsible for investigating all death cases, as well as attempted suicides; all reported robbery offenses, assaults, sex-related offenses, adult missing person cases, and any reports of abuse or exploitation of elderly persons in the cases involving financial crimes, which include forgery, fraud and false pretense. The Juvenile Services Officer in this unit investigates offenses reportedly committed by or against juveniles. This includes arson, all cases of suspected Sudden Infant Death

Syndrome (SIDS), and other cases in which the victim is under the age of sixteen years. The Juvenile Services Squad conducts conferences concerning juvenile behavior and forwards reports to juvenile court. The Crime Stoppers Program is also organized within this division. Crime Scene Investigators are also assigned to this unit. One of the crime scene investigator's primary responsibilities is responding to crime scenes and providing field support related to evidence collection, processing and crime scene investigations.

- *Special Operations* - The Special Operations Unit is responsible for the enforcement of the vice laws and the investigation of vice activities of an organized or commercial nature such as gambling, prostitution, and liquor law violations as well as the investigation of illegal narcotic and controlled substance sales, possession, and use, including illegal use of prescription drugs. It also conducts special education and enforcement programs targeted at drug abuse reduction.
- *Task Force* - The Thomasville Police Department is currently engaged in a task force operation with agencies representing a number of governmental entities throughout the region (i.e. Homeland Security Investigations RAC).
- Training Unit
- School Liaison
- Court Liaison
- **Field Operations Bureau** – This unit is composed of two districts and patrolled by four teams whose primary responsibilities are to provide patrol services to the geographical area served by the department.
 - **Traffic Services Unit** – The Traffic Safety Unit (TSU) consists of two teams that provide support to the patrol function. TSU is responsible for selective traffic enforcement activities and programs designed to reduce accident-causing violations, the investigation of school bus stop arm violations, addressing citizens' traffic complaints, and staffing the highway speed enforcement program. Team members are also responsible for the investigation and reconstruction of serious injury and fatal crashes. The unit has a traffic safety education program that conducts a variety of programs tailored to the specific audience
 - **Reserve Officers** - The Reserve Officers supplement patrol, tactical and investigative functions with trained, volunteer manpower. Reserves represent many civilian occupations. Each Reserve Officer must work a minimum of twelve hours per month in an operational police assignment to maintain membership. They provide valuable assistance at major city events and supplement call-answering officers within the Field Operations Bureau (6).

Denton Police Department

The Denton Police Department provides law enforcement and community services to the citizens of Denton twenty-four hours a day, seven days a week. The Denton police department offers weekly home visits and phone calls to check on the well-being of area residents, including elders, persons who deem themselves a fall risk, shut-ins and anyone else with any other disability that may need an extra watchful eye (7).

Fire Departments

Fire protection in Davidson County is provided by the seven municipal and 28 volunteer fire departments listed in the following table.

Table 16. Fire Departments Serving Davidson County

Department Name	Location
Municipal Fire Departments	
Station 1, Lexington Fire	Lexington (Uptown Station)
Station 2, Lexington Fire	Lexington
Station 3, Lexington Fire	Lexington (Northside Station)
Station 21, Thomasville Fire	Thomasville (Howard Matthews Fire Station) - Headquarters
Station 22, Thomasville Fire	Thomasville
Station 23, Thomasville Fire	Thomasville
Station 24, Thomasville Fire	Thomasville
Volunteer Fire Departments Receiving Funds from Davidson County	
Station 7	Badin Lake Volunteer Fire Department, Inc.
Station 15	Griffith Volunteer Fire Department, Inc.
Station 29	Hornetown Volunteer Fire Department of Forsyth County, Inc.
Station 31	Churchland Rural Fire Department, Inc.
Station 33	Arcadia- Reedy Creek-Hampton Volunteer Fire and Rescue Department, Inc.
Station 35	Gumtree Fire and Rescue, Inc.
Station 37	Central Fire Department of Davidson County, Inc.
Station 39	Town of Denton Volunteer Fire Department
Station 41	Linwood Rural Fire Department, Inc.
Station 43	Thomasville Volunteer Fire Department
Station 46	South Lexington Volunteer Fire Department, Inc.
Station 48	Healing Springs Fire Department, Inc.
Station 51	Reeds Fire Department, Inc.
Station 54	Pilot Fire Department and Community Center of Davidson County, Inc.
Station 56	Southmont Fire Department, Inc.
Station 58	South Davidson Fire Department, Inc.
Station 61	Wallburg Fire and Rescue, Inc.
Station 64	North Lexington Triangle Fire Department, Inc.
Station 67	Tyro Rural Fire Department, Inc.
Station 71	West Lexington Volunteer Fire and Rescue Department, Inc.
Station 73	Welcome Fire Department, Inc.
Station 76	Holly Grove Fire Department, Inc.
Station 86	Midway Fire and Rescue Department, Inc.
Station 91	Silver Valley Fire Department, Inc., Station 1
Station 92	Silver Valley Fire Department, Inc., Station 2
Station 96	Hasty Fire and Rescue, Inc.
Station 10	The Clemmons Fire Department, Inc., Forsyth County
Station 14	The Clemmons Fire Department, Inc., Forsyth County

Source: NC Fire Station Lists by County, http://www.carolinasfirepage.com/members/nc_ctys.html#david.

Community Resources

Many government agencies and community organizations maintain on-line resource directories to help the citizens of Davidson County locate the organizations and services they need. Among them are:

Davidson County Department of Senior Services Community Resource Directory (2018)

The county department of Senior Services maintains an on-line directory of resources of interest—but not limited—to senior citizens. It can be located via the following URL:
<https://www.co.davidson.nc.us/DocumentCenter/View/865/Community-Resource-Directory-PDF>

Davidson County Health Department Resource List

The Davidson County Health Department maintains an on-line resource list arranged topically by kind of service offered. It can be located at:
<https://www.co.davidson.nc.us/DocumentCenter/View/199/Davidson-County-Resource-List-PDF>

United Way of Davidson County

The United Way maintains a Community Assistance Resource Brochure containing a list of links to partner agencies, most of which provide advocacy or direct assistance to the public. The list is accessed via:
<http://uwdavidson.org/community-assistance-resource-brochure>

2-1-1 of Davidson County

With the help of the United Way, many communities in NC, including Davidson County, help maintain a local “2-1-1” phone information system to help citizens locate health and human services and resources as varied as employment assistance, food pantries, or homeless shelters. A call to NC 2-1-1 is free, confidential, available all day, every day, and in any language.

In addition, there is an on-line gateway to NC 2-1-1 that provides links to a listing of county resources via the following URL: <http://www.unitedwaync.org/nc211>

Davidson County Assistance Programs

This unnamed source provides information on local charities, non-profit agencies, and other organizations that can provide economic assistance, such as help in paying rent, mortgage, and utility bills, finding free food, and other forms of aid. The website is indexed by type of aid needed. It can be located at:
https://www.needhelppayingbills.com/html/davidson_county_assistance_pro.html.

CHAPTER TWO: SOCIOECONOMIC DATA

ECONOMIC CLIMATE

Tier Designation

The NC Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns a Tier Designation. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. The Tier system is incorporated into various state programs, including a system of tax credits (Article 3J Tax Credits) that encourage economic activity and business investment in less prosperous areas of NC. In 2019 Davidson County was assigned the Tier 2 designation; its peer Randolph County also was assigned the Tier 2 designation (8).

County Revenue Indicators

The following table presents data for the period covering FY2009-2010 through FY2016-2017. Gross collections of state sales and use taxes in Davidson County annually averaged about 92% of the average for all NC counties. These taxes provide some of the money available to the county to fund public services.

**Table 17. NC State Sales and Use Tax Gross Collections
(FY2009-2010 through FY2016-2017)**

Location	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14	FY2014-15	FY2015-16	FY2016-17
Davidson County	43,283,985	48,381,914	43,746,219	42,680,654	44,215,974	50,762,796	55,614,701	60,077,560
Randolph County	40,473,266	48,254,281	41,952,821	41,068,771	41,852,277	44,486,452	49,654,911	54,553,617
State of NC (avg calculated)	50,252,290	55,679,535	49,906,563	50,164,100	62,256,514	57,312,401	61,067,892	66,300,846

Source: NC Department of Revenue, Tax Publications and Reports, State Sales and Use Tax Reports by Fiscal Year, by County Summary; <https://www.ncdor.gov/reports-and-statistics/state-sales-and-use-tax-reports-fiscal-year>.

Income

While revenue indicators give us some idea of economic health from the community economic development standpoint, income measures tell us about the economic well-being of individuals in the community. Among the more useful income measures are personal income, family income, and household income. For comparison purposes, personal income is calculated on a per capita basis; family income and household income are viewed as a median value for a target population. The following are definitions of each of the three income categories:

- *Per capita personal income* is the income earned per person 15 years of age or older in the reference population.
- *Median household income* pertains to the incomes of all the people 15 years of age or older living in the same household (i.e., occupying the same housing unit) regardless of relationship. For example, two roommates sharing an apartment would be a household, but not a family.
- *Median family income* pertains to the income of all the people 15 years of age or older living in the same household who are related either through marriage or bloodline. For example, in the case of a married couple who rent out a room in their house to a non-

relative, the household would include all three people, but the family would be just the couple.

The next table summarizes 2016 ACS annual income data estimates for Davidson County and its comparators. Among these jurisdictions:

- Per capita personal income in Davidson County was \$3,633 *lower* than the comparable state average.
- Median household income in Davidson County was \$3,787 *lower* than the comparable state average.
- Median family income in Davidson County was \$4,758 *lower* than the comparable state average.
- Mean retirement income in Davidson County was \$4,558 *lower* than the comparable state average.

**Table 18. Income Measures
(2016 ACS Estimates)**

Location	Median Household Income	Difference from the state	Median Family Income	Difference from the state	Per Capita Income	Difference from the state	Mean Retirement Income	Difference from the state
Davidson County	\$44,469	-\$3,787	\$54,909	-\$4,758	\$23,146	-\$3,633	\$17,817	-\$4,558
Randolph County	\$43,010	-\$5,246	\$52,877	-\$6,790	\$21,731	-\$5,048	\$18,380	-\$3,995
State of NC	\$48,256	n/a	\$59,667		\$26,779		\$22,375	

Source: Table DP03: *Selected Economic Characteristics, 2016 American Community Survey 5-Year Estimate*. U.S. Census Bureau American FactFinder website: <http://factfinder2.census.gov>.

Employment

The following definitions will be useful in understanding the data in this section.

- *Labor force*: includes all persons over the age of 16 who, during the week, are employed, unemployed or in the armed services.
- *Unemployed*: civilians who are not currently employed but are available for work and have actively looked for a job within the four weeks prior to the date of analysis; also, laid-off civilians waiting to be called back to their jobs, as well as those who will be starting new jobs in the next 30 days.
- *Unemployment rate*: calculated by dividing the number of unemployed persons by the number of people in the civilian labor force.

Employment by Sector

The table below details the various categories of industry by sector in Davidson County and its jurisdictional comparators for 2017, showing the number employed in each sector, the percentage of all employment that that number represents, and the average weekly wage for people employed in each sector.

- The industry in Davidson County that employed the largest percentage of the workforce (22.56%) was Manufacturing, with an average weekly wage of \$934.
- The Retail Trade sector accounted for the second largest percentage of the Davidson County workforce, at 12.01% (average weekly wage of \$496), followed by Health Care and Social Assistance at 10.14% (average weekly wage of \$717).
- Statewide, the sector employing the largest percentage of the workforce was Health Care & Social Assistance (14.0%), followed by Retail Trade (11.7%) and Manufacturing (10.8%).
- The average weekly wage for all sectors in Davidson County was \$805, \$271 less than the average weekly wage for all sectors in NC as a whole. This weekly shortfall in Davidson County computes to an annual county deficit of \$14,092.

**Table 19. Insured Employment and Wages by Sector
(Annual Summary, 2017)**

Sector	Davidson County			Randolph County			North Carolina		
	Avg. No. Employed	% Total Employment in Sector	Average Weekly Wage per Employee	Avg. No. Employed	% Total Employment in Sector	Average Weekly Wage per Employee	Avg. No. Employed	% Total Employment in Sector	Average Weekly Wage per Employee
Agriculture, Forestry, Fishing & Hunting	48	0.11	\$593	287	0.70	\$596	28,024	0.6	\$673
Mining	n/a	n/a	n/a	n/a	n/a	n/a	2,884	0.1	\$1,221
Utilities	n/a	n/a	n/a	n/a	n/a	n/a	15,189	0.4	\$1,723
Construction	1,926	4.46	\$779	2,188	5.36	\$876	208,698	4.8	\$1,007
Manufacturing	9,733	22.56	\$934	15,418	37.80	\$759	467,442	10.8	\$1,123
Wholesale Trade	2,282	5.29	\$864	1,856	4.55	\$867	185,156	4.3	\$1,389
Retail Trade	5,181	12.01	\$496	4,160	10.20	\$491	505,180	11.7	\$534
Transportation & Warehousing	1,775	4.11	\$813	854	2.09	\$784	149,745	3.5	\$931
Information	136	0.32	\$916	222	0.54	\$912	79,971	1.8	\$1,534
Finance & Insurance	631	1.46	\$863	743	1.82	\$1,009	168,556	3.9	\$1,824
Real Estate & Rental & Leasing	392	0.91	\$812	n/a	n/a	n/a	58,586	1.4	\$936
Professional, Scientific & Technical Services	773	1.79	\$974	583	1.43	\$850	242,829	5.6	\$1,532
Management of Companies & Enterprises	1,337	3.10	\$1,937	343	0.84	727	82,817	1.9	\$2,078
Administrative & Waste Services	3,090	7.16	\$497	2,570	6.30	\$492	296,210	6.8	\$695
Educational Services	4,082	9.46	\$702	n/a	n/a	n/a	380,976	8.8	\$866
Health Care & Social Assistance	4,373	10.14	\$717	4,299	10.54	\$713	606,977	14.0	\$949
Arts, Entertainment & Recreation	829	1.92	\$944	493	1.21	\$323	75,705	1.7	\$596
Accommodation & Food Services	3,647	8.45	\$280	3,566	8.74	\$272	423,365	9.8	\$331
Other Services	888	2.06	\$592	978	2.40	\$604	108,859	2.5	\$655
Public Administration	2,024	4.69	\$772	2,228	5.46	\$745	242,848	5.6	\$929
TOTAL ALL SECTORS	43,147	100.00	\$805	40,788	100.00	\$689	4,330,017	100.0	\$1,076

Source - Quarterly Census Employment and Wages (QCEW), 2017. NC Employment Security Commission, Labor & Economic Analysis Division (LEAD), 4D: <https://accessnc.opendatasoft.com/pages/home/>.

* - Disclosure suppressed

¹ Percent Total Employment in Sector values were calculated by dividing the Avg. Number of Employed within a sector by the total employees in All Sectors.

Largest Employers

The following table lists the 25 largest employers in Davidson County as of the end of the 4th Quarter, 2017.

- Only one of the employers listed—the Davidson County Schools—employed more than 1,000 people.
- Nine employers listed employed between 500 and 999 people.

**Table 20. Twenty-Five Largest Employers in Davidson County
(Fourth Quarter, 2017)**

Rank	Employer	Industry	No. Employed
1	Davidson County Schools	Education & Health Services	1000+
2	County of Davidson	Public Administration	500-999
3	Bradley Personnel Inc	Professional & Business Services	500-999
4	Old Dominion Freight Line	Trade, Transportation & Utilities	500-999
5	Atrium Windows and Doors Inc	Manufacturing	500-999
6	Food Lion	Trade, Transportation & Utilities	500-999
7	Wal-Mart Associates Inc	Trade, Transportation & Utilities	500-999
8	Wake Forest University Baptist Medical	Education & Health Services	500-999
9	Davidson County Community College	Education & Health Services	500-999
10	Jeld-Wen	Manufacturing	500-999
11	Lexington City Schools	Education & Health Services	250-499
12	Asco Power Technologies LP	Trade, Transportation & Utilities	250-499
13	Thomasville City Schools	Education & Health Services	250-499
14	Leggett & Platt Incorporated	Manufacturing	250-499
15	Vitacost Com Inc	Trade, Transportation & Utilities	250-499
16	City of Lexington	Public Administration	250-499
17	United Church Homes and Services	Trade, Transportation & Utilities	250-499
18	Cook Out Office	Leisure & Hospitality	250-499
19	RCR Race operations LLC	Leisure & Hospitality	250-499
20	Pergo LLC	Manufacturing	250-499
21	PPG Industries	Manufacturing	250-499
22	Lowe's Home Centers Inc	Trade, Transportation & Utilities	250-499
23	Aristocraft/Decora/Schrock	Manufacturing	250-499
24	City of Thomasville	Public Administration	250-499
25	McDonald's Restaurants	Leisure & Hospitality	250-499

Source: NC Department of Commerce, Economic Intelligence Development System (EDIS), Business Data, Top Employers, by County; <http://accessnc.commerce.state.nc.us/EDIS/business.html>.

Travel for Employment

Data gathered by the US Census Bureau on how many resident workers travel outside the county for employment can help demonstrate whether a county provides adequate employment opportunities for its own citizens.

- According to the data shown in the table below, less than half—46.6%—of Davidson County resident workers were employed within the county.

**Table 21. Place of Work for Resident Workers Age 16 and Older
(2016 ACS Estimate)**

Location	Number and Percent of Residents									
	Total # Workers Over 16	# Working in NC	% Working in NC	# Working in County	% Working in County	# Working out of County	% Working out of County	# Working out of State	% Working out of State	Total # Leaving County for Work
Davidson County	69,950	69,004	98.6	32,596	46.6	36,408	52.0	946	1.4	37,354
Randolph County	62,644	62,116	99.2	36,003	57.5	26,113	41.7	528	0.8	26,641
State of NC	4,448,095	4,334,037	97.4	3,182,485	71.5	1,151,552	25.9	114,058	2.6	1,265,610

Note: percentages are calculated and may include some rounding error.

Source: Table B08007: Sex of Workers by Place of Work, State and County Level. 2016 ACS 5-year estimate. US Census Bureau, American Fact Finder. <http://factfinder.census.gov>.

Modes of Transportation to Work

Besides serving as an indicator of environmentalism, the mode of transportation workers use to get to their places of employment can also point to the relative convenience of local workplaces and the extent of the local public transportation system. The next table compares data on modes of transportation to work from the 2000 US Census and an ACS estimate for 2016.

- Very few Davidson County workers used public transportation to get to work in 2000, but the number for 2016 was slightly larger.
- The number of Davidson County workers who carpooled decreased 38% between 2000 and 2016.
- The number of Davidson County workers who walked to work decreased 6% over the period cited.
- The number of Davidson County workers who worked at home increased 75% over the same period.

**Table 22. Modes of Transportation to Work
(2000 US Census and 2016 ACS Estimate)**

Location	Number of Persons											
	Drove Alone		Carpooled		Used Public Transportation		Walked		Taxicab, motorcycle, bicycle or other means		Worked at Home	
	2000	2016	2000	2016	2000	2016	2000	2016	2000	2016	2000	2016
Davidson County	59,688	59,715	10,480	6,488	193	243	775	725	597	636	1,223	2,143
Randolph County	53,531	23,993	9,159	5,675	47	259	925	749	201	577	1,381	1,391
State of NC	3,046,666	3,609,146	538,264	436,604	34,803	48,349	74,147	80,835	35,942	58,229	102,951	214,932
Source:	a	b	a	b	a	b	a	b	a	b	a	b

a - US Census Bureau, American Fact Finder, 2000 US Census Data Sets, Summary File 3, Table P030: Means of Transportation to Work for Workers 16 Years and Over; <http://factfinder.census.gov>.

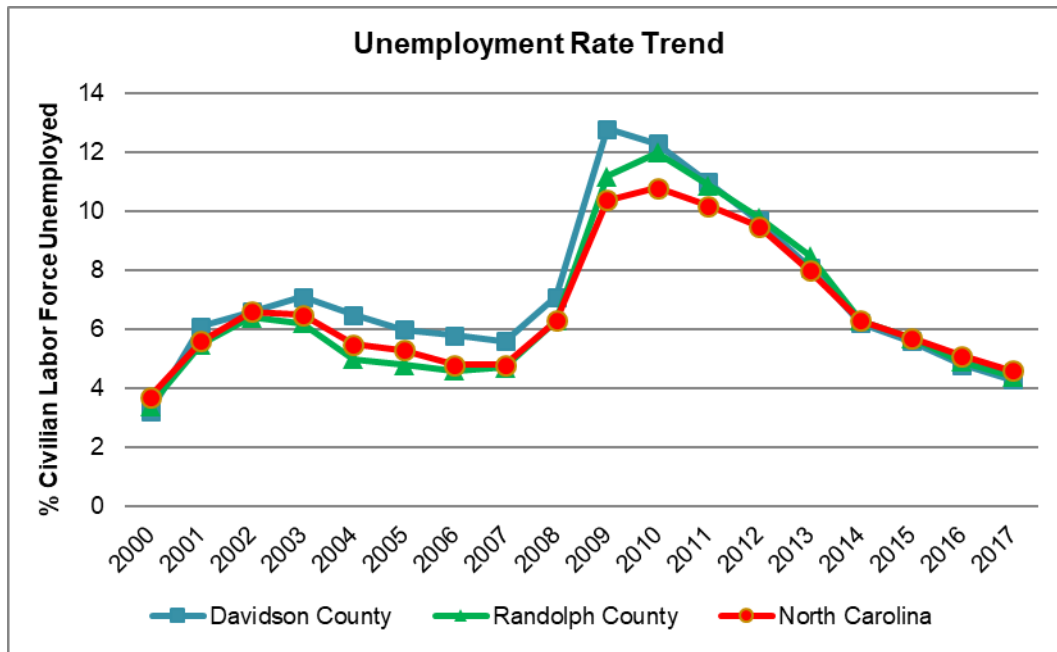
b - US Census Bureau, American Fact Finder, 2016 American Community Survey 5-Year Estimates, Table B08006: Sex of Workers by Means of Transportation to Work. County, North Carolina (Counties as listed); <http://factfinder.census.gov>.

Unemployment

The next figure plots the unemployment rate in Davidson County and its comparators.

- Beginning after 2008, the unemployment rate rose significantly in all three jurisdictions. Unemployment in Davidson County began to decline after 2010, a year before the declines began in Randolph County and the state of NC. The declines continue at the present time.
- The 2017 annual unemployment rate for Davidson County (4.3%) was lower than the comparable rates for either Randolph County (4.4%) or the state as a whole (4.6%) (9).

**Figure 6. Annual Unemployment Rate
(2000-2017)**



Note: The unemployment rate is calculated by dividing the number of unemployed by the civilian labor force. The civilian labor force is the total employed plus the unemployed.
Source: NC Department of Commerce, Access NC data portal. Local Area Unemployment Statistics (LAUS); <https://accessnc.opendatasoft.com/pages/home/>.

Poverty

The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold; this is the “100%-level” figure.

The following table shows the estimated poverty rate for the five-year ACS aggregated periods from 2006-2010 through 2012-2016. The data in this table describe an overall rate, representing the entire population in each geographic entity. As subsequent data will show, poverty may have strong racial and age components that are not discernible in these numbers.

- In Davidson County, the poverty rates rose in each period from 2006-2010 through 2009-2013 and have fluctuated since.
- The poverty rate in Davidson County was the lowest among the comparators in every period cited.

**Table 23. Annual Poverty Rate
(ACS Five-Year Estimates, 2006-2010 through 2012-2016)**

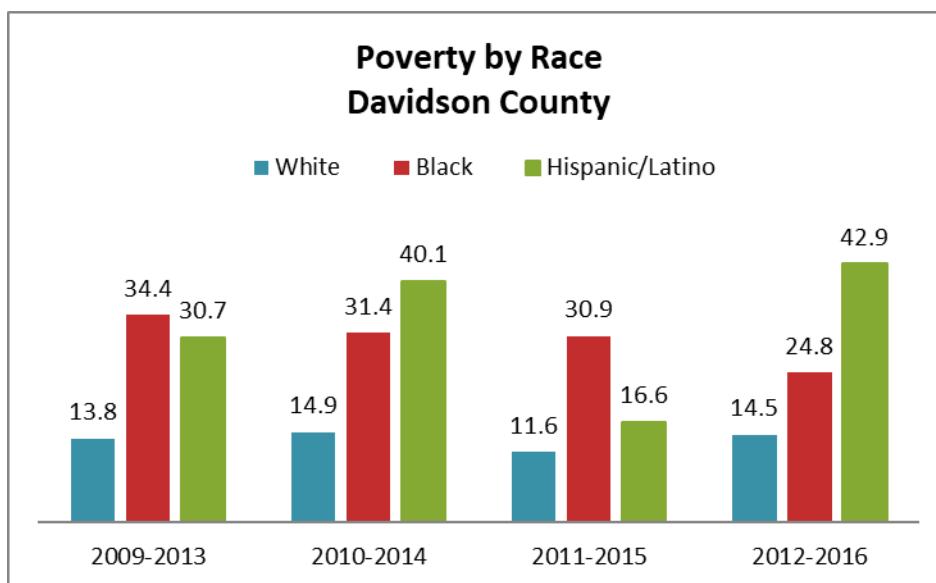
Location	Percent of All People in Poverty						
	2006-2010	2007-2011	2008-2012	2009-2013	2010-2014	2011-2015	2012-2016
Davidson County	14.5	15.1	15.2	16.3	16.1	15.9	16.2
Randolph County	17.2	17.6	17.1	17.8	18.0	17.6	16.9
State of NC	15.5	16.1	16.8	17.5	17.6	17.4	16.8

Source - US Census Bureau, American Fact Finder, American Community Survey, [years as noted] ACS 5-Year Estimates, Table DP03: Selected Economic Characteristics, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

The following figure plots ACS poverty data for Davidson County racially stratified by white/black/Hispanic for five-year aggregates from 2009-2013 through 2012-2016.

- In Davidson County over the period cited, the poverty rate among blacks was 1.7 to 2.7 times the poverty rate among whites.
- The poverty rate among Hispanics in Davidson County over the period cited was from 1.4 to 3.0 times the comparable rate for whites.

**Figure 7. Persons in Poverty, by Race, Davidson County
(ACS Five-Year Estimates, 2009-2013 through 2012-2016)**

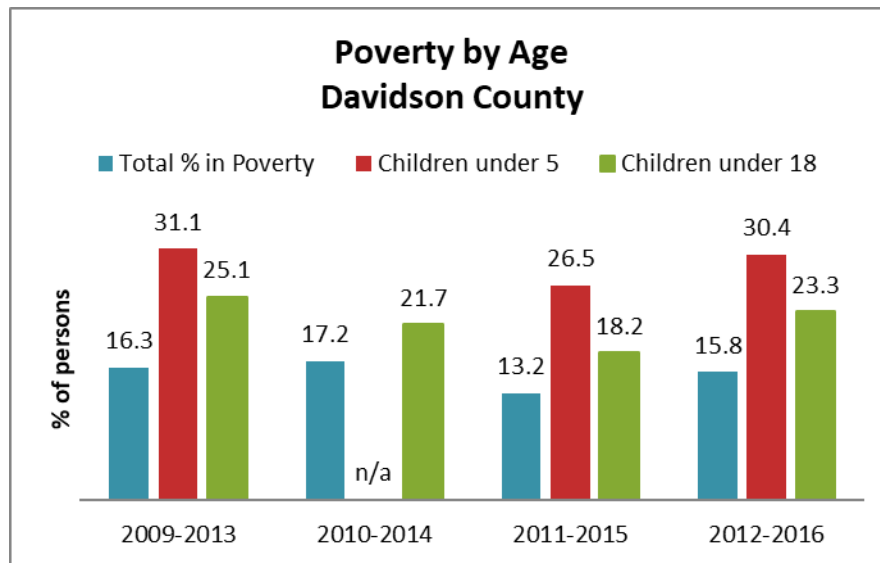


Source: US Census Bureau, American Fact Finder, American Community Survey, [years as noted] American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. Data Profiles, County, North Carolina (Davidson County); <http://factfinder2.census.gov>.

The next figure plots ACS poverty data stratified by age group for the aggregate periods 2009-2013 through 2012-2016. From these data it is apparent that children suffer disproportionately from poverty.

- In every aggregate time period cited in the table, the poverty rate for children under the age of 18 exceeded the overall poverty rate. For the four aggregate periods cited the average poverty rate for youth under age 18 in Davidson County was 1.3 to 1.5 times the overall poverty rate.
- The poverty rate for children under the age of five varied even more significantly from the overall rate. For three of the four aggregate periods 2009-2013 through 2012-2016, the average poverty rate for children under age five in Davidson County was almost double the overall poverty rate. (The poverty rate for children under the age of five in the aggregate period 2010-2014 was not available at the source.)

**Figure 8. Persons in Poverty, by Age Group, Davidson County
(ACS Five-Year Estimates, 2009-2013 through 2012-2016)**



Source: Table S1701: Poverty Status in the Past 12 Months. American Community Survey, years as noted]. US Census Bureau, American Fact Finder; <http://factfinder2.census.gov>.

There are many reasons that children suffer disproportionately from poverty. Demographic characteristics such as higher fertility rates among poor families and the higher prevalence of single parent families among the poor are at least partly responsible for higher poverty rates for children than for adults.

Children Receiving Free or Reduced-price School Lunch

Other data corroborate the impression that children bear a disproportionate burden of poverty. One measure of poverty among children, presented in the table below, is the percent of school-age children in a school system who are eligible to receive free- or reduced-price school lunch (that is, are determined to be “needy”).

Students have to be eligible to receive meals; not everyone who is eligible will choose to enroll in the program and receive meals. To be eligible for *free* lunch under the National School Lunch Act students must live in households earning at or below 130 percent of the Federal poverty guidelines. To be eligible for *reduced-price* lunch students must live in households earning at or below 185 percent of the Federal poverty guidelines.

The table below shows the percent of students in each LEA deemed “needy” relative to free and reduced-price lunch. This figure is calculated as the number of applications for free lunch plus the number of applications for reduced-price lunch divided by the average daily membership.

- The need for assistance in the Lexington and Thomasville LEAs exceeded the NC average in every period cited.

Table 24. Percent of Students Eligible for Free or Reduced-Price School Lunch (“Needy”) (SY2006-07 through SY2016-17)

Location	% of Students Determined to be “Needy”										
	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13	SY2013-14	SY2014-15	SY2015-16	SY2016-17
Davidson County Schools	32.00	33.97	36.37	41.60	42.13	45.42	45.90	47.66	47.72	47.27	46.11
Lexington City Schools	85.67	84.27	85.23	92.49	80.65	86.11	87.44	88.23	87.92	67.19	99.97
Thomasville City Schools	66.45	84.81	88.78	88.49	91.90	90.53	90.75	91.81	61.09	62.32	99.74
Randolph County Schools	42.88	43.92	48.31	52.40	53.95	55.60	56.00	57.31	58.19	57.93	57.73
Asheboro City Schools	57.76	60.43	59.67	62.54	71.24	70.15	75.27	75.92	75.76	77.09	75.69
State of NC	48.46	48.39	49.85	53.68	53.86	55.94	56.14	57.56	52.83	52.48	59.82

Source: NC Department of Instruction, Data & Statistics, Other Education Data: Select Financial Data, Free and Reduced Meals Application Data (by school year). <http://www.ncpublicschools.org/fbs/resources/data/>.

HOUSING

The following table presents ACS data on housing by type in the jurisdictions being compared. This data covers one aggregate period: 2012-2016.

- There was a lower estimated proportion of vacant housing units in Davidson County than in NC as a whole.
- Of the estimated total occupied housing units in Davidson County, approximately 71% were owner-occupied and 29% were renter-occupied.
- In Davidson County 14.9% of all housing units were classified as mobile homes, a figure 12% higher than the NC average of 13.3%.

Table 25. Housing by Type (2012-2016 Five-Year ACS Estimates)

Location	2012-2016										
	Total Housing Units	Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Renter Occupied Units		Mobile Home Units	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	73,053	8,989	12.3	64,064	87.7	45,690	71.3	18,378	28.7	10,919	14.9
Randolph County	61,310	6,426	10.5	54,884	89.5	39,725	72.4	15,159	27.6	12,249	20.0
State of NC	4,453,767	638,375	14.3	3,815,392	85.7	2,471,723	64.8	1,343,669	35.2	590,302	13.3

Source: US Census Bureau, American Fact Finder, 2016 ACS 5-Year Estimates, Table DP04: Selected Housing Characteristics (geographies as listed). <http://factfinder2.census.gov>.

The next table presents data on housing costs for the aggregate periods 2008-2012 and 2012-2016.

- In 2012-2016 the average estimated median monthly mortgage cost in Davidson County was \$1,068, \$175 lower than the state average of \$1,243. In the same period the

average estimated monthly median gross rent in Davidson County was \$676, \$140 lower than the state average of \$816.

- The average percentage of mortgaged units in Davidson County spending more than 30% of household income on housing in the periods cited was 26.8%, 5% lower than the state average of 28.1%. Over the same period the average percentage of renter-occupied housing units in Davidson County spending more than 30% of household income on housing was 45.8%, 7% lower than the state average of 49.4%.
- In Davidson County, median monthly mortgage cost decreased \$86 (7%) between 2008-2012 and 2012-2016; median gross monthly rent increased \$46 (7%) in the same interval.

**Table 26. Estimated Housing Cost as Percent of Household Income
(2008-2012 and 2012-2016 ACS Five-Year Estimates)**

Location	Mortgaged Housing Units							
	2008-2012				2012-2016			
	Total Units ¹	Units Spending >30% Household Income on Housing		Median Monthly Mortgage Cost	Total Units	Units Spending >30% Household Income on Housing		Median Monthly Mortgage Cost
		#	%			#	%	
Davidson County	30,105	9,477	31.5	\$1,154	27,641	7,382	26.8	\$1,068
Randolph County	25,354	8,654	34.2	\$1,095	23,524	1,703	10.7	\$1,012
State of NC	1,658,483	539,993	31.8	\$1,287	1,599,623	447,141	28.1	\$1,243

Location	Renter Occupied Units							
	2008-2012				2012-2016			
	Total Units ¹	Units Spending >30% Household Income on Housing		Median Gross Monthly Rent	Total Units	Units Spending >30% Household Income on Housing		Median Gross Monthly Rent
		#	%			#	%	
Davidson County	15,751	7,090	45.1	\$630	1,710	7,664	45.8	\$676
Randolph County	12,755	6,274	49.2	\$642	13,646	5,948	44.6	\$630
State of NC	1,095,577	554,428	50.6	\$759	1,248,071	602,043	49.4	\$816

Source: US Census Bureau, American FactFinder. [years as noted] ACS 5-Year Estimates. Table DP04: Selected Housing Characteristics (geographies as listed). <http://factfinder2.census.gov>.

Note from US Census Bureau: Percent of renter-occupied units spending greater than 30% of household income on rental housing was derived by dividing the number of renter-occupied units spending >30% by total renter-occupied units, using 5-year estimates from the United States Census Bureau, American Community Survey. Gross rent is defined as the amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment.

Affordable Housing

Housing is considered “affordable” when it comprises no more than 30% of household income. A household paying 30% or more of household income on housing is considered “cost-burdened” by housing. According to 2017 information from the NC Housing Coalition, 27% of Davidson County households (17,390) were “cost-burdened”. In 2017, 27% of households (14,893) in Randolph County were considered cost-burdened as regards housing (10).

The US Department of Housing and Urban Development (HUD) maintains a system for tracking “affordable” housing for its low-income clients, to whom it provides housing subsidies. HUD services are delivered through Public and Indian Housing Authority (PIHA) offices throughout NC. The HUD Field Office in North Carolina is located in Greensboro (11), and public housing agency (PIHA) offices in Lexington and Thomasville can assist Davidson County residents in accessing HUD services (12).

At the time this report was developed in February 2019, there were two single-family HUD-subsidized homes available in Davidson County, one in Lexington, and one in Clemmons (13). In addition, there were 13 affordable apartments listed for the county, 11 in Lexington and two in Thomasville (14).

Homelessness

According to data from the NC Housing Coalition, there is at the present time one homeless shelter in Davidson County: Crisis Ministries (in Lexington), which operates an overnight shelter for men and women, and a 24-hour shelter for families with children. In addition, Davidson County Family Services operates an emergency *domestic violence* shelter for women and minor children (15).

The NC Coalition to End Homelessness assists local jurisdictions in conducting an annual “point-in-time” survey of homeless persons. The Point-in-Time (PIT) count is a count of sheltered and unsheltered homeless persons on a single night in January. HUD requires that Continuums of Care (CoCs) conduct an annual count of homeless persons who are sheltered in emergency shelter, transitional housing, and Safe Havens on a single night. CoCs also must conduct a count of unsheltered homeless persons every other year (odd numbered years), however NC CoCs conduct this count every year. Each count is planned, coordinated, and carried out locally. The Point-in-Time Count follows the U.S. Department of Housing and Urban Development definition of homeless: People who are living in a place not meant for human habitation, in emergency shelter, in transitional housing, or are exiting an institution where they temporarily resided (16).

The 2018 PIT survey in Davidson County counted 100 homeless persons (74 adults over the age of 25, eight adults ages of 18-24, and 18 children age 17 and under) (17).

HOUSEHOLDS

The following table describes households in the three comparator jurisdictions.

- The average number of persons per household in Davidson County—2.53—was only marginally lower than the state average of 2.54.
- The percent of one-person households in Davidson County—25.4%—was lower than the comparable figure for the state as a whole (28.2%).
- The percent of one-person households where the resident is age 65 or older in Davidson County—11.2%—was the same as in Randolph County but higher than the comparable state average of 10.3%.

**Table 27. Household Characteristics
(2012-2016 ACS 5-Year Estimate)**

Location	Total No. Households ¹	Average Persons per Household	% Households One-person	% One-person Households ≥Age 65
Davidson County	64,064	2.53	25.4	11.2
Randolph County	54,884	2.57	26.6	11.2
State of NC	3,815,392	2.54	28.2	10.3

¹ - A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. (People not living in households are classified as living in group quarters).

Source: US Census Bureau, American Fact Finder. Table S1101: Households and Families, 2016 ACS 5-Year Estimates.
<https://factfinder.census.gov>.

Single-Parent Families

Data in the next table describe some characteristics of single-parent families.

- Of the 64,064 households in Davidson County in 2016, 17,875 (28%) had children under the age of 18. Of these:
 - 69% were married couple households (the comparable figure for NC was 66%)
 - 9% were headed by a male householder, with no wife present (NC=8%)
 - 22% were headed by a female householder, with no husband present (NC=26%)

**Table 28. Single-Parent Families
(2012-2016 ACS Five-Year Estimate)**

Location	Total Households	Married Couple Family Households			Male Householder (no wife present) Family Households			Female Householder (no husband present) Family Households		
		Total Households	with own children <18		Total Households	with own children < 18		Total Households	with own children <18	
		Number	Number	Percent	Number	Number	Percent	Number	Number	Percent
Davidson County	64,064	33,597	12,331	36.7	3,154	1,687	53.5	7,775	3,857	49.6
Randolph County	54,884	28,312	10,088	35.6	2,856	1,578	55.3	6,697	3,378	50.4
State of NC	2,815,392	1,833,772	706,208	38.5	169,547	85,557	50.5	512,019	284,537	55.6
	a	a	a	b	a	a	b	a	a	b

a - US Census Bureau, American Fact Finder, 2016 ACS, Table S1101: Households and Families (geographies as noted).

<http://factfinder2.census.gov>.

.b - calculated

Grandparents Responsible for Minor Grandchildren

The following table presents ACS data on grandparents with responsibility for minor grandchildren. Data were collected on whether a grandchild lives with a grandparent in the household, whether the grandparent has responsibility for the basic needs of the grandchild, and the duration of that responsibility. Responsibility for basic needs determines if the

grandparent is financially responsible for food, shelter, clothing, day care, etc., for any or all grandchildren living in the household. Percent is derived with the number of grandparents responsible for grandchildren (under 18 years) as the numerator and number of grandparents living with own grandchildren (under 18 years) as the denominator.

- In Davidson County for the period cited, an estimated 42.9% of grandparents living with their minor grandchildren (1,686 or 3,929) were also responsible for their care. This was the lowest figure among the comparators.
- A large majority (88%) of the responsible grandparents in Davidson County were white.
- 29% of responsible grandparents in Davidson County had some kind of disability.
- 13% lived at or below the 100% poverty level.

**Table 29. Grandparents with Responsibility for Minor Children
(2016 ACS Estimate)**

Location	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*											
		#	%	White	Black/ or African- American	Hispanic/ Latino	Male	Female	In Labor Force	With any Disability	Below the Poverty Level	No Parent of Grandchildren Present	Speak English Less than "Very well"
Davidson County	3,929	1,686	42.9	88.3	4.4	7.1	39.0	61.0	55.5	28.8	12.6	39.2	9.7
Randolph County	3,770	1,717	45.5	77.5	8.7	13.2	31.9	68.1	60.6	22.3	27.9	41.6	8.3
State of NC	210,039	96,671	46.0	58	34.4	6.2	36.0	64.0	57.7	28.2	23.9	39.1	5.1

Source: US Census Bureau, American FactFinder, 2016 American Community Survey 5-Year Estimates. *Table S1002: Grandparents.* <http://factfinder2.census.gov>.

CHILD CARE

Child Care Facilities

The NC Division of Child Development is the state agency charged with overseeing the child care industry in the state, including the regulation of child day care programs. The Division licenses child care facilities that keep more than two unrelated children for more than four hours a day. In NC, regulated child day care facilities are divided into two categories—Child Care Centers and Family Child Care Homes—with the categories delineated on the basis of enrollment. A *child care center* is a larger program providing care for three or more children, but not in a residential setting. The number of children in care is based upon the size of individual classrooms and having sufficient staff, equipment and materials. A *family child care home* is a smaller program offered in the provider's residence where three to five preschool children are in care. A family child care home may also provide care for three school-age children (18).

The way child care facilities were evaluated was changed in 2005 in order to give parents better information about a program's quality. The new rules made a 75% "compliance history" a minimum standard for any licensed facility. Because it is now a minimum requirement, all programs earn a "star rating" based only on the two components that give parents the best indication of quality: staff education and program standards. In addition, programs having a two-component license can earn a "quality point" for enhanced standards in staff education and program standards. As reported in the following table:

- Of the 69 licensed child care centers in Davidson County at the time of this report, 37 (54%) were five-star facilities and 16 (23%) were four-star facilities.

- Of the 14 licensed family child care homes in Davidson County at the time of this report, two (14%) were five-star facilities and three (21%) were four-star facilities.

**Table 30. NC-Licensed Child Care Facilities in Davidson County
(May 10, 2018)**

Type of Facility	Number
Child Care Centers (69)	
Five-star	37
Four-star	16
Three-star	9
Two-star	0
One-star	0
GS 110-106 (Church-affiliated)	7
Temporary	0
Family Child Care Homes (14)	
Five-star	2
Four-star	3
Three-star	4
Two-star	2
One-star	3

Source: NC Department of Health and Human Services, Division of Child Development, Child Care Facility Search Site;
<http://ncchildcaresearch.dhhs.state.nc.us/search.asp>.

EDUCATION

Higher Education

There are two college-level educational institutions in Davidson County: Davidson County Community College and High Point University.

Davidson County Community College (DCCC). Davidson County Community College is part of the statewide NC Community College System. It operates five area campuses: the main Davidson County campus in Thomasville, a Davie County campus in Mocksville, the Thomasville Education Center in Thomasville, the Uptown Lexington Education Center in Lexington, and the Davie Education Center in Bermuda Run.

DCCC is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates, diplomas and associate degrees. DCCC also offers a college transfer program. The average class size is 20, and the Student-Faculty Ratio is 21:1. Approximately 75% of students receive financial aid, and more than 500,000 people have attended DCCC since 1963 (19).

High Point University (HPU). High Point University is the successor to Yadkin College, a college founded in 1857 by the Methodist Protestant Church. Yadkin College, which closed in 1924, was located in rural Davidson County, and named for the nearby Yadkin River. The

present High Point University is located in the city of High Point, the only city in NC that exists in four counties: Davidson, Forsyth, Guilford and Randolph. The city limits of Thomasville come within a half-mile of the High Point city limits to the southwest.

HPU is a private liberal arts institution that currently offers 63 majors as well as pre-professional programs in all health professions, athletic training, engineering, law, ministry and pharmacy. HPU is accredited by the Commission of Colleges of the Southern Association of Colleges and Schools and is a member of the NCAA Division I and the Big South Conference (20).

Primary and Secondary Education

Schools and Enrollment

The next several tables focus on data pertaining *mostly* to the primary and secondary *public* schools in the three Local Educational Authorities (LEAs) in Davidson County: Davidson County Schools, Lexington City Schools, and Thomasville City Schools. In most cases, data is also presented for Randolph County Schools and Asheboro City Schools. At the time this report was developed there were no charter schools in Davidson County.

**Table 31. Public Schools in Davidson County
(SY2016-2017)**

Location	Public				
	Elementary	Middle	High	Other	Charter
Davidson County Schools	18	7	8	2 (6-12 and K-12)	0
Lexington City Schools	4	1	1	1 (K-12)	
Thomasville City Schools	2	1	1		
Randolph County Schools	17	6	7		
Asheboro City Schools	5	2	1		

Source: NC Department of Public Instruction, NC School Report Cards, Search by School District.
<http://www.ncpublicschools.org/src/>.

The table below lists the private schools in Davidson County.

**Table 32. Private Schools in Davidson County
(SY2016-2017)**

Location	Religiously Affiliated	Enrollment	Independent	Enrollment
Davidson County	8	783	2	455
Randolph County	11	816	0	0

Source: NC Division of Non-Public Education, Private Schools, North Carolina Directory of Non-Public Schools. <https://ncadmin.nc.gov/citizens/private-school/nc-directory-private-schools>

The next three tables list the schools in each of the Davidson County LEAs as of SY2016-2017.

**Table 33. Schools in the Davidson County LEA
(SY2016-2017)**

School	Location	School Type/Calendar
Brier Creek Elementary	Thomasville	Regular School, Traditional Calendar
Central Davidson High	Lexington	Regular School, Traditional Calendar
Central Davidson Middle	Lexington	Regular School, Traditional Calendar
Churchland Elementary	Lexington	Regular School, Traditional Calendar
Davidson County High School	Lexington	Alternative Accountability School
Davidson Early College	Lexington	Regular School, Traditional Calendar
Davis-Townsend Elementary	Lexington	Regular School, Traditional Calendar
Denton Elementary	Denton	Regular School, Traditional Calendar
E Lawson Brown Middle	Thomasville	Regular School, Traditional Calendar
East Davidson High	Thomasville	Regular School, Traditional Calendar
Fair Grove Elementary	Thomasville	Regular School, Traditional Calendar
Friedberg Elementary	Winston-Salem	Regular School, Traditional Calendar
Friendship Elementary	Winston-Salem	Regular School, Traditional Calendar
Hasty Elementary	Thomasville	Regular School, Traditional Calendar
Ledford Senior High	Thomasville	Regular School, Traditional Calendar
Ledford Middle	Thomasville	Regular School, Traditional Calendar
Midway Elementary	Lexington	Regular School, Traditional Calendar
North Davidson High	Lexington	Regular School, Traditional Calendar
North Davidson Middle	Lexington	Regular School, Traditional Calendar
Northwest Elementary	Lexington	Regular School, Traditional Calendar
Oak Grove Middle	Winston-Salem	Regular School, Traditional Calendar
Pilot Elementary	Thomasville	Regular School, Traditional Calendar
Reeds Elementary	Lexington	Regular School, Traditional Calendar
Silver Valley Elementary	Lexington	Regular School, Traditional Calendar
South Davidson High	Denton	Regular School, Traditional Calendar
South Davidson Middle	Denton	Regular School, Traditional Calendar
Southmont Elementary	Lexington	Regular School, Traditional Calendar
Southwood Elementary	Lexington	Regular School, Traditional Calendar
Stoner-Thomas School	Lexington	Alternative Accountability School
Tyro Elementary	Lexington	Regular School, Traditional Calendar
Tyro Middle	Lexington	Regular School, Traditional Calendar
Wallburg Elementary	Winston-Salem	Regular School, Traditional Calendar
Welcome Elementary	Lexington	Regular School, Traditional Calendar
West Davidson High	Lexington	Regular School, Traditional Calendar
Yadkin Valley Regional Career Academy	Lexington	Regular School, Traditional Calendar

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards,
<https://ncreportcards.ondemand.sas.com/src>.

**Table 34. Schools in the Lexington City LEA
(SY2016-2017)**

School	Location	School Type/Calendar
Charles England Elementary School	Lexington	Regular School, Traditional Calendar
Lexington Middle School	Lexington	Regular School, Traditional Calendar
Lexington Senior High	Lexington	Regular School, Traditional Calendar
Pickett Elementary School	Lexington	Regular School, Traditional Calendar
South Lexington Development Center	Lexington	Alternative Accountability School
South Lexington School	Lexington	Regular School, Traditional Calendar
Southwest Elementary School	Lexington	Regular School, Traditional Calendar

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards, <https://ncreportcards.ondemand.sas.com/src>.

In addition to the regular schools listed in the table above, the Lexington City LEA operates the South Lexington Developmental Center in Lexington, which serves approximately 40 school-aged students, ages 5-21, who have multiple disabilities. It offers a low teacher-to-student ratio with extensive support personnel, including a full-time nurse, to help meet the individual needs of every student (21).

**Table 35. Schools in the Thomasville City LEA
(SY2016-2017)**

School	Location	School Type/Calendar
Liberty Drive Elementary	Thomasville	Regular School, Traditional Calendar
Thomasville High	Thomasville	Regular School, Traditional Calendar
Thomasville Middle	Thomasville	Regular School, Traditional Calendar
Thomasville Primary	Thomasville	Regular School, Traditional Calendar

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards, <https://ncreportcards.ondemand.sas.com/src>.

In addition to the public schools listed in the tables above, there are 10 private schools in Davidson County, most of which are religiously-affiliated. They are listed in the following table.

**Table 36. Private Schools in Davidson County
(SY2016-2017)**

School	Location	School Type (Enrollment)
ABS of NC Child Development Center	Winstin-Salem	Non-Religious Day School (50 students)
Bethany Christian School	Thomasville	Religious Day School (50 students)
Carolina Christian Academy	Thomasville	Religious Day School (50 students)
Galilee Christian Academy	Lexington	Religious Day School (18 students)
New Hope Christian Academy	Thomasville	Religious Day School (42 students)
Paramount Christian Academy	Thomasville	Religious Day School (2 students)
Sheets Memorial Christian School	Lexington	Religious Day School (222 students)
Union Grove Christian School	Lexington	Religious Day School (385 students)
Walters Grove Baptist Academy	Lexington	Religious Day School (14 students)
Westchester Country Day School	High Point	Independent Day School (405 students)

Source: NC Division of Non-Public Education, Private Schools, North Carolina Directory of Non-Public Schools.
<https://ncadmin.nc.gov/citizens/private-school/nc-directory-private-schools>.

Enrollment in the Davidson County LEA decreased annually in most years over the period cited in the table below. After three years of modest growth, enrollment in the Lexington City LEA has been steady since SY2014-15; enrollment in the Thomasville City LEA has fallen 6% overall since SY2011-12.

**Table 37. K-12 Public School Enrollment
(SY2011-12 through SY2016-17)**

Location	Number of Students					
	SY2011-12	SY2012-13	SY2013-14	SY2014-15	SY2015-16	SY2016-17
Davidson County Schools	20,473	20,355	20,405	20,067	19,794	19,508
Lexington City Schools	3,096	3,125	3,227	3,164	3,167	3,161
Thomasville City Schools	2,527	2,490	2,447	2,466	2,460	2,368
Randolph County Schools	18,768	18,691	18,527	18,310	17,939	17,505
Asheboro City Schools	4,812	4,793	5,021	4,913	4,833	4,741
State of NC	1,458,572	1,467,297	1,493,980	1,498,654	1,493,809	1,486,448

Source: NC Department of Public Instruction, Data and Statistics, Education Data: NC Statistical Profile. NC Statistical Profile Online: Local Education Agencies Information, Pupil Accounting, Table A1 by LEA:
<http://www.ncpublicschools.org/fbs/resources/data/>.

Educational Attainment

The following table presents data on several measures of educational attainment.

Among residents age 25 or older, in 2016, compared to the NC average, Davidson County had:

- a 23% *higher* percentage with less than a 9th grade education;
- a 27% *higher* percentage with a *terminal* high school (or equivalency) diploma; and
- a 37% *lower* percentage with bachelor's degree or higher.

**Table 38. Educational Attainment
(2016 ACS Estimate)**

Location	Percent of the population 25 years and older									
	Total Population Age 25 Years and Older	Less than 9th Grade	9th to 12th grade, no diploma	High school graduate (includes equivalency)	Some college, no degree	Associates Degree	Bachelor's Degree	Graduate or Professional Degree	High School Graduate or Higher	Bachelor's Degree or Higher
Davidson County	114,042	6.4	11.3	33.5	21.1	9.5	13.2	5.0	82.4	18.2
Randolph County	97,483	7.1	12.9	34.5	20.9	9.5	10.8	4.3	80.0	15.1
North Carolina	6,684,672	5.2	8.5	26.4	21.8	9.1	18.8	10.2	86.3	29.0

Source: US Census Bureau, American Fact Finder, American Community Survey, 2016 American Community Survey (ACS) 5-Year Estimates, Table S1501: Educational Attainment; <http://factfinder.census.gov>.

Educational Proficiency

The table below presents data on the end-of-grade (EOG) proficiency results in reading and math for 3rd and 8th graders and for certain demographic groups in Davidson County LEAs.

- In SY2016-2017, compared to the NC average, students in the Davidson County LEA demonstrated *higher* proficiency overall among 3rd and 8th graders on EOG reading and math tests. Black and Hispanic students in the Davidson County LEA outperformed their peers statewide on all tests, but white students in this LEA performed at a level of proficiency below their peers in NC.
- In the same period, 3rd- and 8th-grade students in the Lexington City LEA performed below the level of their peer's proficiency statewide in reading and especially in math. Black and Hispanic students in this LEA perform at the same level or higher than their peers statewide, but white students' performance is significantly lower than among white students statewide.
- In the Thomasville City LEA students in all groups shown in the table performed at levels of proficiency significantly lower than students in those same groups statewide.

**Table 39. Educational Proficiency
SY2016-17**

Location	Percent Students Who are "Grade Level Proficient" on End of Grade Tests							
	% 3rd Graders: Reading	% 3rd Graders: Math	% 8th Graders: Reading	% 8th Graders: Math	% of All Students: All Tests	% of All Black Students: All Tests	% of All Hispanic Students: All Tests	% of All White Students: All Tests
Davidson County Schools	62.4	68.6	56.8	49.7	62.9	45.6	52.8	64.9
Lexington City Schools	51.4	55.4	38.5	39.0	48.6	43.1	48.3	53.1
Thomasville City Schools	35.6	49.4	31.6	40.9	37.2	30.1	39.7	42.3
Randolph County Schools	57.8	67.7	44.3	35.9	55.5	38.3	46.4	58.7
Asheboro City Schools	47.6	68.8	51.4	51.9	56.7	40.6	53.3	67.9
State of NC	57.8	63.6	53.7	45.8	58.8	40.2	48.1	71.1

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. Analytic site for deep data. District Performance. <http://www.ncpublicschools.org/src/>.

Educational Expenditures

The table below presents data on local, state and federal expenditures on education in SY2016-17.

- In SY2016-17 the total per-pupil expenditure (the sum of Federal, state and local investments) in public schools in Davidson County was higher than the state average for the Lexington City and Thomasville City LEAs, but lower for the Davidson County LEA.
- In all jurisdictions, the state contributed the highest proportion to the total per-pupil expenditure. The federal contribution was the smallest proportion of the total in all jurisdictions.

**Table 40. Educational Expenditures
(SY2016-17)**

Location	Average Per Pupil Expenditure			
	Local	State	Federal	Total
Davidson County Schools	\$1,717	\$5,792	\$744	\$8,253
Lexington City Schools	\$1,962	\$6,642	\$1,656	\$10,260
Thomasville City Schools	\$2,386	\$6,361	\$1,970	\$10,717
Randolph County Schools	\$1,446	\$6,058	\$1,009	\$8,513
Asheboro City Schools	\$2,025	\$6,226	\$1,185	\$9,436
State of NC	\$2,232	\$5,944	\$973	\$9,149

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. Analytic site for deep data. District Profile: Funding. <http://www.ncpublicschools.org/src/>.

High School Drop-Out Rate

The next table presents data on the high school (grades 9-12) drop-out rate. According to the NC Department of Public Instruction, a "drop-out" is any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school. For reporting purposes, a drop-out is a student who was enrolled at some time during the previous school year, but who was not enrolled (and who does not meet reporting exclusions) on day 20 of the current school year.

- The high school drop-out rate in all three LEAs in Davidson County, as well as those in Randolph County, fluctuated without clear pattern over the period cited in the table.

**Table 41. High School Drop-Out Rate
(SY2010-11 through SY2016-17)**

Location	Drop-Out Rate						
	SY2010-11	SY2011-12	SY2012-13	SY2013-14	SY2014-15	SY2015-16	SY2016-17
Davidson County Schools	3.57	2.99	2.25	2.79	2.62	2.27	2.22
Lexington City Schools	6.53	3.90	3.46	3.36	5.16	3.69	4.27
Thomasville City Schools	5.69	5.28	4.85	5.26	5.15	2.49	5.92
Randolph County Schools	1.98	1.85	2.41	1.82	1.82	1.61	1.58
Asheboro City Schools	2.88	4.11	2.31	2.18	1.95	1.45	0.65
State of NC	3.43	3.01	2.45	2.28	2.39	2.29	2.31

Source: NC Dept of Public Instruction, Research and Evaluation, Annual Reports, Annual Dropout Reports: Table D-4. <http://www.ncpublicschools.org/research/dropout/reports/>.

Graduation Rate

The four-year cohort graduation rates for subpopulations of 9th graders entering public high school in SY2013-14 and graduating in SY2016-17 or earlier are presented for all comparator jurisdictions in the following table.

- The four-year cohort graduation rates in the Davidson County LEA were higher than comparable state rates for all groups *except* for economically disadvantaged students.
- Graduation rates in the Lexington City LEA were lower overall and for all stratified groups shown compared to state graduation rates.
- Compared to NC, graduation rates in the Thomasville City LEA were higher for economically disadvantaged students but lower for all other groups.

**Table 42. Four Year Cohort Graduation Rate
(9th Graders Entering SY2013-14 and Graduating SY2016-17 or Earlier)**

Location	All Students			Male			Female			Economically Disadvantaged		
	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating
Davidson County Schools	1,521	1,339	88.0	759	650	85.6	762	689	90.4	511	407	79.6
Lexington City Schools	176	143	81.3	98	78	79.6	78	65	83.3	75	59	78.7
Thomasville City Schools	155	120	77.4	86	65	75.6	69	55	79.7	131	112	85.5
Randolph County Schools	1,335	1,194	89.4	704	610	86.6	631	584	92.6	550	456	82.6
Asheboro City Schools	316	290	91.8	156	138	88.5	160	152	95.0	197	175	88.8
State of NC	115,730	110,164	86.5	58,885	49,167	83.5	46,844	50,997	89.7	46,465	38,029	81.8

Note: subgroup information is based on data collected when a student is last seen in the cohort

Source: Public Schools of North Carolina, Cohort Graduation Rate. *4-Year Cohort Graduation Rate Report, 2013-14 Entering 9th Graders Graduating in 2016-17 or Earlier*. <http://www.ncpublicschools.org/accountability/reporting/cohortgradrate>.

School Crime and Violence

Along with test scores and dropout rates, schools now also track and report acts of crime and violence that occur on school property.

The NC State Board of Education has defined 17 criminal acts that are to be monitored and reported, ten of which are considered dangerous and violent:

- Homicide
- Assault resulting in serious bodily injury
- Assault involving the use of a weapon
- Rape
- Sexual offense
- Sexual assault
- Kidnapping
- Robbery with a dangerous weapon
- Robbery without a dangerous weapon
- Taking indecent liberties with a minor

The other seven criminal acts are:

- Assault on school personnel
- Bomb threat
- Burning of a school building

- Possession of alcoholic beverage
- Possession of controlled substance in violation of law
- Possession of a firearm or powerful explosive
- Possession of a weapon

The table below summarizes crime and violence catalogued by the NC Department of Public Instruction for SY2010-11 through SY2016-17.

