

2015 WILKES COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT

Wilkes County Health Department,
Wilkes Regional Medical Center, and
The Health Foundation, Inc.

*Secondary
Data,
Community
Health
Survey and
Stakeholder
Forums
Report*

TABLE OF CONTENTS

List of Tables and Figures	12
Acknowledgments	18
Introduction	Error! Bookmark not defined.
Introduction	19
Assessment Methodology	21
Chapter One: Demographic Data	23
Population Characteristics	23
General Population Characteristics	23
Population by Township	23
Population Growth	24
Birth Rate	25
Population Density	25
Race and Ethnicity	25
Race and Ethnicity by Township	26
Age	27
Age by Township	29
Elderly Population	29
Non-English Speaking Population	31
Linguistic Isolation	31
Age Distribution of the Latino Population	32
Special Populations	33
Military Veterans	33
Blind/Visually Impaired Population	33
Special Needs Registry	34
Civic Engagement	34
Electoral Process	34
Registered Voters	34
Voter Turnout	34
Religious Life	35
Community Services and Organizations	36
Law Enforcement	36
Wilkes County Sheriff's Office	36
Police Departments in Wilkes County	36
Wilkesboro Police Department	36
North Wilkesboro Police Department	36

Elkin Police Department.....	37
Fire Departments	38
Community Resources.....	39
Wilkes County Health Department Community Resource Guide.....	39
2-1-1 of Wilkes County	39
Wilkes Regional Medical Center “Find a Doctor” Webpage	39
SAFE, Inc. Wilkes County, NC – Resources and Links.....	39
Wilkes Faith Help – Local Medical Resources	39
United Way of Wilkes County	40
Wilkes Community Partnership for Children	40
Chapter Two: Socioeconomic Data	41
Economic Climate	41
Tier Designation.....	41
County Revenue Indicators.....	41
Income.....	42
Employment.....	43
Employment by Sector	43
Largest Employers	44
Travel for Employment	45
Modes of Transportation to Work.....	46
Public Transportation in Wilkes County.....	46
Unemployment.....	47
Poverty	48
Children Receiving Free or Reduced-price School Lunch.....	51
Housing	52
Affordable Housing	53
Homelessness	54
Households	54
Single-Parent Families	55
Grandparents Responsible for Minor Children	55
Child Care	56
Child Care Facilities	56
Education	58
Higher Education	58
Primary and Secondary Education	59
Schools and Enrollment.....	59

Educational Attainment.....	60
Educational Expenditures.....	61
High School Drop-Out Rate.....	61
Graduation Rate.....	62
School Crime and Violence.....	62
Crime and Safety.....	64
Crime Rates.....	64
Other Criminal Activities.....	66
Juvenile Crime.....	67
Sexual Assault.....	68
Domestic Violence.....	70
SAFE, Inc. Wilkes County.....	71
Child Maltreatment.....	72
Adult Maltreatment.....	73
Chapter Three: Health Resources.....	74
Medical Insurance.....	74
North Carolina Health Choice.....	75
Medicaid.....	75
Health Check Early Periodic Screening, Diagnosis and Treatment.....	76
Medicaid Services Provided by Wilkes County Department of Social Services.....	77
Health Care Providers.....	78
Practitioners.....	78
Hospitals.....	81
Wilkes Regional Medical Center.....	81
WRMC Demographic Utilization Data.....	81
Wilkes County Health Department.....	84
Wilkes Public Health Dental Clinic.....	86
Federally-Qualified Health Center.....	86
Wilkes County Emergency Medical Services.....	86
School Health.....	88
Long-Term Care Facilities.....	88
Nursing Homes.....	88
Adult Care Homes and Family Care Homes.....	89
Alternatives to Institutional Care.....	89
Home Care, Home Health and Hospice Services.....	89
Wilkes County Department of Social Services.....	90

Adult Day Care/Adult Day Health Centers.....	91
The Ruby Pardue Blackburn Adult Day Health Care Center	91
Mental Health Services and Facilities.....	92
Other Healthcare Resources.....	94
Other Healthcare Facilities	94
Recreational Facilities	94
Chapter Four: Health Statistics	96
Methodology.....	96
Understanding Health Statistics	96
Mortality.....	96
Age-adjustment	96
Aggregate Data	97
Morbidity.....	97
Prevalence	97
Incidence.....	97
Trends.....	97
Small Numbers.....	98
Describing Difference and Change	98
Behavioral Risk Factor Surveillance System (BRFSS)	98
Final Health Data Caveat	99
Health Rankings.....	99
America’s Health Rankings	99
County Health Rankings	99
Maternal and Infant Health	102
Pregnancy.....	102
Pregnancy, Fertility and Abortion Rates, Women Age 15-44	102
Pregnancy, Fertility and Abortion Rates, Women Age 15-19 (“Teens”).....	105
Pregnancies among Teens (age 15-19) and Adolescents (under age 15).....	106
Pregnancy Risk Factors	107
High Parity and Short Interval Births.....	107
Smoking during Pregnancy.....	108
Early Prenatal Care	108
Pregnancy Outcomes	109
Low Birth Weight and Very Low Birth Weight	109
Cesarean Section Delivery	110
Infants Born with Medical Problems.....	110

Infant Mortality.....	111
Life Expectancy.....	113
Mortality.....	114
Leading Causes of Death.....	114
Gender Disparities in Leading Causes of Death	117
Racial Disparities in Leading Causes of Death	119
Age Disparities in Leading Causes of Death.....	121
Total Cancer	122
Malignant Neoplasm Hospitalizations	122
Total Cancer Mortality Rate Trend.....	123
Racial Disparities in Total Cancer Mortality	124
Gender Disparities in Total Cancer Mortality	124
Total Cancer Incidence.....	125
Lung Cancer.....	127
Lung, Trachea and Bronchus Cancer Hospitalizations	127
Lung Cancer Mortality Rate Trend	127
Racial Disparities in Lung Cancer Mortality	128
Gender Disparities in Lung Cancer Mortality	128
Lung Cancer Incidence	129
Prostate Cancer	130
Prostate Cancer Hospitalizations	130
Prostate Cancer Mortality Rate Trend.....	130
Racial Disparities in Prostate Cancer Mortality.....	131
Prostate Cancer Incidence.....	132
Breast Cancer	133
Breast Cancer Hospitalizations	133
Breast Cancer Mortality Rate Trend.....	133
Racial Disparities in Breast Cancer Mortality.....	134
Breast Cancer Incidence.....	134
Colon Cancer	135
Colon Cancer Hospitalizations	135
Colon Cancer Mortality Rate Trend.....	136
Racial Disparities in Colon Cancer Mortality.....	137
Gender Disparities in Colon Cancer Mortality.....	137
Colon Cancer Incidence.....	138
Pancreas Cancer.....	139

Pancreas Cancer Hospitalizations	139
Pancreas Cancer Mortality Rate Trend	139
Racial Disparities in Pancreas Cancer Mortality	140
Gender Disparities in Pancreas Cancer Mortality	140
Pancreas Cancer Incidence	141
Diseases of the Heart	142
Heart Disease Hospitalizations	142
Heart Disease Mortality Rate Trend.....	143
Racial Disparities in Heart Disease Mortality	144
Gender Disparities in Heart Disease Mortality	144
Chronic Lower Respiratory Disease (CLRD)	145
CLRD/COPD Hospitalizations	145
CLRD Mortality Rate Trend	146
Racial Disparities in CLRD Mortality	147
Gender Disparities in CLRD Mortality	147
All Other Unintentional Injury.....	148
All Other Unintentional Injury Hospitalizations	148
All Other Unintentional Injury Mortality Rate Trend	149
Racial Disparities in All Other Unintentional Injury Mortality.....	150
Gender Disparities in All Other Unintentional Injury Mortality.....	150
Cerebrovascular Disease.....	151
Cerebrovascular Disease Hospitalizations.....	151
Cerebrovascular Disease Mortality Rate Trend	152
Racial Disparities in Cerebrovascular Disease Mortality	153
Gender Disparities in Cerebrovascular Disease Mortality	153
Pneumonia and Influenza	154
Pneumonia and Influenza Hospitalizations	154
Pneumonia and Influenza Mortality Rate Trend.....	155
Racial Disparities in Pneumonia and Influenza Mortality.....	156
Gender Disparities in Pneumonia and Influenza Mortality.....	156
Diabetes Mellitus.....	157
Diabetes Mellitus Hospitalizations	157
Diabetes Mellitus Mortality Rate Trend	158
Racial Disparities in Diabetes Mellitus Mortality.....	159
Gender Disparities in Diabetes Mellitus Mortality.....	159
Alzheimer's Disease	160