- The number and rate of acts of school crime and violence in the three Davidson County LEAs fluctuated without pattern over the period cited. Only the statewide average showed any stability, likely due to the large size of the sample.
- The average annual school crime and violence rates for the period cited were 2.2 (Lexington City LEA), 6.8 (Thomasville City LEA) and 7.9 (Davidson County LEA).

**Table 43. School Crime and Violence Trend, All Grades¹
(SY2010-11 through SY2016-17)**

Location	SY2010-11		SY2011-12		SY2012-13		SY2013-14		SY2014-15		SY2015-16		SY2016-17	
	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate
Davidson County Schools	161	7.98	223	11.17	144	7.26	140	7.08	135	6.94	169	8.82	114	6.01
Lexington City Schools	7	2.40	7	2.33	3	1.00	7	2.32	15	4.96	3	1.00	5	1.67
Thomasville City Schools	11	4.57	17	7.03	10	4.18	6	2.57	27	11.37	20	8.42	22	9.59
Randolph County Schools	139	7.57	121	6.61	170	9.34	111	6.17	172	9.68	123	7.05	156	9.14
Asheboro City Schools	52	11.39	46	9.82	29	6.18	30	6.40	47	9.91	12	2.58	23	5.01
State of NC	11,657	7.95	11,161	7.6	10,630	7.20	10,132	6.79	10,347	6.89	10,020	6.62	9,834	6.48

¹ Rate is number of acts per 1,000 students

Source: NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports, Crime & Violence Table C5: Total Number of Acts for Each LEA or Charter School (years as noted). State figures in full Consolidated Report; <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

The next three tables display detail on the acts of crime and violence committed in the LEAs in Davidson County in SY2015-16 and SY2016-17.

- There is significant variation by LEA in school crimes and violence perpetrated by students.
 - In the Davidson County LEA, 48% of the 283 school crimes committed over the two years cited was for possession of a controlled substance.
 - Only eight student crimes were reported in the Lexington City LEA in the two years cited, and of those, half were for possession of a controlled substance.
 - In the Thomasville City LEA, 44 school crimes were reported in the two years cited, and of those, 52% were for possession of a weapon.
 - After possession of weapons and possession of controlled substances, the most commonly reported crime in all three LEAs was assault on school personnel.

Table 44. School Crime and Violence in the Davidson County LEA, by Type of Offense (SY2015-16 and SY2016-17)

Type of Offense	No. Reportable Acts	
	SY2015-16	SY2016-17
Assault resulting in serious personal injury	2	2
Assault involving use of a weapon	0	0
Assault on school personnel	30	13
Bomb threat	0	1
Burning a school building	0	0
Homicide	0	0
Kidnapping	0	0
Possession of alcohol	12	8
Possession of controlled substance	93	44
Possession of a firearm	5	1
Possession of weapon	27	45
Rape	0	0
Robbery with dangerous weapon	0	0
Sexual assault	0	0
Sexual offense	0	0
Indecent liberties with a minor	0	0
TOTAL	169	114

Source: NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports, Crime & Violence Table C-5; <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

Table 45. School Crime and Violence in the Lexington City LEA, by Type of Offense (SY2015-16 and SY2016-17)

Type of Offense	No. Reportable Acts	
	SY2015-16	SY2016-17
Assault resulting in serious personal injury	0	0
Assault involving use of a weapon	0	0
Assault on school personnel	0	2
Bomb threat	0	0
Burning a school building	0	0
Homicide	0	0
Kidnapping	0	0
Possession of alcohol	0	0
Possession of controlled substance	2	2
Possession of a firearm	0	0
Possession of weapon	1	1
Rape	0	0
Robbery with dangerous weapon	0	0
Sexual assault	0	0
Sexual offense	0	0
Indecent liberties with a minor	0	0
TOTAL	3	5

Source: NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports, Crime & Violence Table C-5; <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

Table 46. School Crime and Violence in the Thomasville City LEA, by Type of Offense (SY2015-16 and SY2016-17)

Type of Offense	No. Reportable Acts	
	SY2015-16	SY2016-17
Assault resulting in serious personal injury	0	0
Assault involving use of a weapon	0	0
Assault on school personnel	2	7
Bomb threat	0	0
Burning a school building	0	0
Homicide	0	0
Kidnapping	0	0
Possession of alcohol	0	1
Possession of controlled substance	4	4
Possession of a firearm	0	1
Possession of weapon	14	9
Rape	0	0
Robbery with dangerous weapon	0	0
Sexual assault	0	0
Sexual offense	0	0
Indecent liberties with a minor	0	0
TOTAL	20	22

Source: NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports, Crime & Violence Table C-5; <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

The following table presents data summarizing disciplinary activity in the LEAs of the comparator jurisdictions for the period SY2013-14 through SY2016-17. Since the data represent *counts* of activity in school systems of different sizes, direct comparisons are problematic.

- The most common disciplinary activity in Davidson County LEAs was the short-term suspension. Expulsions were rare in all jurisdictions.

Table 47. School Disciplinary Activity (SY2013-14 through SY2016-17)

School System	SY2013-14			SY2014-15			SY2015-16			SY2016-17		
	Short-Term Suspensions	Long-Term Suspensions	Expulsions	Short-Term Suspensions	Long-Term Suspensions	Expulsions	Short-Term Suspensions	Long-Term Suspensions	Expulsions	Short-Term Suspensions	Long-Term Suspensions	Expulsions
Davidson County Schools	1,814	13	0	1,651	23	0	1,613	22	1	1,735	15	1
Lexington City Schools	0	0	0	0	0	0	3	0	0	0	0	0
Thomasville City Schools	736	0	0	497	1	0	656	0	1	544	1	0
Randolph County Schools	663	9	0	792	15	0	743	10	0	818	6	0
Asheboro City Schools	318	4	0	269	0	0	293	1	0	334	0	0
State of NC	198,254	1,088	37	208,650	1,085	42	216,895	1,036	27	208,539	695	18

A short-term suspension is up to 10 days.

A long term suspension is 11 or more days.

Source: NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports (years as noted); <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

CRIME AND SAFETY

Crime Rates

All crime statistics reported below were obtained from the NC Department of Justice, State Bureau of Investigation unless otherwise noted.

Index crime is composed of *violent crime* and *property crime*. Violent crime includes murder, forcible rape, robbery, and aggravated assault; property crime includes burglary, larceny, arson, and motor vehicle theft.

The table below presents the rates for index crime, violent crime, and property crime for the period from 2012 through 2016 for Davidson County and its comparators.

- The overall index crime rate in Davidson County fell 20% overall between 2012 and 2016, and was lower than the comparable state rate in each of the years cited.
- The largest component of Davidson County index crime was property crime, rates for which also were consistently lower than the comparable rates for the state as a whole.

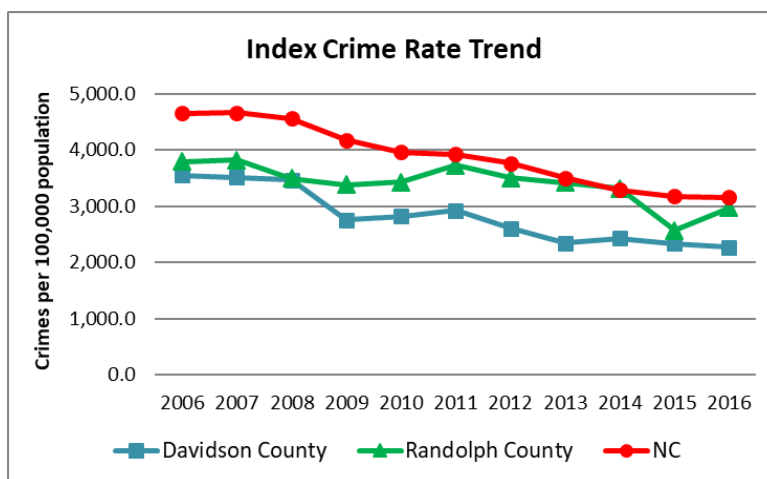
Table 48. Crime Rates, Crimes per 100,000 Population (2012-2016)

Location	Crimes per 100,000 Population														
	2012			2013			2014			2015			2016		
	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime
Davidson County	2,610.0	184.6	2,425.4	2,339.8	187.4	2,212.4	2,431.4	176.1	2,255.3	2,330.0	166.0	2,164.0	2,264.9	166.0	2,098.9
Randolph County	3,498.9	164.6	3,334.3	3,414.2	156.0	3,258.2	3,319.6	155.2	3,164.4	2,570.4	140.7	2,429.7	2,970.1	198.2	2,771.9
State of NC	3,767.2	358.6	3,408.6	3,506.2	339.5	3,166.6	3,285.5	332.9	2,952.7	3,174.3	356.2	2,818.2	3,154.5	374.9	2,779.7

Source: NC Department of Justice, State Bureau of Investigation, Crime, View Crime Statistics, Crime Statistics (by Year); <http://ncdoj.gov/Crime/View-Crime-Statistics.aspx>.

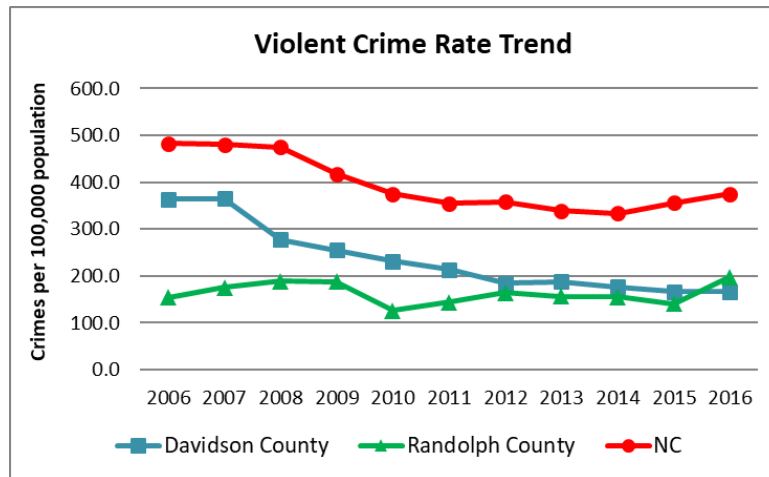
The next three figures present similar but slightly longer-term crime data so overall trends can be discerned.

Figure 9. Index Crime Rate (2006-2016)



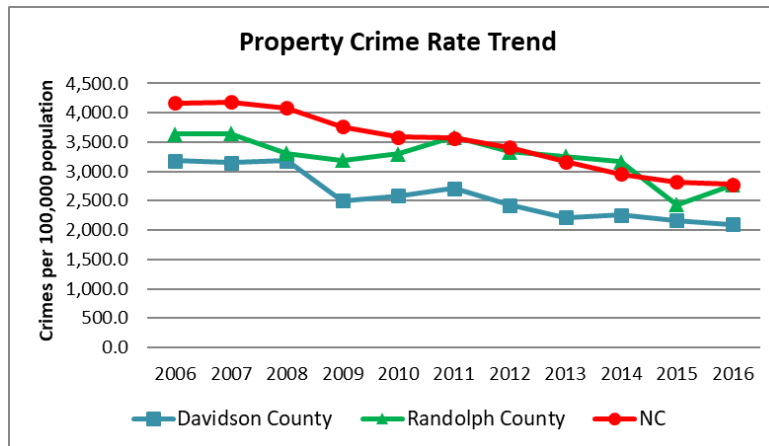
Source: Same as above

**Figure 10. Violent Crime Rate
(2006-2016)**



Source: Same as above

**Figure 11. Property Crime Rate
(2006-2016)**



Source: Same as above

The table below presents detail on index crime committed in Davidson County from 2009-2016. Note the following definitions:

Robbery: larceny by the threat of violence;

Aggravated assault: a physical attack on another person which results in serious bodily harm and/or is made with a deadly or dangerous weapon such as a gun, knife, sword, ax or blunt instrument;

Burglary: unlawful breaking and entering into the premises of another with the intent to commit a felony;

Larceny: the theft of property without use of force; and

Motor vehicle theft: the theft or attempted theft of a motor vehicle

- The predominant violent crime reported in every year cited was aggravated assault.
- The predominant property crime reported in every year cited was larceny.

**Table 49. Types of Crimes Reported in Davidson County
(2009-2016)**

Type of Crime	Number of Crimes							
	2009	2010	2011	2012	2013	2014	2015	2016
Violent Crime	395	361	334	289	294	279	264	265
<i>Murder</i>	0	8	7	0	4	3	1	7
<i>Rape</i>	22	17	24	14	18	17	14	12
<i>Robbery</i>	112	87	78	75	81	83	67	72
<i>Aggravated Assault</i>	261	249	225	200	191	176	182	174
Property Crime	3,883	4,042	4,247	3,798	3,470	3,573	3,441	3,351
<i>Burglary</i>	1,331	1,334	1,541	1,312	1,369	1,543	1,430	1,396
<i>Larceny</i>	2,336	2,535	2,510	2,327	1,936	1,852	1,863	1,769
<i>Motor Vehicle Theft</i>	216	173	196	159	165	178	148	186
Total Index Crimes	4,278	4,403	4,581	4,087	3,764	3,852	3,705	3,616

NC State Bureau of Investigation, Crime in North Carolina, North Carolina Crime Statistics, Crime Statistics in Detailed Reports (By Year), Annual Reports, County Offenses Ten Year Trend, <http://crimereporting.ncsbi.gov/Reports.aspx>.

Other Criminal Activities

The following table summarizes miscellaneous (non-index crime) criminal activities of the recent past.

- As of June 14, 2018, there were 346 registered sex offenders in Davidson County.
- According to the NC State Bureau of Investigation, there were 28 methamphetamine drug lab busts in Davidson County during the period from 2008 through 2017 (although it should be noted that data for 2014, 2015 and 2016 were not available).
- As cited by the State Highway Patrol, Davidson County and Randolph County both have been identified as having between 6 and 20 gangs in 2017 (22).

Table 50. Other Criminal Activity

Location	No. Registered Sex Offenders (6/14/2018)	No. Methamphetamine Lab Busts									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Davidson County	346	3	0	2	8	6	3	n/a	n/a	n/a	6
Randolph County	254	1	1	0	1	2	4	n/a	n/a	n/a	5
State of NC	15,522	197	206	235	344	460	561	557	467	376	232

Source: a a b b b b b b b b b b

a - NC Department of Justice, Sex Offender Statistics, Offender Statistics; <http://sexoffender.ncsbi.gov/stats.aspx>.. The total does not include those who are incarcerated or listed as out of state.

b - NC Department of Justice, State Bureau of Investigation, Divisions, Field Operations, Clandestine Labs, 2017 Map of Clandestine Lab Responses. The historical county-level data is no longer available at this source.

<http://www.ncsbi.gov/Divisions/Field-Operations/Clandestine-Labs/Meth-Lab-Busts>.

Juvenile Crime

The following definitions will be useful in understanding the subsequent data and discussion.

Complaint: A formal allegation that a juvenile committed an offense, which will be reviewed by a counselor who decides whether to approve or not approve the complaint. If approved, it will be heard in juvenile court.

Undisciplined: Describes a juvenile between the ages of six and 16, who is unlawfully absent from school, or regularly disobedient and beyond disciplinary control of parent/guardian or is regularly found where it is unlawful for juveniles to be or has run away from home for more than 24 hours. It also includes 16-17-year-olds who have done any of the above except being absent from school.

Delinquent: Describes a juvenile between the ages of six and not yet 16 who commits an offense that would be a crime under state or local law if committed by an adult.

Diversion: If a complaint is not approved, it may be diverted to a community resource or placed on a diversion contract or plan that lays out stipulations for the juvenile (like community service) to keep the juvenile out of court.

Non-divertible: Non-divertible offenses include offenses such as: murder, rape, sexual offense, arson, first degree burglary, crime against nature, willful infliction of serious bodily harm, assault with deadly weapon, etc.

Transfer to Superior Court: A juvenile who is 13, 14 or 15 who is alleged to have committed a felony may be transferred to Superior Court and tried and sentenced as an adult. If a juvenile is over 13 and charged with first degree murder, the judge must transfer the case to Superior Court if probable cause is found.

Rate: The number per 1,000 persons that are aged 6 to 17 in the county.

The next table presents a summary of juvenile justice *complaints of undisciplined youth* for the period 2011 through 2017.

- The number and rate of complaints for *undisciplined* youth in Davidson County fluctuated throughout the period cited but decreased overall.

**Table 51. Juvenile Justice Complaints: Undisciplined Youth
(2011 through 2017)**

Location	Complaints													
	No. Undisciplined							Rate Undisciplined (Complaints per 1,000 Ages 6 to 17)						
	2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015	2016	2017
Davidson County	81	96	129	80	83	66	58	3.0	3.6	4.9	3.1	3.2	2.5	2.2
Randolph County	61	86	76	63	60	54	47	2.5	3.6	3.2	2.7	2.6	2.4	2.1
State of NC	3,603	3,194	2,738	2,277	2,332	2,339	2,428	2.3	2.5	1.7	1.5	1.49	1.48	1.53

Source: NC Department of Public Safety. Juvenile Justice. County Databooks (Years as noted); <https://www.ncdps.gov/Juvenile-Justice/Community-Programs/Juvenile-Crime-Prevention-Councils/JCPC-Planning-Process/County-Databooks>.

The following table presents a summary of juvenile justice *complaints for delinquent youth* for the same period.

- The number of complaints of *delinquent* youth in Davidson County also fluctuated annually but decreased overall.

**Table 52. Juvenile Justice Complaints: Delinquent Youth
(2011 through 2017)**

Location	Complaints													
	No. Delinquent							Rate Delinquent (Complaints per 1,000 Age 6 to 15)						
	2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015	2016	2017
Davidson County	516	531	654	738	604	408	463	23.0	23.9	29.7	33.8	27.8	18.9	21.8
Randolph County	360	330	266	322	250	345	320	17.9	16.6	13.6	16.6	13.0	18.2	17.2
State of NC	33,556	31,575	29,353	29,288	27,210	25,183	25,737	26.1	24.7	22.9	22.5	20.78	19.16	19.58

Source: NC Department of Public Safety. Juvenile Justice. County Databooks (Years as noted); <https://www.ncdps.gov/Juvenile-Justice/Community-Programs/Juvenile-Crime-Prevention-Councils/JCPC-Planning-Process/County-Databooks>.

The following table presents the related juvenile justice outcomes for the same period.

- Over the seven years cited, generally decreasing numbers of Davidson County youth were sent to secure detention each year and 30 of the county's youth were sent to youth development centers. According to the source cited below, no youths in either Davidson or Randolph counties were transferred to Superior Court in the period cited.

**Table 53. Juvenile Justice Outcomes
(2011 through 2017)**

Location	Outcomes													
	No. Juveniles Detained							No. Sent to Youth Development Center						
	2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015	2016	2017
Davidson County	68	0	53	54	51	26	33	4	6	2	6	3	5	4
Randolph County	20	13	9	25	9	18	8	0	1	1	3	0	3	2
State of NC	3,558	2,767	2,352	2,244	2,162	1,915	1,805	307	216	219	202	217	178	187

Source: NC Department of Public Safety. Juvenile Justice. County Databooks (Years as noted); <https://www.ncdps.gov/Juvenile-Justice/Community-Programs/Juvenile-Crime-Prevention-Councils/JCPC-Planning-Process/County-Databooks>.

Sexual Assault

The table below summarizes data from the Domestic Violence Commission of the NC Council for Women on the number of individuals who filed complaints of sexual assault in the period from FY2006-07 through FY2015-16.

- In the period cited, sexual assault complaints in Davidson County peaked at 95 in FY2006-07.

**Table 54. Sexual Assault Complaint Trend
(FY2006-07 through FY2015-16)**

Location	No. of Individuals Filing Complaints ("Clients")									
	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14	FY2014-15	FY2015-16
Davidson County	95	65	65	44	24	30 *	55	40	42	58
Randolph County	34	24	43	76	96	148	410	205	317	178
State of NC	7,444	6,527	8,494	13,392	13,881	13,214	12,971	13,736	13,655	10,981

* Program submitted partial data

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

It should be noted that reporting methodology changed at the data source in FY2016-17, so prior data should not be compared with data after this date. Future data should be comparable going forward. The table below presents data for FY2016-17 reported according to the new protocol.

Table 55. Sexual Assault Complaint Data, Revised Methodology (FY2016-17)

Location	No. of Individuals Filing Complaints ("Clients")
	FY2016-17
Davidson County	64
Randolph County	126
State of NC	9,453

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

The next table presents details on the types of sexual assaults reported in FY2016-17.

- The largest proportions of defined sexual assault complaints in Davidson County were for child sexual offense (15.6%) and adult rape (4.7%). The majority (71.9%) of complaints did not name a type of assault.
- Statewide the largest proportion of sexual assault complaints involved adult rape (29.8%); the second largest proportion involved child sexual offense (25.7%).

Table 56. Types of Sexual Assaults (FY2016-17)

Location	Total Assault Clients	Type of Assault													
		Adult Rape		Date Rape		Adult Survivor of Child Sexual Assault		Marital Rape		Child Sexual Offense		Incest		Other	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	64	3	4.7	1	1.6	0	0.0	4	6.3	10	15.6	0	0.0	46	71.9
Randolph County	126	27	21.4	5	4.0	28	22.2	15	11.9	9	7.1	13	10.3	29	23.0
State of NC	9,453	2,820	29.8	449	4.7	1,279	13.5	548	5.8	2,428	25.7	346	3.7	1,583	16.7

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2016-2017 County Statistics. <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

The following table details the types of offenders involved in sexual assault complaints in comparator jurisdictions in FY2016-17.

- In Davidson County in the period cited the type of offender was not specified in 83% of the complaints. The most commonly named offender in sexual assault complaints in the county in FY2016-17 was a boy- or girlfriend (12.5%).
- Statewide the most common offender was a relative (31.6%), followed by an acquaintance (27.2%).

**Table 57. Types of Offenders in Sexual Assaults
(FY2016-17)**

Location	Total Offenders	Type of Offender									
		Relative		Acquaintance		Boy/Girl Friend		Stranger		Unknown	
		No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	64	2	3.1	1	1.6	8	12.5	0	0.0	53	82.8
Randolph County	126	31	24.6	14	11.1	23	18.3	3	2.4	55	43.7
State of NC	9,352	2,954	31.6	2,542	27.2	1,437	15.4	561	6.0	1,858	19.9

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2016-2017 County Statistics. <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

Domestic Violence

Domestic violence is the willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control perpetrated by one intimate partner against another. It includes physical violence, sexual violence, psychological violence, and emotional abuse. The frequency and severity of domestic violence can vary dramatically; however, the one constant component of domestic violence is one partner's consistent efforts to maintain power and control over the other (23).

The table below summarizes data on the number of individuals who filed complaints of domestic violence from FY2006-07 through FY2015-16.

- Since the figures are counts and not rates, they are difficult to compare from one jurisdiction to another.
- The annual number of complaints varies in all three jurisdictions without a clear pattern over the period covered.

**Table 58. Domestic Violence Complaint Trend
(FY2006-07 through FY2015-16)**

Location	No. of Individuals Filing Complaints ("Clients")									
	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14	FY2014-15	FY2015-16
Davidson County	491	389	408	259	232	143 *	325	197	183	216
Randolph County	1,609	2,690	4,226	4,858	3,192	2,833	3,194	2,732	2,377	1,190
State of NC	47,305	41,787	51,873	66,320	61,283	51,563	57,345	55,274	56,664	48,601

* Program submitted partial data.

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

As noted previously, reporting methodology changed at the data source in FY2016-17, so prior data should not be compared with data after this date. Future data should be comparable going forward. The table below presents data for FY2016-17 reported according to the new protocol.

**Table 59. Sexual Assault Complaint Data, Revised Methodology
(FY2016-17)**

Location	No. of Individuals Filing Complaints ("Clients")
	FY2016-17
Davidson County	596
Randolph County	991
State of NC	51,074

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

The next table provides details on the services received by domestic violence complainants in FY2016-17.

- The most common service provided to domestic violence complainants in Davidson County in the period cited was advocacy. The service of the courts was frequently tapped as well.
- The local domestic violence shelter in Davidson County was full on 119 days.

**Table 60. Services Received by Domestic Violence Complainants
(FY2016-17)**

Location	Total Domestic Violence Clients	Services Received									Days Local Shelter was Full
		Total	Information	Advocacy	Referral	Transport	Counseling	Hospital	Court	Other	
Davidson County	596	7,590	883	4,396	79	53	702	3	1,413	61	119
Randolph County	991	7,010	2,753	2,816	347	295	342	15	222	220	277
State of NC	51,074	507,204	162,152	100,434	80,126	29,588	53,447	1,023	51,587	28,847	8,025

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2016-2017 County Statistics; <https://ncadmin.nc.gov/about-doa/divisions/council-for-women/women-statistics>.

The table below presents data on the number of domestic violence-related homicides in Davidson County and comparators from 2009-2016. (State and local law enforcement agencies are required by General Statute to report specific information on domestic violence related homicides.)

- There was a total of 13 domestic violence-related homicides in Davidson County over the eight-year period cited.

**Table 61. Domestic Violence-Related Homicides
(2009-2016)**

Location	Number of Domestic Violence Related Homicides							
	2009	2010	2011	2012	2013	2014	2015	2016
Davidson County	0	4	0	0	4	3	2	0
Randolph County	3	0	1	2	2	1	1	2
State of NC	99	107	107	106	108	111	91	110

Source: 2016 Domestic Violence Homicide Report, Domestic Violence Reports, SBI Statistics. NC State Bureau of Investigation website: <http://www.ncsbi.gov/Services/SBI-Statistics/Domestic-Violence-Report>.

Family Services of Davidson County

Family Services of Davidson County is a community non-profit serving families, youth and children who are having difficulties at home, work, school, juvenile court, or with law enforcement with a variety of services offered on a sliding scale. The agency's Crisis Intervention unit provides advocates and family violence therapists to assist victims of domestic violence and sexual assault. The agency's Hattie Lee Burgess Home provides a safe, temporary residence available 24 hours a day, seven days a week for domestic violence and sexual assault survivors and their children (24).

Child Maltreatment

The responsibility for identifying and reporting cases of child abuse, neglect and exploitation falls to the child protective services program within a county's department of social services. Generally, such a unit will have sufficient staff to handle intake of all reports. However, an agency's ability to investigate and monitor reported cases may vary from year to year, depending on the number of properly trained staff available to it; hence, follow-up on reports may vary independently of the number of reports. The next table presents child protective services data from the state's Child Welfare website for the period from FY2010-11 through FY2016-17.

- The total number of findings of child abuse, neglect or dependency in Davidson County fluctuated without a clear pattern. The average annual number of findings per year throughout the seven-year period cited was 44. The most frequent finding was for neglect.

**Table 62. Reports of Child Abuse and Neglect, Davidson County
(FY2010-11 through FY2016-17)**

Category	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Total No. of Findings of Abuse, Neglect, Dependency	33	21	41	43	72	53	43
No. Substantiated ¹ Findings of Abuse and Neglect	3	2	4	6	2	2	4
No. Substantiated Findings of Abuse	6	9	5	12	13	11	7
No. Substantiated Findings of Neglect	23	10	31	25	57	38	30
No. Substantiated Findings of Dependency	1	0	1	0	0	2	2
Services Needed	109	125	122	151	137	178	125
Services Provided, No Longer Needed	14	13	13	24	50	44	31
Services Recommended	155	104	75	94	141	126	173
No. Unsubstantiated Findings	137	141	149	160	158	117	90
Services Not Recommended	657	706	631	614	703	590	485

¹ A "substantiated" report of child abuse, neglect or exploitation indicates that the investigation supports a conclusion that the subject child(ren) was/were abused, neglected, or exploited.

Source: Child Welfare, Reports of Abuse and Neglect section, Reports of Abuse and Neglect Type of Finding/Decision (Not Exclusive) (Longitudinal Data); <http://ssw.unc.edu/ma/>.

The following table presents demographic detail from the same source as above on the complaints of child maltreatment tracked in FY2016-17.

- The majority (76%) of the 41 substantiated findings involved white children.
- For the year cited, approximately half of the substantiated findings involved females, and half involved males.
- The largest proportion of victims (44%) were between the ages of 6 and 12; 37% of victims were under the age of six.

Table 63. Demographic Detail of Child Maltreatment Cases, Davidson County (FY2016-17)

Category of Finding	Number of Children											
	Total	White	African-American	Other Races	Hispanic	Non-Hispanic	Male	Female	Ages 0-5	Ages 6-12	Ages 13-17	Missing Age
Abuse and Neglect	4	3	1	0	1	3	1	3	2	2	0	0
Abuse	7	6	1	0	1	6	1	6	1	4	2	0
Neglect	30	22	6	2	5	25	19	11	12	12	5	1
Services Needed	124	91	20	13	10	114	66	58	96	23	5	0
Services Provided, No Longer Needed	31	25	2	4	0	31	18	13	19	9	5	0
Services Recommended	173	137	31	5	11	162	95	78	92	60	18	3
Unsubstantiated	90	65	24	1	12	78	49	41	44	26	20	0
Services Not Recommended	485	387	86	12	33	452	225	260	246	162	72	5

Source: Child Welfare, Reports of Abuse and Neglect section, Table of Summary Data: Type of Finding by Category (Longitudinal).
<http://ssw.unc.edu/ma/>.

CHAPTER THREE: HEALTH RESOURCES

Access to and utilization of healthcare is affected by a range of variables including the availability of medical insurance coverage, availability of medical professionals, transportation, cultural expectations and other factors.

MEDICAL INSURANCE

Medically Indigent Population

In most communities, citizens' utilization of health care services is related to their ability to pay for those services, either directly or through private or government health insurance plans/programs. People without these supports are called “medically indigent”, and theirs is often the segment of the population least likely to seek and/or to be able to access necessary health care.

The table below presents data on the proportion of the population (by age group) *without* health insurance of any kind. The health insurance system in the US is built largely upon employer-based insurance coverage, so an increase in the number of unemployed people usually leads to an increase in the number of uninsured.

- During the period cited, the percent of the Davidson County population overall (age 0-64) without health insurance was highest in 2013 (17.5%). The most recent (2016) percent uninsured for this age group was 13.0%. It is unclear whether the decrease in the percent uninsured was due specifically to the implementation of the US Affordable Care Act, an improved employment rate, or some other factor.
- In all jurisdictions the younger age group (0-18) had a significantly lower percent without health insurance than the older age group (18-64). Over the course of the period cited, the percent uninsured among youth was approximately one-third the percent among the older age group. This is due at least in part to NC Health Choice, a children's health insurance program discussed below.

Table 64. Percent of Population without Health Insurance, by Age Group (2013-2016)

Location	2013			2014			2015			2016		
	<65	<19	18-64	<65	<19	18-64	<65	<19	18-64	<65	<19	18-64
Davidson County	17.5	6.1	21.9	15.5	4.7	19.7	13.3	5.0	16.5	13.0	4.9	16.1
Randolph County	21.0	8.4	26.1	17.0	6.9	21.0	16.1	5.9	20.0	15.3	5.1	19.3
State of NC	18.1	6.9	22.5	15.2	5.5	18.9	13.0	4.6	16.2	12.2	4.7	15.1

Source: *Small Area Health Insurance Estimates, 2013 [and other years as noted]*. U.S. Census Bureau, Small Area Health Insurance Estimate (SAHIE) Interactive Data Tool. Geographies and age groups as noted. <https://www.census.gov/data-tools/demo/sahie/#/>.

Note on Source: The Small Area Health Insurance Estimates (SAHIE) program was created to develop model-based estimates of health insurance coverage for counties and states. The SAHIE program models health insurance coverage by combining survey data from several sources, including the American Community Survey (ACS), demographic population estimates, aggregated federal tax returns, participation in SNAP, County Business Patterns, Medicaid, CHIP and Census 2010.

As will be reported on fully in a later chapter in this report, the 2018 Davidson County Community Health Survey asked participants whether they had health insurance at the time of the survey (Summer, 2018). Among the 1,064 respondents who answered the question, 9% did not have health coverage, a number not even close to the figures in the table above. Among Davidson County males participating in the survey the percent uninsured was 10%; the percent of females who were uninsured was 4%. The smaller proportion of uninsured identified in the survey compared to the data in the table may be due to a number of factors, including uneven distribution of survey participants (the survey was based on a convenience sample that reached predominately wealthier and employed residents).

North Carolina Health Choice

In 1997, the Federal government created the *State Children's Health Insurance Program* (SCHI)—later known more simply as the *Children's Health Insurance Program* (CHIP)—that provides matching funds to states for health insurance for families with children. The program covers uninsured children in low-income families who earn too much to qualify for Medicaid (25).

States are given flexibility in designing their CHIP eligibility requirements and policies within broad Federal guidelines. The NC CHIP program is called NC Health Choice for Children (NCHC). This plan, which took effect in October 1998, includes the same benefits as the State Health Plan, plus vision, hearing and dental benefits (following the same guidelines as Medicaid). In NC, the maximum income limit for participation in the NCHC program is 211% of the Federal Poverty Guideline (26). Children enrolled in NCHC are eligible for benefits including sick visits, check-ups, hospital care, counseling, prescriptions, dental care, eye exams and glasses, hearing exams, hearing aids, and more (27).

NC Health Choice enrollments for 2015, 2016 and 2017 are provided in the table below which summarizes the largest Medicaid programs in Davidson County.

Medicaid

Medicaid is a health insurance program for low-income individuals and families who cannot afford health care costs. It serves low-income parents, children, seniors, and people with disabilities. Both coverage and eligibility requirements are different for people with different kinds of needs. Chief among these requirements is low income, which depending on service can range from 51% to 200% of the Federal Poverty Guideline.

The table below summarizes data on Medicaid eligibility and expenditures for the period from FY2015 through FY2017.

- The total number of Davidson County residents eligible for Medicaid increased annually every year cited.
- The program areas with the largest number of eligibles were TANF (Temporary Assistance for Needy Families; formerly AFDC [Aid to Families with Dependent Children]) followed by the Infants and Children program.

**Table 65. Number of Medicaid Eligibles in Davidson County, by Program Area
(Annual Unduplicated Counts, 2015-2017)**

Davidson County	Aged	Disabled	TANF (AFDC) Under 21	TANF (AFDC) 21 and over	Infants and Children	MCHIP	County Total	CHIP
Annual Unduplicated 2017	2,515	5,316	10,116	4,498	7,358	2,846	37,861	2,124
Annual Unduplicated 2016	2,489	5,257	9,158	4,742	8,661	2,733	37,489	2,164
Annual Unduplicated 2015	2,407	5,125	6,133	4,778	11,997	2,721	37,013	1,891

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County-Specific Snapshots for NC Medicaid Services, 2015-2017 (geographies as noted); <http://www.ncdhhs.gov/dma/countyreports/index.htm>.

The next table presents summary data on the Medicaid-eligibles and program payments for which the county is responsible for its computable share. Some of the figures in the table are population-dependent (e.g., expenditure per eligible), and are not directly comparable from one jurisdiction to another.

- The total of Medicaid expenditures in both Davidson and Randolph counties increased annually.
- The expenditure per eligible in both Davidson and Randolph counties dipped somewhat in SFY2016 but increased again in SFY2017.

**Table 66. Annual Summary of Medicaid Eligibles and Expenses
(SFY2015-SFY2017)**

SFY2015	2014 Est. Population	Number of Medicaid Eligibles	Total Expenditures	Expenditure per Eligible	Eligibles per 1,000 Population	% of Medicaid Eligibles based on 2014 Population
Davidson	164,464	37,013	\$188,779,059	\$5,100	225	22.5%
Randolph	143,079	34,365	\$172,917,653	\$5,032	240	24.0%
State Total	9,953,687	2,189,881	\$10,991,204,281	\$5,019	220	22.0%

SFY2016	2015 Est. Population	Number of Medicaid Eligibles	Total Expenditures	Expenditure per Eligible	Eligibles per 1,000 Population	% of Medicaid Eligibles based on 2015 Population
Davidson	165,193	37,489	\$190,282,609	\$5,076	227	22.7%
Randolph	142,943	36,134	\$175,227,971	\$4,849	253	25.3%
State Total	10,056,683	2,265,650	\$10,962,551,108	n/a	n/a	n/a

SFY2017	2016 Est. Population	Number of Medicaid Eligibles	Total Expenditures	Expenditure per Eligible	Eligibles per 1,000 Population	% of Medicaid Eligibles based on 2016 Population
Davidson	165,953	37,861	\$193,534,338	\$5,112	228	22.8%
Randolph	143,091	36,109	\$177,933,769	\$4,928	252	25.2%
State Total	10,158,475	2,332,206	\$11,142,210,996	n/a	n/a	n/a

Source: [Years as noted] SFY Medicaid Annual Report Tables. Table 7: Eligibles and Program Payments. NC Division of Medical Assistance. Reports: Annual Reports and Tables. <https://dma.ncdhhs.gov/reports/annual-reports-and-tables>.

Medicare

Medicare is the US government's health insurance program for senior citizens (people 65 years of age or older), certain younger people with specific disabilities, and people with end-stage renal disease. Medicare is an entitlement program and is not based on financial need. Medicare benefits are available to all Americans or their spouses who have paid Social Security taxes through their working years. Some persons who receive Medicare also qualify for Medicaid; these persons are referred to as “dually enrolled” and tend to be elderly and poor. Medicare data is not summarized here but is referred to or presented topically in other parts of this report.

HEALTH CARE PROVIDERS

Practitioners

One way to compare the supply of health professionals among jurisdictions is to calculate and compare the ratio of the number of health care providers to the number of persons in the populations of those jurisdictions. In NC, there is data on the ratio of active health professionals per 10,000 population calculated at the county level. The following table presents those data (which for simplicity's sake will be referred to simply as the “ratio”) for Davidson County, Randolph County and the state of NC over the ten-year period from 2001 through 2017. Noteworthy in this presentation of data is the column designating the percentage of practitioners in each category who are over the age of 65.

- The health professional ratios in Davidson County for RNs, dentists, physicians, pharmacists, nurse practitioners and physician assistants and were lower than the comparable state ratios in each year cited.
- Relatively high proportions (20-25%) of dentists in Davidson County were over the age of 65 in most years cited in the table.

**Table 67. Active Health Professionals per 10,000 Population
(2001-2017)**

Davidson County	Registered Nurses			Dentists			Physicians			Pharmacists			Nurse Practitioners			Physician Assistant		
	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65
2001	734	49.23	1.5%	27	1.81	22.2%	120	8.05	5.8%	83	5.57	10.8%	13	0.87	0%	15	1.01	0%
2002	711	47.05	2.3%	28	1.85	21.4%	121	8.01	8.3%	89	5.89	10.1%	15	0.99	0%	14	0.93	0%
2003	708	46.23	3.0%	29	1.89	20.7%	121	7.90	9.9%	84	5.48	13.1%	17	1.11	0%	14	0.91	0%
2004	684	44.45	2.3%	29	1.88	20.7%	119	7.73	10.1%	88	5.72	12.5%	17	1.10	0%	16	1.04	0%
2005	695	44.90	3.0%	27	1.74	22.2%	120	7.75	9.2%	83	5.36	14.5%	18	1.16	0%	17	1.10	0%
2006	715	46.03	4.2%	27	1.74	25.9%	125	8.05	8.8%	71	4.57	15.5%	21	1.35	0%	19	1.22	0%
2007	738	47.19	3.7%	28	1.79	25.0%	125	7.99	11.2%	77	4.92	11.7%	23	1.47	4%	21	1.34	0%
2008	782	49.21	3.7%	28	1.76	28.6%	122	7.68	9.0%	75	4.72	16.0%	20	1.26	10%	18	1.13	0%
2009	767	47.94	4.6%	30	1.88	26.7%	126	7.88	7.1%	77	4.81	16.9%	25	1.56	12%	19	1.19	0%
2010	745	45.57	3.9%	28	1.71	25.0%	128	7.83	10.2%	75	4.59	14.7%	25	1.53	12%	18	1.10	0%
2011	758	46.40	3.7%	25	1.53	12.0%	127	7.77	9.5%	92	5.63	8.7%	30	1.84	10%	16	0.98	0%
2012	761	46.57	5.4%	26	1.59	23.1%	126	7.71	9.5%	87	5.32	6.9%	30	1.84	7%	16	0.98	0%
2013	772	47.14	4.7%	26	1.59	19.2%	118	7.21	11.0%	82	5.01	11.0%	36	2.20	6%	16	0.98	6%
2014	826	50.23	5.1%	26	1.58	15.4%	112	6.81	10.7%	81	4.93	8.6%	35	2.13	3%	23	1.40	4%
2015	830	50.33	4.9%	25	1.52	16.0%	113	6.85	8.9%	85	5.15	8.2%	40	2.42	3%	28	1.69	4%
2016	804	48.61	5.7%	24	1.45	25.0%	111	6.71	10.8%	78	4.72	7.7%	39	2.35	0%	36	2.17	3%
2017	779	46.62	7.5%	26	1.56	19.2%	111	6.64	10.8%	n/a	n/a	n/a	48	2.87	0%	44	2.63	5%

**Table 67. Active Health Professionals per 10,000 Population (continued)
(2001-2017)**

Randolph County	Registered Nurses			Dentists			Physicians			Pharmacists			Nurse Practitioners			Physician Assistant		
	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65
2001	565	42.76	1.6%	35	2.65	8.6%	117	8.85	3.4%	58	4.39	8.6%	11	0.83	0%	7	0.53	0%
2002	497	36.87	0.6%	36	2.67	5.6%	124	9.20	0.8%	54	4.01	7.4%	13	0.96	0%	10	0.74	0%
2003	499	36.29	0.8%	34	2.47	8.8%	123	8.95	0.8%	55	4.00	10.9%	12	0.87	0%	11	0.80	0%
2004	491	35.74	1.2%	37	2.69	8.1%	132	9.61	3.0%	52	3.79	9.6%	13	0.95	0%	11	0.80	0%
2005	502	36.56	1.0%	36	2.62	8.3%	127	9.25	3.2%	60	4.37	13.3%	13	0.95	0%	12	0.87	0%
2006	540	38.97	2.0%	35	2.53	8.6%	127	9.16	4.7%	62	4.47	8.1%	15	1.08	0%	10	0.72	0%
2007	564	40.45	2.1%	33	2.37	6.1%	132	9.47	5.3%	67	4.81	9.0%	15	1.08	0%	12	0.86	0%
2008	596	42.27	2.9%	34	2.41	5.9%	133	9.43	6.8%	67	4.75	10.5%	20	1.42	0%	12	0.85	0%
2009	597	41.90	3.7%	36	2.53	5.6%	131	9.19	6.9%	67	4.70	11.9%	21	1.47	0%	14	0.98	0%
2010	580	40.81	3.5%	39	2.74	7.7%	135	9.50	7.4%	58	4.08	12.1%	21	1.48	0%	24	1.69	0%
2011	598	41.85	4.2%	37	2.59	10.8%	134	9.38	9.0%	67	4.69	13.4%	29	2.03	3%	27	1.89	0%
2012	639	44.81	4.9%	40	2.81	17.5%	130	9.12	9.2%	76	5.33	11.8%	28	1.96	0%	28	1.96	0%
2013	642	45.03	5.0%	40	2.81	22.5%	122	8.56	8.2%	71	4.98	11.3%	32	2.24	0%	29	2.03	0%
2014	726	50.74	5.0%	40	2.80	27.5%	118	8.25	9.3%	76	5.31	14.5%	40	2.80	0%	36	2.52	0%
2015	729	50.74	4.9%	34	2.37	29.4%	109	7.59	10.1%	67	4.66	14.9%	39	2.73	0%	32	2.24	0%
2016	660	45.75	6.2%	32	2.22	25.0%	109	7.56	11.9%	71	4.92	15.5%	38	2.64	0%	37	2.57	3%
2017	622	42.99	6.3%	32	2.21	25.0%	106	7.33	10.4%	n/a	n/a	n/a	43	2.97	2%	33	2.28	3%

North Carolina	Registered Nurses			Dentists			Physicians			Pharmacists			Nurse Practitioners			Physician Assistant		
	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65	#	Ratio per 10,000	% over age 65
2001	74,790	91.34	2.0%	3,314	4.05	8.8%	16,387	20.01	6.8%	7,060	8.62	5.6%	1,845	2.25	1%	2,032	2.48	0%
2002	74,971	89.93	2.1%	3,415	4.10	9.0%	16,733	20.07	6.4%	7,183	8.62	5.1%	1,992	2.39	1%	2,213	2.65	0%
2003	76,334	89.96	2.3%	3,462	4.08	8.6%	17,083	20.13	6.4%	7,218	8.51	5.7%	2,122	2.50	1%	2,390	2.82	1%
2004	77,655	90.70	2.5%	3,628	4.24	9.0%	17,347	20.26	6.4%	7,446	8.70	6.1%	2,256	2.63	1%	2,498	2.92	1%
2005	79,835	92.15	2.8%	3,772	4.35	9.0%	17,883	20.64	7.1%	7,618	8.79	6.6%	2,440	2.82	1%	2,674	3.09	1%
2006	82,303	92.89	3.0%	3,858	4.35	8.8%	18,391	20.76	7.3%	7,873	8.89	6.6%	2,641	2.98	1%	2,826	3.19	1%
2007	84,820	93.52	3.2%	3,921	4.32	9.2%	18,911	20.85	7.7%	8,171	9.01	6.8%	2,933	3.23	2%	3,054	3.37	1%
2008	87,743	95.09	3.4%	4,053	4.39	9.5%	19,542	21.18	7.8%	8,578	9.30	7.4%	3,150	3.41	2%	3,228	3.50	1%
2009	90,930	96.91	3.6%	4,162	4.44	10.3%	19,894	21.20	8.0%	8,694	9.27	7.5%	3,414	3.64	2%	3,451	3.68	1%
2010	93,133	97.29	3.7%	4,251	4.44	10.9%	20,752	21.68	8.4%	8,755	9.15	6.8%	3,679	3.84	2%	3,652	3.82	2%
2011	95,335	98.60	3.9%	4,273	4.42	10.5%	21,340	22.07	9.3%	9,195	9.51	5.7%	3,972	4.11	2%	3,881	4.01	2%
2012	97,222	99.56	4.2%	4,465	4.57	13.4%	21,788	22.31	10.1%	9,822	10.06	6.4%	4,244	4.35	3%	4,044	4.14	3%
2013	99,611	101.01	4.6%	4,561	4.62	14.1%	22,414	22.73	9.9%	10,026	10.17	6.3%	4,696	4.76	3%	4,202	4.26	3%
2014	99,734	100.20	4.6%	4,681	4.70	14.5%	23,063	23.17	10.3%	10,546	10.60	6.5%	5,372	5.40	3%	4,790	4.81	4%
2015	100,134	99.59	4.5%	4,857	4.83	15.0%	23,324	23.20	10.6%	11,192	11.13	6.5%	5,966	5.93	4%	5,114	5.09	4%
2016	101,570	99.99	4.9%	4,960	4.88	14.9%	23,869	23.50	11.0%	11,620	11.44	6.9%	6,152	6.06	4%	5,602	5.52	4%
2017	103,425	100.68	5.3%	5,112	4.98	15.2%	24,432	23.78	11.5%	n/a	n/a	n/a	6,644	6.47	5%	6,026	5.87	4%

Source: Cecil B Sheps Center for Health Services Research. NC Health Professionals Data System. Choose a Profession, then Download Data. <https://nchealthworkforce.sirs.unc.edu/>.

Dentists Accepting Medicaid/Health Choice

Since there are relatively few dentists in Davidson County, and many dental practices do not accept Medicaid, accessing dental care may be a particularly difficult problem for Medicaid enrollees. The following table lists dental practices in Davidson County that accepted Medicaid and/or NC Health Choice clients in 2015. Note that the data from the source named in the table has been supplanted recently by data accessed at the site *InsureKidsNow.gov* which can be accessed via a tool that can be searched by ZIP code or city. The tool is located at: <http://www.ncdhhs.gov/dma/dental/dentalprov.htm>.

**Table 68. Davidson County Dentists Accepting Medicaid/Health Choice Clients
(As of February 2, 2015)**

Provider Name/Practice Name	Location	Medicaid/ Health Choice	Currently Accepting New Medicaid Clients	Currently Accepting New Health Choice Clients
Madeline Abudu/Davidson County Health Dept	Lexington	Medicaid	Yes	
Ltanya Bailey	Denton	Medicaid	Yes	
Terry Bowman	Denton	Both	Yes	No
Diane Bundy/Smith Bundy and Fisher DDS	Thomasville	Medicaid	No	
Pamela Darr	Thomasville	Both	No	No
Gerald Fisher/Smith Bundy and Fisher DDS	Thomasville	Medicaid	No	
Sarah Frye/Sarah Frye DDS PA	Lexington	Both	Yes	Yes
Melanie Hairston/J. Mark Oliver DDS	High Point	Medicaid	No	
Anthony Hoang/Anthony Hoang DMD PLLS	Lexington	Both	Yes	No
Charles Hoover	Lexington	Both	Yes	Yes
Carolina North/North Carolina Baptist Hospital	Winston Salem	Medicaid	Yes	
John Oliver/J. Mark Oliver DDS	High Point	Medicaid	No	
Daniel Siceloff	Lexington	Both	Yes	Yes
Edward Smith/Smith Bundy and Fisher DDS	Thomasville	Medicaid	No	
Michael Strohecker/Anthony Hoang DMD PLLS	Lexington	Medicaid	No	
Sheri Thomas/Davidson County Health Dept	Lexington	Medicaid	Yes	
Nikki Tucker/J. Mark Oliver DDS	High Point	Both	Yes	No

Source: NC Division of Medical Assistance, Medicaid, Find a Doctor, NC Medicaid and NC Health Choice Dental Provider Lists;
<http://www.ncdhhs.gov/dma/dental/dentalprov.htm>.

Lower ratios alone are not, by themselves, an indicator of substandard health care access, since Davidson County is adjacent to Forsyth County, home to two major medical centers, and surrounding counties house numerous private provider practices.

Hospitals

Novant Health Thomasville Medical Center

The city of Thomasville, in the northern part of Davidson County, is home to Novant Health Thomasville Medical Center, is a not-for-profit hospital offering advanced treatments for residents of Davidson County and surrounding communities. Over 200 physicians have privileges at Thomasville Medical Center, including hospitalists available 24/7 to treat the urgent medical needs of hospitalized patients. The hospital has 101 general beds, and an additional 45 beds in its Geriatric Behavioral Health unit designed to meet the unique medical needs of persons age 55 and older (28).

Wake Forest Baptist Health Lexington Medical Center

Lexington, in the center of Davidson County, is home to Wake Forest Baptist Health Lexington Medical Center. As part of Wake Forest Baptist Health, Lexington Medical Center is a not-for-profit facility which operates 94 acute care beds and serves as a satellite provider of Wake Forest Baptist Health specialty services including digestive health, ENT Head and Neck surgery among others. In addition, the medical center operates 14 physician practices and a public pharmacy (29).

Davidson County Hospital Utilization Data

Both hospitals in Davidson County provided the CHNA consultant with proprietary, de-identified emergency department and inpatient hospital discharge data for 2015, 2016 and 2017, with the condition that no data be specifically linked to either hospital. For that reason, the tables below present aggregated discharge data from the two hospitals. Comparative county population data provided is from the 2016 American Community Survey.

Regarding **emergency department (ED) discharges** shown in the following two tables:

- Females represented 56.8% of all ED discharges in the three-year period cited. Females represented 51.2% of the overall Davidson County population at that time.
- Males represented 43.2% of all ED discharges during the period cited, while composing 48.8% of the county population.
- Children under the age of 18 represented 17.9% of all ED discharges during the period cited, while composing 23.9% of the county population.
- Adults age 18-64 composed 68.0% of all ED discharges during the period cited, while representing 61.7% of the Davidson County population.
- Geriatric adults age 65 or older composed 14.1% of ED discharges, and composed 14.4% of the county population.
- Whites composed 76.2% of all ED discharges, while composing representing 86.5%% of the Davidson County population.
- African-Americans/Blacks are greatly over-represented in the ED: this group represented an average of 17.6%% of all ED discharges in the period cited, while composing 9.0% of the overall Davidson County population.
- Although the category is somewhat muddled by identifier conventions that differ from hospital to hospital, Hispanic/Latinos represented an average of 4.8% of all ED discharges, while composing 6.7% of the overall Davidson County population in 2016.

**Table 70. Emergency Department Discharges by Gender and Age Group
Davidson County Hospitals**

No. ED Discharges by Gender and Age Group						
Year	No. by Gender		No. by Age Group			Total No. Annual Discharges
	Females	Males	< 18	18-64	≥ 65	
2015	31,416	24,067	10,361	37,542	7,580	55,483
2016	31,052	23,888	9,954	37,358	7,630	54,942
2017	31,768	23,837	9,410	37,938	8,258	55,606
Total	94,236	71,792	29,725	112,838	23,468	166,031

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center.

**Table 71. Emergency Department Discharges by Race/Ethnicity
Davidson County Hospitals**

No. ED Discharges by Racial Group						
Year	Am. Indian/ Alaskan Native	Asian/ Native Hawaiian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Total No. Annual Discharges
2015	351	623	9,519	42,577	2,531	55,483
2016	303	495	9,714	41,885	2,615	54,942
2017	307	505	10,067	42,005	2,759	55,606
Total	961	1,623	29,300	126,467	7,905	166,031

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center.

Regarding **inpatient (IP) hospitalization discharges** shown in the next two tables:

- Females represented an average of 65.6% of all IP discharges over the period cited, while composing 51.6% of the overall Davidson County population.
- Males composed 34.4% of all IP discharges while representing 48.8% of the county population.
- Children under the age of 18 represented 22.1% of all IP discharges during the period cited, while composing 23.9% of the county population.
- Adults age 18-64 composed 46.7% of all IP discharges during the period cited, while representing 61.7% of the Davidson County population.
- Geriatric adults age 65 or older composed 31.2% of IP discharges, and composed 14.4% of the county population.
- Whites represented an average of 75.0% of all IP discharges, while composing 86.5% of the overall Davidson County population in 2016.
- African-Americans/Blacks represented an average of 11.4% of all IP discharges, while composing 9.0% of the overall Davidson County population in 2016.
- Although the category is somewhat muddled by identifier conventions that differ from hospital to hospital, Hispanic/Latinos represented an average of 6.1% of all IP discharges, while composing 6.7% of the overall Davidson County population in 2014.
- The Adult age group (18-64 years) age group represented an average of 45% of all IP discharges, while composing approximately 58% of the overall county population.

**Table 72. Inpatient Hospitalization Discharges by Gender and Age Group
Davidson County Hospitals**

No. IP Discharges by Gender and Age Group						
Year	No. by Gender		No. by Age Group			Total No. Annual Discharges
	Females	Males	< 18	18-64	≥ 65	
2015	2,979	1,516	969	2,060	1,466	4,495
2016	2,896	1,514	986	2,058	1,366	4,410
2017	2,740	1,481	949	2,014	1,258	4,221
Total	8,615	4,511	2,904	6,132	4,090	13,126

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center.

**Table 73. Inpatient Hospitalization Discharges by Race/Ethnicity
Davidson County Hospitals**

No. IP Discharges by Racial Group						
Year	Am. Indian/ Alaskan Native	Asian/ Native Hawaiian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Total No. Annual Discharges
2015	15	43	538	3,500	259	4,495
2016	13	38	500	3,255	276	4,410
2017	15	45	452	3,086	266	4,221
Total	43	126	1,490	9,841	801	13,126

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center.

Davidson County Health Department

The Davidson County Health Department began in 1916 when the county first appointed a health officer. Since that time, the Davidson County Health Department's mission has been to assess, protect, and promote the quality of life for all people within the county. The agency carries out this mission by identifying and reducing health risks, preventing the spread of diseases, fostering healthy lifestyles through education, promoting a safe and healthful environment, and providing quality healthcare services in partnership with the community. The health department houses five distinct sections: Administration, Personal Health, Environmental Health, WIC, and Health Education. The health department is located at 915 Greensboro Street in Lexington (30).

Federally-Qualified Health Center

Currently Gaston Family Health Services (dba Davidson Health Services, Lexington and Thomasville) is the only registered FQHC in Davidson County. Davidson Health Services also operates a general dentistry clinic in Lexington (31). Davidson Health Services is a sister organization of Davidson Medical Ministries.

Davidson Medical Ministries Clinic

Davidson Medical Ministries Clinic (DMMC) is a low-cost clinic located in Lexington that meets the needs of the uninsured and the underinsured of Davidson County. It is a private, not-for-profit organization; it is not a government agency, nor is it a part of the Department of Social Services or the Health Department. Its services are not free. Before services can be provided, all clients must provide necessary paperwork to determine their eligibility. If a patient's household income is under 100% of the Federal Poverty Level, DMMC charges a \$10 administrative fee for medical and dental visits. If household income is between 101-200% of the Federal Poverty Level, the patient pays on a sliding scale fee, paying the \$10 administrative fee upon arrival and being billed subsequently on the scale for the remainder of the cost. Those who have Medicaid, Medicare or private insurance will be seen by Davidson Health Services, a sister organization of Davidson Medical Ministries. DMMC provides primary medical and dental care but does not treat emergency situations (32).

Davidson County Emergency Medical Services

Established in 1967, Davidson County EMS (DCEMS) was the first county government-funded service of its type in NC. It has grown from a small, basic life support provider into a high-volume, EMT-Paramedic Service. DCEMS was awarded Model System Status by the NC Office of EMS in 2002 and was the first EMS program in the Piedmont Triad to achieve this title. DCEMS operates from seven different locations within the county and is funded by general tax revenues.

DCEMS provides 24 hour-a-day advanced life support, pre-hospital emergency medical care for a population of over 162,000 in a 582 square mile area. With an annual emergency call volume in excess of 23,000 responses, DCEMS operates a minimum of 10 Advanced Life Support Ambulances, 1 Advanced Life Support Quick Response Vehicle (12 hours) each day in southern Davidson County, and 1, 24-hour ALS Quick Response Vehicle staffed by the Operations Supervisor.

Separated into 3 divisions (Administrations, Operations, and Training), the Department has approximately 86 full-time career employees and 50 part-time career employees. The Operations Division employees work a 12-hour shift schedule. These shifts are either straight days or straight nights. The Administration employees work an 8-hour schedule (33).

Long-Term Care Facilities

The NC Division of Aging and Adult Services is the state agency responsible for planning, monitoring and regulating services, benefits and protections to support older adults, persons

with disabilities, and their families. Among the facilities under the agency's regulatory jurisdiction are nursing homes, family care homes, and adult care homes. Each category of long-term care is discussed subsequently, but the next table summarizes numbers of facilities in each category in Davidson County.

**Table 74. NC-Licensed Long-Term Care Facilities in Davidson County
(June 2018)**

Facility Type/Name	Location	# Beds SNF (ACH) ¹	NC ACLS Star Rating (of 5)
Nursing Homes/Homes for the Aged			
Abbots Creek Center	Lexington	64 (0)	
Accordius Health at Lexington	Lexington	106 (0)	
Alston Brook	Lexington	100 (0)	
Curis at Thomasville Transitional Care and Rehab Center	Thomasville	120 (0)	
Lexington Health Care Center	Lexington	90 (10)	
Mountain Vista Health Park	Denton	60 (60)	
Piedmont Crossing	Thomasville	114 (20)	
Pine Ridge Health and Rehabilitation Center	Thomasville	140 (14)	
Adult Care Homes/Homes for the Aged			
Brookdale Lexington/Southern Assisted Living LLC	Lexington	76	3
Brookstone Retirement Center/Brookstone Rest Home & Retirement Center Inc.	Lexington	115	4
Grayson Creek of Welcome/Landmark Assisted Living LLC	Lexington	75	3
Hilltop Living Center/Plemmons Enterprises, Inc	Linwood	65	3
Mallard Ridge Assisted Living/Mallard Ridge LLC	Clemmons	100	3
Spring Arbor of Thomasville/The Oaks of Thomasville II LP	Thomasville	62	4
Family Care Homes			
Kateland Family Care Home/Southland Village LLC	Lexington	6	3
The Clinard House/The Almost Home Group LLC	Thomasville	6	3
The Lyman House/The Almost Home Group LLC	Thomasville	6	3
The Perryman House/The Almost Home Group LLC	Thomasville	4	3
Westanna Family Care/Southland Village LLC	Lexington	6	n/a

¹ - SNF (ACH) = Maximum number of nursing or adult care home beds for which the facility is licensed.