Alzheimer’s Disease Hospitalizations	160
Alzheimer’s Disease Mortality Rate Trend	160
Racial Disparities in Alzheimer’s Disease Mortality	161
Gender Disparities in Alzheimer’s Disease Mortality	161
Unintentional Motor Vehicle Injury	163
Unintentional Motor Vehicle Injury Hospitalizations	163
Unintentional Motor Vehicle Injury Mortality Rate Trend	163
Racial Disparities in Unintentional Motor Vehicle Injury Mortality	164
Gender Disparities in Unintentional Motor Vehicle Injury Mortality	164
Age Disparities in Motor Vehicle Injury Mortality	165
Alcohol-Related Traffic Crashes	166
Septicemia	169
Septicemia Hospitalizations	169
Septicemia Mortality Rate Trend	169
Racial Disparities in Septicemia Mortality	170
Gender Disparities in Septicemia Mortality	171
Nephritis, Nephrotic Syndrome, and Nephrosis	172
Nephritis, Nephrotic Syndrome and Nephrosis Hospitalizations	172
Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend	173
Racial Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality	174
Gender Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality	174
Suicide	175
Suicide Hospitalizations	175
Suicide Mortality Rate Trend	175
Racial Disparities in Suicide Mortality	176
Gender Disparities in Suicide Mortality	176
Chronic Liver Disease and Cirrhosis	178
Chronic Liver Disease and Cirrhosis Hospitalizations	178
Chronic Liver Disease and Cirrhosis Mortality Rate Trend	178
Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality	179
Gender and Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality	180
Homicide	181
Homicide Hospitalizations	181
Homicide Mortality Rate Trend	181
Racial Disparities in Homicide Mortality	182
Gender Disparities in Homicide Mortality	182

Acquired Immune Deficiency Syndrome (AIDS).....	183
AIDS Hospitalizations	183
AIDS Mortality Rate Trend.....	183
Racial Disparities in AIDS Mortality	184
Gender Disparities in AIDS Mortality	185
Morbidity.....	186
Communicable Disease	186
Sexually Transmitted Infections	186
Chlamydia.....	186
Gonorrhea	187
Human Immune Deficiency Virus (HIV).....	188
Local Communicable Disease Data.....	188
Asthma	189
Diabetes	191
Obesity	192
Obesity in Adults	192
Obesity in Children and Youth.....	192
Oral Health.....	193
Adult Oral Health	193
Child Oral Health	194
Utilization of the Hospital for Dental Services	195
Mental Health.....	196
Mental Health Service Utilization	196
Developmental Disabilities Service Utilization.....	198
Substance Abuse Service Utilization	199
Alcohol and Drugs.....	199
Utilization of the Hospital for Mental Health Services.....	200
Chapter Five: Environmental Data	202
Air Quality.....	202
Air Quality Index.....	202
Toxic Releases	202
Water Quality.....	204
Drinking Water Systems.....	204
NPDES Permits	206
Solid Waste	207
Solid Waste Disposal	207

Wilkes County Solid Waste Management	209
Landfill	209
Recycling	209
Town of North Wilkesboro Municipal Solid Waste Management	210
Town of Wilkesboro Municipal Solid Waste Management.....	210
Rabies	210
Wilkes County Health Department Environmental Health Activities	211
Chapter Six: Community Health Survey	213
Methodology.....	213
Survey Respondent Pool.....	213
Survey Results	215
Demographic Questions.....	215
Community Issues	220
Environmental Health Concerns.....	221
Services Needing Improvement	222
Health Behaviors.....	223
Adolescent Issues.....	224
Personal Health Questions	225
Chapter Seven: Stakeholder Forums	241
Stakeholder Forum Process	241
Stakeholder Forum Results	242
Changes in Agency/Organization Clientele	242
Changes in Service Infrastructure and Agency Needs	242
Client Barriers to Accessing Services and Care	243
Needed but Currently Unavailable Resources and Services	243
Chapter Eight: Wilkes County Populations At-Risk for Poor Health Outcomes.....	244
The Poor	244
The Uninsured.....	244
Minorities.....	245
Males	245
The Elderly	245
Rural Communities.....	246
Populations At-Risk for Priority Health Conditions	246
Obesity and Chronic Disease.....	246
Specific Populations at Risk	247
Mental Health and Substance Abuse	248

Specific Populations at Risk	249
Access to Care	250
Specific Populations at Risk	250
Tobacco and Smoking	251
Specific Populations at Risk	251
Chapter Nine: Determining Health Priorities	252
Priority Selection Process.....	252
Priorities	253
References	254

LIST OF TABLES AND FIGURES

Table 1. General Demographic Characteristics	23
Figure 1. Map of Wilkes County	23
Table 2. Population by Township, Wilkes County	24
Table 3. Decadal Population Growth.....	24
Figure 2. Birth Rate Trend, Live Births per 1,000 Total Population	25
Table 4. Decadal Population Density	25
Table 5. Population Distribution by Race/Ethnicity	26
Table 6. Population by Race/Ethnicity, Wilkes County by Township.....	27
Table 7. Population Distribution by Age and Gender, Number and Percent	28
Figure 3. Population Distribution by Age, Wilkes County and NC (2014).....	28
Table 8. Population by Age, by Township, Wilkes County	29
Table 9. Growth Trend for the Elderly (Age 65 and Older) Population, by Decade	30
Table 10. Growth of the Foreign-Born Population	31
Table 11. Household Language by Linguistic Isolation.....	32
Figure 4. Age Distribution of Overall and Latino Populations in Wilkes County (2013)	32
Table 12. Veteran Status of Population	33
Table 13. Blind/Visually Impaired Populations.....	33
Table 14. Registered Voters, by Race/Ethnicity, Number and Percent.....	34
Table 15. Voter Turnout in General Elections.....	35
Table 16. Religious Bodies in Wilkes County	35
Table 17. Fire Departments Serving Wilkes County	38
Table 18. NC State Sales and Use Tax Gross Collections	41
Table 19. Occupancy Tax Revenue, Wilkes County.....	41
Table 20. Land Transfers in Wilkes County	42
Table 21. Income Measures.....	43
Table 22. Insured Employment and Wages by Sector.....	44
Table 23. Largest 25 Employers in Wilkes County	45
Table 24. Place of Work for Resident Workers Age 18 and Older	45
Table 25. Modes of Transportation to Work	46
Table 26. Wilkes Transportation Authority (WTA) Vehicles and Capacity (August, 2015).....	47
Table 27. Wilkes Transportation Authority (WTA) Ridership.....	47
Figure 5. Annual Unemployment Rate	48
Table 28. Annual Poverty Rate	49
Table 29. Persons in Poverty, by Race	50
Table 30. Persons in Poverty, by Age	51
Table 31. Percent of Students Eligible for Free or Reduced-Price School Lunch (“Needy”)	51
Table 32. Housing by Type	52
Table 33. Estimated Housing Cost as Percent of Household Income	53
Table 34. Catherine H. Barber Memorial Shelter Utilization Data (2010-2015).....	54
Table 35. Household Characteristics.....	55
Table 36. Single-Parent Families	55
Table 37. Grandparents with Responsibility for Minor Children	56
Table 38. NC-Licensed Child Care Facilities in Wilkes County	57
Table 39. Children Enrolled in NC-Regulated Child Care	58
Table 40. Public Schools in the Wilkes County LEA.....	59
Table 41. Private Schools in Wilkes County	59
Table 42. K-12 Public School Enrollment	60
Table 43. Educational Attainment	60