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Adult Care Homes, Family Care Homes, Nursing Facilities (by County); <https://www2.ncdhhs.gov/dhsr/reports.htm>.

Nursing Homes

Nursing homes are facilities that provide nursing or convalescent care for three or more persons unrelated to the licensee. A nursing home provides long term care of chronic conditions or short-term convalescent or rehabilitative care of remedial ailments, for which medical and nursing care are indicated. All nursing homes must be licensed in accordance with state law by the NC Division of Health Service Regulation Licensure Section (34).

At the time this report was prepared, there were eight state-licensed nursing homes in Davidson County, offering a total of 794 beds.

Adult Care Homes and Family Care Homes

Adult care homes are residences for aged and disabled adults who may require 24-hour supervision and assistance with personal care needs. People in adult care homes typically need a place to live, some help with personal care (such as dressing, grooming and keeping up with medications), and some limited supervision. Medical care may be provided on occasion but is *not* routinely needed. Medication may be given by designated, trained staff. These

homes vary in size from *family care homes* of two to six residents to *adult care homes* of more than 100 residents. These homes were previously called "domiciliary homes," or "rest homes." The smaller homes, with two to six residents, are still referred to as family care homes. In addition, there are Group Homes for Developmentally Disabled Adults, which are licensed to house two to nine developmentally disabled adult residents (35).

Adult care homes are different from nursing homes in the level of care and qualifications of staff. They are licensed by the state Division of Health Service Regulation (Group Care Section) under State regulations and are monitored by Adult Home Specialists within county departments of social services. Facilities that violate licensure rules can be subject to sanctions, including fines.

Effective in January 2009 the state of NC implemented a Star Rating system to help consumers seeking a long-term placement for a loved one in an adult care home or family care home. The North Carolina Star Rated Certificate program for assisted living facilities was established in response to requests of NC citizens for increased availability of public information regarding the care provided in adult care facilities. The rules are based on General Statute 131D-10 and were created by the NC Medical Care Commission with input from residents and families in adult care homes, advocacy groups, providers, and others. The ratings (from a low of one to a high of five) are based on once-a-year inspections that typically last two or three days. Note that the ratings may not reflect changes in the facility's care and services that have occurred since that inspection date (36).

At the time this report was prepared, there were six state-licensed adult care homes in Davidson County (none of which was rated "5-star"; all are either "4-star" or "3-star" facilities) and five state-licensed family care homes (all of which were either rated "3-star" or were unrated). The Adult Care Homes offer a total of 493 beds, and the family care homes a total of 28 beds.

Alternatives to Institutional Care

An alternative to institutional care preferred by many disabled and senior citizens is to remain at home and use community in-home health and/or home aide services. This report prefers to cite only those in-home health and/or home aide services that are licensed by the state of NC. Note that there may be additional providers in Davidson County that refer to themselves as "home health service (or care) providers" that are *not* licensed by the state and are not named in this report. Note that this section also includes hospice services in Davidson County.

Home Care, Home Health and Hospice Services

The table below lists the licensed home care, home health, and hospice services in Davidson County.

**Table 75. Licensed Home Care and Hospice Services in Davidson County
(June 2018)**

Facility Name	Location	Services
Amblecare Inc	Lexington	Home Care Only, Accredited
Amedisys Home Health Care	Thomasville	Home Care Only, Accredited. Home Health Only, Accredited.
BAYADA Home Health Care Inc	Lexington	Home Care Only, Accredited. Home Health Only, Accredited.
Continuum Home Care of Davidson	Thomasville	Home Care Only
Davidson Co. Dept of Senior Services	Lexington	Home Care Only
Encompass Home Health of North Carolina	Lexington	Home Care Only, Accredited. Home Health Only, Accredited.
Home Instead Senior Care	Lexington	Home Care Only
Home Sweet Home Inc.	Lexington	Home Care Only
Hospice of Davidson County Inc	Lexington	Hospice Facility, Accredited
Hospice of Davidson County/Hinkle Hospice House	Lexington	Hospice Facility, Accredited (8 inpatient beds, 4 residents beds)
Hospitality Home Care	Thomasville	Home Care Only
Liberty Home Care	Thomasville	Home Care Only, Accredited. Home Health Only, Accredited.
Liberty Medical Specialties, Inc	Thomasville	Home Care Only, Accredited
Lincare, Inc	Lexington	Home Care Only, Accredited
Piedmont Crossing	Thomasville	Home Care Only
Piedmont Home Care	Lexington	Home Care Only, Accredited. Home Health Only, Accredited.
Providence Senior Care	Thomasville	Home Care Only

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Home Care Only, Home Care with Hospice, Home Health Only, and Home Health with Hospice Facilities (by County); <http://www.ncdhhs.gov/dhsr/reports.htm>.

Davidson County Department of Social Services

DCDSS provides limited home management and respite services to disabled and elderly adults, families, and children who are unable to perform these tasks themselves. Social Workers assess and evaluate each adult to develop and implement a service plan to meet the needs. This can include locating and contacting other providers as well as coordinating and monitoring the delivery of services. If a client is eligible for full-coverage Medicaid, they may be eligible for financial assistance for appropriate services that will maintain their health, safety, and well-being while allowing them to remain in their home (37).

Adult Day Care/Adult Day Health Centers

Adult day care provides an organized program of services during the day in a community group setting for the purpose of supporting the personal independence of older adults and promoting their social, physical and emotional well-being. Also included in the service, when supported by funding from the Division of Aging and Adult Services (NCDAAS), are no-cost medical examinations required for admission to the program. Nutritional meals and snacks, as appropriate, are also expected. Providers of adult day care must meet State Standards for Certification, which are administrative rules set by the state Social Services Commission. These standards are enforced by the office of the Adult Day Care Consultant within the NCDAAS. Routine monitoring of compliance is performed by Adult Day Care Coordinators located at county departments of social services. Costs to consumers vary, and there is limited funding for adult day care from state and federal sources (38).

Adult day health services are similar programs to adult day care programs that they provide an organized program of services during the day in a community group setting to support the personal independence of older adults and promote their social, physical, and emotional well-being. In addition, providers of adult day health services, as the name implies, offer health care

services to meet the needs of individual participants. Programs must also offer referral to and assistance in using other community resources, and transportation to and from the program may be provided or arranged when needed and not otherwise available. Also included in the service, when supported by funding from the NCDAAS, are medical examinations required for individual participants for admission to day health care services and thereafter when not otherwise available without cost. Food and services to provide a nutritional meal and snacks as appropriate are expected as well.

The NCDAAS listed two adult day health centers for Davidson County at the time this report was developed: The Life Center of Davidson County, Inc., and Carolina SeniorCare (39).

The Life Center of Davidson County

The purpose of The Life Center of Davidson County, Inc. is to provide high quality day-time care to older and impaired adults, and to help improve the quality of life for both the participant and their caregivers by offering a safe supportive environment, support, relief, respite and counseling. The Life Center serves adults in the Lexington, Thomasville, Denton, and Davidson County area. The Life Center provides supervised daytime care (7:15 am until 5:30 pm, Monday through Friday) in a safe and secure home-like setting by trained professionals

The Life Center provides a range of services including:

- Nutritious meals and snacks
- Assistance in personal care (bathing, shaving, assistance in the restroom, etc.)
- Assistance with medications—including monitoring of blood pressure and blood sugar, injections, breathing treatments, etc.
- Socialization with other seniors (40).

Carolina SeniorCare

Carolina SeniorCare is a not-for-profit provider of services under the sponsorship of United Church Homes and Services (UCHS), a Newton, NC-based ministry offering senior services and senior housing for more than 40 years. Carolina SeniorCare is committed to the wellness of seniors and to enhancing quality of life. Carolina SeniorCare offers the PACE (Program of All-inclusive Care for the Elderly) program to the community. PACE is a comprehensive health care program designed to address the desires of elders who wish to remain in their community while receiving needed medical and supportive services. PACE offers a continuum of care to seniors with chronic care needs while encouraging independence in their own homes for as long as possible. The PACE Day Center, located in Lexington, is open five days a week; it provides a transportation service. The center provides adult day care offering nursing; physical, occupational and recreational therapies; meals; nutritional counseling; social work and personal care (41).

Mental Health Services and Facilities

The unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS). In NC, the mental health system is built on a system of Local Management Entities (LMEs). LMEs are agencies of local government—area authorities or county programs—that are responsible for managing, coordinating, facilitating and monitoring the provision of mental health, developmental disabilities and substance abuse services in the catchment area served. LME

responsibilities include offering consumers 24/7/365 access to services, developing and overseeing providers, and handling consumer complaints and grievances (42).

At the time this report was prepared, the LME for Davidson County was Cardinal Innovations Healthcare, which also functions as a managed care organization (MCO). Cardinal serves a total of 20 counties in central NC (43). Services offered by the Cardinal LME/MCO include:

- Community-based support
- Crisis support
- Family and caregiver support
- Financial support
- Goods, equipment and supplies
- In-home support
- Out-of-home support
- Recovery support
- Residential support (44).

While Cardinal Innovations Healthcare Solutions is headquartered in Charlotte, NC, it maintains a 24-hour 1-800 access/crisis number. It also provides an on-line provider directory to help prospective patients understand their local provider options.

At more than 750 pages Cardinal LME/MCO's provider directory is too lengthy to reproduce in this report but can be accessed at the following Provider Search website:

<https://www.cardinalinnovations.org/Members/Provider-Search>. It should be noted that providers listed in this directory can be located anywhere in the Cardinal service area.

(See also the discussion of Mental Health in *Chapter Four: Health Statistics* of this report for a discussion of Mental Health system reform in NC.)

A list of NC-licensed mental health *facilities* (not providers) *physically located* in Davidson County, is shown in the following table. Most of these facilities provide day activities or supervised living services for the developmentally disabled, but other services include adult vocational programs and sheltered workshops, substance abuse treatment and psychosocial rehabilitation.

**Table 76. NC-Licensed Mental Health Facilities (G.S. 122C) in Davidson County
(June 2018)**

Name of Facility/Operator	Location	Category
AFL - Garrison/Omni Visions, Inc	Lexington	Supervised Living/Alternative Family Living
Ambleside Adult Day Program/Ambleside Inc	Lexington	Day Activity
Arlington House	Lexington	Supervised Living DD Adult
C.F. Marketing/C.F. Marketing LLC	Lexington	Adult Developmental Vocational Programs
Community Living Services of Lexington	Lexington	Adult Developmental Vocational Programs
Davidson #1/The ARC of Davidson County	Lexington	Supervised Living DD Adult
Davidson #2/The ARC of Davidson County	Lexington	Supervised Living DD Adult
Davidson #3/The ARC of Davidson County	Lexington	Supervised Living DD Adult
Davidson #4/The ARC of Davidson County	Lexington	Supervised Living DD Adult
Davidson Crisis Center/Daymark Recovery Services Inc	Lexington	Facility Crisis Services for all Disability Groups
Daymark Davidson Day Treatment at Pickett Elementary	Lexington	Day Treatment
Daymark Recovery Services - Davidson Center	Lexington	SA Intensive and Comprehensive Outpatient Treatments
Dream Makers Assisted Living Services LLC	Lexington	Supervised Living DD Adult
LMS Day Treatment/Daymark Recovery Services Inc	Lexington	Day Treatment
Lexington IOP/Nazareth Children's Home	Lexington	Substance Abuse Intensive Outpatient Program
Lexington Treatment Associates/Maric Healthcare LLC	Lexington	Outpatient Methadone
Marajo Place/Alberta Professional Services Inc	Winston-Salem	Supervised Living/Alternative Family Living
Mayfair/Ambleside, Inc.	Lexington	Supervised Living DD Adult
McDaniel AFL/Omni Visions Inc	Linwood	Supervised Living/Alternative Family Living
Passageway Psychosocial Rehabilitation Program/RHA Health Services Inc	Lexington	Psychosocial Rehabilitation
Path of Hope/Path of Hope Inc	Lexington	Residential Treatment/Rehabilitation, Day Treatment for SA, SA Intensive and Comprehensive Outpatient Treatment Programs
Path of Hope Inc.	Lexington	Residential Treatment/Rehabilitation
Ridgewood/Ambleside Inc	Lexington	Supervised Living DD Adult
Scotthurst I & II/Howell's Child Care Center Inc	Winston-Salem	Supervised Living DD Adult
The Arc of Davidson County - Bridges	Lexington	Day Activity
The Green Center of Growth and Development/Brenda M. Green	Lexington	Substance Abuse Intensive Outpatient Program
The Workshop of Davidson	Lexington	Adult Developmental Vocational Programs, Day Activity
The Workshop of Davidson - Group Home #1 - Women	Lexington	Supervised Living DD Adult
The Workshop of Davidson - Group Home II (Men)	Lexington	Supervised Living DD Adult
Thomasville Treatment Associates/Treatment Centers LLC	Thomasville	Outpatient Methadone
Total Access Care Liberty/Triad Medical Group PA	Thomasville	Supervised Living DD Minor

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Mental Health Facilities (G.S. 122C) (by County); <https://www2.ncdhhs.gov/dhsr/data/mhlist.pdf>.

Other Healthcare Resources

Other Healthcare Facilities

- As of June 2018, there was one independent, free-standing ambulatory surgical facility, two licensed cardiac rehabilitation facilities, and no licensed nursing pools in or proximal to Davidson County, as shown below.

**Table 77. Other NC-Licensed Healthcare Facilities In or Near Davidson County
(June 2018)**

Type and Name of Facility	Location
Licensed Ambulatory Surgical Facilities	
Digestive Health Specialists, PA	Winston-Salem
Licensed Cardiac Rehabilitation Facilities	
Lexington Medical Center	Lexington
Thomasville Medical Center Cardiac Rehabilitation	Thomasville
Licensed Nursing Pools	None

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Licensed Ambulatory Surgical Facilities, Cardiac Rehabilitation Facilities and Nursing Pools (by County); <https://www2.ncdhhs.gov/dhsr/reports.htm>.

- There were two Medicare-approved dialysis facilities in Davidson County as of June 2018; neither of them offers shifts after 5:00 PM.

Table 78. Medicare-Approved Dialysis Facilities in Davidson County (June 2018)

Facility	Location	Features
Thomasville Dialysis Center of Wake Forest University	Thomasville	In-center hemodialysis; no shifts after 5:00pm
Lexington Dialysis Center of Wake Forest University	Lexington	29 hemodialysis stations; no shifts after 5:00pm; offers peritoneal dialysis, offers home hemodialysis training

Source: Dialysis Facility Compare, <http://www.Medicare.gov/Dialysis/Include/DataSection/Questions>.

Recreational Facilities

The next table lists some of the public recreational facilities in Davidson County.

Table 79. Public Recreational Facilities in Davidson County

Category/Name	Location	Facilities/Programs
Parks and Recreational Facilities		
Hughes Park	Thomasville	Youth softball and baseball programs, baseball and softball fields, shelters, batting cages; soccer fields; disc golf; bike trail; walking trail; playground; concession stand; restrooms
Optimist Park	Thomasville	Youth football programs, football and soccer fields; walking trail; restrooms
Bombay Park	Denton	Baseball/softball field; tennis court; outdoor basketball court; pickleball court; sand volleyball court; picnic shelter; playground; splash pad
West Center Street Campus	Lexington	Main offices, meeting room; exercise and yoga classes offered; arts and crafts classes offered; Summer Day Camp; gymnasium; multi-purpose field; bocce courts; walking trail
Southmont Park	Lexington	Playground; baseball and softball field; outdoor basketball court; beach volleyball court; pickleball court; walking trail; splash pad; restrooms
Linwood Park	Lexington	Community shelter; baseball/softball field, batting cages; walking trail; restrooms
Boone's Cave Park	Lexington	Natural Heritage Site; 100 acres of forested hiking trails; picnic shelter; river access for fishing and canoeing
Lake Thom-A-Lex Park	Lexington	Picnic shelters; boat launches, kayak and canoe access and rental; floating piers; recreational fishing, bait shop (seasonally)
Yadkin River Park	Western Davidson County	Coming soon

Source: Davidson County, NC; Parks and Recreation; <https://www.co.davidson.nc.us/338/Parks-Recreation>.

Note: Over the summers, the Parks and Recreation Department arranges for the public to have access to the playgrounds at several local elementary schools: Brier Creek, Davis Townsend, Denton, Southwood, Tyro and Welcome.

CHAPTER FOUR: HEALTH STATISTICS

METHODOLOGY

Routinely collected mortality and morbidity surveillance data and behavior survey data can be used to describe—and compare—the health status of communities. Briefly, mortality refers to death; morbidity refers to illness or disability among the living. These data, some of which are readily available in the public domain, others of which are proprietary (e.g., hospital discharge data) typically use standardized definitions and codes, thus allowing comparisons among county, state and national figures. There is, however, some error associated with each of these data sources. Surveillance systems designed to track morbidity, for communicable diseases and cancer diagnoses for instance, rely on reports submitted by health care facilities across the state and are likely to miss many cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

Understanding Health Statistics

Mortality

Mortality, or the rate of death, is calculated by dividing the number of deaths due to a specific disease in a defined period of time by the size of the population being measured in the same time period. Mortality typically is described as a rate, usually presented as number of deaths per 100,000 people. Mortality rates are readily available since the underlying (or primary) cause of death is routinely reported on death certificates, the submission of which is usually universal. However, some error can be associated with cause-of-death classification, since it is sometimes difficult to choose a single underlying cause of death from potentially many co-occurring conditions.

Mortality rate by cause is calculated according to the following formula:

$$(\text{number of deaths due to a cause/population}) \times 100,000 = \text{deaths per 100,000 people}$$

Age-adjustment

Many factors can affect the risk of death, including race, gender, occupation, education and income. One of the most significant factors is age, because the risk of death inevitably increases with age; that is, as a population ages, its collective risk of death increases. Therefore, an older population will automatically have a higher overall death rate. At any one time some communities have higher proportions of “younger” people, and others have a higher proportion of “older” people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professionals responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NCSCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are preferred for comparing health data from one population or community to another and have been used in this report whenever available.

Aggregate Data

Another convention typically used in the presentation of health statistics is *aggregate data*, which combines annual data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-year data consisting of relatively few cases or deaths. The calculation is performed by dividing the number of cases or deaths due to a particular disease over a period of years by the sum of the size of the population being measured for each of the years in the same period.

Morbidity

Morbidity as used in this report refers generally to the presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the living population. Morbidity data usually is presented as a percentage, or a count, but not a rate. This report contains morbidity statistics from public domain sources, and, because the local hospital in Davidson County made de-identified hospital discharge data available to the consultant, the non-fatal burden of disease can further be described by hospital utilization figures.

Prevalence

Prevalence, which describes the extent of morbidity, refers to the number of existing cases of a disease or health condition in a population at a defined point in time or during a period of time. Prevalence expresses a proportion, not a rate. Typically, prevalence data, especially local prevalence data, underestimates the true extent of a disease in the population, since individuals who do not seek medical care or who are diagnosed outside the target jurisdiction may not be captured by the measure. Note also that decreasing hospital discharge rates do not necessarily indicate decreasing prevalence; rather they may be a result of a lack of access to hospital care.

Incidence

Incidence is the population-based rate at which *new cases* of a disease occur and are diagnosed. It is calculated by dividing the number of newly diagnosed cases of a disease or condition during a given period by the population size during that period. Typically, the resultant value is multiplied by 100,000 and is expressed as cases per 100,000; sometimes the denominator is a smaller number, such as 10,000.

Incidence rate is calculated according to the following formula:

$$(\text{number of new cases/population}) \times 100,000 = \text{new cases per 100,000 people}$$

The incidence rates for certain diseases, such as cancer, are simple to obtain, since data on newly discovered cases is routinely collected by the NC Central Cancer Registry. However, diagnoses of other conditions, such as diabetes or heart disease, are not normally reported to central data-collecting agencies, so accurate incidence data on these conditions is rare.

Trends

Data for multiple years is included in this report wherever possible. Since comparing data on a year-by-year basis often can yield very unstable trends due to small numbers of cases, events or deaths per year (see below), the preferred method for reporting incidence and mortality data is long-term trends using the age-adjusted, multi-year aggregate format. Most trend data used in this report is of that type.

Small Numbers

Year-to-year variance in small numbers of events can make dramatic differences in rates that can be misleading. For instance, an increase from two events one year to four the next could be statistically insignificant in a population sense but result in a calculated rate increase of 100%. Aggregating annual counts over a five-year period before calculating a rate is one method used to ameliorate the effect of small numbers. Sometimes even aggregating data is not sufficient, so the NCSCHS recommends that all rates based on fewer than 20 events—whether covering an aggregate period or not—be considered “unstable” and interpreted only with caution. In recent years, NCSCHS has suppressed reporting data (e.g., mortality rates) based on fewer than 20 events in a five-year aggregate period. (Other state entities that report health statistics may use their own minimum reporting thresholds.) To assure that unstable health data do not become the basis for local decision-making, this author makes every effort to highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period and on 10 or more events in a single year. However, in smaller jurisdictions it may be necessary to use unstable figures in order to have any data at all to report. Where these exceptions occur, the narrative will highlight the potential instability of the data being discussed.

Describing Difference and Change

In describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or location—both of which appear frequently in this report—it is useful to apply the concept of percent difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the scope or significance of the difference or change. Converting the amount of difference or change to a *percent* takes into account the relative size of the numbers that are changing in a way that simple subtraction does not and makes it easier to grasp the meaning of the change.

For example, there may be a rate for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. Although the same, these simple numerical differences are not of the same significance in both instances. In the first example, converting the 6-point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6-point difference to a percent yields a relative change factor of 2.8%; that is, the smaller number in the comparison increased by a relatively small fraction. In these examples the application of percent makes it very clear that the difference in the first example is of a far greater degree than the difference in the second example. This document uses percentage almost exclusively to

describe and highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.).

Behavioral Risk Factor Surveillance System (BRFSS)

Davidson County residents participate in the state's annual Behavioral Risk Factor Surveillance System (BRFSS) Survey, as part of an aggregate 35-county sample that encompasses the entire middle third of the state ("Piedmont North Carolina"). It is not possible to isolate survey responses from Davidson County BRFSS participants without oversampling the county, which rarely occurs. Since the aggregate regional data covers such a diverse area, the results cannot responsibly be interpolated to describe health in Davidson County. As a result, BRFSS data will not be used in this document *except* for local BRFSS data statistically manipulated by the CDC to yield a county-level *estimate*.

Hospital Data

There are two hospitals in Davidson County: Wake Forest Baptist Health Lexington Medical Center in Lexington, and Novant Thomasville Medical Center in Thomasville. Both hospitals provided the consultant with de-identified emergency department and inpatient discharge data that described the discharged patients by demographic characteristics (gender, age and racial/ethnic group), named the primary payer of behalf of each patient, and provided the primary diagnosis associated with the patient according to official ICD (International Classification of Disease) or DRG (diagnosis-related group) code for the visit. ICD codes are used world-wide; DRG codes are unique to the US. The hospital data provided was specific to Davidson County residents, and carried no personal identifiers such as name, address, phone number, or zip code. By professional agreement, the data from both hospitals were combined into one data set. Demographic stratification was applied to the data to describe groups that used these hospital services and to determine whether utilization patterns matched the distribution of the stratified groups in the overall Davidson County population. The diagnosis codes were matched to the comparable diagnosis codes assigned to the fifteen leading causes of death (as well as to selected other diseases and health conditions) and used to help describe the burden of certain health conditions in the community.

Final Health Data Caveat

Some data that is used in this report may have inherent limitations, due to sample size, or its age, for example, but is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

HEALTH RANKINGS

America's Health Rankings

Each year for more than 20 years, America's Health Rankings™, a project of United Health Foundation, has tracked the health of the nation and provided a comprehensive perspective on how the nation—and each state—measures up. America's Health Rankings is the longest running state-by-state analysis of health in the US.

America's Health Rankings™ are based on several kinds of measures. The table below shows where NC stood in the 2018 rankings relative to the “best” and “worst” states, and those states ranked on either side of NC, which was ranked 33rd. Note that first ranked (Utah) is best and 50th ranked (Louisiana) is worst. Since most Davidson County data in this report is compared to NC data, it is useful to understand, therefore, how NC compares to other states in the US.

Table 80. Rank of North Carolina in America's Health Rankings (2018)

Location	National Rank (Out of 50) ¹							
	Overall	Behaviors	Community and Environment	Policy	Clinical Care	All Determinants	All Outcomes	Overall
Utah	1	1	4	23	3	1	8	1
Florida	31 (tied)	33	32	28	34	34	22	31
North Carolina	33	32	45	9	9	27	36	33
Ohio	34	36	27	29	22	33	35	34
Louisiana	50	50	50	38	42	50	43	50

Source: United Health Foundation, 2018. America's Health Rankings; <https://www.americashealthrankings.org/>.

County Health Rankings

Building on the work of America's Health Rankings™, the Robert Wood Johnson Foundation, collaborating with the University of Wisconsin Population Health Institute, undertook a project to develop health rankings for the counties in all 50 states. In this project, each state's counties are ranked according to health outcomes and the multiple health factors that determine a county's health. Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment.

The following table presents the 2018 County Health Rankings™ for Davidson County and its comparator in terms of health outcomes and health factors; the table after that presents comparative detail.

- In 2018 Davidson County was ranked 64th in the state of NC in terms of health outcomes, due mostly to length of life, and 53rd in terms of health factors, in which category clinical care and physical environment contributed most to the lower rank.

It should be noted that the County Health Rankings serve a limited purpose, since the data on which they are based in some cases is outdated. Furthermore, comparing rankings from year to year may not be valid because the parameters used in the ranking algorithms change from time to time.

**Table 81. County Health Rankings
(2018)**

Location	County Rank (Out of 100) ¹							
	Health Outcomes			Health Factors				
	Length of Life	Quality of Life	Overall Outcomes Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	Overall Factors Rank
Davidson County	65	59	64	45	70	34	73	53
Randolph County	45	31	38	72	77	25	93	64

Source: County Health Rankings and Roadmaps, 2018. University of Wisconsin Population Health Institute; <http://www.countyhealthrankings.org/>.

**Table 82. County Health Rankings Details
(2018)**

Outcome or Determinate	Davidson	Randolph	NC County Average	Top US Performers ¹
Health Factors	64	38		
Length of Life	65	45		
Premature death	8,700	8,000	7,300	5,300
Quality of Life	59	31		
Poor or fair health	17%	17%	18%	12%
Poor physical health days	4	3.8	3.6	3.0
Poor mental health days	4.3	4.2	3.9	3.1
Low birthweight	10.0%	8.0%	9.0%	6.0%
Health Factors	53	64		
Health Behaviors	45	72		
Adult smoking	18%	20%	18%	14%
Adult obesity	30%	32%	30%	26%
Food Environment Index	7.3	7.6	6.4	5.6
Physical inactivity	28%	32%	24%	20%
Access to exercise opportunities	65%	55%	76%	91%
Excessive drinking	18%	17%	17%	13%
Alcohol-impaired driving deaths	33%	33%	31%	13%
Sexually transmitted infections	453.5	341.1	647.4	145.1
Teen births	34	38	29	15
Clinical Care	70	77		
Uninsured	13%	16%	13%	6%
Primary care physicians	3920:1	2270:1	1430:1	1030:1
Dentists	4710:1	3410:1	1830:1	1280:1
Mental health providers	1160:1	1140:1	460:1	330:1
Preventable hospital stays	58	59	49	35
Diabetic monitoring	89%	90%	89%	91%
Mammography screening	63%	66%	68%	71%
Social and Economic Factors	34	25		
High school graduation	83%	89%	86%	95%
Some college	58%	53.0%	66.0%	72%
Unemployment	4.8%	4.9%	5.1%	3.2%
Children in poverty	22%	21%	22%	12%
Income Equality	4.2	4.1	4.8	3.7
Children in single-parent households	33%	36%	36%	20%
Social associations	10.6	11.5	11.50	22.1
Violent crime	192	158	342	62
Injury deaths	76	83	68	55
Physical Environment	73	93		
Air pollution - particulate matter	10.2	9.8	9.1	6.7
Drinking water violations	No	Yes	n/a	n/a
Severe housing problems	15%	14%	17%	9%
Driving alone to work	85%	86%	81%	72%
Long commute - driving alone	32%	30%	31%	15%

Source: County Health Rankings and Roadmaps, 2018. University of Wisconsin Population Health Institute; <http://www.countyhealthrankings.org/app/north-carolina/2018/compare>.

¹ 90th percentile; i.e., only 10% are better

MATERNAL AND INFANT HEALTH

Pregnancy

The following definitions and statistical conventions will be helpful in understanding the data on pregnancy:

- Reproductive age = 15-44
- Total pregnancies = live births + induced abortions + fetal deaths at 20+ weeks gestation
- Pregnancy rate = number of pregnancies per 1,000 women of reproductive age
- Fertility rate = number of live births per 1,000 women of reproductive age
- Abortion rate = number of induced abortions per 1,000 women of reproductive age

Pregnancy, Fertility and Abortion Rates, Women Age 15-44

The following table presents total annual pregnancy, fertility and abortion rates for women age 15-44 for the period from 2013-2016, stratified by race/ethnicity.

- The *total pregnancy rate* in Davidson County was lower than the total pregnancy rate for NC in every year cited. The total pregnancy rate in Davidson County *increased* by 6% overall between 2013 and 2016. The highest pregnancy rates in Davidson County over the period cited occurred among Hispanic women.
- The *total fertility rate* in Davidson County was lower than the total fertility rate for NC in 2013, 2014 and 2015, but slightly higher in 2016. The total fertility rate in Davidson County *increased* by 4% overall between 2013 and 2016. The highest fertility rates in Davidson County occurred among Hispanic women.
- The *total abortion rate* in Davidson County was lower than the total abortion rate for NC throughout the period cited. The total abortion rate in Davidson County increased annually and was 22% higher in 2016 than in 2013. The highest abortion rates in Davidson County occurred among African American women.

Table 83. Total Pregnancy, Fertility and Abortion Rates, Ages 15-44, by Race (Single Years, 2013-2016)

Location	Females Ages 15-44											
	2013			2014			2015			2016		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Davidson County Total	63.3	58.3	4.9	65.2	59.4	5.2	65.4	59.5	5.4	67.0	60.7	6.0
White, Non-Hispanic	59.6	55.7	3.8	61.4	56.6	4.1	60.6	56.7	3.5	63.1	59.1	3.9
African American, Non-Hispanic	62.3	51.4	10.9	70.4	57.3	12.5	82.1	65.4	16.4	79.5	59.9	17.7
American Indian, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other, Non-Hispanic	77.1	71.8	n/a	86.9	80.1	n/a	81.2	62.2	n/a	54.3	46.1	n/a
Hispanic	96.9	90.6	n/a	90.0	84.8	n/a	87.3	80.1	n/a	88.0	80.8	n/a
Randolph County Total	67.1	61.0	5.3	68.1	62.0	5.5	67.4	60.8	5.9	68.9	62.7	6.0
White, Non-Hispanic	61.4	56.4	4.5	63.4	57.9	4.9	62.7	57.5	4.6	61.5	56.7	4.7
African American, Non-Hispanic	85.3	67.9	13.9	80.2	65.7	12.8	70.9	53.6	16.1	91.5	75.6	14.2
American Indian, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other, Non-Hispanic	74.1	66.7	n/a	81.7	76.7	n/a	113.8	84.1	n/a	103.7	95.4	n/a
Hispanic	91.9	85.9	n/a	88.1	83.0	n/a	84.3	79.8	n/a	93.9	86.1	7.2
State of NC Total	70.8	60.3	10.1	72.1	61.0	10.7	72.6	60.7	11.5	72.2	60.3	11.5
White, Non-Hispanic	61.8	55.4	6.1	63.5	56.5	6.6	63.4	56.3	6.8	63.0	56.1	6.6
African American, Non-Hispanic	79.0	59.7	18.6	79.5	59.4	19.4	81.3	58.7	21.9	76.4	57.4	21.3
American Indian, Non-Hispanic	71.5	62.9	8.2	69.9	61.1	8.5	74.3	63.2	10.4	70.3	60.2	9.7
Other, Non-Hispanic	79.4	69.5	9.5	82.4	72.0	10.1	79.7	68.6	10.9	80.2	69.9	9.9
Hispanic	98.6	87.9	10.3	98.4	87.0	10.9	98.4	87.1	10.7	100.0	87.3	12.2

Note: Bold type and/or "n/a" indicates an unstable rate based on a small number (fewer than 10 cases)

Source: NC Center for Health Statistics, County-level Data, Vital Statistics: Reported Pregnancies (single years as noted):

<https://schs.dph.ncdhhs.gov/data/vital.cfm>.

Pregnancy, Fertility and Abortion Rates, Women Age 15-19

The following table presents total annual pregnancy, fertility and abortion rates for girls age 15-19 (“teens”) for the period from 2013-2016, stratified by race/ethnicity. Note that rates based on below-threshold numbers of events were suppressed at the source, as indicated in the table by “n/a”.

- The total teen pregnancy rate in Davidson County fell by 17% between 2013 and 2016. Still, the county rate exceeded the state rate in every year cited except 2013.
- Statewide, the teen pregnancy rate fell by 20% over the period cited.
- Statewide, the teen pregnancy rate was highest among Hispanics in 2013 and 2014, and highest among American Indian non-Hispanics in 2016. Those two groups had the same rate in 2015.
- Statewide, the highest teen abortion rates occurred every year among African American girls.

Table 84. Total Pregnancy, Fertility and Abortion Rates, Ages 15-19, by Race (Single Years, 2013-2016)

Location	Females Ages 15-19											
	2013			2014			2015			2016		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Davidson County Total	34.4	29.9	4.3	36.4	32.8	n/a	31.3	26.3	5.0	28.7	25.2	n/a
White, Non-Hispanic	28.6	25.2	n/a	34.9	31.8	n/a	28.3	24.8	n/a	26.8	24.2	n/a
African American, Non-Hispanic	46.6	n/a	n/a	39.3	n/a	n/a	53.9	40.9	n/a	50.9	38.2	n/a
American Indian, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hispanic	63.7	59.5	n/a	45.2	38.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Randolph County Total	41.3	35.2	5.7	36.3	33.3	n/a	36.7	32.7	n/a	34.3	29.7	4.6
White, Non-Hispanic	40.5	35.1	n/a	31.4	29.3	n/a	34.4	30.5	n/a	28.8	24.6	n/a
African American, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
American Indian, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other, Non-Hispanic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hispanic	52.0	44.6	n/a	53.9	51.2	n/a	50.9	50.9	n/a	56.2	49.9	n/a
State of NC Total	35.2	28.4	6.6	32.3	25.9	6.2	30.2	23.5	6.4	28.1	21.8	6.1
White, Non-Hispanic	24.7	20.3	4.2	23.1	19.0	4.0	21.3	17.0	4.2	19.4	15.5	3.8
African American, Non-Hispanic	49.2	37.3	11.5	44.0	33.1	10.5	41.1	29.7	11.0	38.0	27.5	10.1
American Indian, Non-Hispanic	52.6	46.4	6.0	44.9	40.3	n/a	49.1	43.4	5.3	48.8	43.6	5.3
Other, Non-Hispanic	19.9	14.3	5.4	19.0	14.3	4.7	17.5	12.0	5.4	13.8	9.7	4.1
Hispanic	57.9	51.2	6.2	52.8	45.9	6.5	49.1	42.4	6.3	46.9	39.6	7.2

Note: Bold type and/or “n/a” indicates an unstable rate based on a small number (fewer than 10 cases)

Source: NC Center for Health Statistics, County-level Data, Vital Statistics: Reported Pregnancies (single years as noted):

<https://schs.dph.ncdhhs.gov/data/vital.cfm>.

Pregnancies among Teens (age 15-19) and Adolescents (under age 15)

The next two tables present data on the number of teen (ages 15-19) and adolescent (ages 14 and under) pregnancies in each jurisdiction in the period 2013-2016.

Table 85. Number of Teen Pregnancies (Ages 15-19) (Single Years, 2013-2016)

Location	Number of Pregnancies, Ages 15-19			
	2013	2014	2015	2016
Davidson County	169	184	162	148
Randolph County	181	160	165	157
State of NC	11,178	10,328	9,802	9,255

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. (Years, counties and age groups as indicated); <http://www.schs.state.nc.us/interactive/query/>.

**Table 86. Number of Adolescent Pregnancies (Age 14 and Under)
(Single Years, 2013-2016)**

Location	Number of Pregnancies, Age 14 and Younger			
	2013	2014	2015	2016
Davidson County	4	2	3	5
Randolph County	3	4	0	4
State of NC	182	169	157	135

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. (Years, counties and age groups as indicated); <http://www.schs.state.nc.us/interactive/query/>.

Pregnancy Risk Factors

High Parity and Short Interval Births

According to the NCSCHS, a birth is *high parity* if the mother is younger than 18 when she has had one or more births, or aged 18 or 19 and has had two or more births, or is 20-24 and has had four or more births. A *short-interval birth* involves a pregnancy occurring less than six months since the last birth. High-parity and short-interval pregnancies can be a physical strain on the mother and contribute to complicated pregnancies and/or poor birth outcomes.

The table below presents data on high-parity and short interval births for the aggregate period 2012-2016.

- Among its comparators, Davidson County and Randolph County had the same (and higher than NC) percentage of high-parity births among women under age 30; among women age 30 or older, Randolph County had the highest percentage.
- The percentage of short-interval births was highest among the comparators in Davidson County.

**Table 87. High Parity and Short Interval Births
(Single Five-Year Aggregate Period, 2012-2016)**

Location	High Parity Births				Short Interval Births	
	Mothers < 30		Mothers ≥ 30			
	No. ¹	% ²	No. ¹	% ²	No. ³	% ⁴
Davidson County	948	15.8	577	21.6	802	13.6
Randolph County	863	15.8	581	23.1	687	12.5
State of NC	51,558	14.2	52,363	22.0	48,786	12.2
Source:	a	a	a	a	b	b

¹ Number at risk due to high parity

² Percent of all births with age of mother in category indicated

³ Number with interval from last delivery to conception of six months or less

⁴ Percent of all births excluding 1st pregnancies

a - NC State Center for Health Statistics, County-level Data, County Health Data Book (2018), Pregnancy and Births, 2012-2016 Number At Risk NC Live Births due to High Parity by County of Residence; <https://schs.dph.ncdhhs.gov/data/databook/>.

b - NC State Center for Health Statistics, County-level Data, County Health Data Book (2016), Pregnancy and Births, 2012-2016 NC Live Births by County of Residence, Number with Interval from Last Delivery to Conception of Six Months or Less; <https://schs.dph.ncdhhs.gov/data/databook/>.

Smoking during Pregnancy

Smoking during pregnancy is an unhealthy behavior that may have negative effects on both the mother and the fetus. Smoking can lead to fetal and newborn death and contribute to low birth weight and pre-term delivery. In pregnant women, smoking can increase the rate of placental problems, and contribute to premature rupture of membranes and heavy bleeding during delivery (45).

The next table presents trend data on smoking during pregnancy for the period from 2011-2016.

- The percent of births to mothers who smoked during pregnancy in Davidson County was highest among the comparator jurisdictions in every year cited.
- The percent of births to mothers who smoked during pregnancy in Davidson County decreased by 18% overall between 2011 and 2016, but was still almost twice the state rate in 2016.

**Table 88. Smoking during Pregnancy Trend
(Single Years, 2011-2016)**

Location	Number and Percent of Births to Mothers Who Smoked Prenatally											
	2011		2012		2013		2014		2015		2016	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	366	19.2	300	18.0	320	18.6	315	17.9	276	15.8	278	15.7
Randolph County	223	14.2	213	13.0	235	14.8	236	14.7	221	14.2	234	14.6
State of NC	13,159	10.9	12,727	10.6	12,242	10.3	11,896	9.8	11,297	9.3	10,776	8.9

Source: NC State Center for Health Statistics, Vital Statistics, Volume 1 (2006 through 2016): Population, Births, Deaths, Marriages, Divorces, (geography as noted), Mother Smoked; <https://schs.dph.ncdhhs.gov/data/vital.cfm>.

Early Prenatal Care

Good pre-conception health and early prenatal care can help assure women the healthiest pregnancies possible.

The next table presents trend data on the percent of all women receiving prenatal care in the first trimester for the jurisdictions included in this report.

- The percent of pregnant women in Davidson County who received early prenatal care was highest among comparators in 2011-2014 and 2016. The net decrease in Davidson County for the period was 8%; the net decrease in NC was 3%.

**Table 89. Women Receiving Prenatal Care in the First Trimester
(Single Years, 2011-2016)**

Location	Number and Percent of Women Receiving Prenatal Care in the First Trimester											
	2011		2012		2013		2014		2015		2016	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	1,329	76.1	1,270	76.2	1,339	77.6	1,248	71.1	1,128	64.5	1,237	69.8
Randolph County	974	61.9	1,079	66.0	912	57.4	919	57.3	945	60.7	991	61.9
State of NC	85,706	71.2	85,380	71.3	83,663	70.3	82,474	68.2	81,887	67.8	83,319	69.0

Source: a - Numbers and Percentages calculated from data found in the NC State Center for Health Statistics, Basic Automated Birth Yearbook (BABY Book), North Carolina Residents (2006 through 2013) (geographies as noted): Table 6: County Resident Births by Month Prenatal Care Began, All Women; <http://www.schs.state.nc.us/schs/births/babybook/>.
b - Birth Indicator Tables by State and County: Trimester Care Began: First. Years and locations as noted. County Health Databooks (2016-2018). <https://schs.dph.ncdhhs.gov/data/databook/>.

Pregnancy Outcomes

Low Birth Weight and Very Low Birth Weight

Low birth weight can result in serious health problems in newborns (e.g., respiratory distress, bleeding in the brain, and heart, intestinal and eye problems), and cause lasting disabilities (mental retardation, cerebral palsy, and vision and hearing loss) or even death (46).

The following table presents data on low birth-weight births; i.e., infants weighing 2,500 grams (5.5 pounds) or less.

- The proportion of total low birth-weight births in Davidson County varied from 9.3 to 9.6 over the period cited and was the highest among the comparators in every five-year aggregate.
- The percentages of low birth-weight births among black non-Hispanic women in Davidson County were consistently 42%-53% higher the comparable percentages of such births among white non-Hispanic women in the county.

**Table 90. Low Birth-Weight Births
(Five Year Aggregate Periods, 2010-2014 through 2012-2016)**

Location	Percent of Low Birth Weight (≤ 2,500 Gram) Births														
	2010-2014					2011-2015					2012-2016				
	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Davidson County	9.6	9.4	14.4	10.6	7.1	9.3	9.2	13.1	8.9	7.0	9.4	9.3	13.2	9.6	6.8
Randolph County	7.8	7.7	11.4	10.5	6.6	1.7	1.6	3.3	0.4	1.1	1.8	1.7	3.7	0.0	1.3
State of NC	9.0	7.5	13.8	9.2	6.7	9.0	7.4	13.9	9.2	6.8	9.0	7.5	13.9	9.3	6.9

Note: Bold type indicates an unstable rate based on a small number (fewer than 20 cases).

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2016, 2017, 2018), Pregnancy and Births, Low and Very Low Weight Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

The following table presents data on very low birth-weight births; i.e., infants weighing 1,500 grams (3.3 pounds) or less.

- In both counties the percentages of very low birth-weight births in several stratified groups were based on small numbers of events and thus were unstable. However, the stable rates of very low birth weight births among African American non-Hispanic women in Davidson County were approximately twice the comparable rates among white non-Hispanic women.

**Table 91. Very Low Birth-Weight Births
(Five Year Aggregate Periods, 2010-2014 through 2012-2016)**

Location	Percent of Very Low Birth Weight (<1,500 Gram) Births														
	2010-2014					2011-2015					2012-2016				
	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Davidson County	1.6	1.5	3.3	0.5	1.2	1.7	1.6	3.3	0.4	1.1	1.8	1.7	3.7	0.0	1.3
Randolph County	1.4	1.4	2.7	2.3	1.3	1.3	1.2	2.5	1.6	1.1	1.4	1.3	3.2	1.5	0.9
State of NC	1.7	1.3	3.2	1.4	1.2	1.7	1.3	3.3	1.4	1.3	1.7	1.2	3.2	1.4	1.2

Note: Bold type indicates an unstable rate based on a small number (fewer than 20 cases).

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2016, 2017, 2018), Pregnancy and Births, Low and Very Low Weight Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Cesarean Section Delivery

The table below presents data on the percent of births delivered by Cesarean section.

- Over the period cited in the table, Cesarean deliveries averaged 34.6% of all births in Davidson County and 30.7% statewide.

**Table 92. Cesarean Section Deliveries, Primary and Repeat
(Five-Year Aggregate Periods, 2005-2009 through 2012-2016)**

Location	Percent of Resident Births Delivered by Cesarean Section							
	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013	2010-2014	2011-2015	2012-2016
Davidson County	34.4	34.6	35.0	35.0	35.5	34.9	34.0	33.7
Randolph County	30.8	31.2	31.5	31.4	31.7		31.8	31.7
State of NC	30.9	31.2	31.2	31.1	30.9	30.5	30.0	29.8

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2011-2018), Pregnancy and Births, Births Delivered by Caesarian Section (Primary and Repeat); <https://schs.dph.ncdhs.gov/data/databook/>.

Infant Distress at Birth

Assessing DRG codes associated with hospitalizations of newborns and neonates with conditions originating in the perinatal period (DGR codes 789-795) makes it possible to estimate the proportions of births of infants born in distress. The following table summarizes the total number of births with various degrees of problems at both Davidson County hospitals in the period 2015-2017.

- In the three-year period cited, 34% of all births presented with some sort of problem as newborns or neonates.

**Table 93. Newborns and Neonates with Conditions Originating in the Perinatal Period
Davidson County Hospitals, 2015-2017**

	2015	2016	2017	Total
Total Neonates (DRG 789-795)	901	924	879	2,704
Extreme Immaturity/Respiratory Distress Syndrome (790)	4	2	2	8
Prematurity with Major Problems (791)	15	13	9	37
Prematurity without Major Problems (792)	57	53	32	142
Full-Term Neonate with Major Problems (793)	42	44	59	145
Neonate with Other Significant Problems (794)	171	184	243	598
Normal Newborn (795)	600	595	506	1,701

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wake Forest Baptist Health Lexington Medical Center and Novant Health Thomasville Medical Center.

Infant Mortality

Infant mortality is the number of infant (under one year of age) deaths per 1,000 live births. The following table presents infant mortality data for Davidson County and its comparators for the aggregate periods 2007-11 through 2012-16.

- The total infant mortality rate in Davidson County was higher than the comparable state rate in every aggregate period cited except 2010-2014.
- The total infant mortality rate in Davidson County rose 3% overall between 2007-2011 and 2012-2016.
- Although the infant mortality rates among minority groups in Davidson County were mostly unstable or suppressed, it is apparent that infant mortality is a larger burden in the African American non-Hispanic community than in the white non-Hispanic community.
- It should be noted that infant mortality rates in NC are consistently among the country's ten worst.

**Table 94. Total Infant Deaths
(Five-Year Aggregate Periods, 2007-2011 through 2012-2016)**

Location	Infant Deaths											
	2007-2011		2008-2012		2009-2013		2010-2014		2011-2015		2012-2016	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Davidson County Total	73	7.9	78	8.6	69	7.9	53	6.1	63	7.3	70	8.1
White, Non-Hispanic	48	6.9	51	7.6	43	6.6	33	5.1	40	6.2	40	6.1
African American, Non-Hispanic	14	15.6	16	18.0	16	n/a	14	n/a	16	n/a	19	n/a
Other, Non-Hispanic	2	9.3	3	2.1	2	n/a	1	n/a	1	n/a	1	n/a
Hispanic	9	7.2	8	6.6	8	n/a	5	n/a	6	n/a	10	n/a
Randolph County Total	61	7.0	52	6.2	53	6.5	47	5.8	51	6.4	61	7.6
White, Non-Hispanic	46	7.4	36	6.0	39	6.6	33	5.7	37	6.5	44	7.7
African American, Non-Hispanic	6	12.4	6	12.7	6	n/a	5	n/a	4	n/a	7	n/a
Other, Non-Hispanic	0	0.0	2	10.8	3	n/a	3	n/a	3	n/a	3	n/a
Hispanic	9	5.0	8	4.6	5	n/a	6	n/a	7	n/a	7	n/a
State of NC Total	4,899	7.8	4,675	7.5	4,441	7.3	4,295	7.1	4,325	7.2	4,332	7.2
White, Non-Hispanic	2,001	5.7	1,918	5.6	1,850	5.4	1,811	5.4	1,834	5.5	1,800	5.4
African American, Non-Hispanic	2,129	14.3	2,064	14.0	1,967	13.6	1,858	12.9	1,851	12.9	1,864	13.0
Other, Non-Hispanic	188	6.2	181	5.9	178	5.7	185	5.8	194	5.9	209	6.2
Hispanic	581	5.8	512	5.3	446	4.8	441	4.9	446	5.0	459	5.1

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2018), Mortality, Infant Death Rates per 1,000 Live Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

LIFE EXPECTANCY

Life expectancy is the average number of additional years that someone at a given age would be expected to live if he/she were to experience throughout life the age-specific death rates observed in a specified reference period. Life expectancies in terms of years of life remaining can be calculated for any age. Because life expectancy is an average, however, a particular person may well die many years before or many years after their "expected" survival, due to life experiences, environment, and personal genetic characteristics.

Life expectancy from birth is a frequently utilized and analyzed component of demographic data. It represents the average life span of a newborn and is considered an indicator of the overall health of a population or community.

Life expectancy rose rapidly in the twentieth century due to improvements in public health, nutrition and medicine, and continued progress in these areas can be expected to have further positive impact on life expectancy in the future. Decreases in life expectancy are also possible, influenced mostly by epidemic disease (e.g. plagues of history and AIDS in the modern era), and natural and man-made disasters. One of the most significant influences on life expectancy in populations is infant mortality, since life expectancy at birth is highly sensitive to the rate of death in the first few years of life.

The following table presents gender- and race-stratified *life expectancy at birth* data for the three jurisdictions being compared in this document.

- Overall life expectancy at birth in Davidson County increased by 0.7 years (1%) between 1990-1992 and 2014-2016.
- Life expectancy for Davidson County females in 2014-2016 was 0.4 years (0.5%) *shorter* than female life expectancy in 1990-1992, but the 2014-2016 figure for females was still 5.1 years (6.9%) higher than the comparable figure for males in the county in 2014-2016.
- In Davidson County in 1990-1992 the life expectancy for African Americans was 6.0 years (7.9%) shorter than life expectancy for whites. By 2014-2016 the gap had narrowed to 1.6 years (2.1%).

**Table 95. Life Expectancy at Birth, by Gender and Race
(1990-1992 and 2014-2016)**

Location	Life Expectancy in Years									
	Person Born in 1990-1992					Person Born in 2014-2016				
	Overall	Male	Female	White	African-American	Overall	Male	Female	White	African-American
Davidson County	75.7	72.1	79.3	76.3	70.3	76.4	73.8	78.9	76.6	75.0
Randolph County	75.8	71.8	79.8	76.2	69.5	76.7	74.9	78.5	76.8	76.1
State of NC	74.9	71.0	78.7	76.4	69.8	77.4	74.8	79.9	78.3	74.9

Source: NC State Center for Health Statistics, County-level Data, Life Expectancy - State and County Estimates, 1990-1992 and 2014-2016 Life Expectancies Reports. North Carolina and counties as listed. <http://www.schs.state.nc.us/data/lifexpectancy/>.

MORTALITY

Leading Causes of Death

This section describes mortality for the 15 leading causes of death, as well as mortality due to five major site-specific cancers. The list of topics and the accompanying data was retrieved from the NCSCHS *County Health Data Books*. Unless otherwise noted, the numerical data are age-adjusted and represent five-year aggregate periods.

The table below compares mortality rates for the 15 leading causes of death in Davidson County, Randolph County, NC and the US for the five-year aggregate period 2012-2016 (or as otherwise noted). The causes of death are listed in descending order of mortality rate in Davidson County. Note that because NCSCHS suppressed rates in the County Health Data Book for some causes of death in each county because the number of deaths fell below the Center's threshold of 20 per five-year aggregate period, it was necessary to turn to NC Vital Statistics Volume II to obtain those unstable rates.

Table 96. Overall Age-Adjusted Mortality Rates for the 15 Leading Causes of Death (Single Five-Year Aggregate Period, 2012-2016 or as Noted)¹

Rank/Cause of Death	Davidson County			Randolph County			State of NC			United States (2016)	
	Number	Rate	Rank	Number	Rate	Rank	Number	Rate	Rank	Rate	Rank
1. Cancer	1,915	182.3	1	1,545	174.6	2	95,163	166.5	1	155.8	2
Trachea, Bronchus, and Lung	658	61.2	a	545	59.5	a	27,615	47.5	a	38.4	a
Breast	127	22.3	b	95	19.7	b	6,563	20.9	b	11.1	d
Prostate	66	15.7	c	63	18.0	c	4,410	20.1	c	19.3	b
Colon, Rectum and Anus	152	14.8	d	114	12.8	d	7,926	14.0	d	13.9	c
Pancreas	134	12.4	e	87	9.8	e	6,318	11.0	e	11.1	d
2. Diseases of the Heart	1,764	176.9	2	1,567	185.7	1	89,393	161.3	2	165.5	1
3. Chronic Lower Respiratory Disease	645	62.1	3	547	62.8	3	25,385	45.6	3	40.6	4
4. Cerebrovascular Disease	499	51.1	4	385	46.6	4	23,514	43.1	4	37.3	5
5. Alzheimer's Disease	370	39.6	5	269	34.1	6	16,917	31.9	5	30.3	6
6. All Other Unintentional Injuries	314	37.1	6	293	39.1	5	16,453	31.9	5	47.4	3
7. Diabetes Mellitus	292	28.4	7	199	22.8	7	13,042	23.0	7	21.0	7
8. Pneumonia and Influenza	206	21.2	8	155	18.7	9	9,707	17.8	8	13.5	8
9. Unintentional Motor Vehicle Injuries	151	18.8	9	132	18.3	10	7,125	14.1	10	12.1	11
10. Nephritis, Nephrotic Syndrome, and Nephrosis	168	16.8	10	168	20.3	8	9,046	16.4	9	13.1	10
11. Suicide	127	14.9	11	128	17.6	11	6,679	12.9	12	13.5	8
12. Septicemia	151	14.8	12	102	11.6	13	7,266	13.1	11	10.7	12
13. Chronic Liver Disease and Cirrhosis	122	11.7	13	116	12.8	12	5,930	10.3	13	10.7	12
14. Homicide	21	2.7	14	25	3.9	14	3,002	6.2	14	6.2	14
15. Acquired Immune Deficiency Syndrome	16	1.7	15	11	1.4	15	1,183	2.2	15	1.8	15
Total Deaths All Causes (incl. some not listed above)	8,660	880.3		7,243	868.6		429,955	781.8		728.8	

Source:

a - NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

b (bold/unstable rates) - NC State Center for Health Statistics, Statistics and Reports, Vital Statistics, NC Vital Statistics Volume II, Leading Causes of Death, 2016. <https://schs.dph.ncdhhs.gov/data/vital.cfm>.

c - Calculated

d - National Center for Health Statistics, National Vital Statistics Reports, Volume 67, No. 5. Deaths: Final Data for 2016. https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf.

¹ Rate = Number of events per 100,000 population, where the Standard = Year 2000 US Population

² Denominator is not-sex-specific, but rather whole population

Specific differences between Davidson County and NC mortality rates for 2012-2016, calculated from data in the preceding table, are summarized in the table below. In this table, a plus sign (“+”) and the color **red** indicates a Davidson County mortality rate *higher* than the comparable state rate by the percent cited; a minus sign (“-”) and the color **green** indicates a Davidson County rate *lower* than the comparable state rate by the percent named. The color **blue** is used when the percent rate difference, regardless of “+” or “-”, should be considered unstable because it is based on an unstable county mortality rate.

Table 97. Leading Causes of Death, Davidson County Compared to NC (2012-2016)

Davidson County Rank by Descending Overall Age-Adjusted Rate (2012-2016)	Davidson Co. No. of Deaths	Davidson Co. Mortality Rate	County Rate Difference from NC
1. Total Cancer	1,915	182.3	+9%
2. Diseases of the Heart	1,764	176.9	+10%
3. Chronic Lower Respiratory Disease	645	62.1	+36%
4. Cerebrovascular Disease	499	51.1	+19%
5. Alzheimer’s Disease	370	39.6	+24%
6. All Other Unintentional Injuries	314	37.1	+16%
7. Diabetes Mellitus	292	28.4	+23%
8. Pneumonia and Influenza	206	21.2	+19%
9. Unintentional Motor Vehicle Injuries	151	18.8	+33%
10. Nephritis, Nephrotic Syndrome and Nephritis	168	16.8	+2%
11. Suicide	127	14.9	+16%
12. Septicemia	151	14.8	+13%
13. Chronic Liver Disease and Cirrhosis	122	11.7	+14%
14. Homicide	21	2.7	-56%
15. AIDS	16	1.7	-23%

Source: Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS.

From the data in the two tables above it is apparent that in the 2012-2016 aggregate period, mortality rates in Davidson County were *higher* than comparable rates statewide for 13 of the 15 leading causes of death. Mortality rates in Davidson County were lower than comparable state mortality rates only for homicide (56% lower) and AIDS (23% lower, but unstable).

The next table summarizes changes in mortality rates for the leading causes of death between the last CHA (2009-2013 aggregate period) and the present CHNA (2012-2016 aggregate period), an interval of three years.

- Mortality rates in Davidson County increased since the last CHA for all of the leading causes of death *except* heart disease, chronic lower respiratory disease, pneumonia/influenza, unintentional motor vehicle injuries, homicide and AIDS, all of which decreased by a small percentage or did not change at all.

- The greatest increase in mortality rate was for diabetes (+23%); the greatest decrease was for heart disease (-11%).

**Table 98. Short-Term Change in Leading Causes of Death, Davidson County
(Between 2009-2013 and 2012-2016)**

Davidson County Rank by Descending Overall Age-Adjusted Rate (2012-2016)	Rate in 2009-2013	Rate in 2012-2016	% Rate Change 2009-2013 to 2012-2016
1. Total Cancer	177.5	182.3	+3%
2. Diseases of the Heart	197.7	176.9	-11%
3. Chronic Lower Respiratory Disease	62.1	62.1	n/c
4. Cerebrovascular Disease	49.2	51.1	+4%
5. Alzheimer's Disease	37.3	39.6	+6%
6. All Other Unintentional Injuries	33.5	37.1	+11%
7. Diabetes Mellitus	23.0	28.4	+23%
8. Pneumonia and Influenza	22.0	21.2	-4%
9. Unintentional Motor Vehicle Injuries	19.1	18.8	-2%
10. Nephritis, Nephrotic Syndrome and Nephritis	16.6	16.8	+1%
11. Suicide	12.7	14.9	+17%
12. Septicemia	13.0	14.8	+14%
13. Chronic Liver Disease and Cirrhosis	9.9	11.7	+18%
14. Homicide	2.7	2.7	n/c
15. AIDS	1.7	1.7	n/c

Source: Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS

Gender Disparities in Leading Causes of Death

In the past, NC CHAs have demonstrated some significant differences in mortality rates between men and women. According to data from NCSCHS (47):

- In Davidson County in the 2012-2016 aggregate period, the overall mortality rate for males (1,020.3) was 34% higher than the overall mortality rate for females (761.7).
- In Randolph County in the same period the overall mortality rate for males (990.9) was 30% higher than the overall mortality rate for females (764.1).
- In NC in the same period the overall mortality rate for males (922.1) was 38% higher than the overall mortality rate for females (668.6).

The following table compares the rank order of mortality rates for the leading causes of death for males and females in Davidson County and computes a percent difference between gender-stratified mortality rates. Note that comparisons are limited by occasional "N/As", representing rates suppressed due to below-threshold numbers of deaths among stratified groups.