Table 44. Educational Expenditures.....	61
Table 45. High School Drop-Out Rate.....	61
Table 46. Four Year Cohort Graduation Rate.....	62
Table 47. School Crime and Violence ¹ Trend, All Grades ¹	63
Table 48. School Crime and Violence in Wilkes County Schools, by Type of Offense.....	63
Table 49. School Disciplinary Activity.....	64
Table 50. Crime Rates, Crimes per 100,000 Population.....	64
Figure 6. Index Crime Rate (2006-2013).....	65
Figure 7. Violent Crime Rate (2006-2013).....	65
Figure 8. Property Crime Rate (2006-2013).....	65
Table 51. Types of Crimes Reported in Wilkes County.....	66
Table 52. Other Criminal Activity.....	67
Table 53. Gang Activity and Drug Arrests, Wilkes County (2012-2015 [part]).....	67
Table 54. Juvenile Justice Complaints.....	68
Table 55. Juvenile Justice Outcomes.....	68
Table 56. Sexual Assault Complaint Trend.....	69
Table 57. Types of Sexual Assaults.....	69
Table 58. Types of Offenders in Sexual Assaults.....	69
Table 59. Domestic Violence Complaint Trend.....	70
Table 60. Services Received by Domestic Violence Complainants.....	70
Table 61. Domestic Violence-Related Homicides.....	71
Table 62. Reports of Child Abuse and Neglect, Wilkes County.....	72
Table 63. Demographic Detail of Child Maltreatment Cases, Wilkes County.....	73
Table 64. Children’s Services Provided by Wilkes County Department of Social Services.....	73
Table 65. Adult Protective Services Provided by Wilkes County Department of Social Services.....	73
Table 66. Percent of Population without Health Insurance, by Age Group.....	74
Table 67. NC Health Choice Enrollment.....	75
Table 68. Medicaid Eligibility and Expenditures.....	76
Table 69. Wilkes County Medicaid Eligibles, by Program Area.....	76
Table 70. Participation in Health Check EPSDT.....	77
Table 71. Medicaid Services Provided by Wilkes County Department of Social Services.....	77
Table 72. Active Health Professionals per 10,000 Population.....	78
Table 73. Number of Active Health Professionals in Wilkes County, by Specialty.....	79
Table 74. Wilkes County Dentists Accepting Medicaid/Health Choice Clients.....	80
Table 75. WRMC Emergency Department Admissions (2012-2014).....	82
Table 76. WRMC Inpatient Hospital Discharges (2012-2014).....	83
Table 77. Wilkes County Health Department Utilization (2010-2014).....	85
Table 78. Wilkes County Emergency Medical Service Calls (2014).....	87
Table 79. NC-Licensed Long-Term Care Facilities in Wilkes County.....	88
Table 80. Licensed Home Care and Hospice Services in Wilkes County.....	90
Table 81. Adult Services Provided by Wilkes County Department of Social Services.....	90
Table 82. NC-Licensed Mental Health Facilities (G.S. 122C) in Wilkes County.....	93
Table 83. Other NC-Licensed Healthcare Facilities in Wilkes County.....	94
Table 84. Medicare-Approved Dialysis Facilities in Wilkes County.....	94
Table 85. Public Recreational Facilities in Wilkes County.....	95
Table 86. Rank of North Carolina in America’s Health Rankings.....	99
Table 87. County Health Rankings.....	100
Table 88. County Health Rankings Details.....	101
Table 89. Pregnancy, Fertility and Abortion Rates, Ages 15-44.....	102
Table 90. Pregnancy, Fertility and Abortion Rates, Ages 15-44.....	103