- While total cancer was the leading cause of death among females in Davidson County in the period cited, heart diseases was the leading cause of death among males.
- Alzheimer's disease was the fifth leading cause of death among females in the county but was the seventh leading cause of death among males.
- Pneumonia/influenza was the eighth leading cause of death among females but ranked eleventh among males; on the other hand, unintentional motor vehicle injuries ranked eighth among males and eleventh among females.
- Suicide ranked significantly higher as a cause of death among males in the county compared to females (ninth vs. thirteenth, respectively).
- In Davidson County in the 2012-2016 period, stable mortality rates for *males* were *higher* than comparable rates for females for all the leading causes of death except Alzheimer's disease. Mortality rates were several times higher for males than for females for unintentional motor vehicle injuries, suicide, and chronic liver disease and cirrhosis.
- In Davidson County the gender-stratified mortality rates for homicide and AIDS in the 2012-2016 period were unstable and cannot be definitively compared.

**Table 99. Leading Causes of Death, Davidson County, by Gender
(Single Five-Year Aggregate Period, 2012-2016)**

Davidson County Rank by Descending Overall Age-Adjusted Rate (2012-2016)	Rank Among Males	Rank Among Females	% Male Rate Difference from Females
1. Total Cancer	2	1	+41%
2. Diseases of the Heart	1	2	+69%
3. Chronic Lower Respiratory Disease	3	3	+18%
4. Cerebrovascular Disease	4	4	+5%
5. Alzheimer's Disease	7	5	-40%
6. All Other Unintentional Injuries	5	6	+72%
7. Diabetes Mellitus	6	7	+48%
8. Pneumonia and Influenza	11	8	+11%
9. Unintentional Motor Vehicle Injuries	8	11	+2x
10. Nephritis, Nephrotic Syndrome and Nephritis	10	10	+70%
11. Suicide	9	13	+4X
12. Septicemia	13	9	+9%
13. Chronic Liver Disease and Cirrhosis	12	12	+3X
14. Homicide	14	14	n/a
15. AIDS	15	15	n/a

Source: Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS

Racial Disparities in Leading Causes of Death

Because of below-threshold numbers of deaths for some causes during the 2012-2016 period, age-adjusted mortality rates among Davidson County minorities are available only for African Americans and for only six causes of death, as shown in the table below.

In the past, NC CHAs have demonstrated some significant differences in mortality rates between whites and minorities. According to NCSCHS (48):

- In the 2012-2016 aggregate period, the overall mortality rate for African American non-Hispanics (888.9) was slightly *lower* than the comparable overall mortality rate for white non-Hispanics (895.6).

Racial disparities emerge when specific causes of death are examined.

- In Davidson County in the 2012-2016 aggregate period, mortality rates for African American non-Hispanics were *higher* than comparable rates for white non-Hispanics for total cancer, cerebrovascular disease, Alzheimer's disease and especially kidney disease and diabetes, rates for which were almost two times the rates for whites. The heart disease mortality rate for African Americans in Davidson County was *lower* than the comparable rate for whites.

**Table 100. Leading Causes of Death, Davidson County, by Race
(Single Five-Year Aggregate Period, 2012-2016)**

Davidson County Rank by Descending Overall Age-Adjusted Rate (2012-2016)	Rank Among White Non- Hispanic	Rank Among Black non- Hispanic	% Black Rate Difference from White
1. Total Cancer	1	1	+13%
2. Diseases of the Heart	2	2	-21%
3. Chronic Lower Respiratory Disease	3	n/a	n/a
4. Cerebrovascular Disease	4	4	+10%
5. Alzheimer's Disease	5	3	+49%
6. All Other Unintentional Injuries	6	n/a	n/a
7. Diabetes Mellitus	7	5	+91%
8. Pneumonia and Influenza	8	n/a	n/a
9. Unintentional Motor Vehicle Injuries	9	n/a	n/a
10. Nephritis, Nephrotic Syndrome and Nephritis	11	5	+86%
11. Suicide	10	n/a	n/a
12. Septicemia	12	n/a	n/a
13. Chronic Liver Disease and Cirrhosis	13	n/a	n/a
14. Homicide	14	n/a	n/a
15. AIDS	15	n/a	n/a

Source: Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS

Age Disparities in Leading Causes of Death

Each age group tends to have its own leading causes of death. The following table lists the three leading causes of death by mortality rate by age group for the five-year aggregate period from 2012-2016. (Note that for this purpose it is important to use *non-age adjusted* death rates.)

The leading cause(s) of death in each of the age groups in Davidson County in 2012-2016 were the same as in 2009-2013:

- Age Group 00-19: Conditions originating in the perinatal period
- Age Group 20-39: All other unintentional injuries (i.e., non-motor vehicle injuries)
- Age Group 40-64: Cancer – all sites
- Age Group 65-84: Cancer – all sites
- Age Group 85+: Diseases of the heart

**Table 101. Three Leading Causes of Death by Age Group
(Single Five-Year Aggregate Period, 2012-2016)**

Age Group	Rank	Cause of Death		
		Davidson County	Randolph County	State of NC
00-19	1	Conditions originating in the perinatal period	Conditions originating in the perinatal period	Conditions originating in the perinatal period
	2	Motor Vehicle Injuries	Motor Vehicle Injuries	Congenital anomalies (birth defects)
	3	Congenital abnormalities (birth defects)	Congenital abnormalities (birth defects)	Motor vehicle injuries
20-39	1	Other Unintentional Injuries	Other Unintentional Injuries	Other Unintentional injuries
	2	Motor Vehicle Injuries	Suicide	Motor vehicle injuries
	3	Suicide	Motor Vehicle Injuries	Suicide
40-64	1	Cancer - All Sites	Cancer - All Sites	Cancer-All sites
	2	Diseases of the heart	Diseases of the heart	Diseases of the heart
	3	Chronic lower respiratory diseases	Chronic lower respiratory diseases Other Unintentional Injuries	Other Unintentional injuries
65-84	1	Cancer - All Sites	Cancer-All sites	Cancer-All sites
	2	Diseases of the heart	Diseases of the heart	Diseases of the heart
	3	Chronic lower respiratory diseases	Chronic lower respiratory diseases	Chronic lower respiratory diseases
85+	1	Diseases of the heart	Diseases of the heart	Diseases of the heart
	2	Cancer - All sites	Cancer - All sites	Cancer-All sites
	3	Alzheimer's disease	Alzheimer's disease	Alzheimer's disease

Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, Death Counts and Crude Death Rates per 100,000 for Leading Causes of Death, by Age Groups, NC, 2012-2016; <https://schs.dph.ncdhs.gov/data/databook/>.

Differences in mortality statistics will be covered as each cause of death is discussed separately below, in the order of highest to lowest mortality rate in Davidson County. It is important to emphasize once more that because of below-threshold numbers of deaths there will be no stable county rates for some causes of death, especially among racially stratified groups. Some unstable data will be presented in this document, but always accompanied by cautions regarding its use.

Cancer

Cancer is a term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells also can spread to other parts of the body through the blood and lymph systems. If the disease remains unchecked, it can result in death (49).

Total Cancer

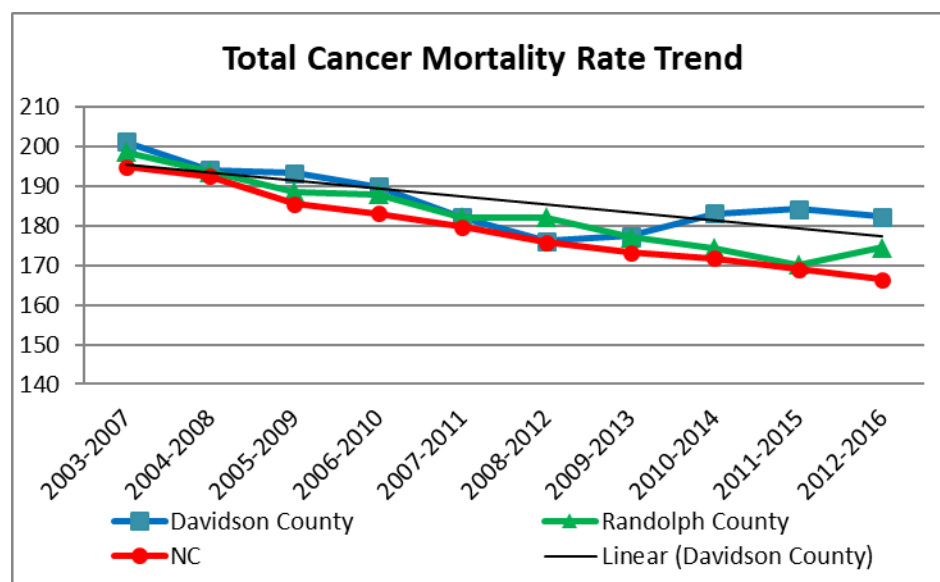
Total cancer (cancers of all types) was the leading cause of death in Davidson County and NC in the 2012-2016 period; it was the second leading cause of death in Randolph County, behind heart disease (cited previously).

Total Cancer Mortality Rate Trend

The figure below displays the total cancer mortality rate trend.

- The total cancer mortality rate in Davidson County fluctuated between 2001-2005 and 2012-2016 but decreased overall as shown by the negative slope of the regression line in the graph. Overall the total cancer mortality rate decreased over the period by 9%, from 201.1 to 182.3
- The total cancer mortality rate in Davidson County exceeded the comparable rate for NC in every period cited.

**Figure 12. Total Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Total Cancer Mortality Rates

The following table presents total cancer mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of total cancer deaths among some minority populations at the county level, mortality rates for those groups were suppressed.

- In Davidson County the total cancer mortality rate among African American non-Hispanics exceeded the rate for white non-Hispanics by 12.5% in this period.

**Table 102. Total Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	1,719	183.3	174	206.3	1	n/a	9	n/a	12	n/a	1,915	182.3
Randolph County	1,446	179.0	85	175.1	5	n/a	6	n/a	13	n/a	1,545	174.6
State of NC	72,841	165.0	19,500	190.7	880.0	158.7	848	104.4	1,094	72.9	95,163	166.5

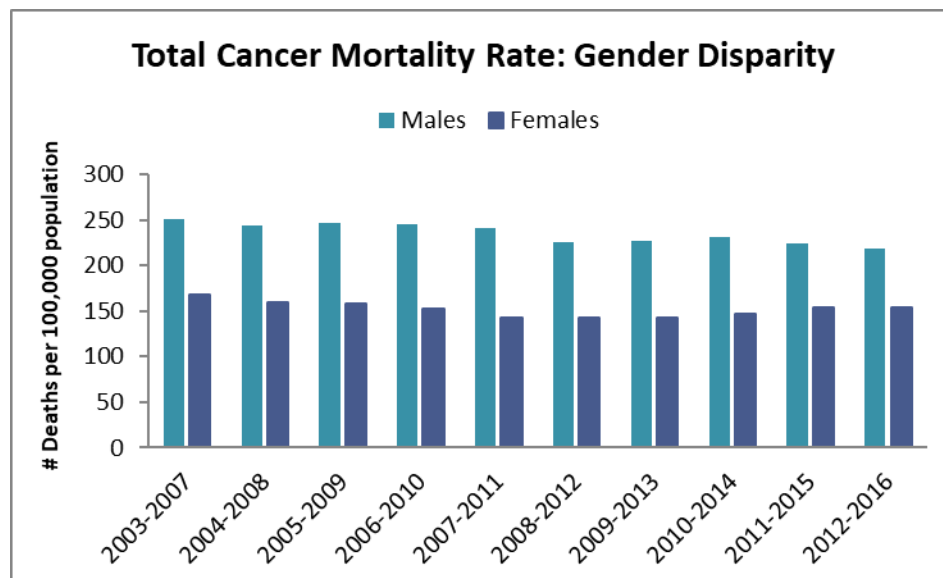
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Total Cancer Mortality

The figure below depicts gender-stratified total cancer mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- It appears that the gender difference in total cancer mortality noted in Davidson County for 2012-2016 is actually long-standing, although the gender gap may be closing.
- Total cancer mortality rates for males in the county are decreasing, but the comparable rates for females may be increasing.

**Figure 13. Total Cancer Mortality Rate Trend, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2009-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

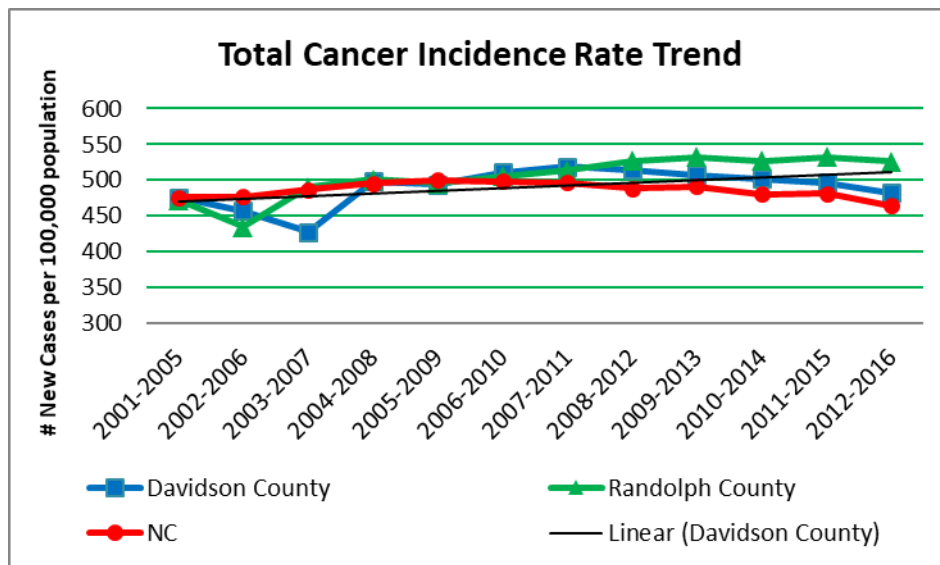
Total Cancer Incidence

Since total cancer is a significant cause of death, it is useful to examine patterns in the development of new cases. The statistic important to understanding the growth of a health problem is *incidence*, the population-based rate at which new cases of a disease occur and are diagnosed (methodology for which has been described previously). Cancer incidence rates used in this report were obtained from the NC Cancer Registry, which collects data on newly diagnosed cases from NC clinics and hospitals as well as on NC residents whose cancers were diagnosed at medical facilities in bordering states.

The following figure plots the incidence rate trend for total cancer for the period 2001-2005 through 2012-2016.

- The total cancer incidence rate in Davidson County fluctuated over time but increased overall by 1.4% over the period cited.

**Figure 14. Total Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); <http://www.schs.state.us.nc/SCHS/CCR/reports.html>.

Total Cancer Morbidity

Hospital Data

As noted earlier, the two hospitals in Davidson County provided the consultant with emergency department and inpatient hospitalization discharge data which will be used to help illustrate the burden of existing disease, not just deaths, on the Davidson County population. Note that the data from the two hospitals has been combined.

The number of discharges from Davidson County hospitals associated with each leading cause of death is determined based on the primary ICD-9 or ICD-10 code associated with each discharge. For cancer, the associated ICD-9 codes (applicable in 2015) are 140-208; the associated ICD-10 codes (applicable to part of 2015 and all of 2016 and 2017) are C00-C97.

Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity cited in this report for Davidson County are comparable.

- According to data in the table below, in the period 2015 through 2017, 154 of 166,031 ED discharges (0.09%) and 120 of 13,126 IP discharges (0.9%) were assigned a primary diagnosis of cancer of some type.
- These would appear to be low proportions of discharges to be associated with the leading cause of death, but it is likely that many Davidson County patients with cancer utilize the specialized physicians and services available at Wake Forest Baptist Hospital and Novant Forsyth Medical Center, large medical centers in adjacent Forsyth County which operate cancer specialty centers.

**Table 103. Hospital Discharges Associated with a Diagnosis of Cancer (All Types)
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	40	58	56	154	44	37	39	120
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	0.07	0.11	0.10	0.09	1.0	0.8	0.9	0.9

See text for list of associated ICD codes.

Site-Specific Cancer Mortality and Incidence Rates

To this point the discussions of cancer mortality and incidence have focused on figures for total cancer. In Davidson County, as throughout the state of NC, there are four (or five) site-specific cancers that cause most cancer deaths: breast cancer, colon cancer, lung cancer, prostate cancer, and, sometimes, pancreas cancer. It should be noted that males also can have breast cancer, but since the number of cases tends to be small, the mortality rates for breast cancer used in this report are rates for female breast cancer.

The table below presents age-adjusted *mortality* data for the five prominent site-specific cancers for the 2012-2016 period.

- In Davidson County, lung cancer was the site-specific cancer with the highest mortality rate, followed by—at decreasing mortality rates—female breast cancer, prostate cancer, colon cancer and pancreas cancer.
- In NC in the same period, lung cancer presented the highest mortality rate, followed by female breast cancer, prostate cancer, colon cancer and pancreas cancer.

**Table 104. Mortality for Major Site-Specific Cancers
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer		Pancreas Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Davidson County	127	22.3	66	15.7	658	61.2	152	14.8	134	12.4
Randolph County	95	19.7	63	18	545	59.5	114	12.8	87	9.8
State of NC	6,563	20.9	4,410	20.1	27,615	47.5	7,926	14.0	6,318	11.0

Source: NC State Center for Health Statistics, County-level Data, Cancer. Cancer Mortality Rates 1999-2016. All Counties by Specified Site 2012-2016. <https://schs.dph.ncdhhs.gov/schs/CCR/mort1216cnty.pdf>.

Rate = Deaths per 100,000 Population, Age-Adjusted to the 2000 US Census

The next table presents age-adjusted *incidence* data for four of the five site-specific cancers for the 2012-2016 period.

- In Davidson County, female breast cancer was the site-specific cancer with the highest incidence rate, followed by prostate cancer, lung cancer, and colon cancer.
- In NC as a whole, female breast cancer has the highest incidence rate, followed by prostate cancer, lung cancer, and colon cancer.

**Table 105. Incidence for Major Site-Specific Cancers
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Davidson County	869	158.4	481	92.1	909	83.0	421	40.4
Randolph County	471	157.0	541	124.6	776	84.9	361	41.3
State of NC	48,200	157.5	30,806	109.4	38,865	66.3	20,617	36.1

Source: NC State Center for Health Statistics, Cancer, Annual Reports: NC Cancer Incidence Rates 2009-2016. All Counties by Specified Site, 2012-2016. <https://schs.dph.ncdhhs.gov/data/cancer.cfm>.

Multi-year mortality and incidence rate trends for these site-specific cancers will be presented subsequently, as each cancer type is discussed separately. The cancer topics are presented in decreasing order of site-specific cancer mortality rates in Davidson County.

Lung Cancer

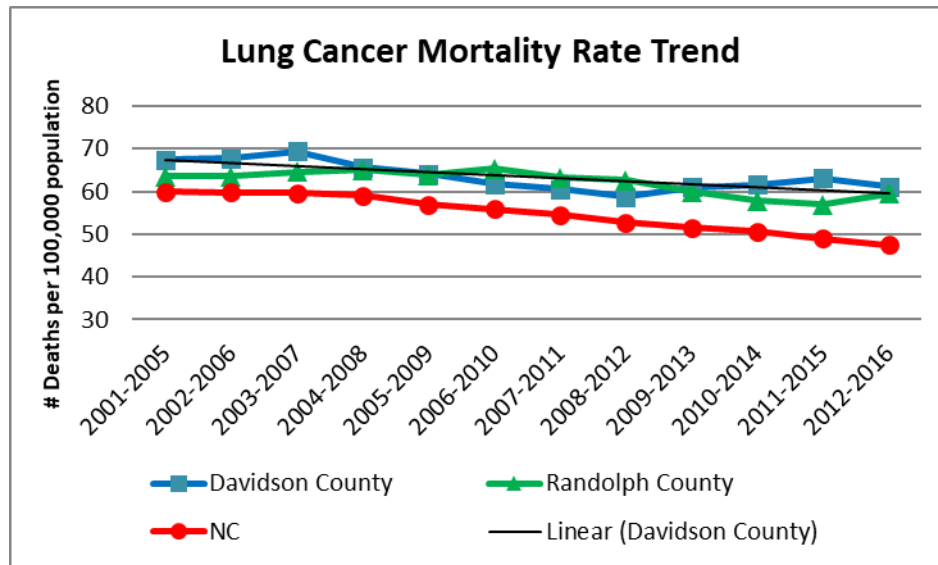
The category of cancer referred to as lung cancer traditionally *also* includes cancers of the trachea and bronchus.

Lung Cancer Mortality Rate Trend

The following figure displays the lung cancer mortality rate trend over time.

- The regression line for the lung cancer mortality rate in Davidson County shows a small decrease over the period cited. The county mortality rate was 9% lower in 2012-2016 (61.2) than in 2001-2005 (67.5).
- The lung cancer mortality rate in Davidson County was the highest among the comparators in nine of the 12 aggregate periods shown.
- The lung cancer mortality rate statewide has decreased steadily over the period cited.

**Figure 15. Lung Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Lung Cancer Mortality Rates

The following table presents lung cancer mortality data for 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of lung cancer deaths among some racially-stratified populations, those mortality rates were suppressed.

- In Davidson County the lung cancer mortality rate for African American non-Hispanics was approximately 8% higher than the comparable rate among white non-Hispanics.

**Table 106. Lung Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	596	61.9	56	66.7	1	n/a	2	n/a	3	n/a	658	61.2
Randolph County	515	61.6	24	54.1	2	n/a	3	n/a	1	n/a	545	59.5
State of NC	22,139	49.1	4,838	46.3	289	51.2	181	23.5	168	13.1	27,615	47.5

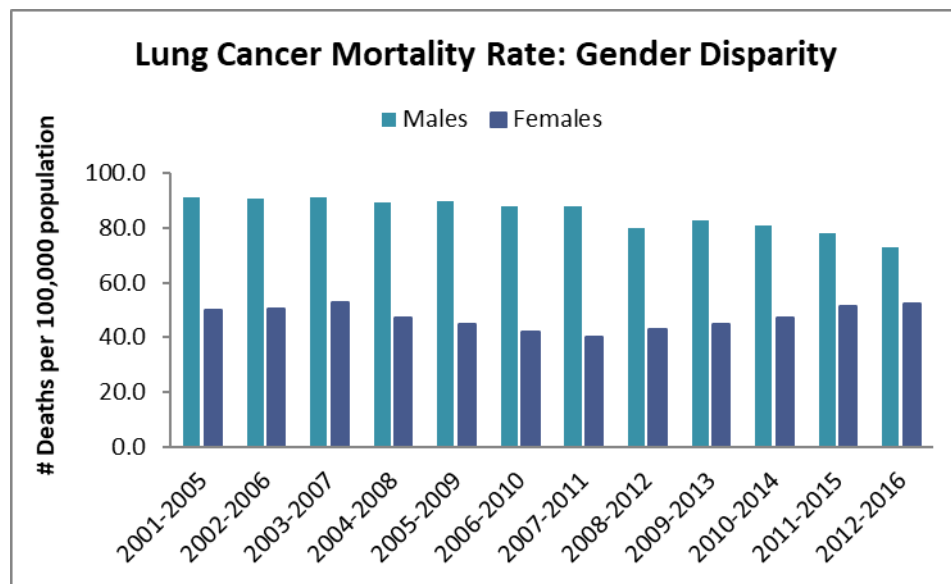
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Lung Cancer Mortality Rates

The following figure depicts gender-stratified lung cancer mortality rates in Davidson County for the period 2001-2005 through 2012-2016.

- There was a significant gender difference in lung cancer mortality in Davidson County in every period cited.
- The lung cancer mortality rate among Davidson County males remained relative steady from 2001-2005 through 2007-2011 before decreasing slowly. Meanwhile, the lung cancer mortality rate among Davidson County females, which had been decreasing, began to increase steadily beginning in about 2008-2012. As a result of these differences, the lung cancer mortality rate gap between males and females in Davidson County has decreased significantly.
- In the 2012-2016 aggregate period, the mortality rate difference for males (73.0) was 40% higher than the comparable rate for females (52.1). In 2001-2005 the lung cancer mortality rate was 82% in county males compared to females.

**Figure 16. Lung Cancer Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



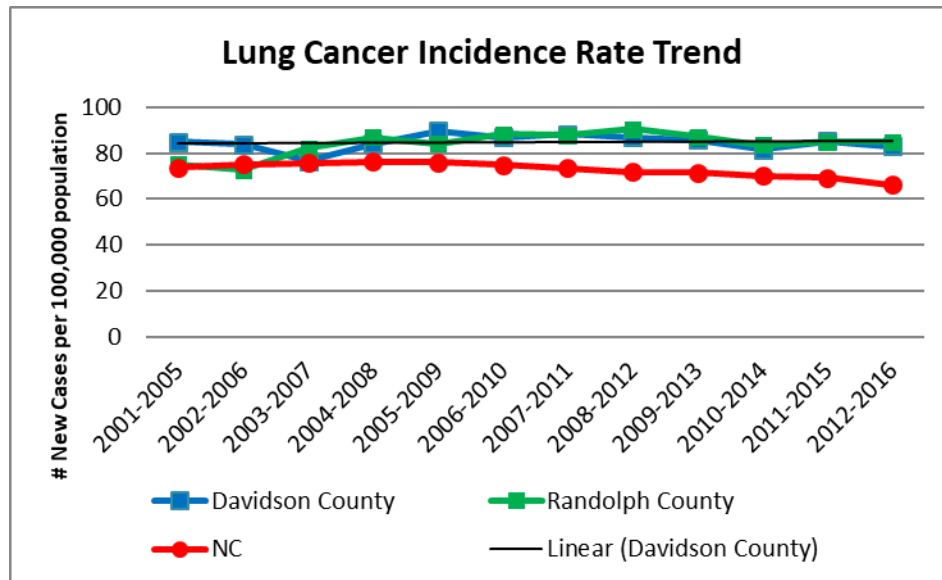
Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Lung Cancer Incidence Rate Trend

The figure below plots the incidence rates for lung cancer for the period 2001-2005 through 2012-2016.

- Lung cancer incidence rates in the county jurisdictions fluctuated little from aggregate to aggregate.
- The lung cancer incidence rate in Davidson County remained steady over the period cited, at an average aggregate value of 84.8.
- The lung cancer incidence rate in Davidson County was the highest rate among comparators in five of the aggregate periods shown; the highest rate in the remaining seven aggregate periods was in Randolph County.
- The lung cancer mortality rate statewide was relatively steady through 2005-2009 before decreasing slowly.

**Figure 17. Lung Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); <http://www.schs.state.us.nc/SCHS/CCR/reports.html>.

Breast Cancer

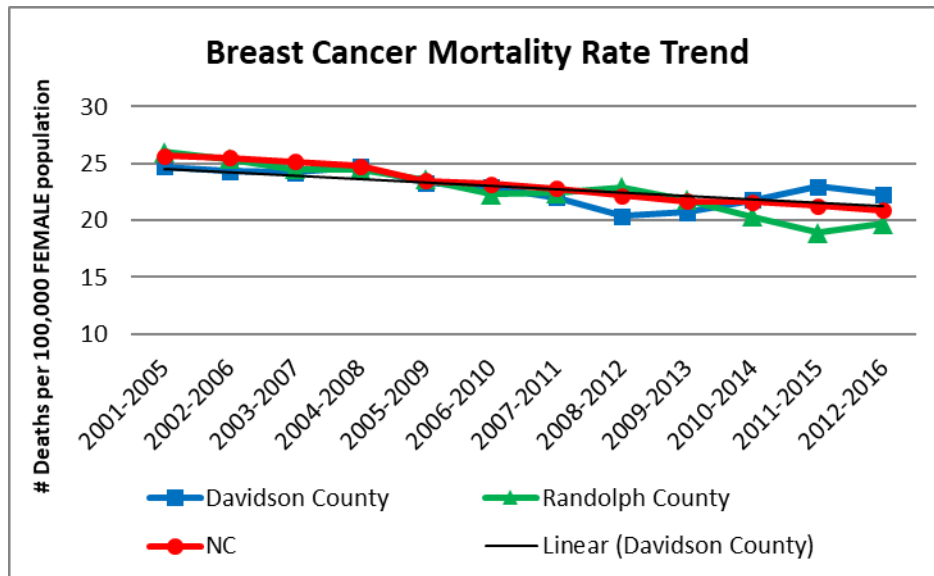
For purposes of this report, breast cancer pertains exclusively to women, although males can and do contract the disease.

Breast Cancer Mortality Rate Trend

The figure below plots female breast cancer mortality rates over time.

- The breast cancer mortality rates in all three jurisdictions have fallen gradually over the period cited.
- Although the breast cancer mortality rate in Davidson County has fallen in the net over the period cited, it has been increasing since 2008-2012, and was the highest among the comparators in the last two aggregate periods.
- The NC breast cancer mortality rate also declined overall by 19% over the period cited.

**Figure 18. Female Breast Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Breast Cancer Mortality Rates

The table below presents breast cancer mortality rate data for 2012-2016, stratified by race. Due to below-threshold numbers of breast cancer deaths in both counties, mortality rates for all stratified minority groups were suppressed.

- Statewide, the breast cancer mortality rate for African American non-Hispanic women was 46% *higher* than the comparable rate for white non-Hispanic women.

**Table 107. Female Breast Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Female Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	115	22.7	11	n/a	0	n/a	0	n/a	1	n/a	127	22.3
Randolph County	91	20.7	3	n/a	1	n/a	0	n/a	0	n/a	95	19.7
State of NC	4,607	19.4	1,728	28.3	64.0	20.2	70	13.2	94	9.9	6,563	20.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

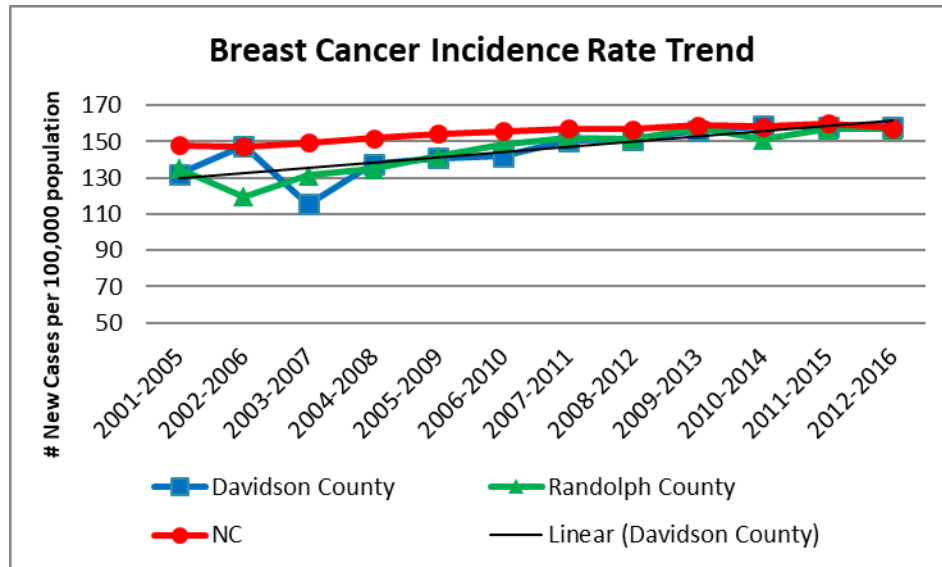
Breast Cancer Incidence Rate Trend

The next figure plots the incidence rate trend for breast cancer.

- Breast cancer incidence rates in all three jurisdictions increased over the period cited.

- In Davidson County the breast cancer incidence rate increased by 20% over the period cited, from 132.2 in 2001-2005 to 158.4 in 2012-2016.
- In NC the breast cancer incidence rate increased by 6% over the same period.

**Figure 19. Breast Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); <http://www.schs.state.us.nc/SCHS/CCR/reports.html>.

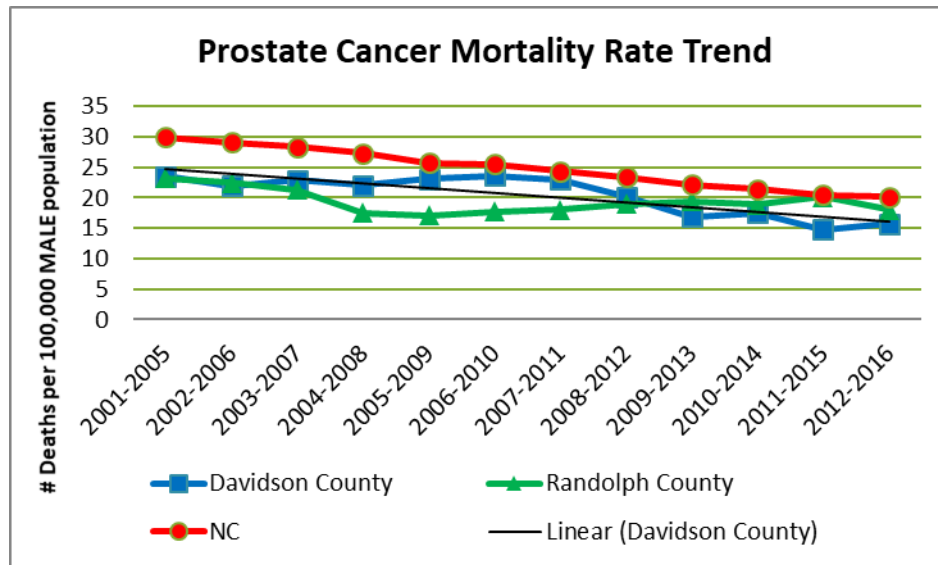
Prostate Cancer

Prostate Cancer Mortality Rate Trend

The next figure plots prostate cancer mortality rates over time.

- The prostate cancer mortality rate in Davidson County has fallen significantly, if somewhat erratically, over the period cited. The Davidson County prostate cancer mortality rate was 33% lower in 2012-2016 (15.7) than in 2001-2005 (23.5).
- The prostate cancer mortality rate statewide also decreased by 33% over the period cited, from 29.9 in 2001-2005 to 20.1 in 2012-2016.

**Figure 20. Prostate Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Prostate Cancer Mortality Rates

The following table presents prostate cancer mortality data for 2012-2016 stratified by race. Due to below-threshold numbers of prostate cancer deaths among racially-stratified populations in both counties, mortality rates for those groups were suppressed.

- Statewide, the prostate cancer mortality rate for African American non-Hispanics was 2.3 times the comparable rate for white non-Hispanics.

**Table 108. Prostate Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Male Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	52	13.5	14	n/a	0	n/a	0	n/a	0	n/a	66	15.7
Randolph County	58	17.9	5	n/a	0	n/a	0	n/a	0	n/a	63	18.0
State of NC	3,050	17.2	1,260	39.1	51.0	28.5	15	n/a	34	6.8	4,410	20.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

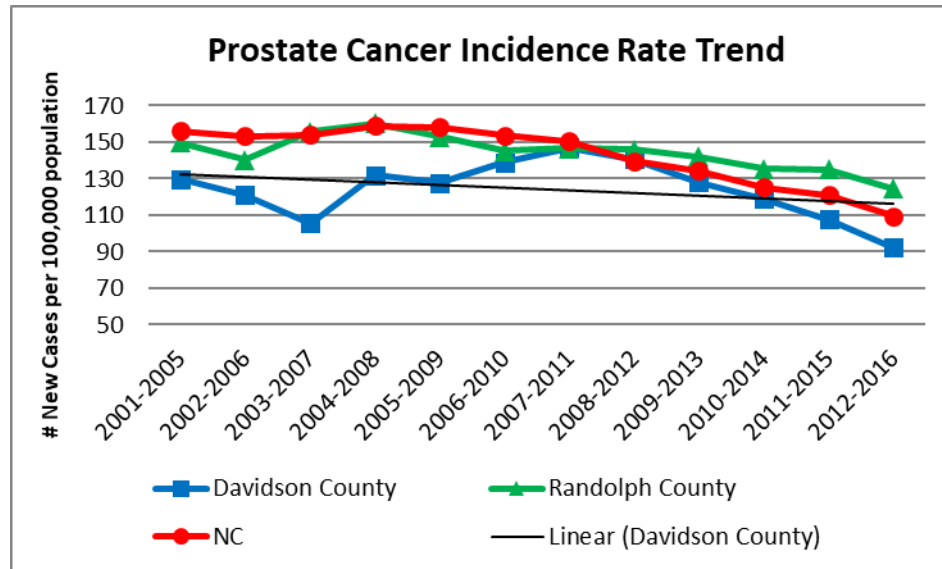
Prostate Cancer Incidence Rate Trend

The figure below plots the incidence rate trend for prostate cancer.

- The prostate cancer incidence rate in Davidson County was lower than the comparable rate for NC throughout the period cited.

- The prostate cancer incidence rate in Davidson County decreased overall by 29% over the period cited. Over the same period the comparable rate in Randolph County decreased 17%, and the rate in NC fell 30%.

**Figure 21. Prostate Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); <http://www.schs.state.us.nc/SCHS/CCR/reports.html>.

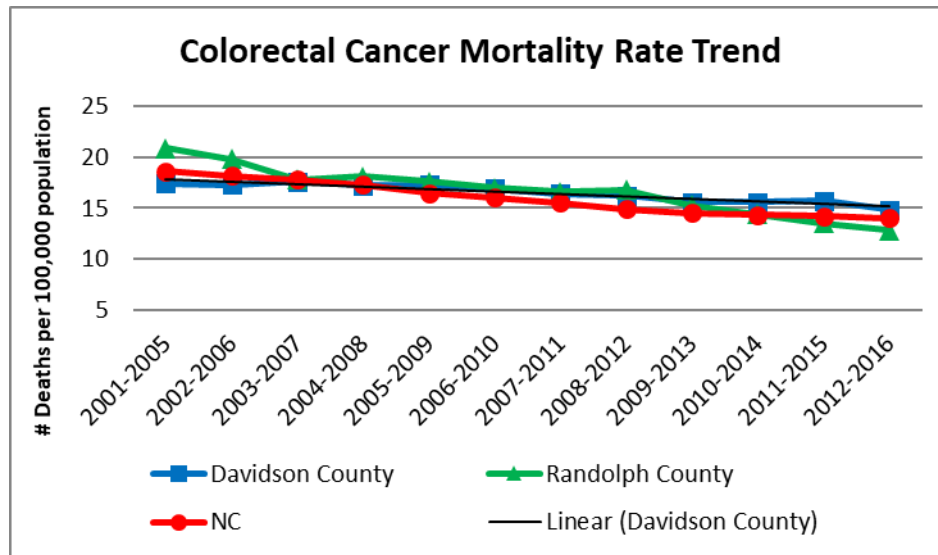
Colon Cancer

Colon Cancer Mortality Rate Trend

The following figure plots colon cancer mortality rates over time.

- Colon cancer mortality rates in all three jurisdictions decreased over the period cited.
- The colon cancer mortality rate in Davidson County was higher than the comparable NC rate from 2005-2009 through 2012-2016.
- The colon cancer mortality rate in Davidson County decreased overall by 15% over the period cited.
- The colon cancer mortality rate statewide decreased overall by 25% over the same period.

**Figure 22. Colon Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Colon Cancer Mortality

The table below presents colon cancer mortality data for 2012-2016, stratified by race/ethnicity. Due to below-threshold numbers of colon cancer deaths among racially-stratified populations in both counties, mortality rates for those groups were suppressed.

- Statewide, the colon cancer mortality rate for African American non-Hispanics was 42% higher than the rate for white non-Hispanics.

**Table 109. Colon Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	132	14.7	16	n/a	0	n/a	2	n/a	2	n/a	152	14.8
Randolph County	104	12.9	9	n/a	0	n/a	0	n/a	1	n/a	114	12.8
State of NC	5,787	13.3	1,918	18.9	74.0	13.1	67	8.0	80	5.0	7,926	14.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

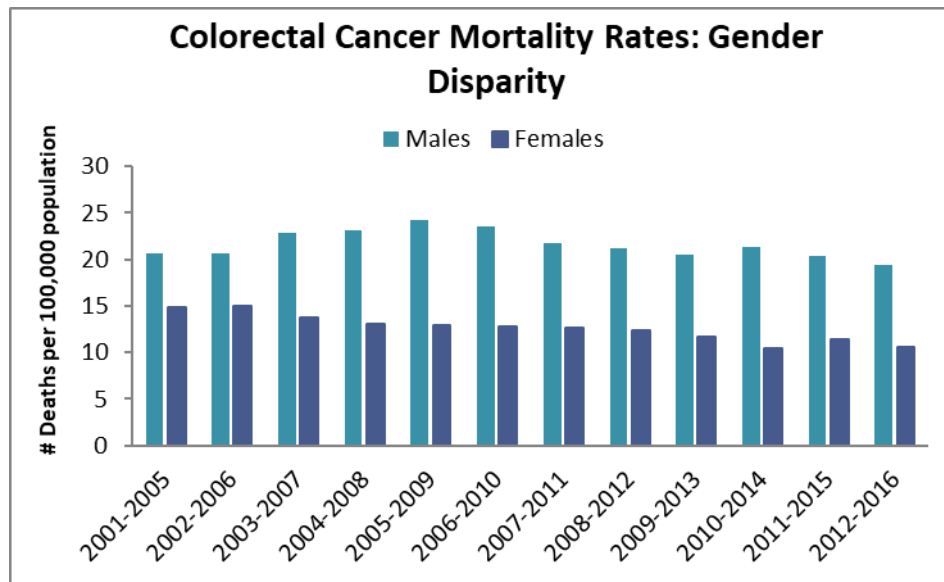
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Colon Cancer Mortality Rates

The following figure presents gender-stratified colon cancer mortality rates in Davidson County for 2001-2005 through 2012-2016.

- Colon cancer mortality rates for Davidson County males were higher than the rates for females in every interval. The mortality rate for males appears to be decreasing after a period of increase; the mortality rate for females appears to be decreasing slowly but steadily.
- In the 2012-2016 aggregate period, the colon cancer mortality rate for males in Davidson County (19.4) was 83%% higher than the corresponding morality rate for females (10.6).

**Figure 23. Colon Cancer Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



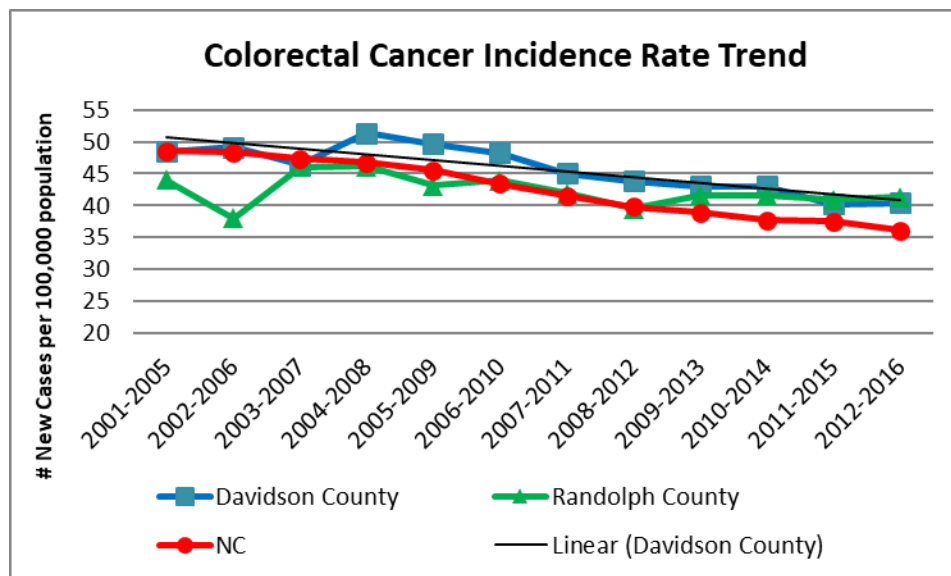
Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Colon Cancer Incidence Rate Trend

The next figure plots the incidence rate trend for colon cancer.

- Colon cancer incidence rates have decreased overall in all three comparator jurisdictions.
- The colon cancer incidence rate in Davidson County, was higher than the NC rate since 2002-2006.
- The colon cancer incidence rate in Davidson County decreased overall by 17% over the period cited.
- Statewide, the colon cancer incidence rate fell overall by 26% over the same period

**Figure 24. Colon Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); <http://www.schs.state.us.nc/SCHS/CCR/reports.html>.

Pancreas Cancer

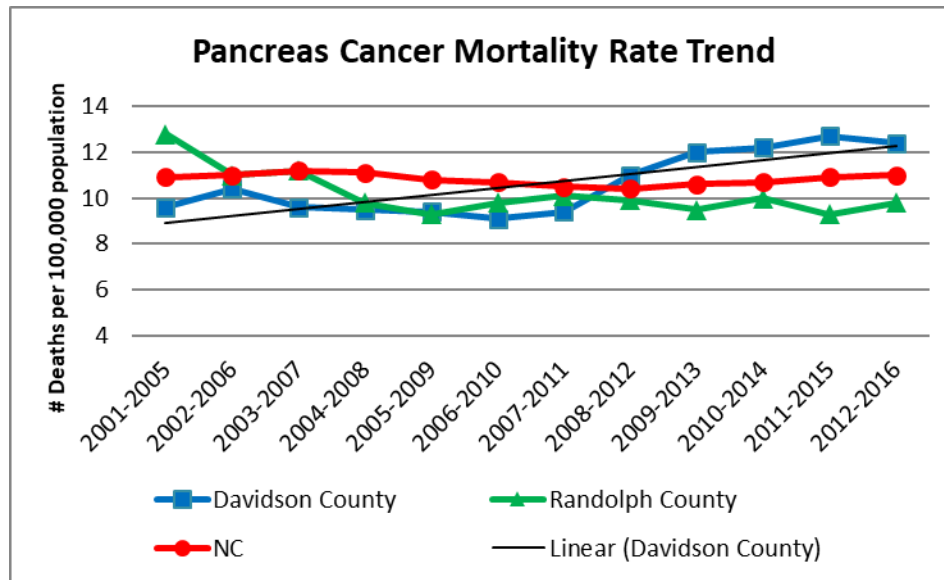
Pancreas cancer is the fifth leading site-specific cause of cancer death in Davidson County. Due to its relative rarity, the NCSCHS does not keep the same range of data for this cancer as it does for other, more common site-specific cancers.

Pancreas Cancer Mortality Rate Trend

The figure below plots pancreas cancer mortality rates over time.

- The pancreas cancer mortality rate in Davidson County has increased significantly since 2007-2011. The local rate has been the highest among the comparators since 2008-2012.
- The pancreas cancer mortality rate in the Davidson County in 2012-2016 (12.4) was 29% higher than the comparable county rate in 2001-2005 (9.6).
- Statewide the pancreas cancer mortality remained relatively steady over the period cited, fluctuating between 10.4 and 11.2.

**Figure 25. Pancreas Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Pancreas Cancer Mortality Rates

The table below presents pancreas cancer mortality data for 2012-2016, stratified by race/ethnicity. Due to below-threshold numbers of pancreas cancer deaths among stratified populations in both counties, mortality rates for those groups were suppressed.

- Statewide, the pancreas cancer mortality rates for African American non-Hispanics (14.1) and American Indian non-Hispanics (11.9) were both higher than the rate for white non-Hispanics (10.5).
- Statewide the pancreas cancer mortality rate for African American non-Hispanics was 34% higher than the comparable rate for white non-Hispanics.

**Table 110. Pancreas Cancer Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)									
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	120	12.4	12	n/a	0	n/a	0	n/a	2	n/a
Randolph County	80	9.8	3	n/a	0	n/a	0	n/a	4	n/a
State of NC	4,707	10.5	1,422	14.1	63.0	11.9	54	6.8	72	5.4
									6,318	11.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

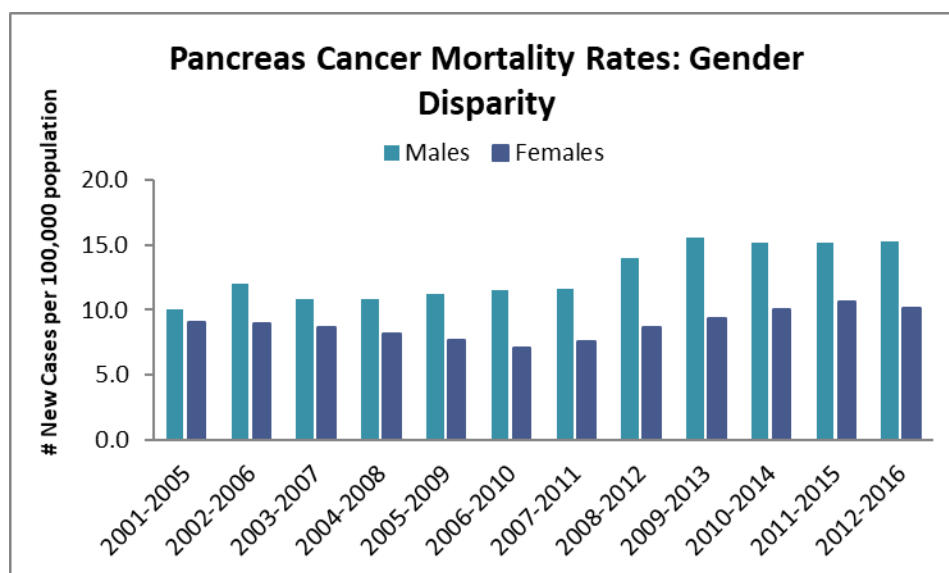
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Pancreas Cancer Mortality Rates

The next figure shown gender-stratified pancreas cancer mortality rates in Davidson County for 2001-2005 through 2012-2016.

- Davidson County males have higher pancreas cancer mortality rates than do females.
- The pancreas cancer mortality rates for males in Davidson County appear to have stabilized in the four or five most recent aggregate periods; in the same time frame, the pancreas cancer mortality rate among county females has increased.
- In the 2012-2016 aggregate period the pancreas cancer mortality rate for Davidson County males (15.3) was 51% higher than the comparable rate for females (10.1).

**Figure 26. Pancreas Cancer Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Pancreas Cancer Incidence

Pancreas cancer incidence rates at the county level are not routinely released by NCSCHS.

Diseases of the Heart

Heart disease describes a range of conditions that affect the heart. Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease; heart rhythm problems (arrhythmias); and congenital heart defects, among others.

The term "heart disease" is often used interchangeably with the term "cardiovascular disease." Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. Other heart conditions,

such as those that affect the heart's muscle, valves or rhythm, also are considered forms of heart disease.

Many forms of heart disease can be prevented or treated with healthy lifestyle choices (50).

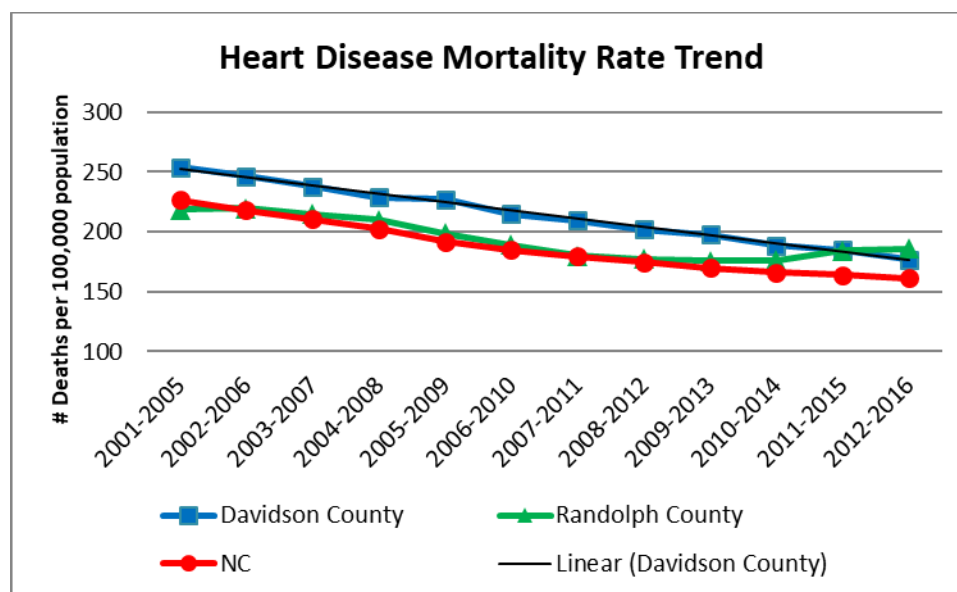
Heart disease was the second leading cause of death in Davidson County and NC and the leading cause of death in Randolph County in the 2012-2016 period (cited previously).

Heart Disease Mortality Rate Trend

The figure below plots heart disease mortality rates over time.

- Heart disease mortality rates decreased in each comparator jurisdiction over the period cited.
- The decrease in rate in Davidson County was so regular that it traces the regression line drawn by the consultant. The decrease over the period cited in Davidson County was 30%.
- Despite consistent decrease, the heart disease mortality rate in Davidson County surpassed the comparable state rate in every aggregate period cited. In the 2012-2016 period the Davidson County rate exceeded the NC rate by approximately 10% (176.9 vs. 161.3).
- The heart disease mortality rate in NC decreased by 29% over the period cited.

**Figure 27. Heart Disease Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Heart Disease Mortality Rates

The next table presents heart disease mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of heart disease deaths among some minority populations in both Davidson and Randolph counties, mortality rates for those groups were suppressed.

- In Davidson County the heart disease mortality rate among African American non-Hispanics was 21% *lower* than the comparable rate among white non-Hispanics.
- At the state level, the heart disease mortality rate among African American non-Hispanics was 18% *higher* than the comparable rate among white non-Hispanics.
- At the state level, the highest heart disease mortality rate occurred among African American non-Hispanics; the second highest rate occurred among American Indian non-Hispanics.

**Table 111. Heart Disease Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	1,637	183.0	110	145.1	1	n/a	8	n/a	8	n/a	1,764	176.9
Randolph County	1,458	189	90	210.6	3	n/a	9	n/a	7	n/a	1,567	185.7
State of NC	69,179	159.0	18,081	187.1	904	182.0	516	76.0	713	56.6	89,393	161.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

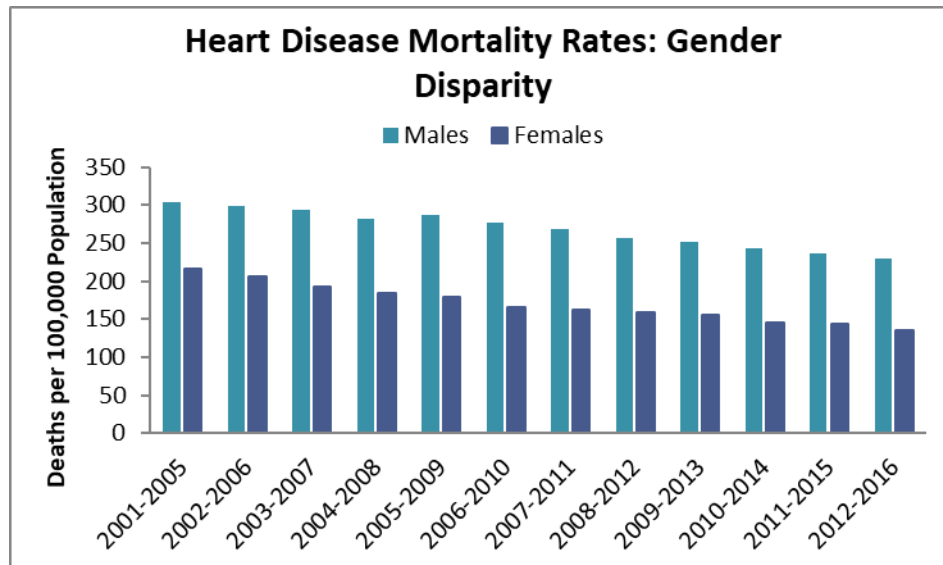
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdohhs.gov/data/databook/>.

Gender Disparities in Heart Disease Mortality Rates

The following figure plots gender-stratified heart disease mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- It appears that the gender disparity noted previously for recent heart disease mortality rate data in Davidson County is actually long-standing. Males in the county have had higher heart disease mortality rates than females since at least 2001-2005.
- The gap in mortality rates between males and females in the county does not appear to be decreasing appreciably, as heart disease mortality rates for both males and females in Davidson County have decreased similarly through the period cited.

**Figure 28. Heart Disease Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Heart Disease Morbidity

Hospital Data

The two hospitals in Davidson County provided data associated with heart disease-related ICD-9 or ICD-10 codes, as summarized in the table below. Emergency department (ED) discharges and in-patient hospitalization (IP) discharges are presented separately. Note that this data is specific to Davidson County residents served at either of the medical centers in the county.

For heart disease, the associated ICD-9 codes (applicable in 2015) are 390-398, 402, 404, 410-429; the associated ICD-10 codes (applicable to part of 2015 and both 2016 and 2017) are I00-I09, I11, I13, I20-I51. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- For the three years cited, 1.3% of all ED discharges were associated with diagnoses of heart disease.
- In the same period, a significant 6.1% of all IP discharges were associated with diagnoses of heart disease.

**Table 112. Hospital Discharges Associated with a Diagnosis of Heart Disease
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	765	686	754	2,205	294	283	221	798
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	1.4	1.2	1.4	1.3	6.5	6.4	5.2	6.1

See text for list of associated ICD codes.

Chronic Lower Respiratory Disease (CLRD)

Chronic respiratory diseases are chronic diseases of the airways and other structures of the lung. Some of the most common are asthma, chronic obstructive pulmonary disease, occupational lung diseases and pulmonary hypertension. Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma (51).

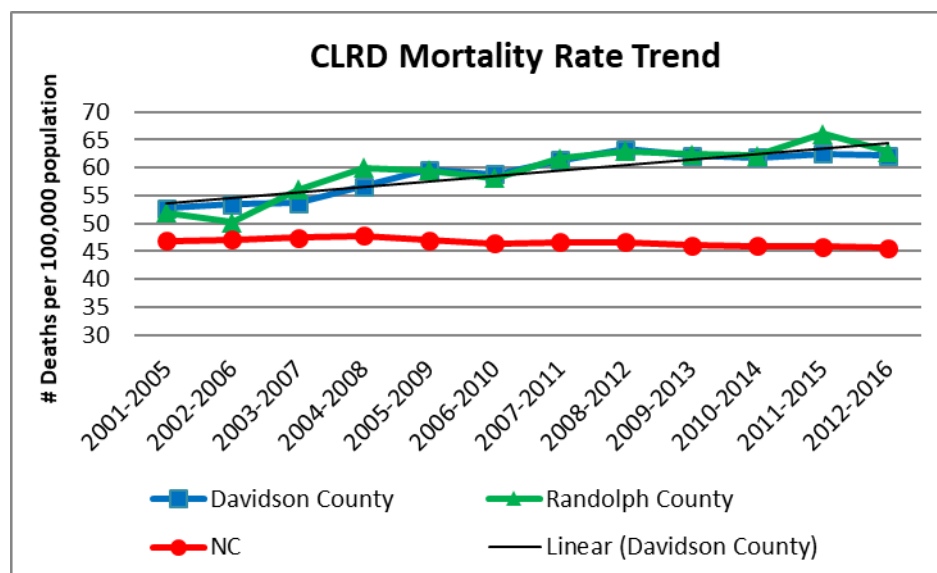
CLRD was the third leading cause of death in Davidson County, Randolph County and the state of NC in the 2012-2016 period (cited previously).

CLRD Mortality Rate Trend

The following figure plots CLRD mortality rates over time.

- CLRD mortality rates in both Davidson and Randolph counties increased significantly over the period cited: the CLRD mortality rate in Davidson County rose by 18% and the rate in Randolph County rose by 21%.
- While the county rates were increasing, the CLRD mortality rate statewide decreased by a modest 3%.

Figure 29. CLRD Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in CLRD Mortality Rates

The following table presents CLRD mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of CLRD deaths among some minority populations in the counties, mortality rates were suppressed for those groups.

- Statewide, the CLRD mortality rate for white non-Hispanics was 84% higher than the comparable rate for African American non-Hispanics.
- Statewide the highest CLRD mortality rate (50.7) occurred among white non-Hispanics, and the second highest rate occurred among American Indian non-Hispanics (43.8).

**Table 113. CLRD Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	626	66.6	18	n/a	0	n/a	0	n/a	1	n/a	645	62.1
Randolph County	535	66.8	10	n/a	1	n/a	0	n/a	1	n/a	547	62.8
State of NC	22,361	50.7	2,645	27.6	211.0	43.8	81	12.5	87	8.6	25,385	45.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

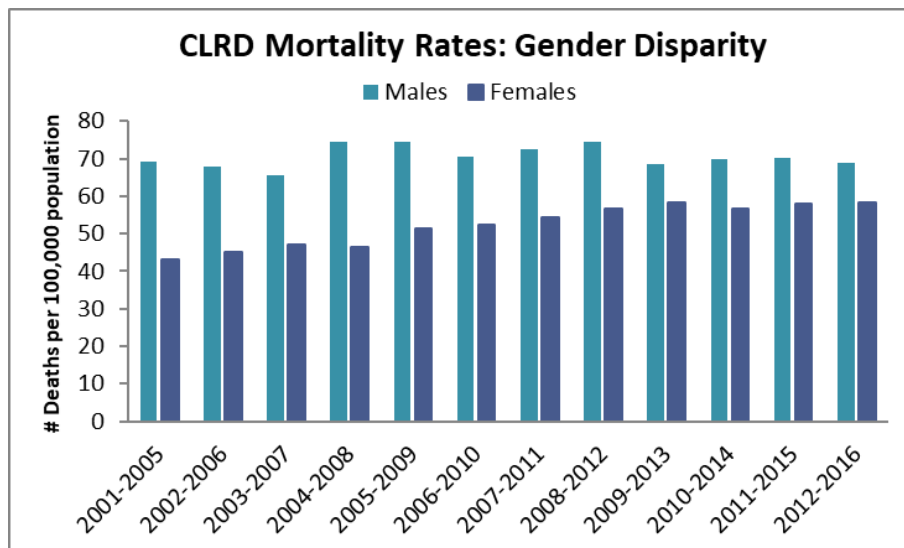
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in CLRD Mortality Rates

The following figure plots gender-stratified CLRD mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The CLRD mortality rate among Davidson County males was higher than the comparable rate among females over the entire period cited, but the gap is becoming smaller as the rate for males decreases and the rate among females increases.

**Figure 30. CLRD Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

CLRD Morbidity

Hospital Data

The two hospitals in Davidson County provided data associated with CLRD-related ICD-9 or ICD-10 codes, as summarized in the table below. Emergency department (ED) discharges and in-patient hospitalization (IP) discharges are presented separately. Note that this data is specific to Davidson County residents served at either of the medical centers in the county.

For chronic lower respiratory disease, the associated ICD-9 codes (applicable in 2015) are 490-494, and 496; the associated ICD-10 codes (applicable to part of 2015 and both 2016 and 2017) are J40-J47. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- Overall, ICD codes for chronic lower respiratory disease were associated with 3.6% of all ED discharges, and 3.4% of all IP discharges in the period 2015-2017.

**Table 114. Hospital Discharges Associated with a Diagnosis of CLRD
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	2,067	1,833	2,124	6,024	174	126	140	440
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	3.7	3.3	3.8	3.6	3.9	2.9	3.3	3.4

See text for list of associated ICD codes.

Because the CLRD mortality rate gap between males and females in Davidson County is changing, it may be illustrative to examine hospital discharges stratified by gender. The table below re-examines the data from the table immediately above, this time stratified by sex.

- The number and proportion of ED discharges associated with a diagnosis of CLRD are both approximately 51% higher among females than among males.
- The number and proportion of IP discharges associated with a diagnosis of CLRD are both 75% higher among females than among males. It is unclear whether these gender differences in hospital utilization reflect a greater presence of CLRD among females or simply greater utilization of hospital services by females.

**Table 115. Hospital Discharges Associated with a Diagnosis of CLRD, by Gender
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	2,067	1,833	2,124	6,024	174	126	140	440
Male	843	740	813	2,396	62	49	49	160
Male % Diagnosis-Specific	40.8	40.4	38.3	39.8	35.6	38.9	35.0	36.4
Female	1,224	1,093	1,311	3,628	112	77	91	280
Female % Diagnosis-Specific	59.2	59.6	61.7	60.2	64.4	61.1	65.0	63.6

See text for list of associated ICD codes.

Cerebrovascular Disease

Cerebrovascular disease describes the physiological conditions that lead to stroke. Strokes happen when blood flow to the brain temporarily or permanently stops and brain cells begin to die. There are two types of stroke. Ischemic stroke (the more common type) is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other kind, called hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds into the brain (52).

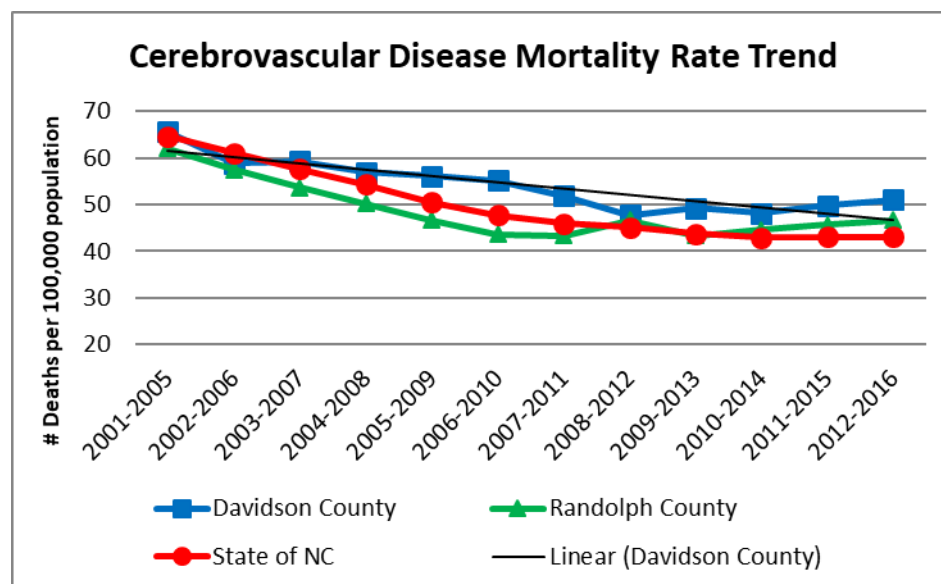
Cerebrovascular disease was the fourth leading cause of death in Davidson County, Randolph County and NC in the 2012-2016 aggregate period (cited previously).

Cerebrovascular Disease Mortality Rate Trend

The figure below plots cerebrovascular disease mortality rates over time.

- Cerebrovascular disease mortality rates decreased overall in all three jurisdictions, but recently have begun to stabilize or reverse.
- In Davidson the cerebrovascular disease mortality rate decreased steadily through 2008-2012 after which time it began to rise. In the 2012-2016 aggregate period the Davidson County mortality rate (51.1) was the highest among comparators.

**Figure 31. Cerebrovascular Disease Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Cerebrovascular Disease Mortality Rates

The table below presents cerebrovascular disease mortality data for 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of cerebrovascular disease deaths in some minority populations at the county level, mortality rates were suppressed for those groups.

- In Davidson County the cerebrovascular disease mortality rate for African American non-Hispanics was 10% higher than the comparable rate for white non-Hispanics.

**Table 116. Cerebrovascular Disease Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	448	50.8	42	55.8	1	n/a	2	n/a	6	n/a	499	51.1
Randolph County	353	46.3	30	80.5	1	n/a	0	n/a	1	n/a	385	46.6
State of NC	17,635	40.6	5,204	56.0	181	39.5	227	36.4	267	21.7	23,514	43.1

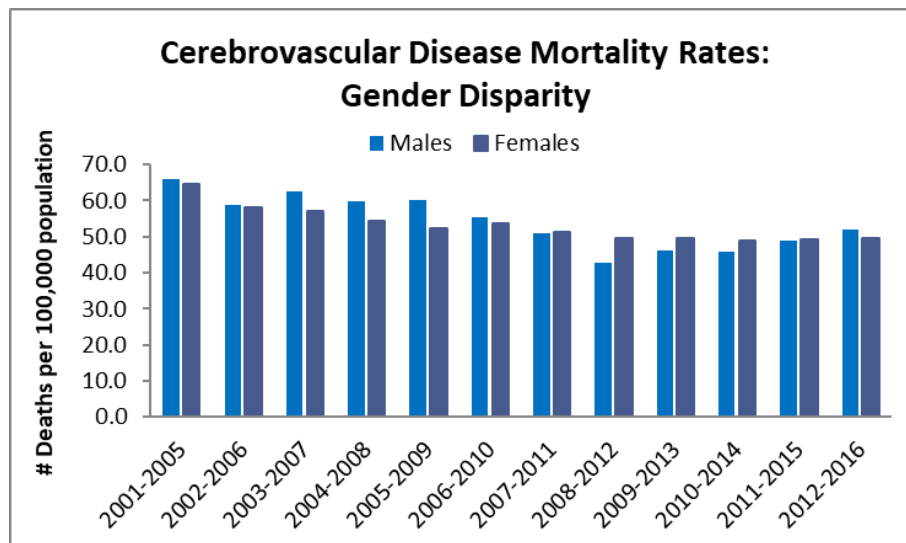
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Cerebrovascular Disease Mortality Rates

The figure below shows gender-stratified cerebrovascular disease mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- In Davidson County from 2001-2005 through 2006-2010 the cerebrovascular disease mortality rate for males was higher than the rate for females, after which time the disparity reversed; however, in the 2012-2016 period the mortality rate for males was once again the higher rate.

**Figure 32. Cerebrovascular Disease Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Cerebrovascular Disease Morbidity

Hospital Data

The two hospitals in Davidson County provided data associated with cerebrovascular disease-related ICD-9 or ICD-10 codes, as summarized in the table below. Emergency department (ED) discharges and in-patient hospitalization (IP) discharges are presented separately. Note that this data is specific to Davidson County residents served at either of the medical centers in the county.

For cerebrovascular disease, the associated ICD-9 codes (applicable in 2015) are 430-434 and 436-438; the associated ICD-10 codes (applicable to part of 2015 and both 2016 and 2017) are I60-I69. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- For the three years cited, 0.35% of all ED admissions were associated with diagnoses of cerebrovascular disease.
- In the same period, 1.6% of all IP discharges were associated with diagnoses of cerebrovascular disease.

**Table 117. Hospital Discharges Associated with a Diagnosis of Cerebrovascular Disease
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	191	178	221	590	95	38	80	213
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	0.3	0.3	0.4	0.35	2.1	0.9	1.9	1.6

See text for list of associated ICD codes.

Because the cerebrovascular mortality rate difference between males and females in Davidson County is changing, it may be illustrative to examine hospital discharges stratified by gender.

- The number and proportion of ED discharges associated with a diagnosis of cerebrovascular disease are both marginally higher among males than females. (Recall that the mortality rate for males in the county was 5% higher than the comparable rate for females in 2012-2016.)
- The number and proportion of IP discharges associated with a diagnosis of cerebrovascular disease are both 34% higher among females than among males.

**Table 118. Hospital Discharges Associated with a Diagnosis of Cerebrovascular Disease,
by Gender
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	191	178	221	590	95	38	80	213
Male	102	87	111	300	39	15	37	91
Male % Diagnosis-Specific	53.4	48.9	50.2	50.8	41.1	39.5	46.2	42.7
Female	89	91	110	290	56	23	43	122
Female % Diagnosis-Specific	46.6	51.1	49.8	49.2	58.9	60.5	53.8	57.3

See text for list of associated ICD codes.

Alzheimer's Disease

Alzheimer's disease is a progressive neurodegenerative disease affecting mental abilities including memory, cognition and language. Alzheimer's disease is characterized by memory loss and dementia. The risk of developing Alzheimer's disease increases with age (e.g., almost half of those 85 years and older suffer from Alzheimer's disease). Early-onset Alzheimer's has been shown to be genetic in origin, but a relationship between genetics and the late-onset form of the disease has not been demonstrated. No other definitive causes have been identified.

In 2016, Alzheimer's disease was ranked as the sixth leading cause of death in the United States, but recent estimates indicate that the disorder may rank third, just behind heart disease and cancer, as a cause of death for older people (53).

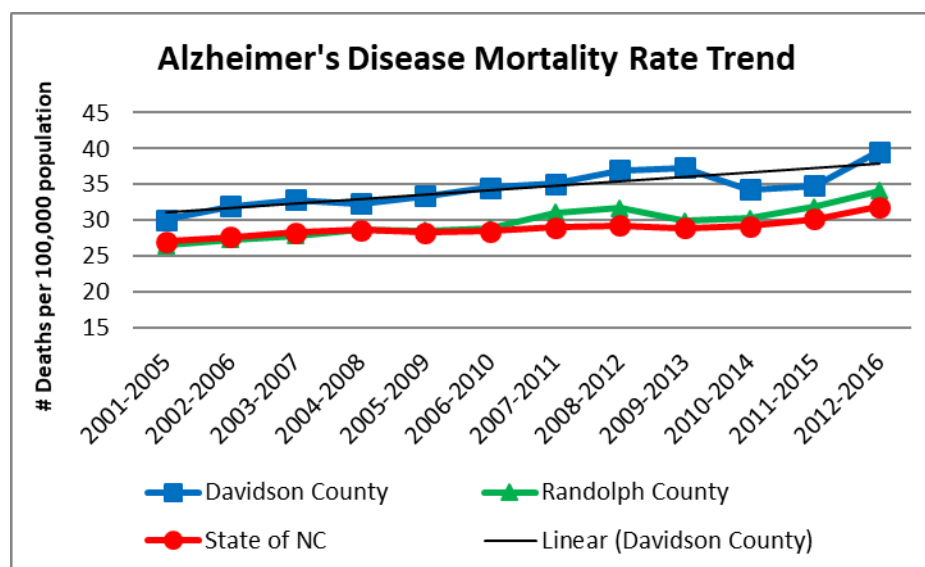
Alzheimer's disease was the fifth leading cause of death in Davidson County, the sixth in Randolph County, and the fifth leading cause of death in NC in the 2012-2016 aggregate period (cited previously).

Alzheimer's Disease Mortality Rate Trend

The following figure plots Alzheimer's disease mortality rates over time.

- The Alzheimer's disease mortality rate in Davidson County was the highest among the comparators throughout the period cited.
- The Alzheimer's disease mortality rate in Davidson County increased overall by 32% over the period cited.
- The Alzheimer's disease mortality rate in NC rose 18%, and the rate in Randolph County rose 29%, over the same period.

Figure 33. Alzheimer's Disease Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Alzheimer's Disease Mortality Rates

The next table presents Alzheimer's disease mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Due to below-threshold numbers of Alzheimer's disease deaths among minority populations at the county level mortality rates were suppressed for those groups and comparisons are not possible.

- In Davidson County the Alzheimer's disease mortality rate for African-American non-Hispanics was 49% higher than the comparable rate for white non-Hispanics.
- Statewide the Alzheimer's disease mortality rate was highest for American Indian non-Hispanics, followed by white non-Hispanics, then African American non-Hispanics.

**Table 119. Alzheimer's Disease Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	330	38.7	38	57.7	0	n/a	0	n/a	2	n/a	370	39.6
Randolph County	258	35	11	n/a	0	n/a	0	n/a	0	n/a	269	34.1
State of NC	14 181	32.7	2 392	29.6	163.0	44.6	56	11.7	125	15.1	16 917	31.9

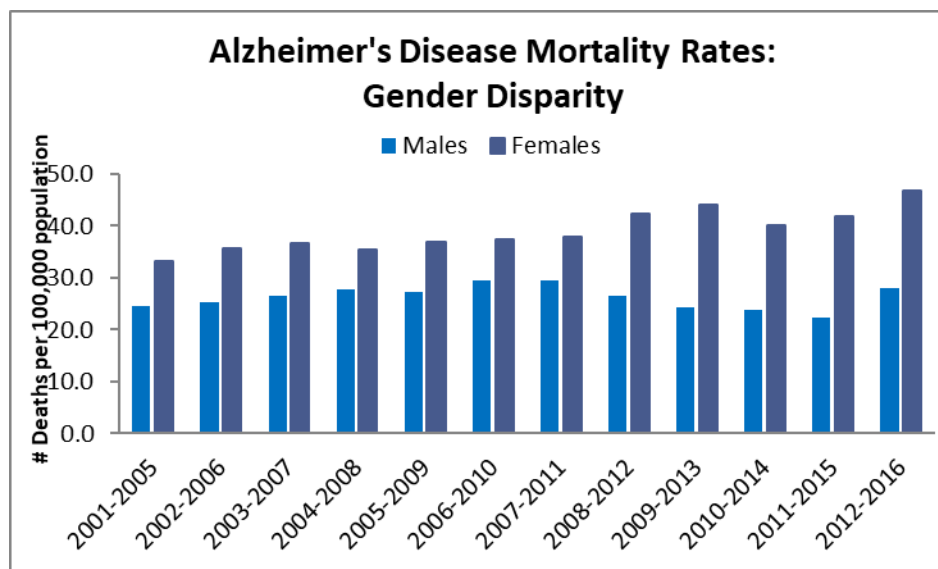
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Alzheimer's Disease Mortality Rates

The following figure plots gender-stratified Alzheimer's disease mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The Alzheimer's disease mortality rate among Davidson County females has been increasing over time.
- The Alzheimer's disease mortality rate among Davidson County males fell between 2007-2011 and 2011-2015 but rose significantly in 2012-2016.
- The gender disparity in the Alzheimer's disease mortality rate in Davidson County remains significant. In the 2012-2016 aggregate period the mortality rate for females in Davidson County (46.7) was 67% higher than the comparable rate for males (27.9).

**Figure 34. Alzheimer's Disease Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

All Other Unintentional Injury

This category includes death without purposeful intent due to poisoning, falls, burns, choking, animal bites, drowning, and occupational or recreational injuries; it expressly *excludes* death from unintentional injury due to motor vehicle crashes, which merits a leading cause of death category of its own which will be covered subsequently.

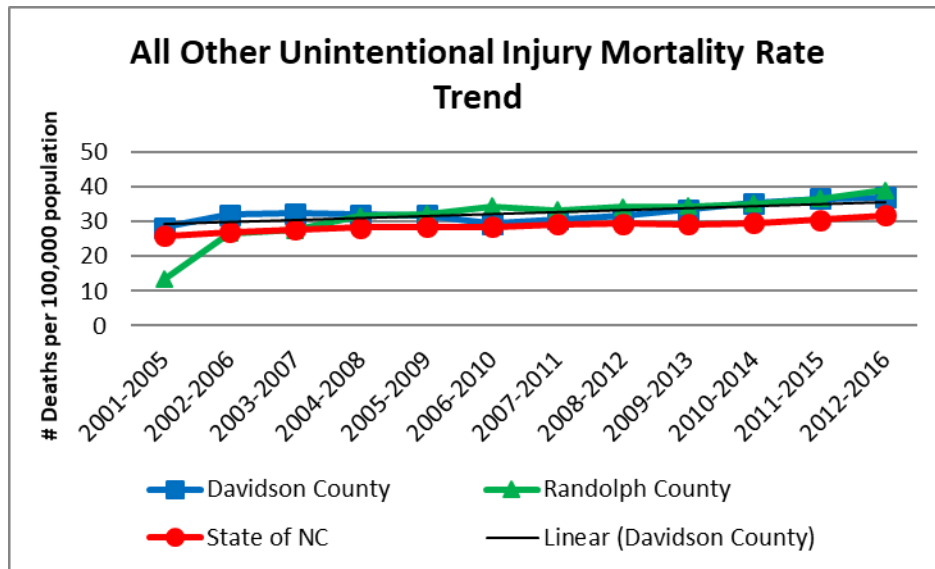
All other unintentional injury was the sixth leading cause of death in Davidson County, the fifth in Randolph County, and the fifth leading cause of death in NC in the 2012-2016 period (cited previously).

All Other Unintentional Injury Mortality Rate Trend

The figure below displays all other unintentional injury mortality rates over time.

- The all other unintentional injury mortality rates in all jurisdictions were rather stable from 2002-2006 through 2007-2011 after which they began to increase at the county level.; the increase at the state level began later, in 2010-2014.
- The unintentional injury mortality rate in Davidson County rose 31% overall between 2001-2005 through 2012-2016.
- In Davidson County the current (2012-2016) unintentional injury mortality rate (37.1) was the highest of the entire period.
- At the state level, the rate rose from 26.0 to 31.9 (23%) over the period cited.

**Figure 35. All Other Unintentional Injury Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in All Other Unintentional Injury Mortality Rates

The table below presents all other unintentional injury mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of other unintentional injury deaths among all minority populations at the county level, mortality rates were suppressed for those groups.

- At the state level the other unintentional injury mortality rate was highest among American Indian non-Hispanics, followed by white non-Hispanics and African-American non-Hispanics.

**Table 120. All Other Unintentional Injury Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	295	41.7	13	n/a	0	n/a	0	n/a	6	n/a	314	37.1
Randolph County	277	43.4	12	n/a	1	n/a	0	n/a	3	n/a	293	39.1
State of NC	13,553	37.3	2,237	21.8	221.0	40.8	120	13.7	322	11.8	16,453	31.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

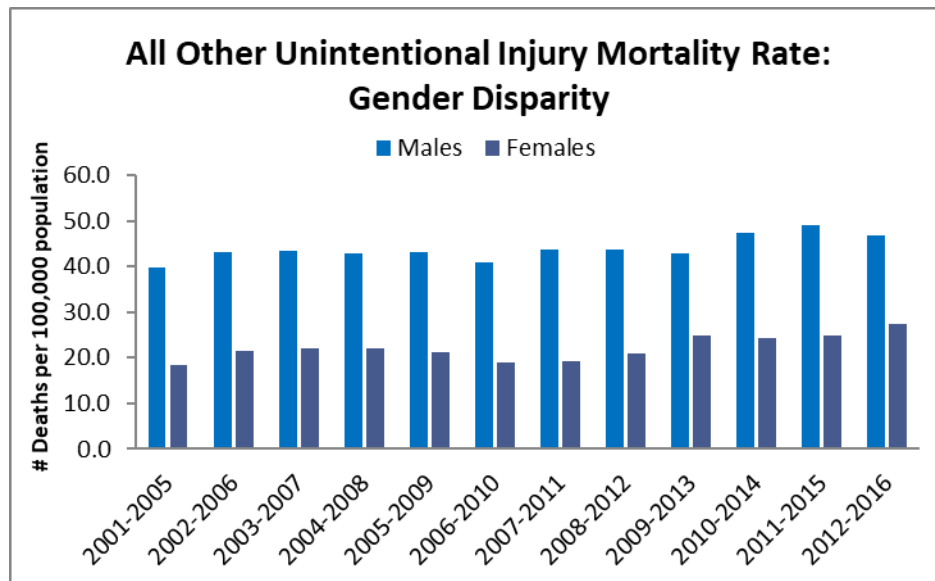
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in All Other Unintentional Injury Mortality Rates

The next figure plots gender-stratified mortality rates for all other unintentional injuries in Davidson County for the aggregate period 2001-2005 through 2012-2016.

- Mortality rates for all other unintentional injury for males in Davidson County historically have been roughly twice the comparable rates for females.

**Figure 36. All Other Unintentional Injury Mortality Rate Trend, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

All Other Unintentional Injuries Morbidity

Hospital Data

Parsing information relative to injury, poisoning and violence from ICD-9- or ICD-10-coded hospital data is difficult because injuries, poisoning and violence are coded both for the consequence of the event (e.g., the bodily location of the injury) and its external cause (e.g., automobile collision). Further, certain codes delineate between unintentional (e.g., accidental) and intentional injury (e.g., deliberate self-harm). Analyzing local hospital data for discharges related to the LCD All Other Unintentional Injuries is possible but would involve a multi-step process beyond the scope of this CHNA project.

Nevertheless, some hospitalization data relative to injuries is available from NC DETECT (North Carolina Disease Event Tracking and Epidemiologic Collection Tool). NC DETECT is North Carolina's statewide syndromic surveillance system, created by the NC Division of Public Health (NCDPH) in 2004 in collaboration with the Carolina Center for Health Informatics (CCHI) in the UNC Department of Emergency Medicine to address the need for early event detection and timely public health surveillance in NC using a variety of secondary data sources.

The following data on injury-related ED visits is summarized by county of the patient's residence and is not hospital-specific. The table below shows the relevant data for residents of the comparator jurisdictions in the period 2012-2015.

- In the period cited, Davidson County had the highest rates of ED visits for assault-related injuries and violence-related injuries among children, as well as for injuries of undetermined intent.

Table 121. Injury-Related Emergency Department Visits, by Patient County of Residence (2012-2015)
Unadjusted Rate per 100,000 person-years

Location	Violence-Related		Self-Inflicted		Assault-Related		Legal Intervention-Related		Unintentional Firearm-Related		Violence-Related among Children		Undetermined Intent	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Davidson County	3,377	549.3	810	131.7	2,442	397.2	43	7.0	82	13.3	405	288.9	533	86.7
Randolph County	3,162	591.8	1,001	187.3	2,047	383.1	38	7.1	76	14.2	325	257.0	413	77.3
State Total *	182,385	492.1	41,455	111.8	132,550	357.6	2,440	6.6	5,940	15.9	21,876	255.3	20,867	56.3

Source: Harmon KJ, Waller AE, Harduar Morano L, Ising A. *A Report on Violent Injuries Treated in Emergency Departments: 2012-2015*. Chapel Hill: NC. Carolina Center for Health Informatics, Department of Emergency Medicine, University of North Carolina at Chapel Hill, 2017. Available at: <http://ncdetect.org/reports/>.

* Total for NC Residents, not all ED visits, which includes out-of-state residents

Unintentional Poisoning Mortality Rates

The NC State Center for Health Statistics produces aggregate period summaries of deaths due specifically to unintentional poisoning. The table below displays this data for Davidson County and its comparators for the five aggregate periods 2009-2013 through 2012-2016.

- The mortality rate in Davidson County attributable to unintentional poisoning (which would include accidental drug overdoses) was the highest among comparators in every aggregate period cited.

Table 122. Unintentional Poisoning Mortality Rate Trend
2009-2013 through 2012-2016

Location	2009-2013		2010-2014		2011-2015		2012-2016	
	# Deaths	Rate	# Deaths	Rate	# Deaths	Rate	# Deaths	Rate
Davidson County	128	16.4	140	18.0	152	19.3	157	20.2
Randolph County	96	14.2	97	14.5	114	16.8	126	18.6
State Total	5,346	11.1	5,531	11.4	6,015	12.3	6,697	13.7

Note: Poisonings include all resident deaths where an unintentional poisoning was coded as the underlying (primary) cause of death. Deaths were coded under the 10th revision of the International Classification of Diseases (ICD). ICD-10: X40-X49.

Source: *Unintentional Poisoning Mortality Rates per 100,000 [years as noted]*. North Carolina State Center for Health Statistics (NCSCSHS), County Health Data Book website: <http://www.schs.state.nc.us/data/databook/>.

Diabetes Mellitus

Diabetes mellitus is a chronic disease caused by inherited and/or acquired deficiency in production of insulin by the pancreas, or by the ineffectiveness of the insulin produced. Such a deficiency results in increased concentrations of glucose in the blood, which in turn damage many of the body's systems, especially blood vessels and nerves.

There are two principle forms of diabetes:

- Type 1 diabetes (formerly known as insulin-dependent) in which the pancreas fails to produce the insulin which is essential for survival. This form develops most frequently in children and adolescents but is being increasingly noted later in life.
- Type 2 diabetes (formerly named non-insulin-dependent) which results from the body's inability to respond properly to the action of insulin produced by the pancreas. Type 2 diabetes is much more common and accounts for around 90% of all diabetes cases worldwide. It occurs most frequently in adults but is being noted increasingly in adolescents as well (54).

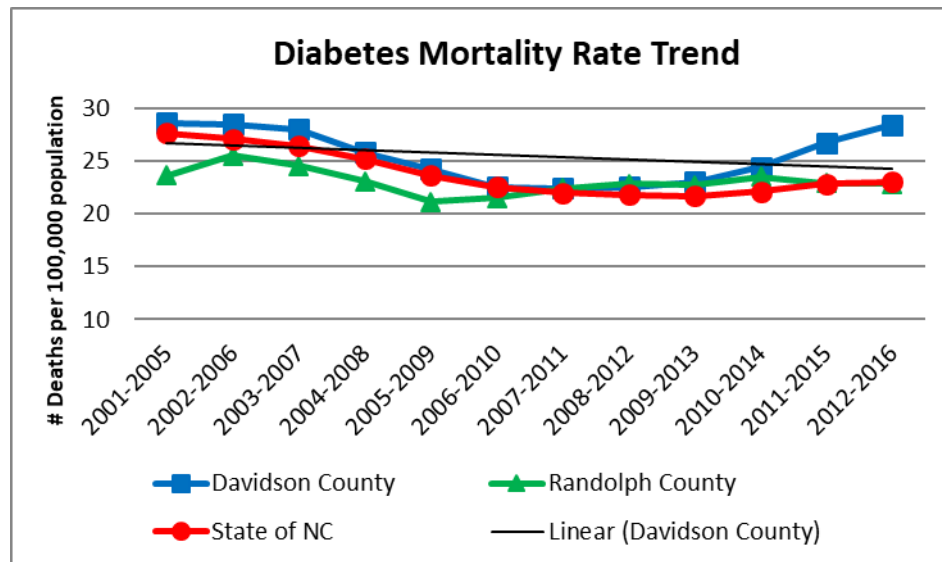
Diabetes was the seventh leading cause of death in Davidson County, Randolph County, and the state of NC in 2012-2016 (cited previously).

Diabetes Mellitus Mortality Rate Trend

The following figure plots diabetes mortality rates over time.

- During the period cited, the highest rates of diabetes mortality among comparators frequently occurred in Davidson County, and did so the most recent four aggregate periods.
- Despite the recent increase in diabetes mortality rates in Davidson County, the overall trend, as indicated by the regression line for the county's rates, is downward.
- Diabetes mortality rates have increased slightly in Randolph County and NC as well in recent aggregate periods.

**Figure 37. Diabetes Mellitus Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Diabetes Mellitus Mortality Rates

The following table presents diabetes mortality data for 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of diabetes deaths among some minority populations at the county level mortality rates were suppressed for those groups.

- In Davidson County the diabetes mortality rate for African American non-Hispanics was almost *twice* the comparable rate for white non-Hispanics.
- Statewide, the diabetes mortality rates for African American non-Hispanic persons and for American Indian non-Hispanic persons were 2.3 *times* the comparable rate among white non-Hispanic persons.
- Statewide, the highest diabetes mortality rate in the period cited occurred among American Indian non-Hispanics, followed by African American non-Hispanics.

**Table 123. Diabetes Mellitus Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	249	27.0	40	51.7	0	n/a	2	n/a	1	n/a	292	28.4
Randolph County	172	21.5	22	52.4	2	n/a	2	n/a	1	n/a	199	22.8
State of NC	8,212	18.8	4,334	44.0	232	45.0	102	14.3	162	11.3	13,042	23.0

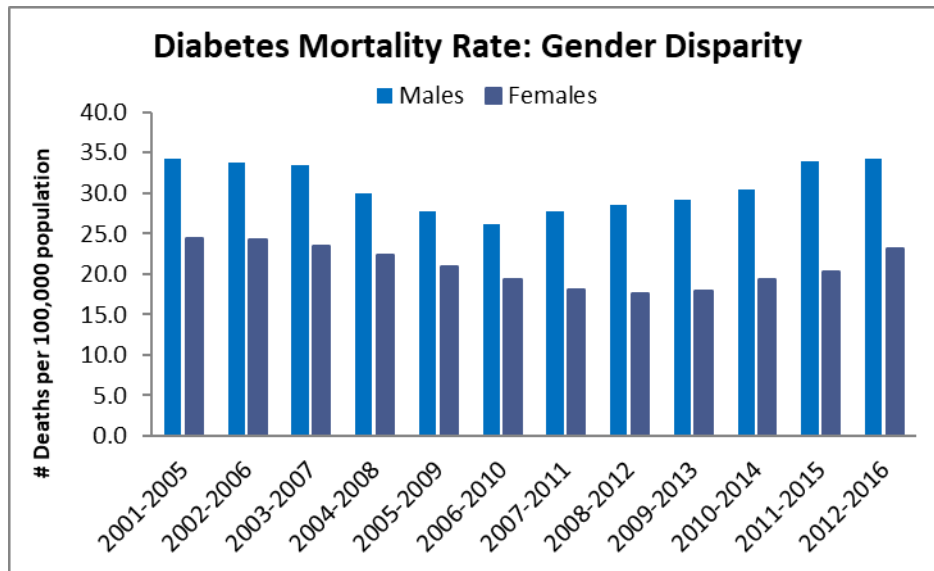
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Diabetes Mellitus Mortality Rates

The next figure plots gender-stratified diabetes mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The diabetes mortality rate among Davidson County males has been consistently higher than the comparable rate among females.
- While the diabetes mortality rate among both males and females in Davidson County fell from 2001-2005 through 2006-2010, the mortality rate began to increase after that time: in 2007-2011 among males and in 2009-2013 among females. Unfortunately, the pattern of increasing diabetes mortality rates in both sexes continues through the most recent period.

**Figure 38. Diabetes Mellitus Mortality Rate Trend, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Diabetes Mellitus Morbidity

Diabetes Prevalence

According to data from the US Centers for Disease Control and Prevention, which catalogs historic prevalence data for diabetes by county, the prevalence of adult (age 18 or older) diabetes in Davidson County in the eight-year period 2006 through 2013 was 9.7%, compared to a statewide prevalence of 9.4%.

**Table 124. Adult Diagnosed Diabetes Prevalence Estimate Trend
(2005 through 2013)**

Location	Estimated Prevalence, Number and Percent (Age-adjusted, Age 18 and Older)															
	2006		2007		2008		2009		2010		2011		2012		2013	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Davidson County	12,540	10.1	11,850	9.4	12,410	9.7	11,527	8.9	13,441	9.9	13,597	9.9	14,564	10.4	13,552	9.5
Randolph County	8,589	7.9	10,500	9.5	10,660	9.5	11,053	9.6	10,836	9.3	11,692	10.0	12,859	10.8	14,402	12.0
State Total	599,940	9.0	208,227	8.9	643,131	9.1	674,394	9.2	700,657	9.4	788,226	10.2	778,716	9.7	860,360	10.5

Source: Centers for Disease Control and Prevention, Diabetes Data and Statistics. County Data. Select indicator and year in mapping tool. <https://www.cdc.gov/diabetes/data/county.html>.

Source for state data: Centers for Disease Control and Prevention, Diabetes. Data and Statistics. National and State Data. <https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>.

Note: The prevalence of diagnosed diabetes and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors.

Hospital Data

The two hospitals in Davidson County provided data associated with diabetes-related ICD-9 or ICD-10 codes, as summarized in the table below. Emergency department (ED) discharges and

in-patient hospitalization (IP) discharges are presented separately. Note that this data is specific to Davidson County residents served at either of the medical centers in the county. For diabetes mellitus, the associated ICD-9 code (applicable in 2015) is 250; the associated ICD-10 codes (applicable to part of 2015 and both 2016 and 2017) are E10-E14. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- Overall, ICD codes for diabetes mellitus were associated with 0.8% of all ED discharges, and 1.6% of all IP discharges in the period 2015-2017.

**Table 125. Hospital Discharges Associated with a Diagnosis of Diabetes Mellitus
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	358	418	484	1,260	88	53	75	216
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	0.6	0.8	0.9	0.8	2.0	1.2	1.8	1.6

See text for list of associated ICD codes.

Because the difference in diabetes mellitus mortality rates for males and females in Davidson County is significant, it may be illustrative to examine hospital discharges stratified by gender. The table below re-examines the data from the table immediately above, this time stratified by sex.

- Over the period cited, the number and proportion of ED discharges associated with a diagnosis of diabetes were both approximately 27% higher among females than among males.
- Females composed 35% more IP diabetes discharges than males.

**Table 126. Hospital Discharges Associated with a Diagnosis of Diabetes Mellitus, by
Gender
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	358	418	484	1,260	88	53	75	216
Male	152	186	217	555	37	26	29	92
Male % Diagnosis-Specific	42.5	44.5	44.8	44.0	42.0	49.1	38.7	42.6
Female	206	232	267	705	51	27	46	124
Female % Diagnosis-Specific	57.5	55.5	55.2	56.0	58.0	50.9	61.3	57.4

See text for list of associated ICD codes.

Because of the racial disparity in diabetes mortality rates between white non-Hispanics and African American non-Hispanics in Davidson County it may be illustrative to examine hospital discharges stratified by those racial groups.

- African Americans accounted for approximately 20% of all diabetes-related ED discharges and 19% of all diabetes-related IP discharges in the period cited even though they account for approximately only 9% of the Davidson County population.

**Table 127. Hospital Discharges Associated with a Diagnosis of Diabetes Mellitus, by Race
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	358	418	484	1,260	88	53	75	216
African American	84	67	97	248	21	9	11	41
African American % Diagnosis-Specific	23.5	16.0	20.0	19.7	23.9	17.0	14.7	19.0
White	260	333	366	959	65	42	62	169
White % Diagnosis-Specific	72.6	79.7	75.6	76.1	73.9	79.2	82.7	78.2

See text for list of associated ICD codes.

Community Survey Data

Diabetes was included in the list of health problems among which 2018 Davidson County Community Health Survey respondents could choose as having the greatest overall impact on health in the county. Diabetes was the second-ranked health problem on the final list (tied with cancer), being chosen by 54% of respondents. Further, when the survey queried whether a health professional had diagnosed him or her with any of a list of health conditions, approximately 14% of respondents named diabetes (not during pregnancy) among their diagnoses.

Among lifestyle factors contributing to diabetes prevalence and mortality, overweight/obesity, poor eating habits, and a sedentary lifestyle are among the most important. While the 2018 Davidson County Community Health Survey did not ask respondents to self-report their height, weight or BMI, it did include obesity/overweight among topics that could be chosen as important community health problems; that topic was chosen first on the final list, having been selected by 60% of respondents. When asked to select from a list the unhealthy behaviors they felt had the greatest impact on the health of the community, 59% of respondents selected lack of exercise and 51% selected poor eating habits ranking those topics third and fourth, respectively.

Pneumonia and Influenza

Influenza (flu) is a highly contagious viral infection of the throat, mouth and lungs that is one of the most severe illnesses of the winter season. Influenza is spread easily from person to person via the airborne route, usually when an infected person coughs or sneezes. Pneumonia is a serious viral or bacterial infection or inflammation of the lungs. The air sacs fill with pus and other liquid, blocking oxygen from reaching the bloodstream. If there is too little oxygen in the blood, the body's cells cannot work properly, which can lead to death. Influenza is a common cause of pneumonia, especially among younger children, the elderly, pregnant women, or those with certain chronic health conditions or who live in a nursing home. Most cases of flu never lead to pneumonia, but those that do tend to be more severe and deadly. In fact, flu and pneumonia were the eighth leading cause of death in the United States in 2015.

For both influenza and some types of pneumonia there are protective vaccines, although none are 100 percent protective. As flu strains change each year, it is necessary to get a flu vaccination each season to make sure you are protected against the most current strains. Pneumonia vaccinations are usually only necessary once, although a booster vaccination may be recommended for some individuals (55).

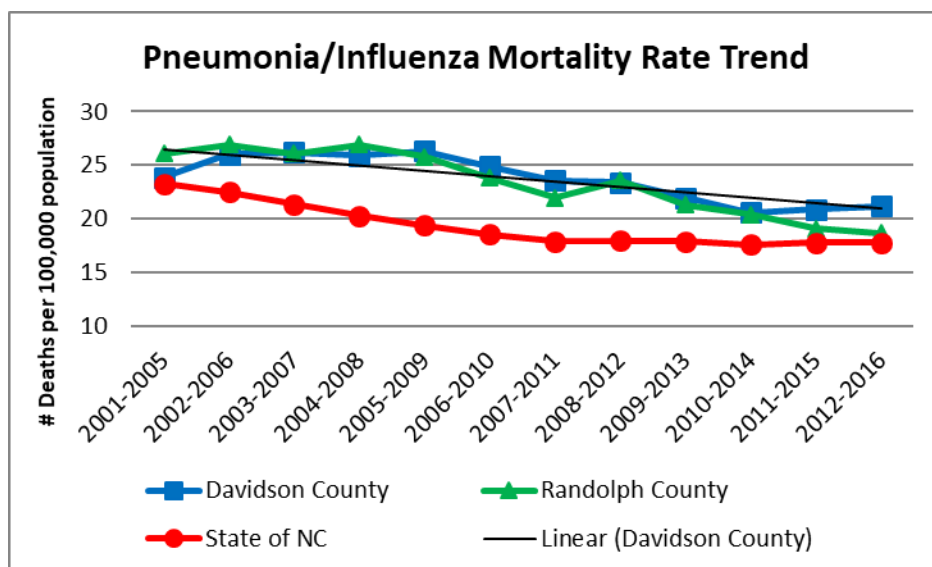
Pneumonia/influenza was the eighth leading cause of death in Davidson County, the ninth in Randolph County, and the eighth leading cause of death statewide in the 2012-2016 aggregate period (cited previously).

Pneumonia and Influenza Mortality Rate Trend

The figure below plots pneumonia/influenza mortality rates over time.

- The Davidson County pneumonia/influenza mortality rate mirrored the Randolph County rate until recently, when the Davidson rate rose as the Randolph rate fell. Rates in both counties exceeded the state rate throughout the period cited.
- Despite the recent increase, the pneumonia/influenza mortality rate in Davidson County fell overall by 11% over the period cited.
- The comparable mortality rate statewide fell overall by 24% over the same period.

Figure 39. Pneumonia and Influenza Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhs.gov/data/databook/>.

Racial Disparities in Pneumonia and Influenza Mortality

The table below presents pneumonia/influenza mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of pneumonia/influenza deaths among minority populations at the county level, mortality rates were suppressed for those groups.

- Statewide the pneumonia/influenza mortality rate was highest among white non-Hispanics followed by African-American non-Hispanics and American Indian non-Hispanics.

**Table 128. Pneumonia and Influenza Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	192	21.9	12	n/a	1	n/a	1	n/a	0	n/a	206	21.2
Randolph County	142	18.4	10	n/a	0	n/a	1	n/a	2	n/a	155	18.7
State of NC	7,888	18.3	1,600	17.1	67.0	13.3	62	10.8	90	7.3	9,707	17.8

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

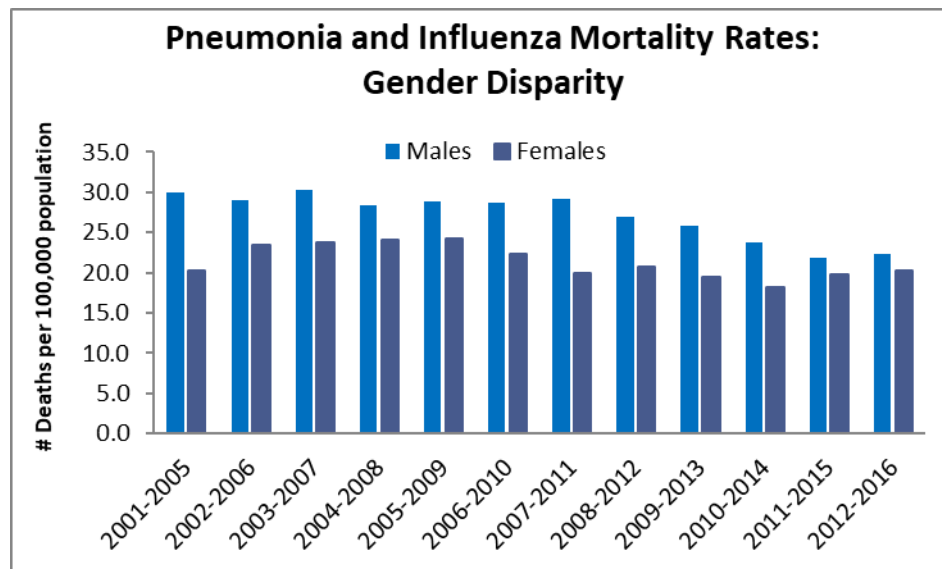
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Pneumonia and Influenza Mortality

The following figure depicts gender-stratified pneumonia/influenza mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- Males in Davidson County historically have had higher pneumonia/influenza mortality rates than females. The size of the disparity has varied over time, as rates have fluctuated. Recently, the gender gap in mortality has decreased. In the 2012-2016 aggregate period, the pneumonia/influenza mortality rate for males (22.4) was only 12% greater than the comparable rate for females (20.0).
- The pneumonia/influenza mortality rate among Davidson County females has increased the past two aggregate periods, a trend which bears watching.

**Figure 40. Pneumonia and Influenza Mortality Rate Trend, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Pneumonia and Influenza Morbidity

Hospital Data

The two hospitals in Davidson County provided data associated with ICD-9/10 codes for pneumonia and influenza, as summarized in the table below. Emergency department (ED) admissions and in-patient hospitalization (IP) discharges are presented separately. Note that this data is specific to Davidson County residents served at either of the medical centers in the county.

For pneumonia and influenza, the associated ICD-9 codes (applicable in 2015) are 480-488; the associated ICD-10 codes (applicable to part of 2015 and all of 2016 and 2017) are J10-J18. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- Overall, ICD codes for pneumonia and influenza were associated with 2.2% of all ED discharges, and 2.0% of all IP discharges in the period 2015-2017.
- There is considerable yearly variation in hospital discharge patterns associated with influenza and pneumonia, as the relative severity of influenza outbreaks and the effectiveness of the influenza vaccine varies unpredictably from year to year.

**Table 129. Hospital Discharges Associated with a Diagnosis of Pneumonia/Influenza
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	1,214	1,005	1,388	3,607	149	64	43	256
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	2.2	1.8	2.5	2.2	3.3	1.5	1.0	2.0

See text for list of associated ICD codes.

Because there have been significant historical differences in pneumonia/influenza mortality rates for males and females in Davidson County, it may be illustrative to examine hospital discharges stratified by gender.

- Over the period cited, the number and proportion of ED discharges associated with a diagnosis of pneumonia/influenza were both approximately 13% higher among females than among males despite these gender groups being present in similar proportions in the overall Davidson County population.
- Over the same period the number and proportion of IP discharges associated with a diagnosis of pneumonia/influenza among females were 29% higher than among males.

**Table 130. Hospital Discharges Associated with a Diagnosis of Pneumonia/Influenza, by
Gender
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	1,214	1,005	1,388	3,607	149	64	43	256
Male	576	481	634	1,691	69	20	23	112
Male % Diagnosis-Specific	47.4	47.9	45.7	46.9	46.3	31.2	53.5	43.8
Female	638	524	754	1,912	80	44	20	144
Female % Diagnosis-Specific	52.6	52.1	54.3	53.1	53.7	68.8	46.5	56.3

See text for list of associated ICD codes.

Since in recent years influenza and associated pneumonias have been deemed of greater threat to the young and the elderly, it may be illustrative to examine hospital discharge data for these diagnoses stratified by age group. The age groups under consideration are Pediatric (under age 18), Adult (ages 18-64), and Geriatric (age 65 and older).

According to data presented in the table below:

- Pediatric-aged patients composed approximately 25% of all ED discharges with a primary diagnosis of pneumonia/influenza. This age group composed 18% of the overall Davidson County population in the 2012-2016 period. According to the data below, there were 10 pediatric IP discharges associated with influenza/pneumonia in the 2015-2017 period, representing approximately 4% of all IP discharges
- Adult, non-geriatric age patients (18-64) composed approximately 53% of all ED discharges associated with these diagnoses, while representing 62% of the overall county population. Adults in the 18-64 age group accounted for approximately 30% of all IP hospitalizations associated with pneumonia/influenza in the period cited.
- Geriatric patients composed 21% of all ED discharges and 66% of all IP discharges associated with a diagnosis of pneumonia/influenza in the 2015-2017 period, while in the same period persons in the 65 and older composed approximately 14% of the overall Davidson County population in the 2012-2016 period.

**Table 131. Hospital Discharges Associated with a Diagnosis of Pneumonia/Influenza, by Age Group
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	1,214	1,005	1,388	3,607	149	64	43	256
Pediatric (Under 18)	316	197	401	914	5	2	3	10
Pediatric % Diagnosis-Specific	26.0	19.6	28.9	25.3	3.4	3.1	7.0	3.9
Adult (18-64)	615	579	733	1,927	44	15	17	76
Adult % Diagnosis-Specific	50.7	57.6	52.8	53.4	29.5	23.4	39.5	29.7
Geriatric (65 and Over)	283	229	254	766	100	47	23	170
Geriatric % Diagnosis-Specific	23.3	22.8	18.3	21.2	67.1	73.5	53.5	66.4

See text for list of associated ICD codes.

To explore possible racial disparities in utilization of hospital services, the same discharge data relative to diagnoses of pneumonia/influenza are stratified by race in the table below.

- While composing approximately 9% of the overall Davidson County population, African Americans composed almost 17% of all ED discharges and almost 9% of all IP discharges associated with diagnoses of pneumonia/influenza.

**Table 132. Hospital Discharges Associated with a Diagnosis of Pneumonia/Influenza, by Race
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	1,214	1,005	1,388	3,607	149	64	43	256
African American	195	150	250	595	11	7	4	22
African American % Diagnosis-Specific	16.1	14.9	18.0	16.5	7.4	10.9	9.3	8.6
White	916	799	1,031	2,746	134	53	39	226
White % Diagnosis-Specific	75.5	79.5	74.3	76.1	89.9	82.8	90.7	88.3

See text for list of associated ICD codes.

Unintentional Motor Vehicle Injury

The NC State Center for Health Statistics distinguishes unintentional motor vehicle injuries from all other injuries when calculating mortality rates and ranking leading causes of death.

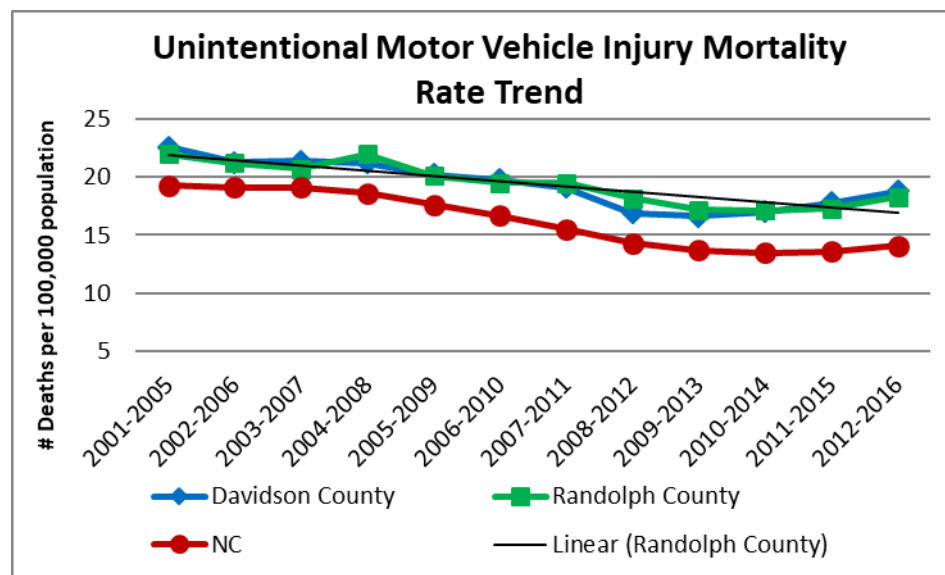
Mortality attributable to unintentional motor vehicle injury was the ninth leading cause of death in Davidson County and the tenth in Randolph County, and NC for 2012-2016 (cited previously).

Unintentional Motor Vehicle Injury Mortality Rate Trend

The following figure plots unintentional motor vehicle injury mortality rates over time.

- The unintentional motor vehicle injury mortality rates in all three jurisdictions decreased over the period cited, in very similar manner. However, it appears that rates in all three jurisdictions may be increasing in the two most recent aggregate periods.
- The unintentional motor vehicle injury mortality rate in Davidson County decreased overall by 17% over the period cited.
- The unintentional motor vehicle injury mortality rate in Davidson County (and in Randolph County) was higher than the comparable NC rate throughout the period cited.

**Figure 41. Unintentional Motor Vehicle Injury Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Unintentional Motor Vehicle Injury Mortality Rates

The following table presents unintentional motor vehicle injury mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of unintentional motor vehicle injury deaths among racially stratified populations at the county level, mortality rates were suppressed for those groups.

- Statewide the unintentional motor vehicle injury mortality rate was highest among American Indian non-Hispanics, followed by African-American non-Hispanics and white non-Hispanics.

**Table 133. Unintentional Motor Vehicle Injury Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	130	19.3	9	n/a	1	n/a	1	n/a	10	n/a	151	18.8
Randolph County	118	19.9	9	n/a	1	n/a	0	n/a	4	n/a	132	18.3
State of NC	4,736	14.0	1,672	15.3	164.0	27.5	82	6.0	471	10.8	7,125	14.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

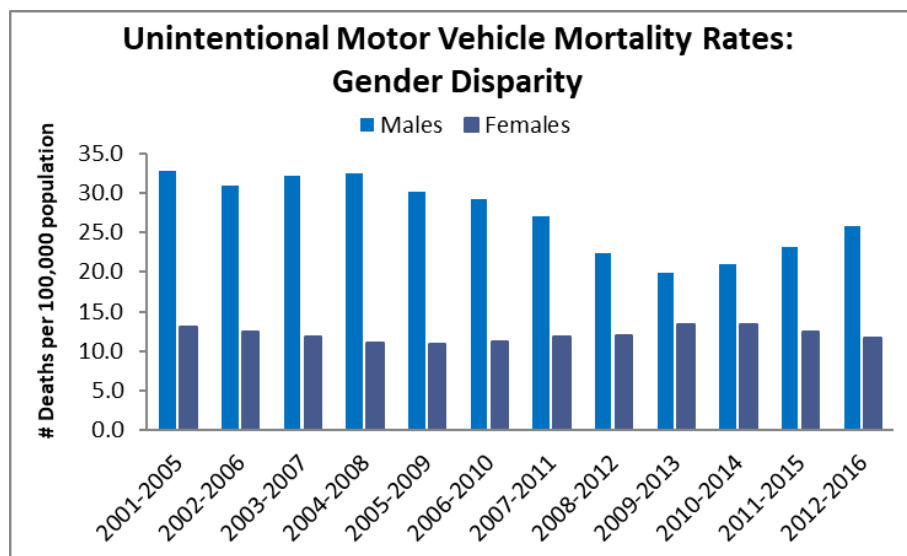
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Unintentional Motor Vehicle Injury Mortality Rates

The figure below plots gender-stratified unintentional motor vehicle injury mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The unintentional motor vehicle injury mortality rate among males in Davidson County decreased steadily from 2004-2008 through 2009-2013 before increasing again.
- The unintentional motor vehicle injury mortality rate for males in Davidson County historically has been higher than the comparable rate for females by as much as a factor of nearly three. In the most recent aggregate period (2012-2016) the mortality rate for males (25.8) was 2.2 times the comparable rate for females (11.7).

**Figure 42. Unintentional Motor Vehicle Injury Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Unintentional Motor Vehicle Injuries Morbidity

Hospital Data

Parsing information relative to injury, poisoning and violence from ICD-9- or ICD-10-coded hospital data is difficult because injuries, poisoning and violence are coded both for the consequence of the event (e.g., the bodily location of the injury) and its external cause (e.g., automobile collision). Further, certain codes delineate between unintentional (e.g., accidental) and intentional injury (e.g., deliberate self-harm). Analyzing hospital data for discharges related to the LCD Unintentional Motor Vehicle Injuries would involve a multi-step process beyond the scope of this CHNA project.

Age Disparities in Motor Vehicle Injury Mortality

The next table presents unintentional motor vehicle injury mortality data, stratified by age group for the 2012-2016 aggregate period. Note that this data is *not* age-adjusted.

- In Davidson County the 20-39 age group had the highest motor vehicle injury mortality rate (20.3) followed by the 40-64 age group (19.7). These local mortality rates were higher than comparable NC rates.
- Statewide, the 20-39 age group has the highest motor vehicle injury mortality rate (18.5), followed by the 40-64 age group (14.5).

**Table 134. Motor Vehicle Injury Mortality, by Age
(Five-Year Aggregate Period, 2012-2016)**

Location	Number of Deaths and Unadjusted Death Rates per 100,000 Population							
	All Ages		0-19		20-39		40-64	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	138	16.9	15	7.1	38	20.3	58	19.7
Randolph County	123	17.3	18	9.5	31	18.6	47	18.8
State of NC	n/a	n/a	833	6.5	2,390	18.5	2,332	14.5

Source: NC State Center for Health Statistics, 2018 County Health Data Book, Death Counts and Crude Death Rates per 100,000 Population for Leading Causes of Death, by Age Groups, NC 2012-2016;
<http://www.schs.state.nc.us/SCHS/data/databook/>.

Alcohol-Related Traffic Crashes

The following table presents several years of data on the proportion of traffic crashes that were alcohol-related.

- The percentage of all crashes that were alcohol-related varied from place to place and from time period to time period without a clear pattern.
- Over the four-year period cited, an average of 25.9% of all fatal traffic crashes in Davidson County were alcohol-related.
- Over the same period, an average of 28.2% of all fatal traffic crashes statewide were alcohol-related.
- In Davidson County over the period cited an annual average of 6.8% of injuries from non-fatal crashes were alcohol-related; the comparable figure for NC was 6.6%.

**Table 135. Alcohol-Related Traffic Crash Trend
(Single Years, 2014-2017)**

Location	% of Fatal Crashes that were Alcohol Related				% of Injuries from Non-Fatal Injury Crashes that were Alcohol Related				% of Injuries from All Reportable Crashes that were Alcohol Related			
	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
Davidson County	27.3	37.5	21.9	16.7	6.4	7.5	6.8	6.5	6.7	7.9	7.0	6.7
Randolph County	20.0	28.0	20.0	18.2	7.9	7.5	6.4	7.8	8.1	7.8	6.6	8.0
State Total	29.1	29.2	28.1	26.3	7.1	6.7	6.3	6.2	7.4	6.9	6.5	6.4

Source - Crash Data and Maps: County Crash Profiles. 2017. Connect NCDOT, Resources, Traffic Safety website:
<https://connect.ncdot.gov/resources/safety/Pages/Crash-Data.aspx>.

Pedestrian and Bicycle Crashes

The NC Department of Transportation maintains data on the character of crashes involving pedestrians, bicycles and motorcycles.

The table below displays data on pedestrian, bicycle and motorcycle crashes in Davidson County and its comparators in 2017. It should be noted that these data refer to *reported* crashes only, and therefore may not include all crashes in a jurisdiction.

- Motorcycle crashes are the most numerous, and the most likely to result in injury.

**Table 136. Number of Pedestrian, Bicycle and Motorcycle Crashes and Injuries
(2017)**

Location	2017									
	Reportable		Alcohol Related		Pedestrian		Bicycle		Motorcycle	
	Crashes	Injuries	Crashes	Injuries	Crashes	Injuries	Crashes	Injuries	Crashes	Injuries
Davidson County	3,450	1,795	170	129	25	30	7	7	54	57
Randolph County	3,444	1,572	161	126	21	21	2	2	46	46
State Total	375,067	129,360	11,342	8,290	2,218	2,441	813	815	3,611	3,575

Source - Crash Data and Maps: County Crash Profiles. 2017. Connect NCDOT, Resources, Traffic Safety website:
<https://connect.ncdot.gov/resources/safety/Pages/Crash-Data.aspx>.

Nephritis, Nephrotic Syndrome, and Nephrosis

Nephritis (also called glomerulonephritis) is a group of diseases that cause inflammation (swelling) of the nephrons in the kidney and reduce the kidney's ability to filter waste from the blood. Most types of nephritis are caused by the body's immune system reacting to an 'insult' of some sort. This might be a medication, poison, infection or a change in the way the immune system behaves (56). Nephrotic syndrome refers to a group of symptoms that include protein in the urine, low blood protein levels, high cholesterol levels, high triglyceride levels, and swelling (57). Nephrosis refers to any degenerative disease of the kidney tubules, the tiny canals that make up much of the substance of the kidney. Nephrosis can be caused by kidney disease, or it may be a complication of another disorder, particularly diabetes (58).

This composite set of kidney disorders was the tenth leading cause of death in Davidson County, the eighth in Randolph County, and the ninth leading cause of death statewide in 2012-2016 (cited previously).