Figure 9. Total Pregnancy Rate Trend, Ages 15-44	103
Figure 10. Total Abortion Rate Trend, Ages 15-44	104
Figure 11. Pregnancy Rate by Race, Ages 15-44, Wilkes County	104
Table 91. Pregnancy, Fertility and Abortion Rates, Ages 15-19	105
Table 92. Pregnancy, Fertility and Abortion Rates, Ages 15-19	105
Figure 12. Total Pregnancy Rate Trend, Ages 15-19	106
Table 93. Number of Teen Pregnancies (Ages 15-19)	106
Table 94 Number of Adolescent Pregnancies (Under Age 15)	107
Table 95. High Parity and Short Interval Births.....	107
Table 96. Smoking during Pregnancy Trend	108
Table 97. Women Receiving Prenatal Care in the First Trimester	108
Table 98. Low Birth-Weight Births	109
Table 99. Very Low Birth-Weight Births.....	109
Table 100. Cesarean Section Deliveries, Primary and Repeat	110
Table 101. WRMC In-Patient Discharges of Newborns and Neonates with Conditions Originating in Perinatal Period.....	110
Table 102. Total Infant Deaths	111
Table 103. Total Infant Deaths	111
Figure 13. Infant Death Trend	112
Table 104. Life Expectancy at Birth, by Gender and Race	113
Table 105. Overall Age-Adjusted Mortality Rates for the 15 Leading Causes of Death, Wilkes County and Comparators	114
Table 106. Leading Causes of Death in Wilkes County Compared to NC (2009-2013)	115
Table 107. Changes in Leading Causes of Death, Wilkes County.....	116
Table 108. Sex-Specific Age-Adjusted Death Rates for Leading Causes of Death, Wilkes County and Comparators	117
Table 109. Leading Causes of Death in Wilkes County, Gender Comparison	118
Table 110. Race-Specific Age-Adjusted Death Rates for Leading Causes of Death	119
Table 111. Leading Causes of Death in Wilkes County, Racial Comparison	120
Table 112. Three Leading Causes of Death by Age Group, Number of Deaths and Unadjusted Death Rates.....	121
Table 113. All Malignant Neoplasms Hospital Discharge Rate Trend.....	122
Table 114. Wilkes County Hospital Data: All Cancer (Neoplasms)	123
Table 115. Overall Cancer Mortality Rate Trend	123
Figure 14. Overall Total Cancer Mortality Rate Trend	123
Table 116. Race/Ethnicity-Specific Total Cancer Mortality	124
Figure 15. Sex-Specific Total Cancer Mortality Rate Trend, Wilkes County	124
Table 117. Overall Total Cancer Incidence Rate Trend.....	125
Figure 16. Overall Total Cancer Incidence Rate Trend.....	125
Table 118. Mortality for Five Major Site-Specific Cancers	126
Table 119. Incidence for Four Major Site-Specific Cancers	126
Table 120. Malignant Trachea, Bronchus, Lung Neoplasms Hospital Discharge Rate Trend ..	127
Table 121. Lung Cancer Mortality Rate Trend.....	127
Figure 17. Lung Cancer Mortality Rate Trend	128
Table 122. Race/Ethnicity-Specific Lung Cancer Mortality	128
Figure 18. Sex-Specific Lung Cancer Mortality Rate Trend, Wilkes County	129
Table 123. Lung Cancer Incidence Rate Trend.....	129
Figure 19. Lung Cancer Incidence Rate Trend.....	130
Table 124. Malignant Prostate Neoplasms Hospital Discharge Rate Trend.....	130
Table 125. Overall Prostate Cancer Mortality Rate Trend	131
Figure 20. Overall Prostate Cancer Mortality Rate Trend	131

Table 126. Race/Ethnicity-Specific Prostate Cancer Mortality	132
Table 127. Prostate Cancer Incidence Rate Trend.....	132
Figure 21. Prostate Cancer Incidence Rate Trend	132
Table 128. Breast Neoplasms Hospital Discharge Rate Trend.....	133
Table 129. Overall Female Breast Cancer Mortality Rate Trend	133
Figure 22. Overall Female Breast Cancer Mortality Rate Trend	134
Table 130. Race/Ethnicity-Specific Female Breast Cancer Mortality	134
Table 131. Breast Cancer Incidence Rate Trend.....	135
Figure 23. Breast Cancer Incidence Rate Trend	135
Table 132. Malignant Colon, Rectum and Anus Neoplasms Hospital Discharge Rate Trend...	136
Table 133. Overall Colon Cancer Mortality Rate Trend	136
Figure 24. Overall Colon Cancer Mortality Rate Trend.....	137
Table 134. Race/Ethnicity-Specific Colon Cancer Mortality	137
Figure 25. Sex-Specific Colon Cancer Mortality Rate Trend, Wilkes County	138
Table 135. Colon Cancer Incidence Rate Trend.....	138
Figure 26. Colon Cancer Incidence Rate Trend	139
Table 136. Overall Pancreas Cancer Mortality Rate Trend	139
Figure 27. Overall Pancreas Cancer Mortality Rate Trend	140
Table 137. Race/Ethnicity-Specific Pancreas Cancer Mortality	140
Figure 28. Sex-Specific Pancreas Cancer Mortality Rate Trend, Wilkes County	141
Table 138. Heart Disease Hospital Discharge Rate Trend	142
Table 139. Wilkes County Hospital Data: Heart Disease.....	143
Table 140. Overall Heart Disease Mortality Rate Trend	143
Figure 29. Overall Heart Disease Mortality Rate Trend	143
Table 141. Race/Ethnicity-Specific Heart Disease Mortality	144
Figure 30. Sex-Specific Heart Disease Mortality Rates, Wilkes County.....	144
Table 142. COPD Hospital Discharge Rate Trend	145
Table 143. Wilkes County Hospital Data: COPD and Allied Conditions	146
(Including Asthma but Excluding Pneumonia and Influenza)	146
Table 144. Overall CLRD Mortality Rate Trend	146
Figure 31. Overall CLRD Mortality Rate Trend.....	146
Table 145. Race/Ethnicity-Specific CLRD Mortality.....	147
Figure 32. Sex-Specific CLRD Mortality Rate Trend, Wilkes County	147
Table 146. Injuries and Poisonings Hospital Discharge Rate Trend	148
Table 147. Wilkes County Hospital Data: Injury and Poisoning	149
Table 148. Overall All Other Unintentional Injury Mortality Rate Trend.....	149
Figure 33. Overall All Other Unintentional Injury Mortality Rate Trend.....	149
Table 149. Race/Ethnicity-Specific All Other Unintentional Injury Mortality.....	150
Figure 34. Sex-Specific All Other Unintentional Injury Mortality Rate Trend, Wilkes County	150
Table 150. Cerebrovascular Disease Hospital Discharge Rate Trend	151
Table 151. Wilkes County Hospital Data: Cerebrovascular Disease.....	152
Table 152. Overall Cerebrovascular Disease Mortality Rate Trend	152
Figure 35. Overall Cerebrovascular Disease Mortality Rate Trend	152
Table 153. Race/Ethnicity-Specific Cerebrovascular Disease Mortality	153
Figure 36. Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Wilkes County	153
Table 154. Pneumonia and Influenza Hospital Discharge Rate Trend.....	154
Table 155. Wilkes County Hospital Data: Pneumonia and Influenza	155
Table 156. Overall Pneumonia and Influenza Mortality Rate Trend.....	155
Figure 37. Overall Pneumonia and Influenza Mortality Rate Trend.....	155
Table 157. Race/Ethnicity-Specific Pneumonia and Influenza Mortality	156
Figure 38. Sex-Specific Pneumonia and Influenza Mortality Rate Trend, Wilkes County.....	156