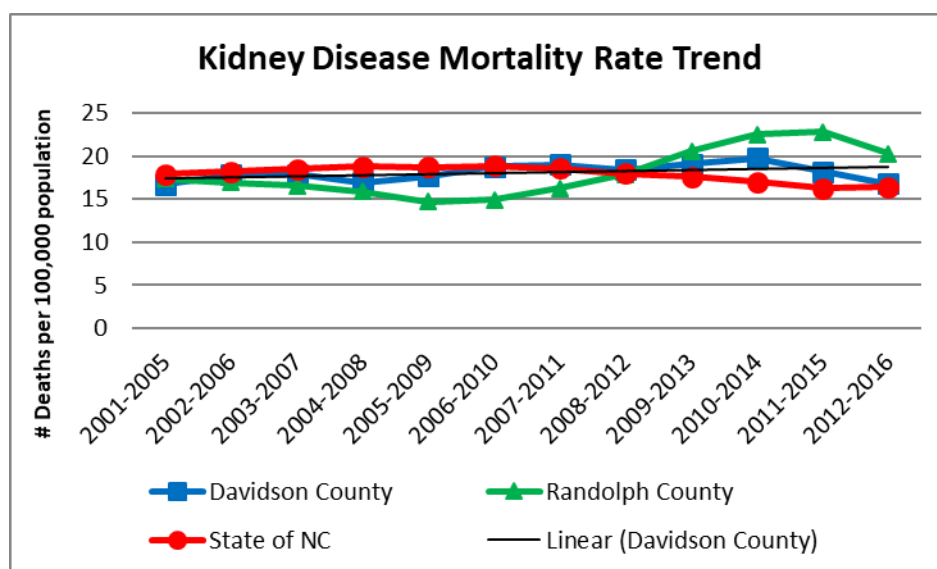
For the sake of simplicity, this complex of diseases will be referred to subsequently as “kidney disease” in reference to this cause of death.

Kidney Disease Mortality Rate Trend

The figure below plots kidney disease mortality rates over time.

- The kidney disease mortality rate in Davidson County was lower than the comparable state rate until 2007-2011 and was higher than the state rate in all periods after that.
- The kidney disease mortality rate in Davidson County has decreased the last two periods after reaching a 10-year high in 2010-2014.

Figure 43. Kidney Disease Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)



Source: NC State Center for Health Statistics, County Health Data Books (years as noted), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Kidney Disease Mortality Rates

The table below presents kidney disease mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of kidney disease deaths among minority populations at the county level, mortality rates were suppressed for those groups.

- In Davidson County the kidney disease mortality rate for African-American non-Hispanics (29.5) was almost twice the comparable rate for white non-Hispanics (15.9).
- Statewide, the kidney disease mortality rate was highest among African-American non-Hispanics, followed by American Indian non-Hispanics and white non-Hispanics.

**Table 137. Kidney Disease Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American,		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	142	15.9	24	29.5	0	n/a	1	n/a	1	n/a	168	16.8
Randolph County	160	20.8	7	n/a	1	n/a	0	n/a	0	n/a	168	20.3
State of NC	5,841	13.4	2,941	31.0	96.0	19.6	66	10.5	102	8.2	9,046	16.4

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

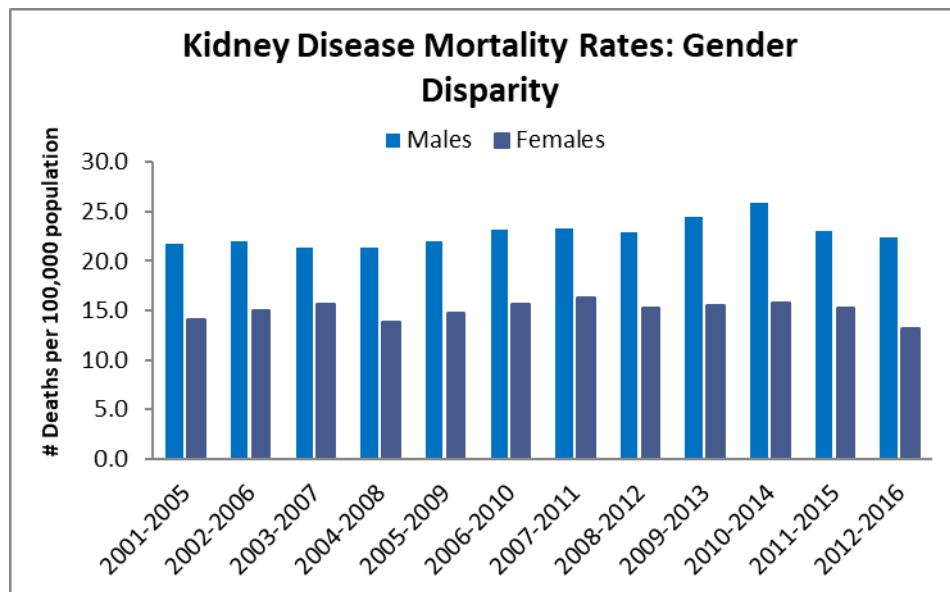
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Kidney Disease Mortality Rates

The figure below plots gender-stratified kidney disease mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The kidney disease mortality rate for males in Davidson County exceeded the comparable mortality rate for females in every period cited.
- In the 2012-2016 aggregate period, the kidney disease mortality rate for Davidson County males (22.4) was 70% higher than the comparable rate for females (13.2).
- Kidney disease mortality rates in the county among both males and females appear to be decreasing of late.

**Figure 44. Kidney Disease Mortality Rates, by Gender. Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Kidney Disease Morbidity

Hospital Data

For kidney disease, the associated ICD-9 codes (applicable in 2015) are 580-589; the associated ICD-10 codes (applicable to part of 2015 and all of 2016 and 2017) are N00-N07, N17-N19, N25-N27. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- Overall, ICD codes for kidney disease were associated with 0.2% of all ED discharges, and 1.6% of all IP discharges in the period 2015-2017.

**Table 138. Hospital Discharges Associated with a Diagnosis of Kidney Disease
Davidson County Hospitals, 2015-2017**

Number of Discharges ^{0.2}	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	129	129	134	392	58	75	76	209
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	0.2	0.2	0.2	0.2	1.3	1.7	1.8	1.6

See text for list of associated ICD codes.

Because the difference in kidney disease mortality rates for males and females in Davidson County are so different, it may be illustrative to examine hospital discharges stratified by gender. The table below re-examines the data from the table immediately above, this time stratified by sex.

- Over the period cited, the number and proportion of ED discharges associated with a diagnosis of kidney disease were both only approximately 1.0% higher among females than among males.
- In the same period the number and proportion of IP discharges associated with a diagnosis of kidney disease among females were 86% higher than the comparable figures among males.

**Table 139. Hospital Discharges Associated with a Diagnosis of Kidney Disease, by
Gender
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	129	129	134	392	58	75	76	209
Male	77	65	53	195	24	27	22	73
Male % Diagnosis-Specific	59.7	50.4	39.6	49.7	41.4	36.0	28.9	34.9
Female	52	64	81	197	34	48	54	136
Female % Diagnosis-Specific	40.3	49.6	60.4	50.3	58.6	64.0	71.1	65.1

See text for list of associated ICD codes.

Because the diabetes mortality rate among African Americans in Davidson County is high, and because kidney disease is often associated with diabetes, it may be illustrative to examine racially stratified hospital discharges associated with kidney disease.

- Over the period cited, the proportion of ED discharges associated with a diagnosis of kidney disease among African Americans was 21% of all discharges for that diagnosis.

This proportion is 2.3 times the proportion of African Americans in the overall Davidson County population (9%). It is unclear whether this figure represents more kidney disease in the African American community, or a lack of access to non-emergency health care.

- In the same period the proportion of IP discharges associated with a diagnosis of kidney disease among African Americans was approximately 16% of all discharges for that diagnosis. This proportion is 78% higher than the proportion of African Americans in the overall Davidson County population (9%).

Table 140. Hospital Discharges Associated with a Diagnosis of Kidney Disease, by Race Davidson County Hospitals, 2015-2017

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Total Diagnosis-Specific	129	129	134	392	58	75	76	209
African American	28	31	24	83	9	14	10	33
African American % Diagnosis-Specific	21.7	24.0	17.9	21.2	15.5	18.7	13.2	15.8
White	98	93	106	297	47	59	65	171
White % Diagnosis-Specific	76.0	72.1	79.1	75.8	81.0	78.7	85.5	81.8

See text for list of associated ICD codes.

As was noted previously in the Health Resources chapter of this report, there are at the present time only two dialysis facilities in Davidson County, neither of which offers services after 5:00 PM, when many minorities might need dialysis services. Lack of transportation may also prevent this population from accessing dialysis services when needed.

Suicide

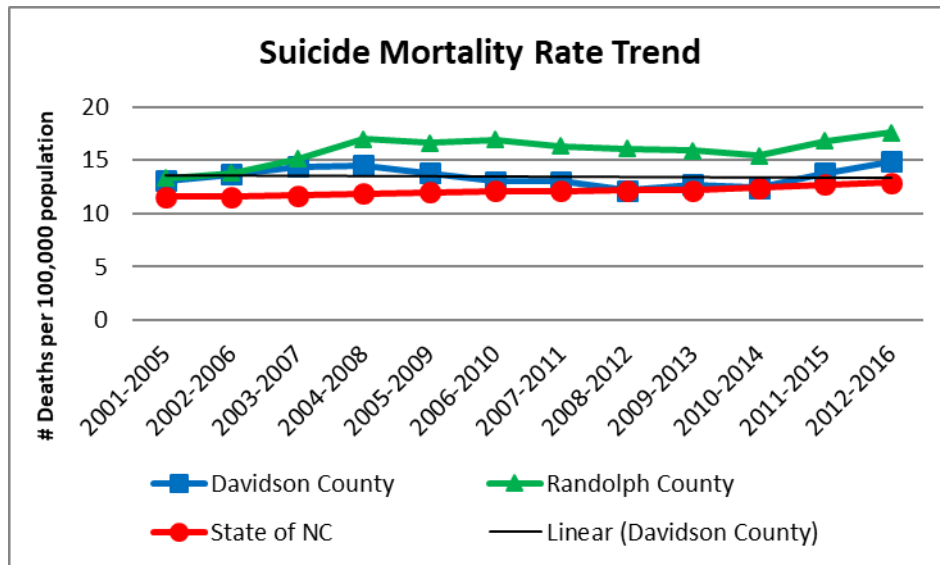
Suicide was the eleventh leading cause of death in Davidson County and Randolph County, and the twelfth leading cause of death in NC in the period 2012-2016 (cited previously).

Suicide Mortality Rate Trend

The figure below plots suicide mortality rates over time.

- The suicide mortality rate in Davidson County exceeded the comparable NC rate throughout the period cited except for 2008-2012 and 2010-2014. The highest rates throughout the period were in Randolph County.
- The suicide mortality rate in Davidson County has increased in the two most recent aggregate periods, a worrisome sign. The current suicide mortality rate in the county (14.9) is the highest in 12 years,

**Figure 45. Suicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhs.gov/data/databook/>.

Racial Disparities in Suicide Mortality Rates

The next table presents suicide mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of suicide deaths among most stratified populations at the county level, mortality rates were suppressed for those groups.

- Statewide, the suicide mortality rate was highest among white non-Hispanics, followed by American Indian non-Hispanics.

**Table 141. Suicide Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	120	17.0	2	n/a	0	n/a	1	n/a	4	n/a	127	14.9
Randolph County	123	20.5	1	n/a	0	n/a	1	n/a	3	n/a	128	17.6
State of NC	5,799	16.6	544	5.0	67.0	11.5	111	8.2	158	4.2	6,679	12.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

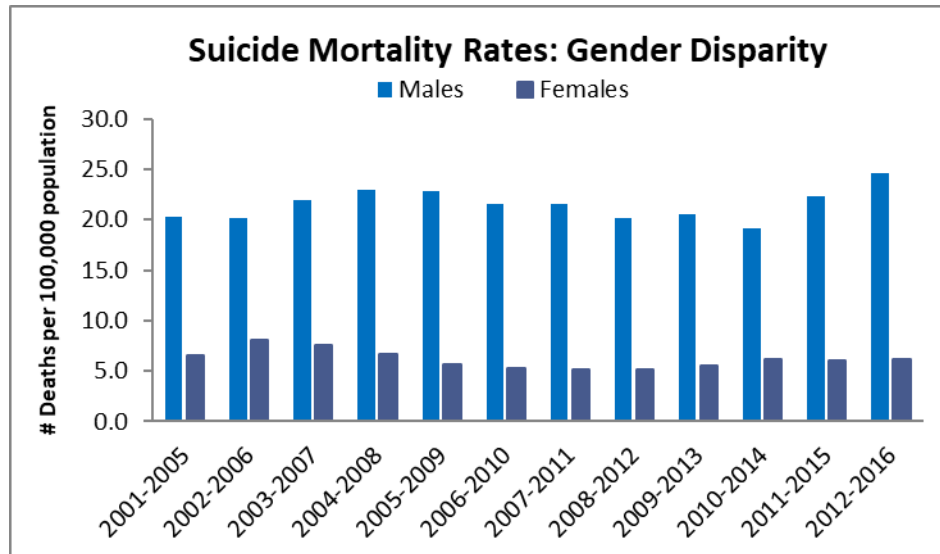
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhs.gov/data/databook/>.

Gender Disparities in Suicide Mortality Rates

The following figure plots gender-stratified suicide mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The suicide mortality rate for males in Davidson County historically has been up to four times the comparable rate for females.

**Figure 46. Suicide Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Septicemia

Septicemia, or sepsis, is the clinical name for blood poisoning by bacteria. It is the body's most extreme response to an infection. Sepsis that progresses to septic shock has a death rate as high as 50%, depending on the type of organism involved. Sepsis is a medical emergency and needs urgent medical treatment. Without treatment, sepsis can quickly lead to tissue damage, organ failure, and death (59).

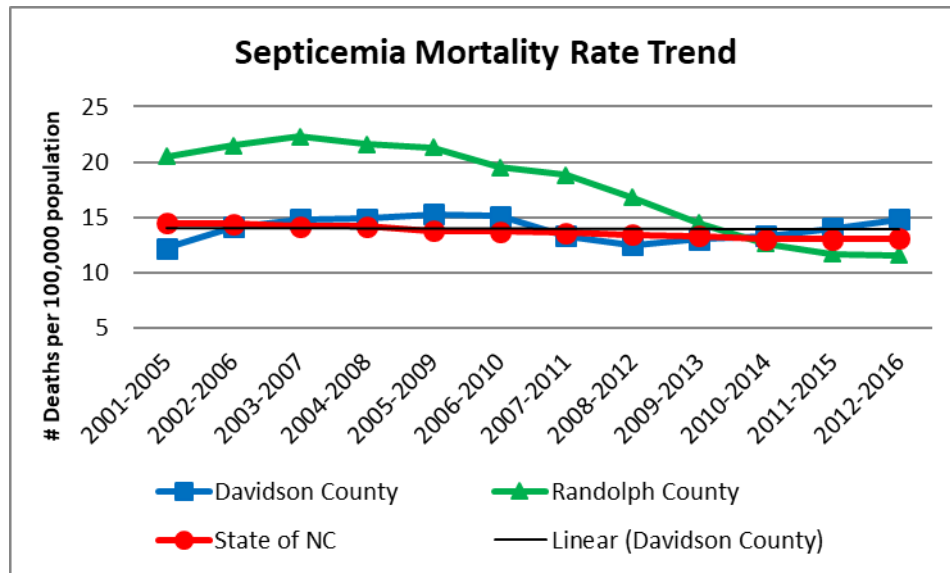
Septicemia was the twelfth leading cause of death in Davidson County, the thirteenth in Randolph County, and the eleventh leading cause of death in NC in the 2009-2013 aggregate period (cited previously).

Septicemia Mortality Rate Trend

The following figure plots septicemia mortality rates over time.

- The septicemia mortality rate in Davidson County exceeded the comparable NC rate in 2003-2007 through 2006-2010 and 2010-2014 through 2012-2016.
- Although the regression line describing septicemia mortality rates in Davidson County was almost flat, the county septicemia mortality rate in 2012-2016 (14.8) was 21% higher than the comparable rate in 2001-2005 (12.2).

**Figure 47. Septicemia Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities in Septicemia Mortality Rates

The following table presents septicemia mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of septicemia deaths among minority populations in the counties, mortality rates were suppressed for those groups.

- Statewide, the septicemia mortality rate was highest among African American non-Hispanic persons, followed by American Indian non-Hispanic persons.

**Table 142. Septicemia Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	132	14.5	15	n/a	0	n/a	1	n/a	3	n/a	151	14.8
Randolph County	94	11.8	5	n/a	3	n/a	0	n/a	0	n/a	102	11.6
State of NC	5,295	12.3	1,799	18.6	60.0	12.4	43	6.2	69	5.1	7,266	13.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

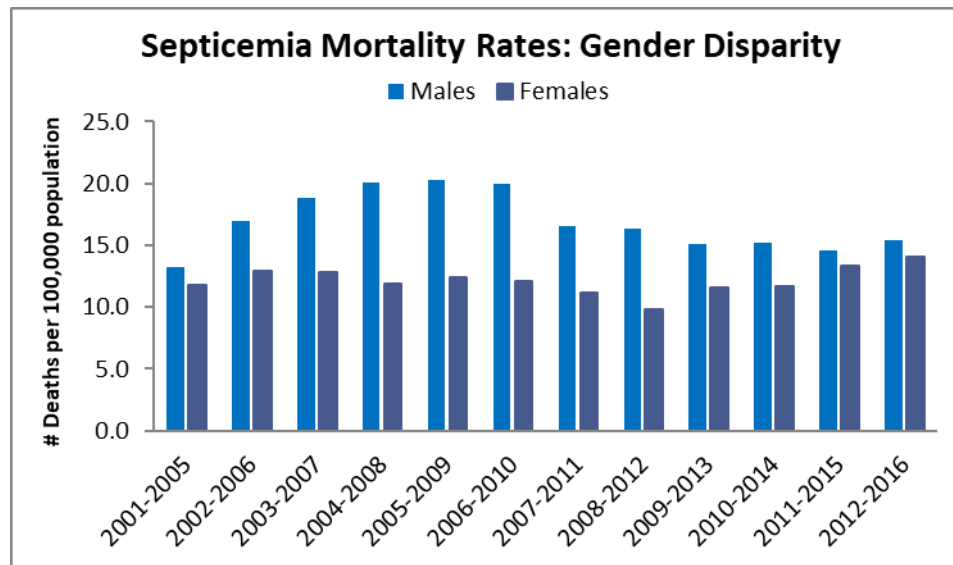
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Septicemia Mortality Rates

The figure below depicts gender-stratified septicemia mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- According to the graph, the septicemia mortality rate among Davidson County males was significantly higher than the comparable rate among county females until relatively recently.
- The septicemia mortality rate for Davidson County females appears to have increased in the last three aggregate periods so that the gender difference in 2012-2016 has lessened significantly. In 2012-2016 the septicemia mortality rate for males (15.4) was only 9% higher than the comparable rate for females (14.1).

**Figure 48. Septicemia Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Septicemia Morbidity

Hospital Data

For septicemia, the associated ICD-9 code (applicable in 2015) is 038; the associated ICD-10 codes (applicable to part of 2015 and both 2016 and 2017) are A40-A41. Note that these are the same codes associated with causes of mortality cited on death certificates and in NCSCHS mortality rates, so proportions of mortality and morbidity in Davidson County are comparable.

- Overall, ICD codes for septicemia were associated with 0.4% of all ED discharges, and, significantly, 10.2% of all IP discharges in the period 2015-2017, making septicemia one of the most important reasons for hospitalization at Davidson County Hospitals.

**Table 143. Hospital Discharges Associated with a Diagnosis of Septicemia
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department				Inpatient			
	2015	2016	2017	Total	2015	2016	2017	Total
Diagnosis-Specific	200	232	210	642	522	440	380	1,342
Total All Discharges	55,483	54,942	55,606	166,031	4,495	4,410	4,221	13,126
Diagnosis as % of Total Discharges	0.4	0.4	0.4	0.4	11.6	10.0	9.0	10.2

See text for list of associated ICD codes.

Chronic Liver Disease and Cirrhosis

Chronic liver disease describes an ongoing disturbance of liver function that causes illness. Liver disease, also referred to as hepatic disease, is a broad term that covers all the potential problems that cause the liver to fail to perform its designated functions. Usually, more than 75% or three quarters of liver tissue needs to be affected before decrease in function occurs. Cirrhosis is a term that describes permanent scarring of the liver. In cirrhosis, the normal liver cells are replaced by scar tissue that cannot perform any liver function (60).

Chronic liver disease and cirrhosis was the thirteenth leading cause of death in Davidson County, the twelfth in Randolph County, and the thirteenth in NC in 2012-2016 (cited previously).

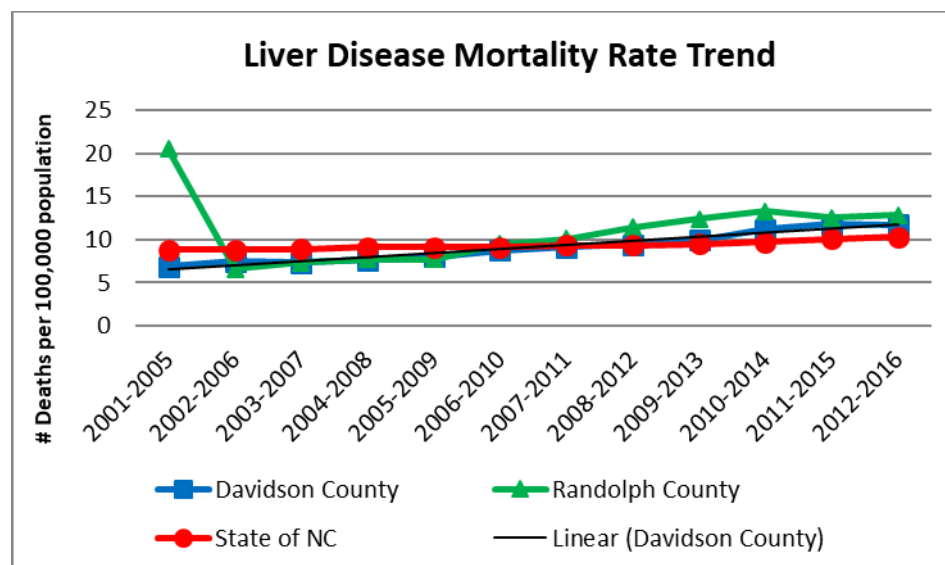
For simplicity, this cause of death will be referred to subsequently as “Liver Disease”.

Liver Disease Mortality Rate Trend

The figure below plots liver disease mortality rates over time.

- The liver disease mortality rate in Davidson County, lower than the comparable NC rate for much of the period cited, has risen lately and has exceeded the comparable state rate since 2008-2012. In 2012-2016, the county rate was 11.7 and the NC rate was 10.3.
- The liver disease mortality rate in Davidson County increased from 6.9 in 2001-2005 to 11.7 in 2012-2016, a 70% overall increase.

Figure 49. Liver Disease Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Racial Disparities Liver Disease Mortality Rates

The table below presents liver disease mortality data for the aggregate period 2012-2016, stratified by race/ethnicity. Note that due to below-threshold numbers of chronic liver disease and cirrhosis deaths among most stratified populations at the county level, mortality rates were suppressed for those groups.

- Statewide the liver disease mortality rate was highest among American Indian non-Hispanics, followed by white non-Hispanics.

**Table 144. Liver Diseases Mortality, by Race/Ethnicity
(Single Five-Year Aggregate Period, 2012-2016)**

Location	Deaths, Number and Rate (Deaths per 100,000 Population)											
	White, Non-Hispanic		African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Davidson County	112	12.3	9	n/a	0	n/a	0	n/a	1	n/a	122	11.7
Randolph County	112	13.9	3	n/a	0	n/a	0	n/a	1	n/a	116	12.8
State of NC	4,813	11.4	859	7.4	89.0	14.8	38	3.5	131	6.3	5,930	10.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

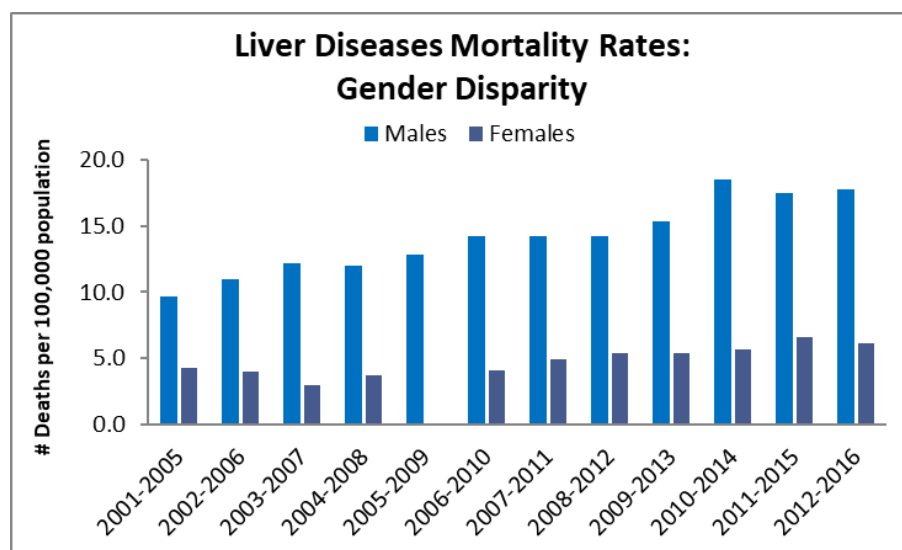
Source: NC State Center for Health Statistics, County Health Data Book (2018), Mortality, 2012-2016 Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Gender Disparities in Liver Diseases Mortality Rates

The following figure plots gender-stratified chronic liver disease and cirrhosis mortality rates in Davidson County for the aggregate periods 2001-2005 through 2012-2016.

- The liver disease mortality rate for males in Davidson County historically has been several times the rate for females, and it is increasing steadily.

**Figure 50. Liver Diseases Mortality Rates, by Gender, Davidson County
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <https://schs.dph.ncdhhs.gov/data/databook/>.

Liver Diseases Morbidity

Hospital Data

For chronic liver disease and cirrhosis, the associated ICD-9 codes (applicable in 2015) is 751; the associated ICD-10 codes (applicable to part of 2015 and all of 2016 and 2017) are K70 and K73-K74. There were totals of only 84 ED discharges and 7 IP discharges from Davidson County Hospitals associated with these codes in the period 2015 through 2017. This data is not discussed here in order to protect the identity of the patients discharged.

Homicide

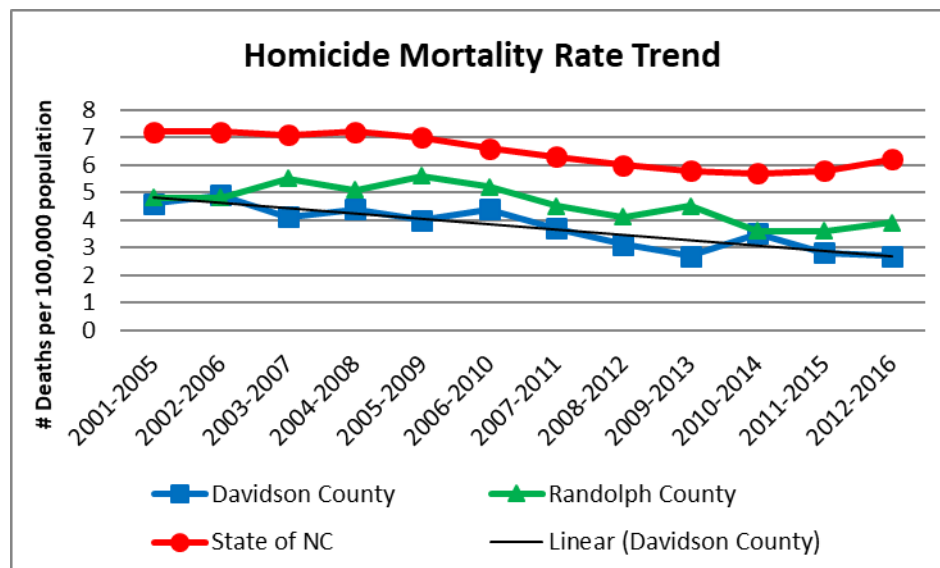
Homicide was the fourteenth leading cause of death in Davidson County, Randolph County and NC in the 2012-2016 aggregate period (cited previously).

Homicide Mortality Rate Trend

The following figure displays homicide mortality rates over time.

- The homicide mortality rate in Davidson County was lower than the comparable NC rate and the Randolph County rate in almost the entire period cited.
- The homicide mortality rate in Davidson County decreased overall by 70% over the period cited, from 4.6 in 2001-2005 to 2.7 in 2012-2016.
- Note that the erratic nature of the county-level mortality rates is reflective of small and changing numbers of homicides.

**Figure 51. Homicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2018), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County;
<https://schs.dph.ncdhhs.gov/data/databook/>.

Gender and Racial Disparities in Homicide Mortality Rates

So many race- and gender-stratified homicide mortality rates in Davidson and Randolph counties in the aggregate period 2012-2016—and many other aggregate periods—were unstable and thus suppressed by NCSCHS, that none are discussed here. At the state level, the highest homicide mortality rates are noted among American Indian non-Hispanics, followed by African American non-Hispanics. Statewide, the homicide rate among males is three to four times the comparable rate among females.

Acquired Immune Deficiency Syndrome (AIDS)

The terms HIV and AIDS can be confusing, because they're related but different. HIV is a virus that harms the immune system by invading and then destroying infection-fighting white blood cells. AIDS is the final stage of an untreated HIV infection. People with AIDS can have a range of symptoms, because their weakened immune systems put them at risk for life-threatening infections and cancers.

The HIV virus passes from one person to another through certain body fluids, such as blood and semen. About 90% of new HIV infections in the U.S. occur during sex. Shared needles and injection drug use is the second most common route of infection. HIV can also spread from an infected mother to her newborn. HIV isn't spread through casual contact, such as shaking hands, hugging, sneezing, sharing utensils, or using bathrooms.

Today, by taking a combination of HIV-fighting medicines (called antiretroviral therapy), fewer Americans with HIV are developing AIDS. And some HIV infections can now be prevented by taking daily medications (called *PrEP*) (61).

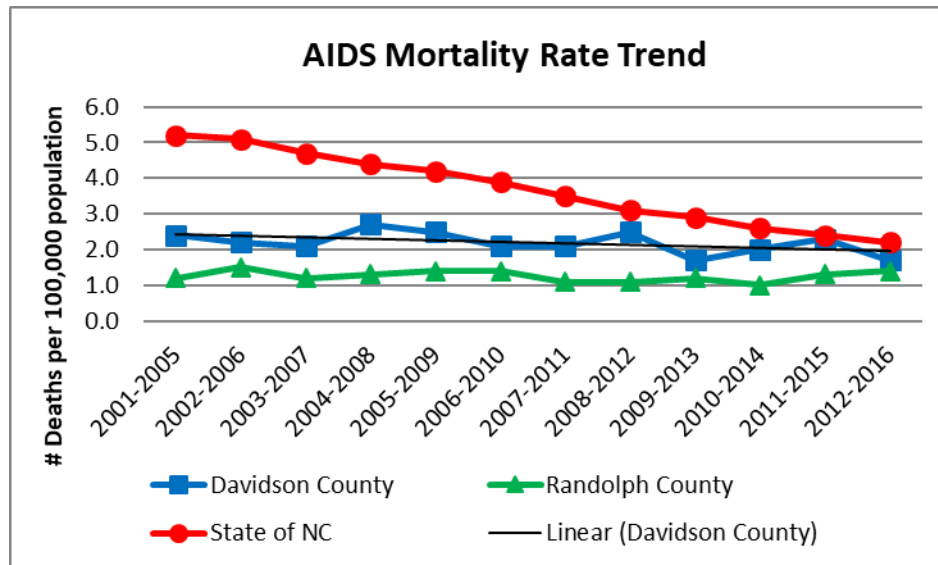
AIDS was the fifteenth leading cause of death in Davidson County, Randolph County and NC in the 2012-2016 period (cited previously).

AIDS Mortality Rate Trend

The figure below plots AIDS mortality rates over time.

- Almost all the Davidson County and Randolph County AIDS mortality rates for the entire period cited were unstable. In Davidson County, the AIDS mortality rate demonstrated a slight downward trend. The AIDS mortality rates in Davidson County were higher than the comparable rates in Randolph County throughout the period cited, but lower than the NC rate in all periods except 2011-2015.
- The AIDS mortality rate for NC decreased 58% (from 5.2 to 2.2) over the period cited.

**Figure 52. AIDS Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2012-2016)**



Source: NC State Center for Health Statistics, Statistics and Reports, Vital Statistics, NC Vital Statistics Volume II: Leading Causes of Death, years as cited;
<http://www.schs.state.nc.us/data/vital.cfm#vitalvol2>.

Gender and Racial Disparities in AIDS Mortality Rates

All race- and gender-stratified homicide mortality rates in Davidson and Randolph counties between 2001-2005 and 2012-2016 were unstable and thus suppressed by NCSCHS, so they are not discussed here.

Comparison of Deaths and Hospital Discharges for Leading Causes of Death

The table below compares the number of deaths in Davidson County for the fifteen leading causes of death in the 2012-2016 aggregate period with the number of emergency room (ED) and inpatient (IP) discharges from Davidson County Hospitals in 2015-2017 coded for the same conditions. This data comparison is included to help describe the non-fatal burden of disease in Davidson County.

- Note that the conditions are listed in rank order by *mortality rate*, not number of deaths.
- While cancer and heart disease were associated with the greatest numbers of deaths in the county (1,915 and 1,764, respectively), CLRD was associated with the largest total number of hospital discharges (6,464), followed by pneumonia/influenza (3,863), and then heart disease (3,003).
- Although septicemia accounted for 151 deaths in Davidson County in the period cited, hospital discharges associated with those diagnoses totaled 1,984 in the period 2015-2017.

Table 145. Comparison of Number of Deaths and Hospital Discharges for Conditions Coded for Leading Causes of Death, Davidson County Hospitals

Davidson County Rank by Descending Overall Age-Adjusted Rate (2012-2016)	Davidson Co. No. of Deaths 2012-2016	Hospital ED Discharges 2015-2017 Total=166,031	Hospital IP Discharges 2015-2017 Total=13,126
1. Total Cancer	1,915	154	120
2. Diseases of the Heart	1,764	2,205	798
3. Chronic Lower Respiratory Disease	645	6,024	440
4. Cerebrovascular Disease	499	590	213
5. Alzheimer's Disease	370	68	13
6. All Other Unintentional Injuries	314	n/a	n/a
7. Diabetes Mellitus	292	1,260	216
8. Pneumonia and Influenza	206	3,607	256
9. Unintentional Motor Vehicle Injuries	151	n/a	n/a
10. Nephritis, Nephrotic Syndrome and Nephritis	168	392	209
11. Suicide	127	n/a	n/a
12. Septicemia	151	642	1,342
13. Chronic Liver Disease and Cirrhosis	122	84	7
14. Homicide	21	n/a	n/a
15. AIDS	16	14	1

MORBIDITY

Morbidity refers generally to the current presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the living population. This report, communicable diseases (including sexually-transmitted infections), asthma, diabetes, obesity, oral health, and mental health conditions are the topics covered under morbidity.

Communicable Disease

A communicable disease is a disease transmitted through direct contact with an infected individual or indirectly through a vector.

Sexually Transmitted Infections

The topic of communicable diseases includes sexually transmitted infections (STIs). The STIs of greatest regional interest are chlamydia and gonorrhea. HIV/AIDS is sometimes grouped with STIs, since sexual contact is one mode of HIV transmission. While AIDS, as the final stage of HIV infection, was discussed previously among the leading causes of death, HIV is discussed here as a communicable disease.

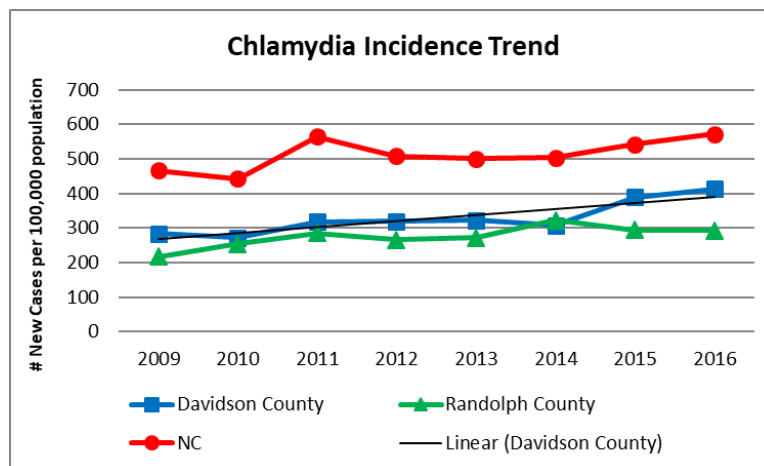
Chlamydia

Chlamydia is the most frequently reported bacterial STI in the US. Chlamydia cases frequently go undiagnosed and can cause serious problems in men and women, such as penile discharge and infertility respectively, as well as infections in newborn babies of infected mothers (62).

The next figure plots incidence rates for chlamydia infections over time.

- The chlamydia incidence rate in Davidson County was well below the comparable NC rate but higher than the rate for Randolph County in all but one year cited.
- The chlamydia incidence rate in Davidson County has increased over time.

Figure 53. Chlamydia Infection Incidence Rate Trend (2008-2016)



Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2016 HIV/STD Surveillance Report, Table 12; <https://epi.publichealth.nc.gov/cd/stds/annualrpts.html>.

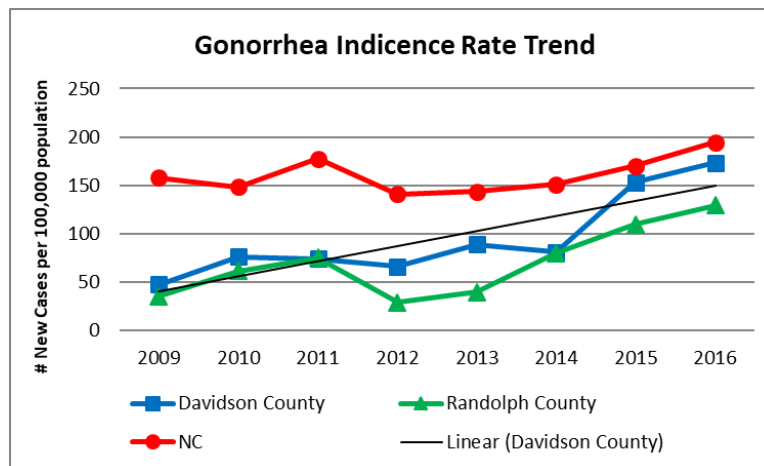
Gonorrhea

Gonorrhea is the second most commonly reported bacterial STI in the US. The highest rates of gonorrhea have been found in African Americans, people 20 to 24 years of age, and women, respectively. In women, gonorrhea can spread into the uterus and fallopian tubes, resulting in pelvic inflammatory disease (PID). PID can cause tubal pregnancy and infertility in as many as 10 percent of infected women. In addition, some health researchers think gonorrhea adds to the risk of getting HIV infection (63).

The figure below plots incidence rates for gonorrhea infections over time.

- The gonorrhea incidence rate in Davidson County was below the comparable state rate throughout the period cited but has risen sharply recently to within 11% of the NC rate.
- Gonorrhea incidence rates have risen in all three jurisdictions.

Figure 54. Gonorrhea Infection Incidence Rate Trend (2008-2016)



Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2016 HIV/STD Surveillance Report, Table 11; <https://epi.publichealth.nc.gov/cd/stds/annualrpts.html>.

Human Immune Deficiency Virus (HIV)

The following table presents HIV incidence figures for the period 2009 through 2013.

- HIV incidence rates in Davidson County were based on small numbers of events and consequentially were subject to considerable variability and instability. Nevertheless, they were lower than the comparable NC rates in every year cited. (Most of the HIV incidence rates for Randolph County were unstable.)

Table 146. HIV Infection Incidence Trend (2012-2016)

Location	HIV Cases by County of First Diagnosis (Adults and Adolescents)									
	2012		2013		2014		2015		2016	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Davidson County	8	5.8	13	9.4	9	6.5	10	7.2	11	7.9
Randolph County	6	5.1	5	4.2	6	5.0	4	3.3	10	8.3
State of NC	1,256	15.5	1,309	16.0	1,315	15.8	1,334	15.9	1,399	16.4

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2016 HIV/STD Surveillance Report, Table 3; <https://epi.publichealth.nc.gov/cd/stds/annualrpts.html>

Note: Rates appearing in **bold** type are based on fewer than 10 cases per year. Such rates are unstable and should be interpreted with caution.

The next table presents data on the prevalence of HIV infection (HIV and AIDS) in the comparator jurisdictions.

- As of December 31, 2016, there were 236 persons with HIV/AIDS living in Davidson County.

**Table 147. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2016
(by County of Residence)**

Location	#
Davidson County	301
Randolph County	216
State of NC	34,187

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2016 HIV/STD Surveillance Report, Table 1; <http://epi.publichealth.nc.gov/cd/stds/figures/std13rpt.pdf>.

Asthma

Asthma, a disease that affects the lungs, is one of the most common long-term diseases of children, but adults also can have asthma. Asthma causes wheezing, breathlessness, chest tightness, and coughing at night, early in the morning, or upon exertion. The symptoms result because the sides of the airways in the lungs swell and the airways shrink. Less air gets in and out of the lungs, and mucous naturally produced by the body further clogs the airways. In most cases, the cause of asthma is unknown (although there likely is a hereditary component), and there is no known cure. Asthma can be hard to diagnose (64).

The table below presents hospital discharge data for asthma, stratified by age, for the period of calendar years 2011-2014. (At the present time this is the best measure of asthma prevalence available from NCSCHS.)

Note: A new diagnostic coding system (ICD-10CM) was implemented in October of 2015. The new coding system is not comparable to the ICD-9CM coding criteria used previously. Therefore, reporting of Calendar Year 2015 discharge data will not be available because it crosses over two different diagnostic coding methods. The latest available hospital discharge summary reports for 2014 can be found in the 2015 County Data book. Calendar Year 2016 hospital discharge summary reports will be published by NCSCHS as soon as standardized ICD-10CM reporting categories are established.

- Davidson County asthma discharge rates for either age group were lower than the comparable state rates throughout the period cited.
- In Davidson County, the discharge rate for youth (age 0-14) was higher than the discharge rate for all ages in all years cited.

**Table 148. NC Hospital Discharges with a Primary Diagnosis of Asthma
(2011-2014)**

Location	Discharges, Number and Rate (Discharges per 100,000 Population)															
	2011				2012				2013				2014			
	All Ages		Age 0-14		All Ages		Age 0-14		All Ages		Age 0-14		All Ages		Age 0-14	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Davidson County	109	67.0	23	72.8	94	57.6	28	89.7	118	72.2	33	107.3	91	55.5	17	55.9
Randolph County	67	47.1	26	90.6	55	28.6	26	91.5	55	38.6	21	75.1	74	51.8	26	94.3
State of NC	9,880	102.3	3,004	157.3	9,786	100.3	3,128	163.7	9,021	91.6	2,841	148.9	9,035	90.9	2,754	144.6

Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013-2016), Morbidity, Asthma Hospital Discharges (Total and Age 10-14) per 100,000 Population (years and counties as noted);

<https://schs.dph.ncdhhs.gov/data/databook/>.

Rate = Cases per 100,000

While not as useful as rates—but more current than the data in the table above—are counts of ED and IP discharges from Davidson County hospitals for 2015-2017 relative to a diagnosis of asthma.

For asthma, the associated ICD-9 code (applicable in 2015) is 493; the associated ICD-10 code (applicable to part of 2015 and all of 2016 and 2017) is J45.

The table below presents the numbers of ED discharges from Davidson County hospitals in 2015-2017 that were associated with a primary diagnosis of asthma. Note that IP data is not presented because in the period cited there were 68 IP discharges in total at the two hospitals.

- For the three years cited, 1.9% of all ED admissions were associated with diagnoses of asthma.

**Table 149. Hospital Discharges Associated with a Diagnosis of Asthma
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department			
	2015	2016	2017	Total
Diagnosis-Specific	474	465	529	1,468
Total All Discharges	55,483	54,942	55,606	166,031
Diagnosis as % of Total Discharges	0.9	0.8	1.0	1.9

See text for list of associated ICD codes.

Because it appears that the burden of asthma is greater among youth than adults it may be instructive to examine hospital data stratified by age group. The next table presents asthma-related ED discharges from Davidson County hospitals in 2015-2017 stratified for the 0-14 and 15 and older age groups, the same age groups used by NCSCHS when describing asthma hospital discharges.

- Youth under the age of 15 composed 24.2% of all ED discharges associated with a primary diagnosis of asthma in the period cited.

**Table 150. Hospital Discharges Associated with a Diagnosis of Asthma, by Age Group
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department			
	2015	2016	2017	Total
Total Diagnosis-Specific	474	465	529	1,468
Age 0-14	117	126	112	355
Age 0-14 % Diagnosis-Specific	24.7	27.1	21.2	24.2
Age 15 or Older	357	339	417	1,113
Age 15 or Older % Diagnosis-Specific	75.3	72.9	78.8	75.8

See text for list of associated ICD codes.

Obesity

Obesity in Adults

The following table presents somewhat outdated estimates of the prevalence of diagnosed obesity in adults age 18 and older. Note that like data for the state of NC is not available at the source.

It is regrettable that more recent adult obesity data at the county level is not available.

- Among the comparators, Davidson County had a higher prevalence of diagnosed obesity in adults than did Randolph County in every year except 2009. The six-year average prevalence of adult obesity in Davidson County was 29.9%; the comparable six-year average in Randolph County was 29.8%.
- In Davidson County the estimated prevalence of diagnosed diabetes in adults increased overall by 4% between 2008 and 2013. Over the same period prevalence in Randolph County increased overall by 12%.

**Table 151. Adult Diagnosed Obesity Prevalence Estimate Trend
(Single Years, 2008 through 2013)**

Location	Estimated Prevalence, Number and Percent (Age-adjusted, Age 18 or Older)											
	2008		2009		2010		2011		2012		2013	
	#	%	#	%	#	%	#	%	#	%	#	%
Davidson County	35,190	29.9	34,129	29.3	34,895	29.1	36,184	30.0	36,766	30.0	38,547	31.2
Randolph County	29,980	28.8	30,673	29.6	29,790	28.7	31,111	29.7	31,254	29.7	33,939	32.2
State of NC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: The prevalence of diagnosed obesity and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors. Source: Centers for Disease Control and Prevention, Diabetes Data and Trends, County Data and State Data. Maps and Data Tables: Indicator, location and year as listed above. <http://www.cdc.gov/diabetes/atlas/countydata/atlas.html>.

Obesity in Children and Youth

The Eat Smart Move More Initiative, using the NC Pediatric Nutrition Surveillance System (NC-PedNSS), collects height and weight measurements from children seen in NCDPH-sponsored WIC and Child Health Clinics, as well as some school-based Health Centers (65). (It is important to note that this data is not necessarily representative of the county-wide population of children.) This data is used to calculate Body Mass Indices (BMIs) in order to gain some insight into the prevalence of childhood obesity. BMI is a calculation relating weight to height by the following formula:

$$\text{BMI} = (\text{weight in kilograms}) / (\text{height in meters})$$

For children, a BMI in the 95th percentile or above is considered "obese" (formerly defined as "overweight"), while BMIs that are between the 85th and 94th percentiles are considered "overweight" (formerly defined as "at risk for overweight").

The table below presents NCPedNSS data for children ages 2-4, 5-11, and 2-18 for 2015.

- In Davidson County, 31.7% of 2-4-year-olds in the program in 2015 were rated overweight or obese; 60.5% of 5-11-year-olds were rated overweight or obese. Overall, 35.4% of 2-18-year-olds in the program in 2015 were deemed overweight or obese.

Table 152. Prevalence of Obesity and Overweight in Children, NC-PedNSS (2015)

Location	Children Age 2-4								
	Underweight		Healthy Weight		Overweight		Obese		Total
	<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile		
	#	%	#	%	#	%	#	%	#
Davidson County	44	2.4	1,229	65.9	318	17.1	273	14.6	1,864
Randolph County	55	2.8	1,408	68.1	306	14.8	300	14.5	2,069
State Total	6,019	4.5	88,058	66.5	19,831	15.0	18,570	14.0	132,478

Location	Children Age 5-11								
	Underweight		Healthy Weight		Overweight		Obese		Total
	<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile		
	#	%	#	%	#	%	#	%	#
Davidson County	4	2.1	70	37.4	19	10.2	94	50.3	187
Randolph County	0	0.0	2	66.7	0	0.0	1	33.3	3
State Total	1,447	10.9	8,082	60.8	1,769	13.3	1,991	15.0	13,289

Location	Children Age 2-18								
	Underweight		Healthy Weight		Overweight		Obese		Total
	<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile		
	#	%	#	%	#	%	#	%	#
Davidson County	48	2.3	1,306	62.4	341	16.3	399	19.1	2,094
Randolph County	55	2.7	1,410	68.0	306	14.8	302	14.6	2,073
State Total	8,917	5.7	101,996	65.1	22,884	14.6	22,953	14.6	156,750

Note: Effective 2014, NC-NPASS (North Carolina Nutrition and Physical Activity Surveillance System) has been renamed to NC-PedNESS to better reflect the contents of the data for children collected from WIC and Child Health Clinics. As in the legacy surveillance system the data still consists of children ages 2 through 4 which are reflective of the population at 185% of the federal poverty level. The children ages 2 through 4 included in the NC-PedNESS data are from the Special Supplemental Nutrition Program for Women, Infants, and Children – better known as the WIC Program and Child Health Clinics. Children are not eligible to participate in WIC once they become 5 years old. The NC-PedNESS Data also contains data on children 5 years and older from Child Health Clinics and some School based Health Centers whose BMI-Status for Age are also provided in separate tables.

Note: Percentages appearing in **bold** type are based on fewer than 10 cases per weight category per year. Such rates are unstable and should be interpreted with caution.

Source - 2015 NC-PedNESS: Obesity in Children [age groups are noted]. Eat Smart Move More, Data on Children and Youth website: <http://www.eatsmartmovemorenc.com/Data/ChildAndYouthData.html>.

Oral Health

Adult Oral Health

Counties are expected to use data from the annual Behavioral Risk Factor Surveillance System (BRFSS) survey to describe dental problems in the community. In NC, the BRFSS survey results are compiled on the county level only for large jurisdictions or metropolitan areas. Davidson County responses are combined with those of 34 other counties in a central NC region BRFSS data summary. Consequently, it is necessary to look elsewhere to adequately describe the dental needs of adults in Davidson County.

The 2018 Davidson County CHNA process included a community survey (described subsequently in this report) that asked questions about respondents' access to healthcare services. However, the survey did *not* inquire specifically about access to dental services.

Utilization of the Hospital ED for Oral/Dental Problems

Patients often visit hospital emergency departments seeking relief for oral and dental problems if they do not have a regular dentist, cannot get a timely appointment with their own dentist, or cannot afford dental services. Anecdotally, some ED staff report drug-seeking behavior among some ED patients complaining of oral/dental discomfort. What is surprising is how often residents utilize the ED in lieu of a dentist. The following table summarizes discharges from Davidson County hospital EDs associated with ICD codes for oral and dental problems (ICD-9: 520-529, and ICD-10: K00-K14).

- In the period cited, 2.8% of all ED discharges at Davidson County hospitals were associated with codes for oral and dental problems.

**Table 153. Hospital Discharges Associated with Diagnoses of Oral and Dental Problems
Davidson County Hospitals, 2015-2017**

Number of Discharges	Emergency Department			
	2015	2016	2017	Total
Diagnosis-Specific	1,628	1,585	1,483	4,696
Total All Discharges	55,483	54,942	55,606	166,031
Diagnosis as % of Total Discharges	2.9	2.9	2.7	2.8

See text for list of associated ICD codes.

Mental Health

As previously noted in the Mental Health Services and Facilities section of this report, the unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS).

In 2001, the NC General Assembly passed the Mental Health System Reform Act, which ended the previous system by which quasi-independent local entities such as counties and regional agencies delivered mental health services by directly employing the care providers. The new law essentially privatized mental health services by requiring the governmental local management entities (LMEs) to contract with other public or private providers or provider groups to serve area residents in need of mental health services. The local counties and regions no

longer directly controlled the provision of services, but instead were responsible for managing provider contracts (66).

The status quo of the mental health system in NC did not remain static for long, since state government recognized that even with reorganization of the service system the budget for Medicaid-funded mental health services was not adequately managed and was growing at a high rate each year. In 2004 the state Division of Medical Assistance chose to implement the 1915(b)(c) Medicaid Waiver Program as a to control and budget the costs of Medicaid-funded services. This program budgets and manages expenditures based on a capitation formula and other fiscal adjustments that take into account the historical service costs associated with different Medicaid-eligible groups. Starting in 2005 the state established one LME (Piedmont Behavioral Health) as a pilot Medicaid managed care vendor via the waiver program. Expansions of the pilot program were undertaken in 2008 and 2010, and in 2011 NCDHHS was instructed to implement the 1915(b)(c) Waiver Program statewide by July 1, 2013 (67).

The state established a series of minimum requirements for LMEs to participate in the Waiver Program and if an LME could not meet the minimum standards it was required to merge with another LME. As a result of standards enforcement, the state's original 23 LMEs had shrunk to 10 by December 2013 (68).

At the time this report was written, there were *seven* LME/MCOs operating in North Carolina. The LME/MCO serving Davidson County is Cardinal Innovations Healthcare Solutions (CIHS), whose corporate offices are in Charlotte, NC (69).

One goal of mental health reform in NC was to refocus mental health, developmental disabilities and substance abuse care in the community instead of in state mental health facilities. The data below clearly illustrates how utilization of some state-level services has diminished.

Mental Health Service Utilization

The following table presents an annual summary of the number of persons in each comparator jurisdiction served by LMEs/Area Programs from 2008 through 2017.

- The number of persons in Davidson County served by its LME decreased annually through 2014 except for a burst of utilization in 2012 and 2013.

Table 154. Persons Served by Mental Health Area Programs/Local Management Entities (2008-2017)

Location	Number of Persons Served									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Davidson County	5,403	4,527	3,887	3,121	6,072	5,724	2,884	2,952	3,300	3,188
Randolph County	5,205	5,344	5,694	6,156	5,788	6,832	7,782	7,376	7,338	7,507
State of NC	306,907	309,155	332,796	360,180	315,284	306,080	316,863	337,161	347,060	321,511

Note: The figures in the table represent all clients of a community-based Area Program for mental health, developmental disabilities, and drug and alcohol abuse active at the beginning of the state fiscal year plus all admissions during the year. Also included are persons served in three regional mental health facilities. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. State figures include clients reported to reside out-of-state and sometimes contains individuals of Unknown County of residence.

Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 519);

http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

According to a recent (March 20, 2017) article in the Raleigh News and Observer (70), in 2016 hospitals in major metropolitan areas across the state of NC were heavily burdened by mental health cases. In that year, WakeMed hospital in Raleigh had to stop accepting new patients because its 60-bed emergency department was filled with over 100 people with mental illness, UNC Hospital's ED was routinely overwhelmed by those seeking mental health care, and Mission Hospital in Asheville often had a quarter of its ED occupied by people needing psychiatric treatment. It is widely accepted that the emergency department is one of the most costly and ineffective means to serve those with mental health concerns; nevertheless, it may be more accessible for some patients than the system intended to care for them.

There is evidence that some Davidson County residents who might be best served by accessing the services of the local LME/MCO utilize instead the emergency departments of the county's hospitals for their mental health needs.

For mental, behavioral and neurodevelopmental conditions, the associated ICD-9 codes (applicable in 2015) are 290-319; the associated ICD-10 codes (applicable to part of 2015 and all of 2016 and 2017) are F00-F99.

- Over the three-year period cited, 2.8% of all ED discharges were associated with a diagnosis of a mental, behavioral or neurodevelopmental disorder (this includes substance use-related diagnoses).
- In CY2017, the total number of hospital ED discharges associated with these diagnoses (1,633) was equal to 51.2% of the total number of Davidson County patients served by the LME/MCO in SFY2016-2017 (3,188) (71).

**Table 155. ED Discharges Associated with a Diagnosis of Mental, Behavioral and Neurodevelopmental Disorders
Person Memorial Hospital, 2015-2017**

Number of Discharges	Emergency Department			
	2015	2016	2017	Total
Total Diagnosis-Specific	1,560	1,406	1,633	4,599
Total All Discharges	55,483	54,942	55,606	166,031
Diagnosis Specific as % of Total Discharges	2.8	2.6	2.9	2.8

See text for list of associated ICD codes.

When participants in the 2018 Davidson County Community Health Survey were asked to where they would refer a friend or relative with a mental health problem, 19% of respondents said they didn't know, and this response was despite their being provided a list naming the local mental health service provider. It is unclear whether the reliance on the hospital ED for mental health services reflects this lack of knowledge or something else. Nevertheless, it is apparent that residents of Davidson County are relying on the area hospitals for mental health care, whether in the event of a true emergency or as a mental health care provider of last resort.

Psychiatric Hospital Service Utilization

Since mental health reform of the early 2000s, only the most seriously ill mental health patients statewide qualify for treatment at state psychiatric hospitals (72).

At the present time, there are three state-operated psychiatric hospitals in NC: Broughton Hospital (Morganton), Central Regional Hospital (Butner), and Cherry Hospital (Goldsboro).

The following table presents a summary of the number of persons in each jurisdiction served in NC State Psychiatric Hospitals for the period from 2008 through 2017.

- In Davidson County the numbers of persons served annually in NC State Psychiatric Hospitals decreased overall by 90% over the period cited. Statewide the number of persons served fell every year cited; in 2017 the total number served statewide was 79% lower than in 2008.

Table 156. Persons Served in NC State Psychiatric Hospitals (2008-2017)

Location	Number of Persons Served									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Davidson County	206	102	41	26	2	2	32	22	23	21
Randolph County	124	82	142	110	42	44	19	18	14	11
State of NC	14,643	9,643	7,188	5,754	4,572	3,964	3,529	3,276	3,039	3,083

Note: Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state.

Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 516); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Developmental Disabilities Service Utilization

According to NC MH/DD/SAS (73), developmental disability:

- Is chronic
- Begins at birth or during childhood
- Adversely affects an individual's daily living and functioning

Developmental disabilities can be caused by a mental impairment, a physical impairment or combination of both mental and physical. This can result in limited functions, including:

- Caring for oneself
- Difficulties with communication
- Difficulties with learning
- Difficulties with mobility or moving around
- Difficulties making decisions for oneself
- Difficulties living independently
- Being financially self-sufficient

Although community care is preferred where available, the state currently operates three facilities serving the developmentally disabled: Caswell Developmental Center (Kinston), Murdoch Developmental Center (Butner), and J. Iverson Riddle Developmental Center (Morganton).

The table below presents a summary of the persons in each jurisdiction served in NC State Developmental Centers for the period from 2008 through 2016.

- The numbers of persons in Davidson County served in NC State Developmental Centers were small and variable over the nine-year period cited.
- At the state level, the number of developmentally disabled persons served in state facilities decreased by 18% overall between 2008 and 2016.

Table 157. Persons Served in NC State Developmental Centers (2008-2016)

Location	Number of Persons Served								
	2008	2009	2010	2011	2012	2013	2014	2015	2016
Davidson County	7	7	6	8	9	9	10	10	6
Randolph County	10	8	6	6	8	8	5	6	6
State of NC	1,409	1,404	1,375	1,355	1,340	1,331	1,282	1,245	1,160

Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 517); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

Substance Abuse Service Utilization

Alcohol and Drugs

There are three state-operated residential alcohol and drug abuse treatment centers (ADATC): the Julian F. Keith ADATC (Black Mountain), the R.J. Blackley ADATC (Butner), and the Walter B. Jones ADATC (Greenville).

The following table presents a summary of the persons in each comparator jurisdiction served in NC State ADATC for the period from 2008 through 2016.