Table 158. Diabetes Hospital Discharge Rate Trend.....	157
Table 159. Wilkes County Hospital Data: Diabetes	158
Table 160. Overall Diabetes Mellitus Mortality Rate Trend	158
Figure 39. Overall Diabetes Mellitus Mortality Rate Trend.....	158
Table 161. Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality	159
Figure 40. Sex-Specific Diabetes Mellitus Mortality Rate Trend, Wilkes County.....	159
Table 162. Overall Alzheimer’s Disease Mortality Rate Trend.....	160
Figure 41. Overall Alzheimer’s Disease Mortality Rate Trend.....	161
Table 163. Race/Ethnicity-Specific Alzheimer’s Disease Mortality.....	161
Figure 42. Sex-Specific Alzheimer’s Disease Mortality Rate Trend, Wilkes County.....	162
Table 164. Unintentional Motor Vehicle Injury Mortality Rate Trend	163
Figure 43. Unintentional Motor Vehicle Injury Mortality Rate Trend	164
Table 165. Race/Ethnicity-Specific Unintentional Motor Vehicle Injury Mortality	164
Figure 44. Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Wilkes County	165
Table 166 Motor Vehicle Injury Mortality, Numbers and Rates, by Age	165
Table 167. Alcohol-Related Traffic Crashes Trend.....	167
Table 168. Outcomes of Alcohol-Related Traffic Crashes	168
Table 169. Septicemia Hospital Discharge Rate Trend	169
Table 170. Overall Septicemia Mortality Rate Trend	170
Figure 45. Overall Septicemia Mortality Rate Trend	170
Table 171. Race/Ethnicity-Specific Septicemia Mortality	171
Figure 46. Sex-Specific Septicemia Mortality Rate Trend, Wilkes County	171
Table 172. Nephritis, Nephrotic Syndrome, Nephrosis Hospital Discharge Rate Trend.....	172
Table 173. Wilkes County Hospital Data: Hypertensive Disease	173
Table 174. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend.....	173
Figure 47. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend.....	173
Table 175. Race/Ethnicity-Specific Nephritis, Nephrotic Syndrome and Nephrosis Mortality...	174
Figure 48. Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend, Wilkes County	174
Table 176. Wilkes County Hospital Data: Suicide Ideation	175
Table 177. Overall Suicide Mortality Rate Trend	175
Figure 49. Overall Suicide Mortality Rate Trend.....	176
Table 178. Race/Ethnicity-Specific Suicide Mortality	176
Figure 50. Sex-Specific Suicide Mortality Rate Trend, Wilkes County	177
Table 179. Chronic Liver Disease and Cirrhosis Hospital Discharge Rate Trend	178
Table 180. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend.....	179
Figure 51. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend	179
Table 181. Race/Ethnicity-Specific Chronic Liver Disease and Cirrhosis Mortality	180
Figure 52. Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Wilkes County	180
Table 182. Overall Homicide Mortality Rate Trend	181
Figure 53. Overall Homicide Mortality Rate Trend.....	181
Table 183. Race/Ethnicity-Specific Homicide Mortality.....	182
Figure 54. Sex-Specific Homicide Mortality Rate Trend, Wilkes County.....	182
Table 184. AIDS Hospital Discharge Rate Trend	183
Table 185. Overall AIDS Mortality Rate Trend.....	184
Figure 55. Overall AIDS Mortality Rate Trend	184
Table 186. Race/Ethnicity-Specific AIDS Mortality	185
Table 187. Chlamydia Infection Incidence Trend.....	187
Table 188. Gonorrhea Infection Incidence Trend	187