- The numbers of persons in Davidson County served in NC State ADATCs fluctuated over the period cited. A maximum number served for the period cited occurred in 2009 (n=12) and the low number served (0) occurred in 2015.
- Unlike figures for state psychiatric hospitals, the number of persons statewide served in NC ADATCs did not decline dramatically in any one year; rather, the decline has been rather steady and gradual since about 2011.

Table 158. Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2008-2016)

Location	Number of Persons Served								
	2008	2009	2010	2011	2012	2013	2014	2015	2016
Davidson County	7	12	4	7	4	5	5	0	5
Randolph County	12	13	37	47	53	44	23	31	38
State of NC	4,284	4,812	4,483	4,590	4,265	4,343	4,049	3,698	3,505

Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state.

Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 518); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

Evidence of Opioid Utilization in Davidson County

NC Opioid Action Plan Dashboard Metrics (as of 1/3/2019)

The data dashboard developed by the North Carolina Department of Health and Human Services helps track and monitor the 13 data metrics in the North Carolina Opioid Action Plan. The metrics are updated quarterly in the dashboard and the most recent quarter and year-to-date provisional data are displayed in a metric summary table. The dashboard also displays trends over time in graphs of each metric for the state and all 100 counties (74).

The tables below describe NC Opioid Dashboard data for Davidson County for 2017.

- There were 45 unintentional; deaths in Davidson County in 2017 related to use of opioids.
- In the same year there were 176 ED visits that received a diagnosis as opioid overdose.

Table 159. Number of Opioid Deaths and ED Visits for Opioid Overdose (2017)

Location	Unintentional Opioid Related Deaths					ED visits that received an opioid overdose diagnosis*				
	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017
Davidson County	11	9	15	10	45	42	37	45	52	176
Randolph County	14	8	12	13	47	41	25	37	33	136
North Carolina	452	470	520	442	1,884	1,597	1,924	2,205	1,727	7,453

* The Metric Summary display suppresses ED Dx fewer than 10. While the actual numbers have been provided, caution is urged. This metric tracks the number of opioid overdose visits to Emergency Departments (EDs) in North Carolina. These are visits of all intents: unintentional, intentional, and visits of unknown intent.

The metric "unintentional opioid related deaths" tracks the number of unintentional opioid-related overdose deaths occurring to residents of the named jurisdictions and includes deaths involving all types of opioids: commonly prescribed opioids, heroin, and synthetic narcotics like fentanyl and fentanyl-analogues.

Source - *Metric Summary Table* [by county and state]. NC Opioid Action Plan Dashboard website.

<https://injuryfreenc.shinyapps.io/OpioidActionPlan/>

- The percentage of Davidson County patients with an opioid prescription receiving more than an average daily dose was higher than the comparable percentages in Randolph County and NC.
- The percentage of Davidson County patients having an opioid prescription AND at least one benzodiazepine prescription on the same day was 22% higher than the average percentage for the state of NC.

**Table 160. Indicators for Potential Overdose
(2017)**

Location	Percent of patients with an opioid Rx receiving more than an average daily dose of 90+ MME of opioid analgesics					Percent of Rx days any patient had at least one opioid AND at least one benzodiazepine Rx on the same day				
	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017
Davidson County	7.4	6.9	6.5	6.5	6.8	29.3	28.1	26.7	25.3	27.4
Randolph County	6.9	6.7	6.4	6.5	6.6	28.3	27.9	27.0	25.2	27.1
North Carolina	6.7	6.5	6.2	6.3	6.4	23.7	22.9	22.0	21.0	22.4

Higher doses of opioids increase the risk for motor vehicle injury, opioid use disorder, and opioid overdose. The CDC Guideline for Prescribing Opioids for Chronic Pain recommends clinicians avoid increasing dosage to ≥ 90 morphine milligram equivalents (MME) per day.

Concurrent use of central nervous system depressants like opioids, benzodiazepines, and alcohol may put patients at greater risk for an overdose.

Source - *Metric Summary Table* [by county and state]. NC Opioid Action Plan Dashboard website.

<https://injuryfreenc.shinyapps.io/OpioidActionPlan/>

Naloxone is a medication designed to rapidly reverse opioid overdose. It is an opioid antagonist—meaning that it binds to opioid receptors and can reverse and block the effects of other opioids. It can very quickly restore normal respiration to a person whose breathing has slowed or stopped as a result of overdosing with heroin or prescription opioid pain medications. There are three FDA-approved formulations of naloxone: injectable (professional training required), auto-injectable (Ezvio®), and pre-packaged nasal spray (Narcan®) (75).

- In Davidson County in 2017 there were 204 naloxone administrations by EMS personnel; there were 97 naloxone reversals administered by other community entities in the county that same year.

**Table 161. Naloxone Access
(2017)**

Location	Number of EMS naloxone administrations					Number of community naloxone reversals**				
	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017	1st Q 2017	2nd Q 2017	3rd Q 2017	4th Q 2017	YTD total 2017
Davidson County	55	50	68	31	204	4	0	55	38	97
Randolph County	82	75	67	58	282	19	22	12	41	94
North Carolina	3,604	4,083	4,327	3,268	15,282	1,065	889	771	1,451	4,176

Reflects the number of successful overdose reversals using naloxone that were reported to the NC Harm Reduction Coalition.

These are reversals by community lay people and do not include administration by first responders

This metric tracks the number of naloxone administrations provided by Emergency Medical Services (EMS) personnel each quarter. Note that naloxone administration alone does not necessarily equate to an opioid overdose as EMS may administer naloxone when an individual is suffering from a different condition with similar signs and symptoms to an opioid overdose

In August of 2013, the NC Harm Reduction Coalition (NC HRC) launched their Overdose Prevention Project and began distributing naloxone rescue kits across the state. This metric reflects the number of overdose reversals using those naloxone kits reported back to NC HRC. These are reversals reported by community members and do not include administration of naloxone by first responders.

Source - *Metric Summary Table* [by county and state]. NC Opioid Action Plan Dashboard website.

<https://injuryfreenc.shinyapps.io/OpioidActionPlan/>

CHAPTER FIVE: ENVIRONMENTAL DATA

AIR QUALITY

Air Quality Index

Nationally, outdoor air quality monitoring is the responsibility of the Environmental Protection Agency (EPA). In NC, the agency responsible for monitoring air quality is the Division of Air Quality (DAQ) in the NC Department of Environmental Quality (NCDEQ).

The impact of air pollutants in the environment is described on the basis of emissions, exposure, and health risks. A useful measure that combines these three parameters is the EPA's Air Quality Index (AQI). The EPA monitors and catalogues AQI measurements at the county level, but not in all counties. The table below presents air quality data collected for Davidson County and its comparators for 2017, the most recent year for which there is final data. Air quality was measured in Davidson County on 359 days in 2017. Of these days, 294 had "good" air quality and 65 had "moderate" air quality. On each of the monitored days small particulate matter (PM_{2.5}) was present at the level of pollutant.

Table 162. Air Quality Index Summary, 2017

Location	No. Days with AQI	Number of Days When Air Quality Was:					Number of Days When Air Pollutant Was:					
		Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	CO	NO2	O3	SO2	PM2.5	PM10
Davidson County	359	294	65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	359	n/a
Randolph County	No report											
State of NC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source - Air Quality Index Reports, 2017. US EPA Air Data website: http://www.epa.gov/airdata/ad_rep_aqi.html.

Toxic Releases

TRI tracks the management of more than 675 toxic chemicals that may pose a threat to human health and the environment.

Over 4 billion pounds of these toxic chemicals are released into the nation's environment each year, via air, water and land. The US Toxic Releases Inventory (TRI) program, created in 1986 as part of the Emergency Planning and Community Right to Know Act and the Pollution Prevention Act of 1990, is the tool the EPA uses to track these releases. More than 22,000 US facilities in different industry sectors must report annually to the TRI Program Office how much of each chemical is released to the environment and/or managed through recycling, energy recovery and treatment. (A "release" of a chemical means that it is emitted to the air or water or placed in some type of land disposal.) Note that TRI reports do not cover all toxic chemicals, and they omit pollution from motor vehicles and small businesses (76).

Davidson County is among the NC counties with the smallest volumes of toxic releases. In 2017, 45,707 pounds of TRI chemicals were released in Davidson County, ranking the county 62nd in the state in total volume of releases. The NC county with the highest volume of releases in 2017 was Brunswick County, which reported over 5.1 million pounds of releases (77).

According to 2017 data in the table below:

- Manufacturing facilities were responsible for the largest volumes of TRI chemicals/chemical compounds released in Davidson County.
- The chemicals released in largest quantities in Davidson County in 2017 were methanol and lead compounds.

Table 163. Toxic Release Inventory (TRI) Summary, Davidson County (2017)

Location	Total On- and Off-Site Disposal or Other Releases, In Pounds	County Rank (of 86 reporting) for Total Releases	Compounds Released in Greatest Quantity	Quantity Released, In Pounds	Facilities Releasing Greatest Amount of Compound (Amount, In Pounds)	Primary Nature of Release	Facility Location
Davidson County	45,707	62	Methanol	37,110	Electric Glass Fiber America LLC (36,250)	Total On-site Disposal or Other Release	Lexington
			Lead Compounds	3,808	Brasscraft - Thomsaville (3,452)	Total Off-site Disposal or Other Release	Thomasville
					Owens-Brockway Glass Container Inc. Plant #06 (351)	Total On-site Disposal or Other Release	Lexington
			Toluene	2,604	Kurz Transport Properties LP (2,604)	Total On-site Disposal or Other Release	Lexington
			Copper compounds	1,815	Brasscraft - Thomsaville (1,814)	Total Off-site Disposal or Other Release	Thomasville
			Vinyl Acetate	196	Southern Resin, Inc. (196)	Total On-site Disposal or Other Release	Thomasville
			Formaldehyde	120	Southern Resin, Inc. (120)	Total On-site Disposal or Other Release	Thomasville
			Lead	3	Electric Glass Fiber America LLC (51)	Total Off-site Disposal or Other Release	Lexington
NC Total	52,282,279						
NC County Average	522,823						

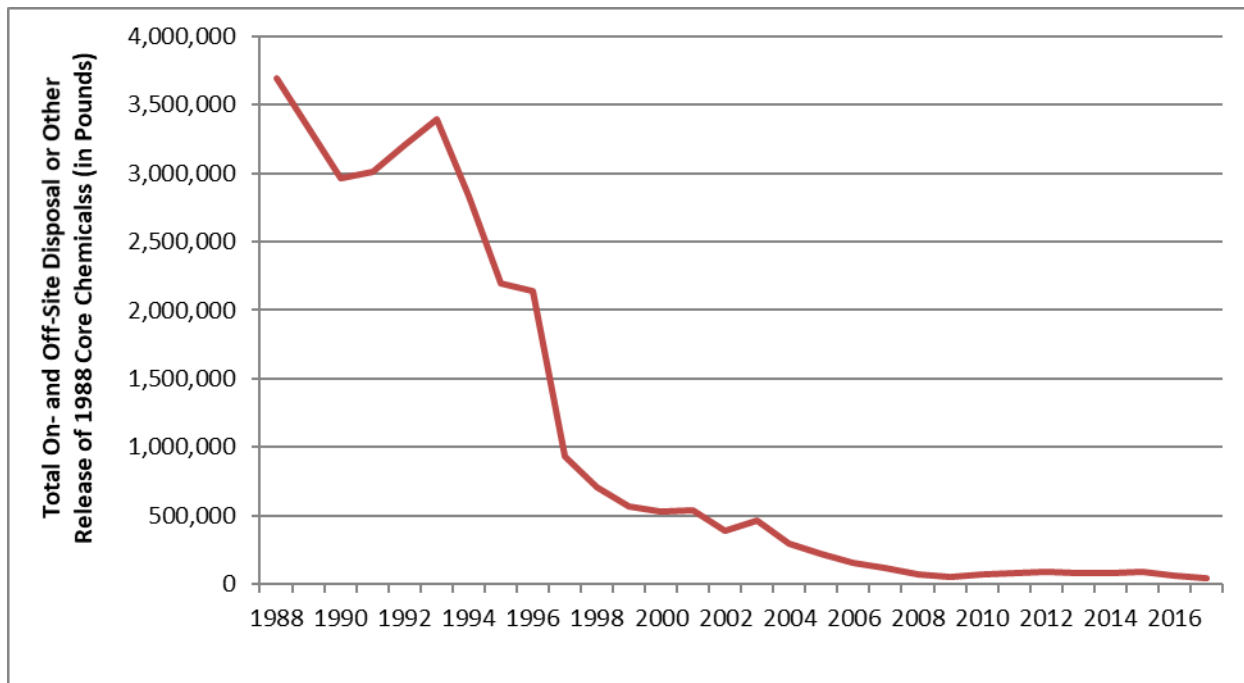
Source: TRI Release Reports: Chemical Reports, 2017. US EPA TRI Explorer, Release Reports, Chemical Reports website: http://iaspub.epa.gov/triexplorer/tri_release.chemical.

TRI chemical releases in Davidson County have decreased dramatically over time, as shown in the following figure, which plots the weight, in pounds, of total TRI chemicals released annually by all industries in Davidson County beginning in 1988.

Note that the graph includes only those chemicals defined as “1988 Core Chemicals”. The 1988 Core Chemicals include only chemicals that were reported in all years beginning from 1988. The list includes 296 chemicals. The data does not include, for example, chemicals added since 1988, or chemicals delisted in any year. Because reporting definitions for ammonia, hydrochloric acid, sulfuric acid and vanadium have changed and reporting requirements for previously listed PBTs have changed, these chemicals are also not included in the report (78).

The reduction of TRI releases in the county is not necessarily related to cleaner industrial processes, but rather to the closure of facilities. For example, the TRI chemicals released in highest quantities in the peak emission years (1988 to around 1993) were primarily volatile solvents associated with the manufacture of wood composites and furniture, chemicals which are no longer released in large quantities because many of the emitting facilities have since closed or reduced operations.

Figure 55. Total TRI Release Trend, Davidson County (1988-2016)



Note: The chemicals included in the trend include only 1988 Core Chemicals (see text for explanation).

Source: US EPA TRI Explorer, Releases: Trends Report, North Carolina, Davidson County.

https://iaspub.epa.gov/triexplorer/tri_release.trends.

WATER QUALITY

Drinking Water Systems

The EPA is responsible for monitoring the safety of drinking water and water system violations of the federal Safe Drinking Water Act (SDWA). The EPA's Safe Drinking Water Information System (SDWIS) contains information about public water systems and their violations of EPA's drinking water regulations, as reported to EPA by the states. These regulations establish maximum contaminant levels, treatment techniques, and monitoring and reporting requirements to ensure that water systems provide safe water to their customers (79).

In September 2018, SDWIS listed six active water systems in Davidson County. Five were *community water systems* that served 207,267 people. A community water system is one with at least 15 service connections used by year-round residents or regularly serves 25 year-round residents. This category includes municipalities, subdivisions and mobile home parks.

In addition to the five community water systems in Davidson County, there was also one *transient, non-community water systems (T/N-C)* serving 74 people. Water systems in the T/N-C category do not consistently serve the same people, and include rest stops, campgrounds and gas stations. There are no *non-transient, non-community (T/N-C)* water systems in the county. Water systems in the N-T/N-C category regularly supply water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

- According to the data in the table, active community water systems in Davidson County serve the entire population.

Table 164. Population Served by Active Water Systems (2018)

Location	2014 Estimated Population	Number CWSs	Total Population Served by CWSs	% Population Served by CWSs	Number N-T/N-C WSs	Total Population Served by N-T/N-C WSs	% Population Served by N-T/N-C WSs	Number T/N-C WSs	Total Population Served by T/N-C WSs	Total Population Served by Active Water Systems
Davidson County	164,058	5	203,237	123.9	0	0	0.0	1	74	203,311
Randolph County *	142,588	35	58,458	41.0	13	2,566	1.8	70	2,093	63,117
State of NC	9,940,828	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Source	1	2	2	3	2	2	3	2	2	3

1 – US Census Bureau. American Fact Finder, PEPSR6H: 2014 Annual Estimates of the Resident Population by Sex, Race and Hispanic Origin for the United States, States, and Counties. <http://factfinder2.census.gov/>.

2 - Safe Drinking Water Search for the State of North Carolina. US EPA Envirofacts Safe Drinking Water Information System (SDWIS) website: <http://www.epa.gov/enviro/facts/sdwis/search.html>.

3 - Calculated from table data

* The Piedmont Triad Regional CWS (located in Randleman) serves Randolph County, but is listed as serving almost 368,000 people total, with no indication of how many of those are Randolph County residents. So it is not included in the total population served by CWS.

The EPA also records in SDWIS violations of drinking water standards reported to it by states. It records violations as either *health-based* (contaminants exceeding safety standards or water not properly treated) or *monitoring- or reporting-based* (system failed to complete all samples or sample in a timely manner, or had another non-health related violation). The following table lists the active water systems in Davidson County as of the fall of 2018. The table also includes any *health-based* violations for the period from 2007 through 2017.

**Table 165. Active Water Systems in Davidson County
(As of Fall, 2018)**

Type of System	Total Population Served	Primary Water Source Type	Health Violations 2007-2017
Community Water Systems			
Davidson Water, Inc.	147,455	Surface Water	None
Denton, Town of	3,080	Surface Water	None
Handy Sanitary District	7,899	Surface Water (Purchased)	2017, 2014, 2012
Lexington, City of	18,931	Surface Water	3 in 2018, 4 in 2017, 2009
Thomasville, City of	25,872	Surface Water	None
Total	203,237		
Non-Transient, Non-Community Water Systems			
None			
Total	0		
Transient, Non-Community Water Systems			
Newsom Mobile Home Park Campground	74	Ground Water	None
Total	74		

Source: Safe Drinking Water Search for the State of North Carolina. US EPA Envirofacts Safe Drinking Water Information System (SDWIS) website: <http://www.epa.gov/enviro/facts/sdwis/search.html>.

NPDES Permits

Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into US waters. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters (80).

The following table lists the NPDES-permitted dischargers in Davidson County and the destinations and permitted volumes of their discharges as of July 2016.

Table 166. National Pollutant Discharge Elimination System (NPDES) Permitted Dischargers in Davidson County (as of July 2018)

Owner	Facility	Type	Discharge Destination	Permitted Flow (Gal/Day)
Major Facilities				
Town of Denton	Denton Waste Water Treatment Plant	Municipal, < 1MGD	Lick Creek	800,000
City of High Point	Westside Waste Water Treatment Plant	Municipal, Large	Rich Fork	6,200,000
City of Lexington	Lexington Regional Waste Water Treatment Plant	Municipal, Large	Abbotts Creek Arm of High Rock Lake	6,500,000
City of Thomasville	Hamby Creek Waste Water Treatment Plant	Municipal, Large	Hamby Creek	6,000,000
Minor Facilities				
City of Thomasville	City of Thomasville Water Treatment Plant	Water Treatment Plant	Rich Fork Creek	200,000
PPG Industries Fiber Glass Products Inc.	Lexington Manufacturing Facility	Industrial Process & Commercial	North Potts Creek (Second Potts Creek)	600,000
Davidson Water, Inc.	Davidson Water Treatment Plant	Water Treatment Plant	Yadkin River	Not limited
Aqua North Carolina, Inc.	Salem Glen Subdivision Waste Water Treatment Plant	100% Domestic, < 1MGD	Yadkin River	200,000
Town of Denton	Denton Water Treatment Plant	Water Treatment Plant	Yadkin River	Not limited
Steve Pappas	Captain Stevens Seafood Restaurant	100% Domestic, < 1MGD	Reedy Creek	2,500
Frog Level Industries	Quail Run Mobile Home Park	100% Domestic, < 1MGD	Miller Creek	17,000
Aqua North Carolina, Inc.	Willow Creek Waste Water Treatment Plant	100% Domestic, < 1MGD	Abbotts Creek	80,000
Wilderness-NC, Inc.	Wilderness-NC Lumber Plant	Industrial Process & Commercial	Flat Swamp Creek	12,500
Norfolk Southern Railway Co.	Linwood Yard	Industrial Process & Commercial	Yadkin River	317,000
Kurz & Partners, LP	Kurz Transfer Products	Industrial Process & Commercial	Reedy Creek	1,500
Bills Truck Stop, Inc.	Bill's Truck Stop Waste Water Treatment Plant	100% Domestic, < 1MGD	South Potts Creek (First Potts Creek)	6,000
Tisha Tuttle	Hilltop Living Center Waste Water Treatment Plant	100% Domestic, < 1MGD	Yadkin River	3,000
Aqua North Carolina, Inc.	Spring Creek Waste Water Treatment Plant	100% Domestic, < 1MGD	Fryes Creek	80,000
City of Lexington	Lexington Water Treatment Plants #1 & #2	Water Treatment Plant	Abbotts Creek	Not limited
General Permits				
Lexington Furniture Industries	Plant 5	Non-contact Cooling, Boiler Blowdown	Rat Spring Branch	n/a
Halyard Health Inc	Lexington facility	Non-contact Cooling, Boiler Blowdown	North Potts Creek (Second Potts Creek)	n/a
Elizabeth Carbide of North Carolina	Elizabeth Carbide of North Carolina	Non-contact Cooling, Boiler Blowdown	Brier Creek	n/a
Mohawk Industries Inc	Unilin Flooring, NC LLC	Non-contact Cooling, Boiler Blowdown	Hamby Creek	n/a
Holding Brothers Inc	West Lexington Sav-A-Sum	Groundwater Remediation	Swearing Creek	n/a
Davidson Water Inc	Davidson Water WTP	Sand Dredging Operations	YADKIN RIVER	n/a
	Jerry Gray Smith Farm	Sand Dredging Operations	Muddy Creek	n/a
	Rich Fork Creek operation	Sand Dredging Operations	Rich Fork	n/a
	Abbotts Creek site	Sand Dredging Operations	Abbotts Creek	n/a
Thomas Mock	Spurgeon Creek site	Sand Dredging Operations	Spurgeon Creek	n/a
Leonard Sand Company	Leonard Sand Co.	Sand Dredging Operations	Swearing Creek	n/a
	412 Cascade Drive	Single Family Domestic	Abbotts Creek	n/a
	187 Marajo Court	Single Family Domestic	Miller Creek	n/a
	2162 Upper Lake Road	Single Family Domestic	Hamby Creek	n/a
Timothy B Applegate	2605 North Old Greensboro Road	Single Family Domestic		n/a
	407 Cascade Drive	Single Family Domestic	Abbotts Creek	n/a
	2100 Laura Lane	Single Family Domestic	Payne Creek	n/a
	729 Turnpike Road	Single Family Domestic	Rich Fork	n/a
	979 Old Greensboro Road	Single Family Domestic	Abbotts Creek	n/a
	Old Greensboro Road #1756	Single Family Domestic		n/a
	184 Dixie Trail	Single Family Domestic	Rich Fork	n/a
Ken & Laura Griffin	309 Craven Drive	Single Family Domestic	Hunts Fork	n/a
	146 Summers Trail	Single Family Domestic	Hamby Creek	n/a
	4368 Chestnut Street Extension	Single Family Domestic		n/a
	376 North Mohawk Drive	Single Family Domestic	Rich Fork	n/a
	1660 West Lexington Avenue	Single Family Domestic	Rich Fork	n/a
	1664 West Lexington Avenue	Single Family Domestic	Rich Fork	n/a
	206 Beaver Creek Road	Single Family Domestic	Beaverdam Creek	n/a
	347 Timberland Drive	Single Family Domestic	Little Uwharrie River (Wheatmore Pond)	n/a
	413 Cascade Drive	Single Family Domestic	Abbotts Creek	n/a
	1129 Kendall Mill Road	Single Family Domestic	Hamby Creek	n/a
	1243 A & B Welcome-Bethesda Rd	Single Family Domestic	Tinkers Creek	n/a
	670 Country Lane	Single Family Domestic	Little Brushy Fork	n/a
	385 Sink Road	Single Family Domestic	Tinkers Creek	n/a
	507 Cascade Drive	Single Family Domestic	Abbotts Creek	n/a
Brian & Pamela Hodgins	798 Jacob Street Extension	Single Family Domestic	Hunts Fork	n/a
	2370 Old NC Highway 109	Single Family Domestic	Flat Swamp Creek	n/a

Source - List of Active and Expired Individual Permits [BIMS_100316]. List of Active and Expired General Permits [NCG5 Database July 2016]. Retrieved July 12, 2018, from NPDES Wastewater Permitting Process, North Carolina Division of Water Resources website: <https://deg.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/npdes-wastewater/permitting-process>.

SOLID WASTE

Solid Waste Disposal

The next table presents figures summarizing tonnage of solid waste disposed in Davidson County and comparators for the period FY2012-13 through FY2016-17.

- In FY2016-17, Davidson County managed 139,226 tons of municipal solid waste (MSW) for a rate of 0.84 tons per capita. This tonnage represented a *decrease* of 22% from the per capita rate for FY1991-92 (the period customarily used for the base rate).
- Over the same period the overall state per capita solid waste management rate increased 3% over the FY1991-92 base per capita rate.

**Table 167. Solid Waste Disposal
FY2012-13 through FY2016-17**

Location	Population	Tons Managed	Municipal Solid Waste and Construction & Demolition Tons Disposed					Based Year Per Capita	Per Capita Rate	% Change from 1991-1992
	July 2016	1991-1992	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	1991-1992	2016-2017	2016-2017
Davidson County	166,137	139,617	121,928	126,075	140,495	140,377	139,226	1.08	0.84	-22
Randolph County	143,711	78,663	109,457	105,803	100,538	109,842	107,360	0.73	0.75	2
State Total	10,155,942	7,257,428	9,149,130	9,150,471	9,635,874	11,323,734	11,231,358	1.07	1.11	3

Source: *FY16-17 County Per Capita Report*. North Carolina Department of Environmental Quality (DEQ), Division of Waste Management, Solid Waste Management Annual Reports website: <https://deq.nc.gov/about/divisions/waste-management/sw/data/annual-reports>.

The next table lists the active/open solid waste facilities in Davidson County that have been permitted by the state of NC.

Table 168. Open Permitted Solid Waste Facilities, Davidson County (October 5, 2018)

Name	Waste	Activity	Location
Davidson County CDLF	Construction & Demolition	Landfill	Lexington
Davidson County HHW	Household hazardous waste	Collection	Lexington
Davidson County MSW (Lined)	Municipal Solid Waste	Landfill	Thomasville
Davidson County Transfer Facility	Municipal Solid Waste	Transfer	Thomasville
Todco, Inc. Wood Recycling	Type 1	TP	Lexington
Todco, Inc. C&D Transfer	Construction & Demolition	Transfer	Lexington
Davidson Composting Facility	Type 4	Compost	PROPOSED
Veach Land Clearing & Inert Debris	Land Clearing & Inert Debris	Landfill	Winston-Salem
Norman's Septic Tank Service	Septage	Hauler	Lexington
B & B Septic	Septage	Hauler	Lexington
Comer Sanitary Service, Inc.	Septage	Hauler	Lexington
Ketcham Septic Tank Company	Septage	Hauler	Lexington
McMahan Septic Tank	Septage	Hauler	Lexington
North State Plumbing Service	Septage	Hauler	Lexington
Transous Forsyth Septic Tank Service, Inc.	Septage	Hauler	Clemmons
Davidson County Board of Education	Septage	Hauler	Lexington
EverSwing Septic Tank Service	Septage	Hauler	Lexington
64 Portables, Inc.	Septage	Hauler	Lexington
Scott Robbins Septic Tank	Septage	Hauler	Denton
Triad 24 Pumping	Septage	Hauler	Lexington
Hulin Septic Tank	Septage	Hauler	Lexington

Source: *Solid Waste Permitted Facilities*. North Carolina Department of Environmental Quality (DEQ), Division of Waste Management, Solid Waste Management website: <https://deq.nc.gov/about/divisions/waste-management/sw/data/facility-lists>.

The table below presents the FY2016-17 County Waste Disposal Report for Davidson County which lists the tons of solid waste originating in Davidson County and disposed of in-county and facilities elsewhere.

- Some of Davidson County's solid waste is transferred to or transported directly to landfills *outside* the county, but the vast majority (96%) is landfilled within the county.

Table 169. Facilities Listing Davidson County as Source of Waste (FY2016-17)

Facility	Facility Type	County	Tons Received	Tons Transferred
Chambers Development MSWLF	Municipal Solid Waste	Anson	1,367.21	0.00
BFI - Charlotte Motor Speedway	Landfill V	Cabarrus	3.92	0.00
Davidson County MSW Lined Landfill	Municipal Solid Waste	Davidson	127,119.05	0.00
Davidson County Transfer Facility	Transfer	Davidson	724.90	724.90
Todco, Inc. C&D Transfer	Transfer	Davidson	1,477.51	309.67
Overdale Road Transfer Station	Transfer	Davidson	3,885.00	3,885.00
Abbey Green, Inc.	Construction & Demolition Recycling	Forsyth	76.40	23.74
City of High Point Landfill	Municipal Solid Waste	Guilford	913.19	0.00
High Point C&D Debris Landfill	Construction & Demolition Reclamation	Guilford	220.69	0.00
A-1 Sandrock C&D Landfill	Construction & Demolition	Guilford	332.93	0.00
Greensboro Transfer Station	Transfer	Guilford	561.04	566.41
Uwharrie Environmental Regional Landfill	Regional Landfill	Montgomery	4,113.20	0.00
Rowan County Landfill	Municipal Solid Waste	Rowan	185.20	0.00
East Spencer Waste Transfer Facility	Transfer	Rowan	709.90	699.08
Richland Landfill, Inc	Municipal Solid Waste	n/a	13.90	0.00

Source: *FY16-17 County Waste Disposal Report*. North Carolina Department of Environmental Quality (DEQ), Division of Waste Management, Solid Waste Management Annual Reports website: <https://deq.nc.gov/about/divisions/waste-management/sw/data/annual-reports>.

The next table describes the capacity of Davidson County landfills as of 2016-17.

- The municipal solid waste landfill in Davidson County currently has capacity projected to last for another 41 years.

Table 170. Capacity of Landfills in Davidson County (FY2016-17)

Facility Name	Open Date	Total Permitted Volume	Remaining Permitted Volume	Permitted Volume Overall Remaining in Tons	Approximate Total Permitted Volume Remining in Years
Davidson County MSW Lined Landfill	10/1/1994	10,517,323	6,795,854	4,214,201	41.3

Source: *FY16-17 Landfill Capacity Report*. North Carolina Department of Environmental Quality (DEQ), Division of Waste Management, Solid Waste Management Annual Reports website: <https://deq.nc.gov/about/divisions/waste-management/sw/data/annual-reports>.

Davidson County Municipal Solid Waste Management

The Solid Waste Management program provides waste collection and disposal options for the residents of Davidson County. In addition, the program promotes recycling opportunities, and conducts research to provide options for future solid waste management needs. The program performs the following functions:

- Environmental Education
- Innovative Environmental Management for the 21st Century
- Recyclable Collection
- Residential Drop-off Convenience Centers
- Solid Waste Disposal

Landfill

The Davidson County Sub-tille D Landfill is designed and operated to protect human health and the environment which has replaced the unregulated open/illegal dumps. Every person involved shares the responsibility to understand the role of landfills in our waste management system and become active participants in regulatory compliance, process improvements and fiscal responsibility.

Sanitation

The Sanitation division is a vital link in the overall operations of the Davidson County Integrated Solid Waste Department. This division consists of 11 strategically located Recycling Centers (formerly known as box sites) and a fleet of 3 full-time roll-off trucks. These trucks log over 100,000 miles annually to ensure all waste and recyclables are transported properly from the drop off sites to the Landfill and Material Recovery Facility (MRF).

Each drop off site is staffed with one county employee to assist residents with their disposal needs and to make sure everyone's visit is safe and pleasant (81).

City of Lexington Municipal Solid Waste Management

Recycling and waste collection residential services are available to city residents for recycling and various household disposals, including yard waste, grass and leaf collection.

Basic Residential Service consists of collection and disposal of:

- One rollout garbage container once per week
- One recycling bin once per week or rollout container bi-weekly
- Grass collection
- Small trash and yard waste equivalent to a total of two pickup truck loads (2 Tons) per month. (There is a fee plus tipping fees at the Davidson County landfill and/or wood recycling center for large collections exceeding two pickup truck loads.)
- Collection of leaves during "leaf season" (October - December) (82).

City of Thomasville Municipal Solid Waste Management

The city of Thomasville Sanitation Department provides the following basic residential services:

- The city will collect no more than two containers at any one stop (residential, office or institutional).
- The solid waste container should be placed curbside.
- The city will process one recycling bin at no cost. Extra material may be placed in a bag and placed beside the bin on collection day. Recyclables include glass, aluminum/steel cans, plastic bottles and jugs, newspaper, corrugated cardboard, magazines, junk mail, catalogs, phone books, and all types of paper including cereal boxes, pizza boxes, and drink boxes. Electronic items such as computer-related equipment, VCRs, stereos, cameras, copy-fax machines, telephone equipment and televisions are also accepted for recycling. The following materials are NOT accepted: Styrofoam, aerosol cans, aluminum foil or foil plates, cookware, food or liquids, clothes hangers, light bulbs, paint cans, flower pots or containers of any kind, windows, plate glass, mirrors, disposable hygiene items, diapers, used oil, and plastic bags or sheeting.
- Loose leaf collection usually begins the first week in November and continues until mid-January.
- Grass clippings should be bagged or placed in containers for collection (except for leaf collection season when they can be loose).
- Cumulative amounts of solid waste, yard waste, trash, etc. should not exceed 5 cubic yards.
- Appliances and tires are collected on a call-in basis.

The Thomasville Sanitation Department does NOT collect:

- Renovation, construction or demolition material.
- Waste generated through services performed by a contractor or third party.
- Chemicals, used oil, hazardous or flammable material of any kind, ashes, or sealed metal drums. (Residents may dispose of this material at the Davidson County household Hazardous Waste Facility.)
- Automobile parts
- Dirt, rocks, bricks, concrete, loose garbage or trash (83).

RABIES

Rabies is a vector-borne disease that can be controlled among pets by having dogs and cats properly vaccinated. While pets can be protected that way, there is no practical way to control rabies in the wild, where it is more common. The table below lists the total number of rabies cases detected in Davidson County and its comparators over the period from 2007-2017.

Major rabies discussion points are these: First of all, rabies is not especially common in Davidson County, with 102 cases identified in eleven years. Secondly, rabies is more common in animals *other* than cats, dogs or bats. Of the 15 total rabies cases in Davidson County in 2016 and 2017, the most common hosts were raccoons (4 cases), skunks (4 cases) and foxes (3 cases). Statewide in 2017, 111 of 254 (or 44%) of all rabies cases were in raccoons.

**Table 171. Animal Rabies Cases
(2007-2017)**

Location	Total Number of Animal Rabies Cases										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Davidson County	9	9	8	13	17	8	8	11	4	7	8
Randolph County	12	13	17	7	20	15	11	4	9	3	8
State of NC	474	452	473	397	429	431	380	352	339	251	254

Source: NC Division of Public Health, Epidemiology. Rabies. Facts and Figures. Rabies by County, Tables by Year.
<http://epi.publichealth.nc.gov/cd/rabies/figures.html#tables>.

CHAPTER SIX: COMMUNITY HEALTH SURVEY

METHODOLOGY

The Davidson County CHNA Team, assisted by Davidson County Health Department staff, conducted this primary data collection activity using a Survey Monkey™ on-line survey supplemented by paper surveys distributed via a “convenience sample” technique to groups who might not be able to access or use the Internet.

In the spring of 2018, the primary partners began work on developing the community health survey. Team meetings were held periodically, with communication in the interim via email and phone. The team was tasked with promoting the on-line community health survey from mid-June through mid-August 2018. By the end of September 2018, 1,109 surveys had been submitted and the Public Health Consultant and her team analyzed the survey results.

The 2018 Davidson County Community Health Survey solicited respondents’ concerns about community health problems, unhealthy behaviors, and community social issues. Respondents were also queried as to their medical care access, personal health, and personal health behaviors. The survey instrument advised the participants that their responses would be confidential and not linked to them personally in any way.

The demographic profile of the survey respondents matched some of the demographic characteristics of the county. For instance, the representation of racial groups among survey respondents was similar to the racial/ethnic profile of the county. Despite attempts to prevent it, however, certain groups were either over-sampled or under-sampled. The 2018 survey respondent pool can be generally characterized as predominately female, ethnically diverse and racially-balanced, but more highly educated than the general population. The respondent pool is discussed in greater detail in the following section. The survey instrument is appended to this report.

SURVEY RESPONDENT POOL

The following table compares the demographics of the survey respondent pool to the overall population of Davidson County as of 2016 US Census Bureau estimates.

- The survey sample significantly over-represented females.
- The survey sample under-sampled African Americans and adequately sampled Hispanics.
- As to age distribution, it should be noted that the survey and census figures cannot be compared directly since the proportions via the census include all persons in the county and the survey sample excluded persons under the age of 18. However, it does appear that the survey over-represented persons in the 30 to 59 age ranges.
- The survey sample under-represented the unemployment.
- The survey sample significantly under-represented those with less than a high school/GED diploma and significantly over-represented those with a bachelor’s degree or higher.

Demographic Comparison: 2018 Survey Respondents to Davidson County Population

Demographic Category	2018 Survey Participants		County Population (2016)
	Number	Percent	Percent
Gender			
Male	170	16.7	48.8
Female	848	83.2	51.2
Race/Ethnicity			
White/Caucasian	891	91.0	86.5
African American/Black	43	4.4	9.0
Asian or Pacific Islander	5	0.5	1.3
Native American	4	0.4	0.4
Two or more Races	22	2.2	1.6
Other	14	1.4	1.2
Of Hispanic or Latino Origin	64	6.3	6.7
Age			
18-19	4	0.4	n/a
20-29	89	8.8	10.5
30-39	216	21.2	12.8
40-49	238	23.4	15.6
50-59	258	25.4	14.2
60-64	80	7.9	6.2
65 and Older	132	13.1	14.5
Other			
Unemployed	30	3.0	4.3 (2017)
Household Income < \$20,000	119	12.1	n/a
Household Income ≥ \$50,000	510	51.8	n/a
Less than HS Diploma/GED	68	6.6	17.7
Bachelor's Degree or Higher	475	46.6	18.2

SURVEY RESULTS

A total of 1,109 completed surveys were collected, 1,064 in English and 45 in Spanish.

Survey responses were analyzed for frequency of response using the built-in capacities of Survey Monkey. Because the same consultant analyzed both the 2018 and the 2015 Davidson County Community Health Surveys comparisons of those two sets of results are provided. It should be noted that not every respondent answered every question. The number and corresponding percentage of individuals who chose each response category are presented in the analysis below. Note: The order of some of the questions in the analysis may differ from their order in the actual survey, having been rearranged for clarity.

Demographic Questions

Survey participants were asked to provide demographic information by selecting appropriate responses from lists of categories of age, gender, race and ethnicity, education level, and household income. This demographic information was collected in order to assess how well the survey participants represented the general population of Davidson County.

What is the ZIP code of your PRIMARY residence in Davidson County? (n=1006; 103 unanswered)

	2018		2015	
	#	%	#	%
27292 (Lexington)	289	28.7%	269	31.5%
27295 (Lexington)	267	26.5%	248	29.0%
27360 (Thomasville)	220	21.9%	202	23.7%
27107 (Winston Salem)	63	6.3%	n/a	n/a
27239 (Denton)	57	5.7%	46	5.4%
27012 (Clemmons)	31	3.1%	21	2.5%
27299 (Linwood)	29	2.9%	38	4.4%
27265 (High Point)	24	2.4%	n/a	n/a
27262 (High Point)	14	1.4%	n/a	n/a
27127 (Winston Salem)	10	1.0%	n/a	n/a
27260 (High Point)	2	0.2%	24	2.8%
27351 (Southmont)	0	0.0%	3	0.4%
27373 (Wallburg)	0	0.0%	3	0.4%

- In 2018, 55% of respondents were from Lexington, 22% of respondents were from Thomasville.
- ~23% of respondents were from elsewhere in Davidson County.

How old are you? (n=1017; 92 unanswered)

	2018		2015	
	#	%	#	%
18-19	4	0.4%	21	2.4%
20-29	89	8.8%	114	12.9%
30-39	216	21.2%	133	15.0%
40-49	238	23.4%	203	23.0%
50-59	258	25.4%	230	26.0%
60-64	80	7.9%	85	9.6%
65-69	51	5.0%	53	6.0%
70-79	62	6.1%	31	3.5%
80-85	15	1.5%	7	0.8%
85 or older	4	0.4%	7	0.8%

- In 2018, 9% of the participants were between 18 and 30; approximately 11% of the county population falls in this age group.
- 78% of respondents were between the age of 30 and 64, an age group that comprises 48% of the total population.
- 13% of those surveyed were over the age of 65. County-wide, 17% of the population is over 65.

How would you identify? (n=1019; 90 unanswered)

	2018		2015	
	#	%	#	%
Male	170	16.7%	174	19.7%
Female	848	83.2%	711	80.3%
Other	1	0.1%	n/a	n/a

- In 2018, approximately 17% of the survey participants were male and 83% were female.
- The population of the county is split 49/51 males to females.

Are you of Hispanic, Latino, or Spanish origin? (n=1013; 96 unanswered)

	2018		2015	
	#	%	#	%
Yes	64	6.3%	50	5.7%
No	949	93.7%	828	94.3%

- 6.3% of the survey respondents were of Hispanic origin in 2018. At the county level, an estimated 6.7% of the population is of Hispanic/Latino/Spanish origin.

What do you consider your race? (n=979; 130 unanswered)

	2018		2015	
	#	%	#	%
White only	891	91.0%	739	83.5%
Black/African American only	43	4.4%	86	9.7%
Two or more races	22	2.2%	20	2.3%
Other race not listed here	14	1.4%	30	3.4%
Native American/American Indian/Alaska Native only	4	0.4%	9	1.0%
Asian only	4	0.4%	1	0.1%
Pacific Islander only	1	0.1%	0	0.0%

- The majority of the survey respondents were white in 2018.
- African Americans were under-represented within this survey sample: they comprised 4.4% of 2018 respondents and account for 9% of the county population.

What is the highest level of school, college or training that you have finished? (n=1020; 89 unanswered)

	2018		2015	
	#	%	#	%
Less than 9th grade	31	3.0%	27	3.1%
9th – 12th grade, no diploma	37	3.6%	48	5.1%
High school diploma (or GED/equivalent)	133	13.0%	153	17.3%
Associate's Degree or Vocational Training	198	19.4%	172	19.5%
Some college (no degree)	146	14.3%	158	17.9%
Bachelor's degree	274	26.9%	193	21.8%
Graduate or professional degree	201	19.7%	133	15.0%
Other (please specify)	9	0.9%	n/a	n/a

- Nearly 47% of the respondents had a Bachelor's degree or higher, compared to 18% Davidson County residents estimated to be so educated.
- 92% of the respondents had at least a high school education, compared to 82% at the county-level.

What was your total household income last year, before taxes? This includes everybody age 15 or older who lives in your house and has income. (n=985; 124 unanswered)

	2018		2015	
	#	%	#	%
Less than \$20,000	119	12.1%	124	14.6%
\$20,000 to \$29,999	84	8.5%	129	15.2%
\$30,000 to \$39,999	98	9.9%	97	11.4%
\$40,000 to \$49,999	74	7.5%	78	9.2%
\$50,000 to \$59,999	98	9.9%	67	7.9%
\$60,000 to \$69,000	78	7.9%	73	8.6%
\$70,000 to \$79,000	105	10.7%	73	8.6%
\$80,000 to \$99,000	125	12.7%	93	11.0%
\$100,000 or more	204	20.7%	115	13.5%

- 12% of 2018 respondents reported making less than \$20,000.
- 30% of participants make less than \$30,000.
- 33% make more than \$80,000.

What is your employment status? (n=1013; 96 unanswered)

	2018		2015	
	#	%	#	%
Employed full-time	767	75.7%	613	69.5%
Employed part-time	81	8.0%	95	10.8%
Retired	116	11.5%	87	9.9%
Unemployed	30	3.0%	44	5.0%
Disabled	30	3.0%	41	4.6%
Student	16	1.6%	44	5.0%
Homemaker	18	1.8%	25	2.8%
Self-employed	23	2.3%	11	1.2%

- 3% of the respondents were unemployed, compared to a county unemployment rate of 4.3% in 2017.
- Nearly 76% of respondents were employed full-time.

Does anyone in your household have a working telephone? (n=1014; 95 unanswered)

	2018		2015	
	#	%	#	%
No; no one in my household has a telephone of any kind	19	1.9%	13	1.5%
Yes: a land line only	19	1.9%	40	4.5%
Yes: one or more cell phone(s) only	565	55.7%	374	42.5%
Yes: both a land line and one or more cell phones	411	40.5%	453	51.5%

- Around 41% of the 2018 participants have both a land line and cell phone(s).
- Approximately 56% of respondents use only cell phones.
- Compared to 2015, cell phone-only households are more common and landlines (alone or combined with cell phones) are less common.

Do you have access to the Internet? (n=1011; 98 unanswered)

	2018		2015	
	#	%	#	%
Yes	974	96.3%	813	92.2%
No	37	3.7%	69	7.8%

If yes, where: (n=977, 132 unanswered)

	2018	
	#	%
At home	856	87.6%
On cell phone	742	75.9%
Public place (library, work, etc.)	433	44.3%

- A vast majority of the participants had access to the Internet, most of them accessing it at home or on a cell phone.

Health Problems

Survey participants were asked to consider a list of health problems and select the five they thought were the most important in Davidson County. If they selected Cancer as an issue, they had the option of “writing-in” the kind of cancer they thought was most important. The list of responses below is arranged in descending order of the frequency with which a named behavior was chosen. (n=1102; 7 unanswered)

	2018		2015	
	#	%	#	%
Obesity/overweight	664	60.3%	580	60.4%
Opioid crisis	641	58.2%	n/a	n/a
Mental health	628	57.0%	430	44.7%
Diabetes	521	47.3%	518	53.9%
Aging problems	491	44.6%	488	50.8%
Heart disease/heart attack	460	41.7%	471	49.0%
Cancer	456	41.4%	515	53.6%
Lung disease	232	21.1%	226	23.5%
Motor vehicle accident injuries	232	21.1%	166	17.3%
Dental health	211	19.1%	229	23.8%
Accidental injuries NOT involving vehicles	184	16.7%	169	17.6%
Infectious/contagious diseases	150	13.6%	162	16.9%
Teenage pregnancy	145	13.2%	225	23.4%
Stroke	104	9.4%	138	14.4%
Sexually transmitted infections	100	9.1%	101	10.5%
Asthma	71	6.4%	103	10.7%
Kidney disease	38	3.4%	46	4.8%
HIV/AIDS	28	2.5%	54	5.6%
Liver Disease	21	1.9%	23	2.4%
Infant death	20	1.8%	21	2.2%
Birth defects	11	1.0%	26	2.7%

Most common Cancer write-ins: All/Any (59), Breast (92), Colon (22), Lung (93)

- Obesity/overweight was the most commonly identified health problem in Davidson County in both 2015 and 2018, selected by 60% of respondents.
- The opioid crisis, not a choice in 2015, was the second most commonly selected health problem, identified by 58% respondents.
- Mental Health ranked third on the list in 2018, with a higher proportion of respondents selecting (57%) it compared to 2015 (45%).
- With the exception of Motor vehicle accident injuries, every other item on the list was chosen less frequently compared to 2015.
- Diabetes and Aging problems ranked fourth and fifth in 2018.

Unhealthy Behaviors

Survey participants were asked to consider an alphabetized list of unhealthy behaviors and select the five they thought had the greatest overall impact on health in Davidson County. The list of responses below is arranged in descending order of the frequency with which a named behavior was chosen. (n=1095, 14 unanswered)

	2018		2015	
	#	%	#	%
Drug abuse (incl. both prescription drugs and illegal drugs)	988	90.2%	748	78.1%
Alcohol abuse	682	62.3%	604	63.0%
Lack of exercise/poor physical fitness	647	59.1%	562	58.7%
Poor eating habits	564	51.5%	481	50.2%
Smoking/tobacco use	513	46.8%	439	45.8%
Not going to the doctor for preventive check-ups and screenings	459	41.9%	355	37.1%
Reckless/drunken driving	360	32.9%	226	23.6%
Violent, angry behavior (including rape/sexual assault)	274	25.0%	174	18.2%
Not going to a dentist for preventive checkups and cleaning	253	23.1%	177	18.5%
Having unsafe sex	194	17.7%	261	27.2%
Suicide	154	14.1%	70	7.3%
Not getting immunizations ("shots") to prevent disease	88	8.0%	61	6.4%
Not using seatbelts	84	7.7%	51	5.3%
Poor preparation for disasters and emergencies	59	5.4%	38	4.0%
Not using child safety seats	58	5.3%	39	4.1%
Not getting prenatal (pregnancy) care	50	4.6%	47	4.9%

- Drug abuse was selected by the vast majority of respondents as the most important unhealthy behavior in Davidson County, and in higher proportion even than 2015.
- Alcohol abuse was the second most commonly identified unhealthy behavior, chosen by 63% of respondents in both 2015 and 2018.
- The next most commonly identified unhealthy behaviors were lack of exercise/poor physical fitness (59%) followed by poor eating habits (50%). These proportions closely align with 2015 responses.
- Smoking/tobacco use was chosen by approximately 47% of participants and ranked fifth on the list of unhealthy behaviors.

- Compared to 2015 response rates, a higher proportion of respondents identified healthcare access issues: not going to the doctor for checkups, not going to the dentist, not getting immunizations.
- While it did not rank high on the list in either period, it is notable that suicide was selected by twice as many respondents in 2018 compared to 2015.
- Reckless/drink driving and violent, angry behavior also garnered a higher proportion of responses in 2018 compared to 2015.

Community Concerns

Survey participants were asked to consider an alphabetized list of problem community social issues and select the five they thought had the greatest overall impact on health in Davidson County. If they selected “Lack of health care providers” as an issue, they had the option of “writing-in” the kind of provider they felt was lacking. The list of responses below is arranged in descending order of the frequency with which a named issue was chosen. (n=1102; 7 unanswered)

	2018		2015	
	#	%	#	%
Substance abuse/misuse	648	58.8%	n/a	n/a
Affordability of health services	647	58.7%	471	49.3%
Availability of healthy food choices in restaurants and grocery stores	513	46.6%	184	19.2%
Crime (e.g., theft, murder, assault, etc.)	427	38.7%	292	30.5%
Transportation options	393	35.7%	113	11.8%
Unsafe schools (e.g., in/at-school crime, violence, bullying, etc.)	349	31.7%	71	7.4%
Unemployment/underemployment	308	27.9%	471	49.3%
Lack of healthcare providers	308	27.9%	77	8.1%
Unsafe/unmaintained roads	295	26.8%	74	7.7%
Lack of counseling/mental health services/support groups	207	18.8%	208	21.8%
Lack of recreational facilities	184	16.7%	87	19.6%
Low income/poverty	171	15.5%	530	55.4%
Hunger	153	13.9%	256	26.8%
Lack of/inadequate health insurance	149	13.5%	233	24.4%
Dropping out of school	130	11.8%	186	19.5%
Neglect and abuse of children	125	11.3%	239	25.0%
Animal control issues/rabies	102	9.3%	105	11.0%
Homelessness	96	8.7%	308	32.2%
Neglect and abuse of domestic partners	92	8.3%	45	4.7%
Racism/discrimination	82	7.4%	117	12.2%
Neglect and abuse of the elderly	80	7.3%	107	11.2%

Most common Lack of providers written in: family medicine/general practice (19), mental health (6), affordable (5)

- It is notable that these responses vary greatly between 2015 and 2018. Economic issues (unemployment/underemployment, low income/poverty, homelessness),

priority issues for 2015 respondents, were not chosen as frequently in 2018. Social and health issues were much more on the minds of 2018 participants.

- Substance abuse/misuse (not a choice in 2015) ranked at the top of the list, along with Affordability of health services, both identified by nearly 59% of respondents.
- Availability of health food choices in restaurants and grocery stores rose significantly on the list, with 47% of respondents choosing it in 2018 compared to 19% in 2015.
- Crime ranked fourth on the list of community concerns, with 38% identifying it in 2018.
- Transportation options and Unsafe schools ranked fifth and sixth on the list and were chosen by significantly more respondents in 2018 than in 2015.

Substance Abuse

Survey participants were asked to consider a list of substance abuse issues and select the three they thought had the greatest overall impact on health in Davidson County. They also had the option of writing in an “other” substance abuse problem. The list of responses below is arranged in descending order of the frequency with which a named issue was chosen. (n=1100; 9 unanswered)

	2018		2015	
	#	%	#	%
Abusing prescription drugs/pills	667	60.6%	553	58.1%
Alcohol abuse	499	45.4%	563	59.2%
Methamphetamines (Meth)	467	42.5%	273	28.7%
Heroin	424	38.5%	n/a	n/a
Other “hard” drugs (e.g., cocaine, crack)	265	24.1%	343	36.1%
Drinking and driving	264	24.0%	299	31.4%
Using someone else’s prescription drugs/pills	233	21.2%	203	21.3%
Marijuana	219	19.9%	283	29.8%
I really don’t know	136	12.4%	123	12.9%
Other (please specify)	22	2.0%	n/a	n/a

Other write-ins: opioids (9), all (4)

- The most commonly selected substance abuse issue was abusing prescription drugs/pills, identified by 61% of respondents in 2018, a slightly higher proportion compared to 2015.
- Alcohol abuse ranked second on the list in 2018 (and first in 2015), as selected by 45% of respondents.
- Methamphetamines ranked third on the list and was selected by a higher proportion in 2018 (42%) compared to 2015 (29%).
- Heroin, not a choice in 2015, ranked fourth, with almost 39% of respondents selecting in 2018.

Environmental Health

Survey participants were asked to consider a list of environmental health issues and select the ONE they thought had the greatest overall impact on their own health. They also had the option of writing in an “other” environmental health problem. The list of responses below is arranged in descending order of the frequency with which a named issue was chosen. (n=1055; 54 unanswered)

	2018		2015	
	#	%	#	%
Air quality	341	32.3%	274	32.2%
Second-hand smoke	274	26.0%	180	21.1%
Food Safety	197	18.7%	205	24.1%
Mold	167	15.8%	169	19.8%
Meth labs	58	5.5%	14	1.6%
Other (please specify)	30	2.8%	n/a	n/a
Lead exposure	11	1.0%	6	0.7%
Radon	7	0.7%	4	0.5%

Most common Other write-in: water/water quality (9), don't know (4)

- Approximately 32% of respondents felt that air quality is the environmental issue that most affects health, in both 2015 and 2018.
- The next most common answers were second-hand smoke, food safety and mold.

Personal Health Questions

Where do you get most of your health-related information or advice? (n=1049; 60 unanswered)

	2018		2015	
	#	%	#	%
Doctor/nurse	642	61.2%	501	55.6%
Internet	205	19.5%	163	18.1%
Friends and family	87	8.3%	108	12.0%
Newspaper/magazine/TV	26	2.5%	31	3.4%
Other (please specify)	24	2.3%	n/a	n/a
Hospital	23	2.2%	34	3.8%
Health Department	22	2.1%	15	1.7%
Social media (Facebook, Twitter, etc.)	19	1.8%	9	1.0%
School	11	1.0%	8	0.9%
Pharmacist	7	0.7%	8	0.9%
Church	6	0.6%	21	2.3%
Help lines	1	0.1%	3	0.3%
Telemedicine	0	0.0%	n/a	n/a

Most common Other write-in: work in healthcare (11)

- Around 61% of survey respondents get their health-related information from a doctor or nurse, a higher proportion compared to 2015 (56%).
- The internet was the second most popular source of health information (20%) followed by friend and family members (8%).

Where do you go most often when you are sick? (n=1057; 52 unanswered)

	2018		2015	
	#	%	#	%
Private Doctor's office	718	67.9%	591	64.9%
Urgent Care Center or Walk-In Clinic	142	13.4%	88	9.7%
I don't go anywhere when I'm sick	86	8.1%	89	9.8%
Hospital Emergency Department	33	3.1%	46	5.1%
OB/GYN or Women's Health Provider	31	2.9%	60	6.6%
Medical Ministries Clinic	29	2.7%	25	2.7%
Other (please specify)	13	1.2%	n/a	n/a
Pharmacy	10	0.9%	11	1.2%
Telemedicine	8	0.8%	n/a	n/a

- A majority of survey respondents, around 68%, to go a private doctor's office when they are sick, a higher proportion compared to 2015.
- Urgent Care Center or Walk-In Clinic ranked second on the list and was chosen more frequently compared to 2018.
- In 2018 8% answered that "I don't go anywhere when I'm sick", a lower proportion than in 2015 (10%).
- Among women, around 7% don't go anywhere when sick. 69% see a private doctor and 14% go to an urgent care center or walk-in clinic.
- Among males, 13% don't go anywhere when sick. Around 62% see a private doctor when sick and 12% go to an urgent care center or walk-in clinic.
- Among Hispanic respondents, 75% don't go anywhere when sick.

Where do you go when you need a yearly check-up or physical? (n=1057; 52 unanswered)

	2018		2015	
	#	%	#	%
Private Doctor's office	780	73.8%	583	63.9
OB/GYN or Women's Health Provider	239	22.6%	259	28.4
I don't get an annual check-up or physical.	81	7.7%	104	11.4
Medical Ministries Clinic	40	3.8%	23	2.5
Urgent Care Center of Walk-In Clinic	28	2.6%	31	3.4
Health Department	23	2.2%	23	2.5
Pharmacy	10	0.9%	5	0.5
Other (please specify)	10	0.9%	n/a	n/a
Telemedicine	0	0.0%	n/a	n/a

Most common Other write-ins: VA (8), on the job clinic, hospital for mammogram

- A majority of respondents see a private doctor for their yearly physical or check-up. A higher proportion of respondents reported seeing a private doctor for healthcare compared to 2015.
- Around 23% see an OB/GYN or Women's Health Provider for a physical, a lower proportion compared to 2015.
- Approximately 8% of 2018 respondents reported not getting an annual check-up or physical, a lower proportion compared to 2015.
- Among women, around 6% don't get an annual physical/check-up. 74% see a private doctor and 27% see a women's health provider or OB/GYN for a physical.
- Among men, approximately 17% do not get an annual physical. 76% of male respondents see a private doctor for an annual check-up.
-
- Among Hispanic respondents, 74% don't get an annual physical and 12% see a private doctor for an annual check-up.

Do you currently have any kind of health insurance? (n=1064; 45 unanswered)

	2018		2015	
	#	%	#	%
No, I do not have health insurance of any kind.	92	8.6%	118	12.8%
Yes: Private insurance provided through my employer.	673	63.3%	549	59.5%
Yes: Private insurance I purchased from a vendor	170	16.0%	109	11.8%
Yes: Medicare	122	11.5%	78	8.5%
Yes: Private insurance provided through my spouse's employer or my parent's employer.	68	6.4%	63	6.8%
Yes: Medicaid	30	2.8%	53	5.7%
Yes: Military insurance (e.g., VA benefits, Tricare, CHAMPUS, etc.)	19	1.8%	16	1.7%
Yes: Insurance I purchased on the Affordable Care Marketplace.	14	1.3%	16	1.7%

- Nearly 9% of participants do not currently have any kind of health insurance, a lower proportion compared to 2015.
- The most common source of insurance among 2018 survey respondents was private insurance provided through an employer (63%).
- 16% of respondents purchase their own private insurance, a higher proportion compared to 2015.
- 11.5% of respondents were on Medicare; nearly 3% were insured through Medicaid.

Was there a time in the past 12 months when you needed medical care but could not get it? (n=1047; 62 unanswered)

	2018		2015	
	#	%	#	%
No; I got all the medical care I needed in the past 12 months.	818	78.1%	665	72.8%
Yes, because I had health insurance but my share of the cost (deductible/co-pay/co-insurance) was too high.	105	10.0%	90	9.9%
Yes, because I didn't have health insurance and couldn't afford the cost by myself.	80	7.6%	109	11.9%
Yes, because it took too long to get an appointment.	46	4.4%	31	3.4%
Yes, because I had health insurance but it didn't cover what I needed.	40	3.8%	40	4.4%
Yes, because the doctor wasn't taking new patients.	20	1.9%	10	1.1%
Yes; Other reason:	15	1.4%	n/a	n/a
Yes, because I didn't know where to go.	10	1.0%	11	1.2%
Yes, because I didn't have transportation to get there.	9	0.9%	12	1.3%
Yes, because the provider (doctor, clinic or hospital) would not take my insurance or Medicaid.	8	0.8%	12	1.3%

Other reasons written in:

- Approximately 22% of the survey respondents had a problem getting needed health care at some point in the past year, a lower proportion compared to 2015 (27%).
- 10% of all respondents said they had a problem getting needed health care because "I had health insurance but my share of the cost was too high".
- When the "Yes..." responses are recalculated with a denominator of those respondents who didn't say no (so among those who DID have a problem accessing care, n=229):
 - 46% of them reported having insurance but their share of the cost of care was too high
 - 35% said they didn't have health insurance and couldn't afford the cost.
 - 20% said they couldn't get an appointment
 - 18% had health insurance but it didn't cover what was needed.

Was there a time in the past 12 months when you could not get a medically necessary prescription? (n=1054; 55 unanswered)

	2018		2015	
	#	%	#	%
No; I could get all the medically necessary prescriptions I needed.	878	83.3%	690	76.3%
Yes, because I didn't have health insurance and couldn't afford the cost by myself.	73	6.9%	103	11.4%
Yes, because I had health insurance drug coverage but my share of the cost (deductible/co-pay/co-insurance) was too high.	73	6.9%	72	8.0%
Yes, because I had health insurance but it didn't cover any prescriptions or the prescription I needed.	43	4.1%	40	4.4%
Yes, because my physician would not refill my prescription.	15	1.4%	n/a	n/a
Yes; Other reason:	14	1.3%	n/a	n/a
Yes, because the pharmacy would not take my insurance or Medicaid.	5	0.5%	9	1.0%
Yes, because I didn't know where to go.	5	0.5%	2	0.2%
Yes, because I didn't have transportation to get there.	4	0.4%	4	0.4%
Yes, because I had problems with Medicare Part D coverage.	1	0.1%	2	0.2%

Other reasons written in:

- Around 17% of the survey respondents had a problem filling a medically necessary prescription at some point in the last year, a lower proportion compared to 2015 (24%).
- The most common barriers to prescription access was the lack of health insurance, and the high cost (co-pays, deductibles, co-insurance) even with health insurance.
- When the "Yes..." responses are recalculated with a denominator of those respondents who didn't say no (so among those who DID have a filling a prescription, n=176):
 - 41% didn't have insurance and couldn't afford the cost
 - 41% reported having insurance but their share of the cost of care was too high
 - 24% had health insurance but it didn't cover what was needed.

If a friend or family member needed counseling for a drug/alcohol abuse problem, who would you tell them to call or talk to? (n=1053; 56 unanswered)

	2018	
	#	%
Doctor	446	42.4%
Daymark Recovery Services	311	29.5%
Private counselor or therapist	311	29.5%
Minister/religious official	304	28.9%
Support group (e.g., AA, Al-Anon)	303	28.8%
Family Services	212	20.1%
Not sure/don't know	204	19.4%
School counselor, nurse or social worker	172	16.3%
Local hospital	110	10.4%
Monarch	108	10.3%
Path of Hope	91	8.6%
Cardinal Innovations	68	6.5%
Other (please specify)	29	2.8%

- The wording of this question changed in 2018 and so is not comparable to 2015.
- Just over 42% of survey respondents would refer someone who needed drug/alcohol abuse counseling to a doctor.
- The second most common options for counseling, each selected 30% of respondents, were Daymark Recovery Services and private counselor or therapist.
- 29% of respondents would refer someone needing drug or alcohol counseling to a minister/religious official or a support group.

If a friend or family member needed mental health services, who would you tell them to call or talk to? (n=1057; 52 unanswered)

	2018	
	#	%
Doctor	513	48.5%
Private counselor or therapist	402	38.0%
Daymark Recovery Services	268	25.4%
Minister/religious official	246	23.3%
Family Services	224	21.2%
Not sure/don't know	189	17.9%
School counselor, nurse or social worker	182	17.2%
Local hospital	174	16.5%
National or other crisis phone line	151	14.3%
Monarch	121	11.4%
Cardinal Innovations	78	7.4%
Other (please specify)	18	1.7%

- The wording of this question changed in 2018 and so is not comparable to 2015.
- More than 48% of survey participants would tell needing mental health services to a doctor, the most common response.
- The next most common response was private counselor or therapist.

How would you rate your own health? (n=1050; 59 unanswered)

	2018		2015	
	#	%	#	%
Excellent	163	15.5%	108	12.2%
Good	524	49.9%	386	43.5%
Average	294	28.0%	315	35.5%
Below Average	59	5.6%	65	7.3%
Poor	10	1.0%	14	1.6%

- Approximately 15% of respondents rate their own health as excellent, a higher proportion compared to 2015.
- Almost 7% rate their own health as below average or poor, a lower proportion than in 2015.

Considering all types of alcoholic beverages, on how many days during the past month did you have 5 or more alcoholic drinks on a single occasion or at one sitting? (n=1049; 60 unanswered)

	2018		2015	
	#	%	#	%
None	852	81.2%	736	81.1%
One or two times	140	13.3%	129	14.2%
Three or four times	36	3.4%	26	2.9%
Five or more times	21	2.0%	16	1.8%

- 81% of participants report never having more than 5 alcoholic drinks in one sitting within the past month, in both 2015 and 2018.
- Around 19% of respondents reported engaging in binge drinking (more than 5 drinks in one sitting) one or more times in the past month, in both 2015 and 2018.
- Among females, 16% had 5 or more alcoholic beverages on a single occasion at least once in the past month.
- Among males, 30% had 5 or more alcohol beverages on a single occasion at least once in the past month.

Do you use “electronic-cigarettes” (e.g., e-cigs, vape pens, e-hookahs, etc.)? (n=1043; 66 unanswered)

	2018		2015	
	#	%	#	%
Yes	29	2.8%	33	3.6%
No	1014	97.2%	874	96.4%

- The vast majority of survey respondents do not use electronic cigarette products.

Do you smoke regular (tobacco) cigarettes? (n=1050; 59 unanswered)

	2018		2015	
	#	%	#	%
I have never smoked.	709	67.5%	569	62.7%
I used to smoke but have quit.	245	23.3%	228	25.1%
I smoke less than one pack a day.	74	7.0%	85	9.4%
I smoke one or more packs a day.	22	2.1%	26	2.9%

- Around 68% of survey respondents have never smoked, a higher proportion compared to 2015.
- 9% of respondents currently smoke, a lower proportion compared to 2015 responses.
- 23% of respondents used to smoke but have quit.

Where would you go for help if you wanted to quit smoking? (n=1035; 74 unanswered)

	2018		2015	
	#	%	#	%
Not applicable: I don't smoke	831	80.3%	689	76.6%
Not applicable: I don't want to quit smoking	16	1.5%	26	2.9%
Doctor, private counselor/therapist	99	9.6%	100	11.1%
Not sure/don't know	64	6.2%	63	7.0%
Pharmacy/over-the-counter product	58	5.6%	37	4.1%
Quit Now NC/Quit Line	32	3.1%	39	4.3%
Health Department	9	0.9%	11	1.2%
Hospital	0	0.0%	1	0.1%

- Although the majority of survey respondents do not smoke, the most common recommendation for help quitting was a doctor, private counselor or therapist.

Do you support tobacco-free outdoor public areas such as parks, festivals, fairs, etc? (n=1043; 66 unanswered)

	2018		2015	
	#	%	#	%
Yes	824	79.0%	679	75.3%
No	147	14.1%	165	18.3%
Don't know	72	6.9%	58	6.4%

- Almost 80% of respondents support tobacco-free outdoor public spaces.

The recommendation for physical activity is 30 minutes a day, 5 days a week (2½ hours per week.) Pick the one main reason that you do not get this much physical activity. (n=978; 131 unanswered)

	2018		2015	
	#	%	#	%
Nothing; I do get this much physical activity	357	36.5%	303	35.4%
I don't have time to exercise.	248	25.4%	226	26.4%
I don't like to exercise	137	14.0%	130	15.2%
I feel like I get this at my work.	134	13.7%	105	12.3%
Other (please specify)	77	7.9%	n/a	n/a
It costs too much to exercise	39	4.0%	19	2.2%
I am physically disabled.	34	3.5%	40	4.7%
There is no safe place to exercise.	29	3.0%	33	3.9%

Other written-in reasons: health or physical issues (12), no time (21), too tired (6), lazy (7)

- Responses to this question have changed little between 2015 and 2018.

- Approximately 36% of respondents say they get the recommended amount of physical activity.
- Among the respondents who say they do not get the recommended amount of exercise, the most common reason was that they don't have time to exercise.
- The next most common reason was that they don't like to exercise.

One recommendation for healthy eating is to eat at least five (5) servings of fruits and vegetables a day (NOT counting French fries or potato chips). Pick the one main reason that you do not eat this way. (n=1040; 69 unanswered)

	2018		2015	
	#	%	#	%
Nothing; I eat 5 or more servings a day.	407	39.1%	315	35.1%
I just don't think about it.	151	14.5%	144	16.0%
They're too expensive.	125	12.0%	159	17.7%
They go bad before we eat them.	108	10.4%	104	11.4%
I don't have time to fix them.	77	7.4%	59	6.6%
Other (please specify)	72	6.9%	n/a	n/a
I don't have access to fruits and vegetables.	43	4.1%	10	1.1%
I (or my family) won't eat them.	35	3.4%	37	4.1%
I don't know how to prepare them.	17	1.6%	9	1.0%
I don't think they are important.	5	0.5%	21	2.3%

Other written-in reasons: eat them but not enough (10), I try but don't always get 5 servings (5), don't like them (3), restaurants don't have many options (2), no time to prepare, not always available, too costly (3), I eat what's easiest

- 39% of participants say they eat the recommended 5 servings of fruits and vegetables a day.
- Among those who say they do not eat the recommended amount, the most common reason cited was "I just don't think about it", followed by "they're too expensive".

Have you ever been told by a doctor, nurse, or other health professional that you have any of the following? (n=1041; 68 unanswered)

	2018		2015	
	#	%	#	%
Asthma	157	17.0%	n/a	n/a
Angina/heart disease	56	6.1%	43	5.2%
Lung disease	35	3.9%	n/a	n/a
Cancer	82	9.1%	67	8.0%
Depression or anxiety	359	38.3%	319	37.8%
Diabetes	112	12.0%	116	13.8%
High blood pressure	327	33.8%	291	33.6%
High cholesterol	302	30.9%	263	30.7%
Overweight/obesity	480	50.1%	364	42.3%

- In 2015 the Lung Disease description included Asthma and in 2018 Asthma was listed separately; responses are not comparable across periods.
- The most common diagnosis among survey respondents was overweight/obesity: approximately 50% reported receiving this diagnosis from a health professional, a higher proportion compared to 2015.
- Nearly 38% of respondents have been diagnosed with depression or anxiety, similar to the 2015 survey sample.
- Around 34% have been diagnosed with high blood pressure, similar to 2015 responses.
- Approximately 31% were told they have high cholesterol, in both 2015 and 2018.
- Around 12% have been diagnosed with diabetes (not including gestational diabetes), a slightly lower proportion compared to 2015.
- 9% have received a cancer diagnosis at some point in their lives, slightly higher compared to 2018.
- Just over 6% have been diagnosed with heart disease or angina, a slightly higher proportion compared to 2018.
- 4% have been told they have a lung disease such as COPD or chronic bronchitis.
- Among female respondents
 - 53% have been diagnosed as overweight/obese
 - 41% have been diagnosed with depression or anxiety
 - 31% have been diagnosed with high blood pressure
 - 30% have been diagnosed with high cholesterol
- Among male participants
 - 47% have been diagnosed with high blood pressure
 - 37% have been diagnosed with overweight/obesity
 - 35% have been diagnosed with high cholesterol
 - 25% have been diagnosed with depression/anxiety.
- Among Hispanic respondents, 22% have been diagnosed with overweight/obesity. Around 20% have been diagnosed with high blood pressure or high cholesterol. Just over 18% have been diagnosed with depression or anxiety. 6% have been diagnosed with diabetes.

Health Screenings

In order to more accurately analyze screening behaviors, these questions were cross-tabulated in Survey Monkey. To be consistent with the rest of this report, the tables present overall response and the age/gender specific responses are discussed in the text.

If you are a male or female age 50 or older, have you ever had a colon cancer screening (e.g., fecal occult blood test, sigmoidoscopy, or colonoscopy)? (n=1025; 84 unanswered)

	2018		2015	
	#	%	#	%
Yes	392	38.2%	323	37.0%
No	128	12.5%	111	12.7%
Not sure/don't know	4	0.4%	5	0.6%
N/A; I am under age 50	501	48.9%	434	49.7%

- Among the 461 male and female respondents over the age of 50 who answered this question in 2018, 79% reported ever having had a colon cancer screening. 20% have never had a colon cancer screening.
- Note that this calculation doesn't include respondents under the age of 50 who have been told by a doctor or provider that they should have a colon cancer screening.

If you are a male, do you conduct monthly testicular self-exams? (n=977; 132 unanswered)

	2018		2015	
	#	%	#	%
Yes	78	8.0%	56	6.4%
No	90	9.2%	106	12.2%
Not sure/don't know	12	1.2%	19	2.2%
N/A; I am a female	797	81.6%	691	79.2%

- Among the 167 males who answered this question, 46% reported conducting monthly testicular self-exams. 49% do not conduct monthly testicular self-exams.

If you are a male age 50 or older, do you have a prostate exam (e.g., PSA blood test or digital rectal exam) as frequently as recommended by a doctor or other health care provider? (n=955, 25 unanswered)

	2018		2015	
	#	%	#	%
Yes	73	7.6%	83	9.6%
No	38	4.0%	32	3.7%
Not sure/don't know	8	0.8%	5	0.6%
N/A; I am a female, or a male under age 50	836	87.5%	749	86.2%

- Among the 85 males over 50 who answered this question in 2018, 72% reported having a prostate exam as recommended by a doctor or health care provider. 25% do not have a prostate exam on the recommended schedule.
- Note that this calculation doesn't include men under the age of 50 who have been told by a doctor or provider that they should have a prostate exam.

If you are a female, do you conduct monthly breast self-exams? (n=1009; 100 unanswered)

	2018		2015	
	#	%	#	%
Yes	529	52.4%	418	46.9%
No	318	31.5%	285	32.0%
Not sure/don't know	10	1.0%	12	1.3%
N/A; I am a male	152	15.1%	176	19.8%

- Among the 842 female respondents who answered this question, 62% reported conducting monthly breast self-exams. 37% do not conduct monthly self-exams.

If you are a female age 40 or older, do you have an annual mammogram (breast x-ray)? (n=1007; 102 unanswered)

	2018		2015	
	#	%	#	%
Yes	502	49.9%	394	44.3%
No	103	10.2%	99	11.1%
Not sure/don't know	3	0.3%	4	0.4%
N/A; I am a male, or a female under age 40	399	39.6%	393	44.2%

- Among the 574 women over the age of 40 who answered this question, 83% reported having an annual mammogram. 16% do not have an annual mammogram.

If you are a female age 21 or older, do you have a Pap smear as frequently as recommended by a doctor or other health care provider? (n=1004; 105 unanswered)

	2018		2015	
	#	%	#	%
Yes	689	68.6%	546	61.6%
No	151	15.0%	139	15.7%
Not sure/don't know	6	0.6%	4	0.5%
N/A; I am a male, or a female under age 21	158	15.7%	197	22.2%

- Among the 832 females over the age of 20 who answered this question (the age groups asked in the demographic section to not allow for age 21 to be isolated), 81%

have a Pap smear as frequently as recommended by a health care professional.
17% do not have a Pap smear as recommended.

New Questions for 2018

If you have been pregnant (Among females: n=837, 11 unanswered)

AMONG FEMALES	Yes		No		Not applicable		Total
	#	%	#	%	#	%	
Did you use any type of drug?	15	1.9%	633	78.2%	161	19.9%	809
Did you intend to get pregnant?	459	55.2%	215	25.9%	157	18.9%	831
Did you smoke during pregnancy?	59	7.3%	586	72.5%	163	20.2%	808

- Among the females who answered this question, 1.9% reported using any type of drug while pregnant.
- 55.2% intended to get pregnant, 26% did not intend to get pregnant.
- 7.3% reported smoking during pregnancy.
- If the “not applicable” responses are removed from the female responses, in order to attempt to isolate those women who have been pregnant, and the Yes and No responses are recalculated with the new denominator:
 - 2.3% reported using any type of drug
 - 68.1% intended to get pregnant and 32% did not intend to get pregnant.
 - 9.1% smoked during pregnancy.

I have completed my advance care planning by designating (in writing) a health care power of attorney and/or finalizing a living will. (n=1027, 82 unanswered)

	2018	
	#	%
Yes	283	27.6%
No	688	67.0%
Not sure/don't know	56	5.5%

- Nearly 28% of respondents have designated in writing a health care power of attorney and/or finalized a living will.

I have discussed my end of life care wishes with my primary physician and/or completing a Medical Orders for Scope of Treatment (MOST) form. (n=1027, 82 unanswered)

	2018	
	#	%
Yes	156	15.2%
No	808	78.7%
Not sure/don't know	63	6.1%

- Approximately 15% of respondents have discussed their end of life care wishes with their PCP and/or completed a MOST form.

Emergency Preparedness

Does your household have working smoke and carbon monoxide detectors? (n=1024; 85 unanswered)

	2018		2015	
	#	%	#	%
Yes, smoke detectors only	546	53.3%	533	60.3%
Yes, carbon monoxide detectors only	15	1.5%	10	1.1%
Yes, both kinds of detectors	400	39.1%	284	32.1%
Not sure/don't know	63	6.2%	57	6.4%

- 53% of the respondents reported having working smoke detectors in their homes, a lower proportion compared to 2015.
- 39% of the respondents reported having both smoke and carbon monoxide detectors, a higher proportion compared to 2015.

CHAPTER SEVEN: DAVIDSON COUNTY POPULATIONS AT-RISK FOR POOR HEALTH OUTCOMES

From the data explored in this document it would appear that the poor, the uninsured, African Americans (and other minorities), and males in Davidson County are at greater risk for poor health outcomes than their wealthy, insured, white, and female counterparts. Given the geography of Davidson County, the relative lack of public transportation, and the aging character of the population, other vulnerable groups include people living in the rural parts of the county, especially the elderly, who may have problems accessing health and human service resources. Sometimes, several of these factors may combine to portend particularly unfavorable health outcomes, as for example for poor, uninsured minority elderly living in rural areas.

THE POOR

Poverty may carry with it limited options for health care access, since those in poverty usually have few resources for necessities beyond housing and food. As noted previously, in 2012-2016 the overall poverty rate for Davidson County was 16.2%, slightly lower than the NC average of 16.8%. Among African Americans in the county, however, the comparable poverty rate was 24.8%, 1.7 times the poverty rate among whites (14.5%); in the same period the poverty rate among Hispanics was 42.9%, almost 3 times the comparable rate among whites. Income levels in Davidson County are well below state averages; for example, data cited previously show that in 2016 annual per capita income in Davidson County lagged behind the average for NC by over \$3,500. Oftentimes, poverty relates directly to lack of insurance, as discussed below.

THE UNINSURED

Prior to the advent of the Affordable Care Act, health insurance in the US was primarily employer-provided. Although this scenario is changing, clear outcomes are yet to be determined. Meanwhile, certain groups in Davidson County, especially the unemployed and the working poor, may be uninsured or underinsured. While many individuals and especially families may qualify for Medicaid, there are those who earn too much to qualify for government assistance but too little to afford quality health insurance for themselves and their families. While the NC Health Choice program helps the children in these families, the adults may fall “between the cracks” in terms of ability to access health insurance.

According to US Census data cited elsewhere in this document, in 2016, 13.0% of the Davidson County population between the ages of birth and 64 was uninsured. Although not descriptive of a random, representative sample, results from the 2018 Davidson County Community Health Survey revealed that 9% of all respondents reported they were uninsured at the time of the survey.

High utilization of the emergency departments (EDs) of Davidson County hospitals by certain groups may point to this insurance disparity. For example, African Americans were significantly over-represented in EDs, composing almost 18% of all ED admissions while representing only 9% of the overall population. ED utilization may indicate a lack of health insurance, but it may also represent a lack of a “medical home” among those seeking non-emergent care in the ED.

MINORITIES

As cited previously, African Americans, who while they constitute less than 10% of the overall county population and suffer mortality for the leading causes of death at an overall rate 0.7% *lower* than whites, do have significantly higher mortality rates than whites due to certain medical conditions, including diabetes (+91%), kidney disease (+86%), Alzheimer's disease (+49%), total cancer (+13%) and stroke (+10%).

Pregnancy outcomes for African American women in Davidson County are statistically less favorable than the comparable statistics for white women. The frequency of births of low- and very-low birth-weight infants are significantly higher among African American women (~+48% and ~+2 times, respectively), and infant mortality rates for blacks, while technically unstable, are double the comparable rates for whites.

Ethnically-stratified mortality data for Hispanics in Davidson County is not available for the leading causes of death due to below-threshold numbers of events. According to birth outcomes data, low birth-weight births and infant deaths usually occur at *lower* frequencies among Hispanics than among white non-Hispanics.

MALES

As amply demonstrated in previous discussion, Davidson County males suffer a 34% higher overall mortality rate than Davidson County females. Further, males in the county have disproportionately higher mortality rates than females for 12 of the 15 leading causes of death, by margins of difference ranging from +5% to a factor of almost four. This is, by the way, a common phenomenon throughout at least NC if not the nation. It is unclear what is driving this disparity. Speculation cites the male tendency to prefer to not recognize health problems as such and then to postpone health care until a problem is so serious it is sometimes beyond correction. For unknown reasons there seems little impetus to identify the root causes of this disparity in order to overcome it.

THE ELDERLY

The population nationwide is aging, and Davidson County is no exception. Population projections cited elsewhere in this report predict that the population in the county age 65 and older will reach over 36,000 by 2030 (compared to 23,400 in 2010), and at that time will compose over 20% of the total county population (compared to 14% in 2010).

This is a population group that often requires community supports such as health and human services at rates higher than the general population, while sometimes having increased difficulty in accessing those services. Among the resources that will be needed to support this population in coming years are options for long-term care, including not only long-term care residences such as nursing homes but also home-delivered housekeeping and health care services. At the time this report was written, there were 1,315 long-term care beds in the county, yielding a ratio of beds to population >65 of 1:21. If no additional beds are added to this inventory, and considering expected growth in the population >65, the ration could be 1:28 by the year 2030.

Many in the growing elderly population in the county are military veterans, with a larger proportion of veterans age 65 and older in Davidson County (51%) than in NC as a whole (49%), or the US (48%). No VA medical services are available in Davidson County.

RURAL COMMUNITIES

Despite having three population centers, much of Davidson County remains rural in character. It is the consultant's impression that people "gravitate" to services in the nearest population center, either Thomasville, Lexington or Denton, and strongly identify with their region of the county. Most health and human services are based in either Lexington (the county seat) or Thomasville. There is a medical center in both Thomasville and Lexington, but none in Denton, which is the most isolated of the three population centers. No US highways traverse through Denton; it is served only by NC routes. The public transportation system in the county, Davidson County Transportation System (DCTS) focuses its services in Lexington and Thomasville and in areas between those towns.

Denton, in the southern part of the county, is in Emmons Township, where 33% of the population is age 55 or older. Adjacent, relatively isolated townships are similarly "aged": 32% of the population in Jackson Hill Township and 32% of the population in Healing Spring Township is age 55 or older; this means that a significant elderly population is isolated from many of the services they may need.

CHAPTER EIGHT: DETERMINING HEALTH PRIORITIES

PRIORITY SELECTION PROCESS

The CHNA Team conducted a *Davidson County Community Health Forum* on November 16 at the Davidson County Community College campus in Thomasville. This event provided community stakeholders and county residents an opportunity to share their opinions and inform the community health assessment priority-selection process. The forum was advertised in local papers, fliers were distributed via email, and participants were recruited by members of the Davidson County Healthy Communities Coalition Steering Committee. The forum lasted two hours and included a PowerPoint presentation by the consultant that summarized major findings of secondary data research and results of the community health survey. The presentation was followed by distribution of a ballot asking participants to list – *in no particular order* – the *five* issues they identified from the data in the presentation as the most important in Davidson County. The ballot included guidelines to help the participants create their lists thoughtfully and realistically.

Fourteen members of the Davidson County Healthy Communities Coalition, which serves as the Steering Committee for the 2018 CHA/CHNA, met on December 6, 2018, at which meeting the Health Education Supervisor with the Davidson County Health Department provided a PowerPoint overview of the primary and secondary data that had been gathered, along with the initial prioritization from balloting that occurred on November 16. After discussion, attendees were asked to list, *in rank order*, what they considered to be the *three* most important issues to address in Davidson County. The Health Department combined these issues into a list of the overall most significant health issues – or priorities – in the county.

PRIORITIES

The following were established as Davidson County's health priorities for the next three years (2019-2021):

- Substance misuse
- Mental health
- Chronic disease
- Access to care

Substance Misuse

Health Indicators

Community opinion provided strong impetus to name substance misuse/abuse as chief among Davidson County health priorities. As reported elsewhere in this document, respondents to the community survey named drug abuse and alcohol abuse first and second among the unhealthy behaviors most affecting the quality of life in the county, identified substance abuse/misuse as the leading social issue, and identified the opioid crisis as the second most important health problem.

According to data from NCSCHS, the unintentional poisoning mortality rate in Davidson County has increased each year since 2009-2013 and was higher than the comparable state rate in all four periods available. In 2012-2016, the Davidson County rate was 47% higher than the state rate. Unintentional poisoning includes any "noxious substance", such as narcotics and hallucinogens, unspecified drugs, medicaments, and biological substances, gases and vapors (84).

The Centers for Medicaid and Medicare Services publishes data describing opioid prescribing patterns among Medicare Part D prescribers. Between 2013 and 2016, an average of 60% of Part D prescribers across Davidson County prescribed opioids, higher than both the state and national averages (54% and 46%, respectively). While most Davidson County prescribing rates do not appear to deviate dramatically from national and state comparators, there is a Lexington-based zip code that has significantly higher prescribing rates for opioids and extended release opioids over all four years of available data (85).

The NC Opioid Action Plan, established in 2016 by NC DHHS in partnership with other agencies, publishes quarterly data relating to 13 measures they have identified as key indicators relating to the opioid crisis. Between 2016 and 2017, the number of unintentional opioid related deaths in Davidson County increased from 33 to 45; the number of ED visits receiving an opioid overdose diagnosis also increased, from 141 to 176. The number of opioid pills dispensed in Davidson County decreased from 10.8 million in 2016 to 8.5 million in 2017 and appears on-track to decreased again by the end of 2018. Compared to NC, Davidson County had a higher percentage of patients with an opioid prescription receiving more than the recommended dosage in both 2016 and 2017, which can increase the risk for opioid use disorder and overdose. Similarly, the county had higher rates of patients with both opioid and benzodiazepine prescriptions on the same day, concurrent use of which can increase the risk of an overdose. Administrations of naloxone by both EMS and community agencies increased between 2016 and 2017, suggesting either that the need for overdose reversals increased or that access to the life-saving treatment has improved. The number of buprenorphine prescriptions dispensed increased between 2016 and 2017, as did the number of uninsured individuals and Medicaid beneficiaries with an opioid use disorder served by treatment programs, indicating that treatment is reaching more individuals in need (86).

Specific Populations at Risk

The poor and uninsured. The uninsured and those in poverty are always at risk for poor outcomes for mental health and substance abuse problems because of access issues. In addition, it is not uncommon for persons of any age burdened by economic and other life stressors to sometimes turn to alcohol and/or drugs as a means of escaping their harsh reality.

Youth and the elderly. Youth may initially experiment with drugs or alcohol for a variety of reasons, including peer pressure, risk-taking, and escapism. Youth experimenting with (or addicted to) drugs may not share and discuss their problems with anyone with the possible exception of their peer group, and parents are not always aware of warning signs. Consequently, youth are especially likely to suffer from undiagnosed and untreated drug problems. The elderly sometimes abuse prescription drugs accidentally and are especially at risk if they have cognition problems.

Medically underserved. According to the US Health Resources and Services Administration (HRSA), Davidson County qualifies as both a Medically Underserved Area (MUA) and Medically Underserved Populations (MUP). A shortage of primary care and mental health/substance

abuse providers limits the availability of services to residents. Limited accessibility can result in increased emergency room usage and decreased preventative care and disease management.

Health Resources Available and/or Needed

Available Resources:

Mental health facilities
Hospitals
School education
Treatment centers
Daymark Recovery Services - outpatient services
Inpatient Facility-Based Crisis facility at Daymark
Monarch – outpatient services
Path of Hope – Residential Treatment
Cardinal Innovations – Access Line
Lexington Treatment Associates – Methadone program
Nazareth Child and Family Connection – Suboxone treatment
Family Services of Davidson County
Project Lazarus – Davidson County Stop Prescription Abuse Now (DCSPAN) program
Davidson County Schools - Partner with DCSPAN to promote awareness
4 Medication drop boxes

Resources Still Needed:

Faster response to crisis intervention
More public education re: use of drugs, etc.
School nurses at all schools
More treatment centers, especially detox facilities
Halfway houses – men's and women's
Materials/resources for drop boxes/mail back resources
Education
Resources for community engagement/education
Provider education
Facilities and counselors
Medicaid expansion

Mental Health

Health Indicators

As described in an earlier section of this report, utilization of state mental health services by Davidson County residents has decreased in the recent past, partly as a result of NC Mental Health system reform, which favors local- over state-level care. It is unlikely, however, that decreases in service utilization represent a truly diminished need for services.

While the actual number of persons with mental health needs in Davidson County is not precisely known, 38% of respondents to the 2018 Davidson Community Health Survey (the same percentage as in 2015) reported a personal diagnosis of depression (only one kind of mental health problem). Survey respondents also named mental health as the third most important community health problem.

As noted previously, the fraction of all ED admissions in Davidson County attributable to mental health diagnoses (including substance abuse) in the period 2015-2017 averaged almost 2.8% (up from 2% in 2012-2014). Many of these admissions likely represent a population unable or possibly unwilling to access other mental health providers, including those in the service network of the LME/MCO serving Davidson County (Cardinal Innovations Healthcare). Something is surely amiss in the mental health services sector in Davidson County, since the average annual number of hospital ED discharges for mental health conditions in the period 2015-2017 (1,533) equaled approximately 48% of the number of patients served by Cardinal Innovations in FY2017 (3,188).

While there are Cardinal network providers physically located in Davidson County, it's possible that many in the community do not know about them or how to access that network of services. Respondents to the 2018 Davidson County Community Health Survey were asked where they might refer someone with a mental health or drug/alcohol problem. While most respondents would recommend a "doctor", an unnamed "private counselor or therapist", or a specific mental health facility (for example, Daymark Recovery Services) a significant proportion would refer to someone outside of the network of mental health professionals, such as a member of the clergy (23-29%). Fully 18% percent of the respondents said they were "not sure/didn't know" where to refer someone. Of course, with the fraction of uninsured under age 65 in Davidson County at almost 13%, and an overall poverty rate at almost 16%, it's likely that many who access the hospital ED instead of the "official" network of mental health practitioners do so because they cannot afford other than a provider of last resort.

One tragic outcome of mental health problems is suicide. While not among the top few leading causes of death in Davidson County (ranking 11th in 2012-2016), the suicide mortality rate in the county exceeded the comparable state rate by 16%. Interestingly, respondents to the 2018 Davidson County Community Health Survey ranked suicide 11th among the 16 most significant unhealthy behaviors in the county.

Specific Populations at Risk

The poor and uninsured. The uninsured and those in poverty are always at risk for poor outcomes for mental health problems because of access issues. In addition, it is not uncommon for persons of any age burdened by economic and other life stressors to have depression and other mental health issues.

Youth and the elderly. Youth suffering from depression and other mental health problems may be especially reticent to share and discuss their problems with anyone for fear of being labeled "different", and parents are not always aware of warning signs. Consequently, youth are especially likely to suffer from undiagnosed and untreated mental health problems. Many elderly persons were raised not to discuss or even recognize mental health problems and attach to them a stigma that prevents them from seeking needed care even on their own behalf.

Medically underserved. According to the US Health Resources and Services Administration's (HRSA) designation of Medically Underserved Areas (MUAs) and Populations (MUPs), Davidson County is considered a medically underserved area/population. A shortage of primary care and mental health providers limits the availability of services to residents. Limited accessibility can result in increased emergency room usage and decreased preventative care and disease management.

Males. Males suffer mortality attributable to suicide at a rate four times the rate for females. Middle-aged and older men, particularly, seem particularly vulnerable to suicide, for reasons that are inadequately understood.

Health Resources Available and/or Needed

Available Resources:

Cardinal Innovations (LME/MCO)
Daymark Recovery Services – Outpatient services
Inpatient Facility-Based Crisis facility at Daymark
Monarch
Family Services of Davidson County
Workshop of Davidson County
Hospitals
CARENet
Private counselors
Passageways Clubhouse
Davidson County Schools - Traumatic Event Debriefing (TED) Program and Training
Davidson County Schools - Partner with Cardinal Innovations and its providers
Mental Health Association of Davidson County

Resources Still Needed

More access to inpatient care
More individualized care for uninsured, low income
Quicker response time for crisis situations
More integrated care into primary care settings
More residential facilities for those who cannot live alone
Education on local resources
Local facility and case workers
Medicaid expansion

Chronic Disease

Health Indicators

As noted previously, heart disease was the second, chronic lower respiratory disease the third, and diabetes the seventh leading cause of death in Davidson County in 2012-2016. At that time, the county heart disease mortality rate exceeded the comparable NC rate by over 10%, the chronic lower respiratory disease mortality rate was 36% higher than the rate statewide, and the local diabetes mortality rate exceeded the state rate by 23%.

According to data made available to the CHA/CHNA consultant by Davidson County hospitals, there were 2,205 emergency department (ED) discharges with primary diagnoses associated with heart disease in 2015 through 2017, representing 1.3% of all ED discharges in that three-year period. Similarly, inpatient (IP) hospitalizations attributable to a primary diagnosis of heart disease accounted for 798 admissions, or 6.0% of all IP hospitalizations over the same period. Approximately 6% of respondents to the 2018 Davidson County Community Health Survey reported having been diagnosed with angina or heart disease.

Other chronic conditions, including high cholesterol and high blood pressure (hypertensive disease) are considered indicators/precursors to eventual heart disease. Significant proportions

of respondents to the 2018 Davidson County Community Health Survey reported they had been diagnosed with high cholesterol (31%) or hypertension/high blood pressure (34%).

An examination of Davidson County hospital data revealed 6,024 ED discharges in 2015 through 2017 associated with a diagnosis of chronic lower respiratory disease, representing almost 4% of all ED discharges in that period, and 440 IP hospitalizations in the same period, representing 3.4% of all IP hospitalizations in that period. Almost 4% of 2018 community survey respondents reported having been diagnosed with “lung disease”.

As noted in the earlier discussion of site-specific cancer rates, the mortality rate for lung cancer (a chronic condition as long as the patient lives) in Davidson County has decreased over the past decade, but the lung cancer incidence rate has increased. Most experts agree that chronic lung disease, including cancer, is associated with smoking, which remains a problem behavior in Davidson County. For instance, approximately 16% of pregnant women in Davidson County smoked during pregnancy in 2016, a frequency almost twice the frequency statewide. Further, 9% of respondents to the 2018 community health survey reported themselves to be “current smokers”.

Data from the two hospitals in the county revealed that 1,260 ED discharges in 2015-2017 were associated with a diagnosis of diabetes, representing nearly 0.8% of all ED discharges in that period; in addition, there were 216 IP hospitalizations in the same period, representing 1.6% of all IP hospitalizations in that period. Approximately 12% of 2018 community survey respondents reported having been diagnosed with diabetes. According to data reported by the CDC, the prevalence of diabetes in Davidson County in 2013 was estimated at 9.5% and had averaged 9.7% between 2006 and 2013. Overweight and obesity—both prevalent in Davidson County (50% of 2018 survey respondents reported having been so diagnosed)—may be precursors to developing Type II diabetes later in life.

Specific Populations at Risk

The poor and uninsured. Members of the community who lack health insurance are always at-risk for poor health outcomes, and the percent of the Davidson County population under age 65 without health insurance in 2016 was 13%, or over 17,500 persons. While this report offers no racially stratified data pertaining to the uninsured, the high poverty rates in the African American and Hispanic communities, consistently higher than comparable rates for whites, are likely indicative of high proportions of uninsured, or at least limited access to healthcare, among blacks and Hispanics. The proper treatment and management of chronic diseases is, by definition, ongoing, an expensive and often unattainable protocol for certain groups.

Males. As cited elsewhere in this report, mortality rates in Davidson County for most chronic diseases are higher for males than for females. For example, the heart disease mortality rate for Davidson County males in 2012-2016 exceeded the comparable mortality rate for females by approximately 69%, and the mortality rate for diabetes among males exceeded the comparable rate among females by 48%.

Minorities. According to racially-stratified mortality data for 2012-2016, the diabetes mortality rate for African Americans in Davidson County was 91% higher than the comparable rate for whites. The African American mortality rate for heart disease in Davidson County was 21% lower than the comparable rate for whites in the same aggregate period.

Health Resources Available and/or Needed

Available Resources:

Private providers
Clinics like DMMC-DHS for uninsured
Health education opportunities
Hospitals
Lexington Medical Center (LMC) - Lunch and Learn Series
LMC - Cardiologist
LMC - Cardiac and Pulmonary Rehabilitation
LMC - Respiratory Services
Davidson County Schools - Partner with DCHD School Nurse Team to address student needs

Resources Still Needed:

Improved health care delivery system
Integration of social workers into primary care
Expansion of health education opportunities for uninsured
Medicaid expansion

Access to Care

Health Indicators

As described in an earlier section of this report, Davidson County has a shortage of healthcare providers, especially as compared to the state. The 2017 ratios of active health professionals per 10,000 population were lower in Davidson County than in NC for medical doctors, dentists, registered nurses, and pharmacists. This can result in increased emergency room usage and decreased preventive care and disease management. There is speculation that the downswing in the economy has created a vicious circle for community health care providers. The poor economy has led to more people who cannot afford to pay for their medical services, which in turn has discouraged providers from locating to Davidson County.

While the actual number of persons experiencing difficulties accessing health care in Davidson County is not known, 22% of respondents to the 2018 Davidson County Health Survey reported having a problem in the past year getting medical care. In addition, 17% of survey respondents reported having a problem in the past year getting a necessary prescription filled.

Lack of public transportation is also a factor in not being able to access health care. According to DataUSA, in 2016 there were 1,359 households in Davidson County without a car. There is no public transportation, or even a taxi service, serving Davidson County outside city limits.

Specific Populations at Risk

The poor and uninsured. The uninsured and those in poverty are always at risk for poor health outcomes because of access issues. While this report offers no racially stratified data pertaining to the uninsured, the high poverty rates in the African-American and Hispanic communities, consistently higher than comparable rates for whites, are likely indicative of high proportions of uninsured, or at least limited access to healthcare, among Blacks and Hispanics. This is borne out in the apparent over-utilization of hospital emergency department services by Davidson County African-Americans, as described previously.

Medically underserved. According to the U.S. Health Resources and Services Administration's (HRSA) designation of Medically Underserved Areas (MUAs) and Populations (MUPs), Davidson County is considered a medically underserved area/population. A shortage of primary care providers, dentists, pharmacists, and registered nurses limits the availability of services to residents. Limited accessibility can result in increased Emergency Room usage and decreased preventive care and disease management.

Persons living in rural parts of the county. The lack of a transportation is a critical factor in limiting access to health care by those living far from medical centers and medical providers.

Health Resources Available and/or Needed

Available Resources:

Community Resource Brochure

Community Resource List

Davidson County Transportation – limited routes within city limits

Resources Still Needed:

Resources for community engagement/education

Davidson County Transportation – routes outside the city limits

Enhanced access to Telemedicine

NEXT STEPS

Davidson County has many strengths and unmet needs. This report is an effort to provide a glimpse into the health challenges facing the community and to offer some direction on addressing these concerns. The information from this document will be widely shared and utilized to influence community health improvement planning across the community. The Davidson County Health Department, in collaboration with the members of the steering committee, will develop a community-wide communication plan to assure broad dissemination of this report. Municipal and county government, economic development committees, the Chamber of Commerce, the faith community, civic groups, and community groups will be among those targeted. Ideally, these entities will actively seek and find ways to align their programs, services, and resources to have the greatest impact on the identified health needs. The steering committee will also leverage existing workgroups and create new workgroups to determine further actions. More than likely, additional analysis of the issues and their underlying causes will be necessary to fully understand and respond to the communities disproportionately impacted by poor health and limited access to health services. By September 2019, these workgroups will develop community health improvement plans detailing strategies that will address priority issues. The committee will encourage collaborative planning among the various partners in Davidson County, thereby achieving the greatest impact in physical activity and healthier nutrition, tobacco use prevention, mental health, chronic disease prevention, and substance abuse reduction for the residents of Davidson County.

APPENDIX

2015 DAVIDSON COUNTY COMMUNITY HEALTH SURVEY INSTRUMENT

The purpose of this survey is to learn more about the health and quality of life in Davidson County. The Davidson County Health Department, Lexington Medical Center and Thomasville Medical Center will use the results of this survey to help them develop plans for addressing the county's most pressing health issues. ***Your participation in this survey is completely voluntary. Your answers will not be linked to you in any way.*** Thank you for taking the time to complete this Community Health Survey.

PLEASE READ THIS IMPORTANT MESSAGE

DO NOT complete the survey (1) if you live outside Davidson County, or (2) you are not at least 18 years old, or (3) if you have already completed this survey.

PART 1: Community Problems and Issues

The next three questions ask your opinion about the most important health, behavioral and community-wide problems and issues in Davidson County.

1. Health Problems

Using the following list please **put a check mark next to the five (5) most important health problems in Davidson County.** (These would be the health problems that you think have the greatest overall effect on health in the community.)

Remember to check only FIVE (5):

☐ Accidental injuries NOT involving vehicles (e.g., falls, choking, drowning, poisoning, gun accidents, etc.)
☐ Aging problems (e.g., Alzheimer's disease, arthritis, hearing/vision loss, etc.)
☐ Asthma
☐ Birth defects
☐ Cancer
Type _____

☐ Dental health
☐ Diabetes
☐ Gun-related injuries
☐ Heart disease/heart attack
☐ HIV/AIDS
☐ Infant death
☐ Infectious/contagious diseases (e.g., TB, flu, pneumonia, food poisoning, etc.)
☐ Kidney disease
☐ Liver Disease

☐ Lung disease (asthma, emphysema, COPD, chronic bronchitis, etc.)
☐ Mental health (depression, schizophrenia, etc.)
☐ Motor vehicle accident injuries
☐ Obesity/overweight
☐ Sexually transmitted diseases (e.g., chlamydia, gonorrhea)
☐ Stroke
☐ Teenage pregnancy

2. Unhealthy Behaviors

Using the following list please **put a check mark next to the five (5) most important unhealthy behaviors in Davidson County.** (These would be the unhealthy behaviors that you think have the greatest overall effect on health and safety in the community.)

Remember to check only FIVE (5):

- | | | |
|---|--|--|
| ☐ Alcohol abuse | ☐ Not using child safety seats | ☐ Poor eating habits |
| ☐ Drug abuse (incl. both prescription drugs and illegal drugs) | ☐ Not using seatbelts | ☐ Poor preparation for disasters and emergencies |
| ☐ Having unsafe sex | ☐ Not going to a dentist for preventive checkups and cleaning | ☐ Reckless/drunk driving |
| ☐ Lack of exercise/poor physical fitness | ☐ Not going to the doctor for preventive check-ups and screenings | ☐ Smoking/tobacco use |
| ☐ Lack of parenting skills | ☐ Not getting prenatal (pregnancy) care | ☐ Suicide |
| ☐ Not getting immunizations (“shots”) to prevent disease | | ☐ Violent, angry behavior (including rape/sexual assault) |

3. Community Issues

Using the following list please **put a check mark next to the five (5) most important community-wide issues in Davidson County.** (Social issues that you think have the greatest overall effect on the quality of life in the community.)

Remember to check only FIVE (5):

- | | |
|---|---|
| ☐ Animal control issues/rabies | ☐ Lack of healthcare providers |
| ☐ Availability of child care | What kind: _____ |
| ☐ Affordability of health services | ☐ Lack of recreational facilities (e.g., parks, trails, community centers, etc.) |
| ☐ Availability of healthy food choices in restaurants and grocery stores | ☐ Low income/poverty |
| ☐ Bioterrorism | ☐ Neglect and abuse (please specify below:) |
| ☐ Crime (e.g., theft, murder, assault, etc.) | ☐ Elder abuse |
| ☐ Dropping out of school | ☐ Child abuse |
| ☐ Gang activity | ☐ Domestic violence |
| ☐ Homelessness | ☐ Pollution (air, water, land) |
| ☐ Inadequate/unaffordable housing | ☐ Racism/discrimination |
| ☐ Lack of/inadequate health insurance | ☐ Transportation options |
| ☐ Lack of culturally appropriate services for minorities | ☐ Unemployment/underemployment |
| ☐ Lack of counseling/mental health services/support groups | ☐ Unsafe/unmaintained roads |
| | ☐ Unsafe schools (e.g., in/at-school crime, violence, bullying, etc.) |

4. What are the top three biggest substance abuse problems in Davidson County? Choose **three (3)** answers.

- ☐ Abusing prescription drugs/pills
- ☐ Alcohol abuse
- ☐ Drinking and driving
- ☐ Huffing (inhaling glue, Dust-Off, Whiteout, etc.)
- ☐ Marijuana
- ☐ Methamphetamines (Meth)
- ☐ Other "hard" drugs (E.g., cocaine, crack, heroin)
- ☐ Using someone else's prescription drugs/pills
- ☐ Other: _____
- ☐ I really don't know

PART 2: Health Care Access

The following questions ask about how you access health care. Remember, this survey will not be linked to you in any way.

5. Where do you get **most** of your health-related information or advice? Choose **only one (1)** answer.

- | | | |
|---|--|---|
| ☐ Friends and family | ☐ Church | ☐ Internet |
| ☐ Doctor/nurse | ☐ Newspaper/magazine/TV | ☐ Social media (Facebook, Twitter, etc.) |
| ☐ Health Department | ☐ Pharmacist | ☐ Other: _____ |
| ☐ Hospital | ☐ School | |
| ☐ Help lines | | |

6. Where do you go most often **when you are sick**? Choose **only one (1)** answer.

- | | |
|---|--|
| ☐ Private Doctor's office | ☐ OB/GYN or Women's Health Provider |
| ☐ Hospital Emergency Department | ☐ Pharmacy |
| ☐ Urgent Care Center or Walk-In Clinic | ☐ Other: _____ |
| ☐ Medical Ministries Clinic | ☐ I don't go anywhere when I'm sick |

7. Where do you go when you need your **yearly check-up or physical**? (Check as **many answers** as you need to.)

- | | |
|---|--|
| ☐ Private Doctor's office | ☐ OB/GYN or Women's Health Provider |
| ☐ Health Department | ☐ Pharmacy |
| ☐ Urgent Care Center or Walk-In Clinic | ☐ Other: _____ |
| ☐ Medical Ministries Clinic | ☐ I don't go anywhere when I'm sick |

8. Do you currently have any kind of health insurance?

- ☐ No, I do not have health insurance of any kind.
- ☐ Yes: Private insurance I purchased from a vendor (e.g., Aetna, Blue Cross/Blue Shield, etc.).
- ☐ Yes: Insurance I purchased on the Affordable Care Marketplace.
- ☐ Yes: Private insurance my employer pays for.
- ☐ Yes: Private insurance my spouse's employer or my parent's employer pays for.
- ☐ Yes: Military insurance (e.g., VA benefits, Tricare, CHAMPUS, etc.)
- ☐ Yes: Medicare
- ☐ Yes: Medicaid

9. Was there a time in the past 12 months when you needed **medical care** but could not get it? (Check **as many answers** as you need to.)

- ☐ No; I got all the medical care I needed in the past 12 months.
- ☐ Yes, because I didn't have health insurance and couldn't afford the cost by myself.
- ☐ Yes, because I had health insurance but it didn't cover what I needed.
- ☐ Yes, because I had health insurance but my share of the cost (deductible/co-pay/co-insurance) was too high.
- ☐ Yes, because the provider (doctor, clinic or hospital) would not take my insurance or Medicaid.
- ☐ Yes, because I didn't have transportation to get there.
- ☐ Yes, because I didn't know where to go.
- ☐ Yes, because it took too long to get an appointment.
- ☐ Yes, because the doctor wasn't taking new patients.
- ☐ Yes; Other reason: _____

10. Was there a time in the past 12 months when you could not get a **medically necessary prescription**?
(Check **as many answers** as you need to.)

- ☐ No; I could get all the medically necessary prescriptions I needed.
- ☐ Yes, because I didn't have health insurance and couldn't afford the cost by myself.
- ☐ Yes, because I had health insurance but it didn't cover any prescriptions or the prescription I needed.
- ☐ Yes, because I had health insurance drug coverage but my share of the cost (deductible/co-pay/co-insurance) was too high.
- ☐ Yes, because the pharmacy would not take my insurance or Medicaid.
- ☐ Yes, because I had problems with Medicare Part D coverage.
- ☐ Yes, because I didn't have transportation to get there.
- ☐ Yes, because I didn't know where to go.
- ☐ Yes; Other reason: _____

11. What is the main reason that you or your family would not be up-to-date on vaccines? (Check **only one (1)** answer.)

- | | |
|---|--|
| ☐ My family and I are up-to-date on our vaccines. | ☐ I am afraid of possible side effects. |
| ☐ Vaccines cost too much | ☐ I believe the vaccines cause the disease. |
| ☐ I don't want to see my child in pain | ☐ I don't know when they are due. |
| ☐ I have religious reasons not to vaccinate | ☐ Other: _____ |

12. If a friend or family member needed counseling for a **mental health or a drug/alcohol abuse problem**, who would you tell them to call or talk to? Choose **as many answers** as you need to.

☐ Daymark Recovery Services	☐ Minister/religious official
☐ Family Services	☐ Local hospital
☐ Monarch	☐ School counselor, nurse or social worker
☐ ARC	☐ Support group (e.g., AA, Al-Anon)
☐ Private counselor or therapist	☐ Not sure/don't know
☐ Doctor	☐ Other: _____

13. If a friend or family member were thinking about suicide, who would you tell them to call or talk to? Choose **as many answers** as you need to.

☐ Daymark Recovery Services	☐ Local hospital
☐ Family Services	☐ School counselor, nurse or social worker
☐ Monarch	☐ National or other crisis phone line
☐ Private counselor or therapist	☐ Not sure/don't know
☐ Doctor	☐ Other: _____
☐ Minister/religious official	

PART 3. Personal Health

The following questions ask about **your own personal health**. Remember, this survey will not be linked to you in any way.

14. Considering all types of **alcoholic beverages**, on how many days during the past month did you have **5 or more** alcoholic drinks on a single occasion or at one sitting? Choose **only one (1)** answer.

☐ None ☐ One or two times ☐ Three or four times ☐ Five or more times

15. Do you use “**electronic-cigarettes**” (e.g., e-cigs, vape pens, e-hookahs, etc.)?

☐ Yes ☐ No

16. Do you **smoke regular (tobacco) cigarettes**? Choose **only one (1)** answer.

☐ I have never smoked.	☐ I smoke less than one pack a day.
☐ I used to smoke but have quit.	☐ I smoke one or more packs a day.

17. Where would you go for help if you wanted to **quit smoking**? Choose **as many** answers as you need to.

☐ Not applicable: I don't smoke	☐ Pharmacy/over-the-counter product
☐ Not applicable: I don't want to quit smoking	☐ Hospital
☐ Quit Now NC/Quit Line	☐ Doctor, private counselor/therapist
☐ Health Department	☐ Not sure/don't know

18. Do you support tobacco-free outdoor public areas such as parks, festivals, fairs, etc?

☐ Yes ☐ No ☐ Don't know

19. The recommendation for physical activity is **30 minutes a day, 5 days a week (2½ hours per week.)** Pick the **one main reason** that you do not get this much physical activity.

☐ Nothing; I do get this much physical activity	☐ I don't have time to exercise.
☐ I feel like I get this at my work.	☐ It costs too much to exercise
☐ I am physically disabled.	☐ I don't like to exercise
☐ There is no safe place to exercise.	☐ Other: _____

20. One recommendation for healthy eating is to eat **at least five (5) servings of fruits and vegetables a day** (NOT counting French fries or potato chips). Pick the *one main reason* that you do not eat this way.

☐ Nothing; I eat 5 or more servings a day.	☐ I just don't think about it.
☐ I (or my family) won't eat them.	☐ I don't have time to fix them.
☐ I don't know how to prepare them.	☐ They're too expensive.
☐ They go bad before we eat them.	☐ Other: _____
☐ I don't think they are important.	

21. Have you ever been told by a **doctor, nurse, or other health professional** that you have any of the conditions in the following list? Please answer **every** question.

Angina/heart disease	☐ Yes	☐ No
Lung disease (asthma, COPD, chronic bronchitis)	☐ Yes	☐ No
Cancer	☐ Yes	☐ No
Depression or anxiety	☐ Yes	☐ No
Diabetes (not during pregnancy)	☐ Yes	☐ No
High blood pressure	☐ Yes	☐ No
High cholesterol	☐ Yes	☐ No
Overweight/obesity	☐ Yes	☐ No

22. **If you are a male**, do you conduct **monthly testicular self-exams**? (*If you are a female, skip this question.*)

☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am a female

23. **If you are a male age 50 or older**, do you have a **prostate exam** (e.g., PSA blood test or digital rectal exam) as frequently as recommended by a doctor or other health care provider? (*If you are a female, OR a male under age 50, skip this question.*)

☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am a female

24. If you are a female, do you conduct **monthly breast self-exams**? (*If you are a male, skip this question.*)
☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am a male
25. If you are a female age **40 or older**, do you have an **annual mammogram** (breast x-ray)? (*If you are a male, OR a female under age 40, skip this question.*)
☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am a male, or a female under age 40
26. If you are a female age **21 or older**, do you have a **Pap smear** as frequently as recommended by a doctor or other health care provider? (*If you are a male, OR a female under age 21, skip this question.*)
☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am a male, or a female under age 21
27. If you are a **male or female age 50 or older**, have you ever had a **colon cancer screening** (e.g., fecal occult blood test, sigmoidoscopy, or colonoscopy)? (*If you are under age 50, skip this question.*)
☐ Yes ☐ No ☐ Not sure/don't know ☐ N/A; I am age 50 or older
28. **All males and females:** Do you conduct **monthly skin self-checks** (for moles, skin changes, etc.)?
☐ Yes ☐ No ☐ Not sure/don't know

Part 4. Environmental Health

29. Do you and your family recycle? ☐ Yes ☐ No
 If no, why not? (**Check only one (1) answer**):
☐ It is too much trouble to recycle.
☐ I don't know where to take materials for recycling.
☐ My garbage pick-up does not offer recycling.
☐ Other: _____
30. Which of the following Environmental Health concerns do you believe **most** affects your health? Choose **only one (1)** answer.
☐ Mold ☐ Air quality
☐ Radon ☐ Food safety
☐ Lead exposure ☐ Second-hand smoke
☐ Meth labs ☐ Other: _____

Part 5. Emergency Preparedness

31. Does your household have *working smoke and carbon monoxide detectors*? (Choose **only one (1)** answer.)

☐ Yes, smoke detectors only ☐ Yes, both kinds of detectors
☐ Yes, carbon monoxide detectors only ☐ Not sure/don't know

32. Does your family have a **basic emergency supply kit with enough supplies to last at least three (3) days**? (These kits include water, non-perishable food, necessary prescriptions, first aid supplies, flashlight and batteries, non-electric can opener, blanket, etc.).

☐ Yes ☐ No ☐ Not sure/don't know

33. What would be your **main way of getting information** from authorities in a large-scale disaster or emergency? Choose **only one (1)** answer.

☐ Television ☐ Print media (newspaper) ☐ Text message or phone call from an
☐ Radio ☐ Social networking site emergency alert system
☐ Internet ☐ Neighbors, friends, family ☐ Not sure/don't know
☐ County website

34. If public authorities announced a **mandatory evacuation** from your neighborhood or community due to a large-scale disaster or emergency, would you voluntarily evacuate?

☐ Yes, I would evacuate
☐ Not sure/don't know if I would evacuate
☐ No, I would not evacuate

35. If you answered "Not sure/don't know" or "No", why are you unsure or why would you not evacuate? (Choose **as many** reasons as you need to):

☐ Not applicable: I said I would evacuate ☐ Concern about family safety
☐ Lack of transportation ☐ Concern about leaving pets
☐ Lack of trust in public officials ☐ Concern about traffic jams/ability to leave
☐ Concern about leaving property behind ☐ Health problems (could not be moved)
☐ Concern about personal safety ☐ Other:

36. What potential emergency situation concerns you the most? Choose **only one (1)** answer.

☐ Flood/high water ☐ Bioterrorism/other terrorist attack
☐ Tornado/wind damage ☐ Epidemic disease
☐ Forest/brush fire ☐ Other: _____
☐ Hurricane

Part 6. (Final Part). Demographic Questions

We have a final set of questions about you. These are questions that help us understand how different types of people view different health issues.

37. What is the ZIP code of your PRIMARY residence in Davidson County? Check only **one (1)**.

☐ 27012 ☐ 27239 ☐ 27260 ☐ 27292 ☐ 27295
☐ 27299 ☐ 27351 ☐ 27360 ☐ 27373 ☐ 27274

38. How old are you?

☐ 18-19 ☐ 40-49 ☐ 65-69 ☐ 85 or older
☐ 20-29 ☐ 50-59 ☐ 70-79
☐ 30-39 ☐ 60-64 ☐ 80-85

39. Are you male or female? ☐ Male ☐ Female

40. Are you of Hispanic, Latino, or Spanish origin? ☐ Yes ☐ No

41. What do you consider your race? Please check **only one (1)** answer.

☐ White only
☐ Black/African American only
☐ Native American/American Indian/Alaska Native only
☐ Asian (Indian, Pakistani, Japanese, Chinese, Korean, Vietnamese, Filipino/a) only
☐ Pacific Islander (Native Hawaiian, Samoan, Guamanian/Chamorro) only
☐ Other race not listed here
☐ Two or more races

42. What is the **highest** level of school, college or training that you have finished? Choose **only one (1)** answer.

☐ Less than 9th grade ☐ Some college (no degree)
☐ 9th – 12th grade, no diploma ☐ Bachelor's degree
☐ High school diploma (or GED/equivalent) ☐ Graduate or professional degree
☐ Associate degree or Vocational Training ☐ Other: _____

43. What was your **total household income** last year, before taxes? (This includes everybody age 15 or older who lives in your house and has income.) Choose **only one (1)** answer.

☐ Less than \$20,000 ☐ \$40,000 to \$49,999 ☐ \$70,000 to \$79,000
☐ \$20,000 to \$29,999 ☐ \$50,000 to \$59,999 ☐ \$80,000 to \$99,000
☐ \$30,000 to \$39,999 ☐ \$60,000 to \$69,000 ☐ \$100,000 or more

44. How many people does this income support? (If you are paying child support but your child is not living with you, this still counts as someone living on your income.) Choose **only one (1)** answer.

☐ 1 person ☐ 2 people ☐ 3 or 4 people ☐ 5 or more people

45. What is your employment status? (Choose **as many** answers as you need to describe your situation.)

☐ Employed full-time	☐ Unemployed	☐ Homemaker
☐ Employed part-time	☐ Disabled	☐ Self-employed
☐ Retired	☐ Student	

46. Does anyone in your household have a working telephone?

☐ No; no one in my household has a telephone of any kind
☐ Yes: a land line only
☐ Yes: one or more cell phone(s) only
☐ Yes: both a land line and one or more cell phones

47. Do you have access to the Internet? ☐ Yes ☐ No

Thank you very much for completing the Community Health Survey!

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