Table 189. HIV Infection Incidence Trend	188
Table 190. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2013.....	188
Table 191. NC Hospital Discharges with a Primary Diagnosis of Asthma, Numbers and Rates per 100,000.....	189
Figure 56. NC Hospital Discharge Rate, Primary Diagnosis of Asthma, All Ages	190
Figure 57. NC Hospital Discharge Rate, Primary Diagnosis of Asthma, Ages 0-14	190
Table 192. Wilkes County Hospital Data: Asthma	191
Table 193. Adult Diagnosed Diabetes Prevalence Estimate Trend.....	192
Table 194. Adult Diagnosed Obesity Prevalence Estimate Trend	192
Table 195. Prevalence of Obesity and Overweight in Children, Ages 2-4, NC NPASS.....	193
Table 196. Dental Service Utilization by Medicaid Recipients, by Age Group.....	194
Table 197. Child Dental Screening Summary.....	194
Table 198. Wilkes County Hospital Emergency Department Admissions	195
for Dental and Oral Problems.....	195
Table 199. Persons Served by Mental Health Area Programs/Local Management Entities	197
Table 200. Persons Served by LME, by Disability, Wilkes County.....	197
(SFY 2008-SFY 2012).....	197
Table 201. Persons Served in NC State Psychiatric Hospitals	198
Table 202. Persons Served in NC State Developmental Centers.....	199
Table 203. Persons Served in NC Alcohol and Drug Abuse Treatment Centers.....	199
Table 204. Wilkes County Hospital Data: Mental, Behavioral and Neurological Disorders	200
Table 205. Wilkes County Hospital Emergency Department Admissions	200
for Mental Health Disorders.....	200
Table 206. Toxic Release Inventory (TRI) Summary, Wilkes County (2014)	203
Figure 58. Total TRI Release Trend, Wilkes County (1988-2014)	204
Table 207. Population Served by Active Water Systems (as of October, 2015).....	205
Table 208. Active Water Systems in Wilkes County	206
Table 209. National Pollutant Discharge Elimination System (NPDES) Permitted Dischargers in Wilkes County	207
Table 210. Solid Waste Disposal	208
Table 211. Open Permitted Solid Waste Facilities, Wilkes County (November 1, 2015).....	208
Table 212. County Waste Disposal Report, Wilkes County	208
Table 213. Capacity of Landfills in Wilkes County	209
Table 214. Animal Rabies Cases	211
Table 215. Program Activity Summary, WCHD Environmental Health Division	212

ACKNOWLEDGMENTS

This document was developed by the Wilkes County Health Department, in partnership with the Wilkes Regional Medical Center and the Health Foundation, Inc., as part of a local community health (needs) assessment process. We would like to thank and acknowledge several agencies and individuals for their contributions and support in conducting this health assessment:

Name	Agency
Ann Absher	Wilkes County Health Department
Arlen Rash	Wilkes Regional Medical Center
Barbra Overby	Wilkes Regional Medical Center
Barry Nelson	Wilkes Regional Medical Center
Barry Wald	Wilkes Regional Medical Center
Heather Murphy	Health Foundation, Inc.
Holly Norman	Health Foundation, Inc.
Janet Dillard	Wilkes Regional Medical Center
Jared Belk	Wilkes County Health Department
Jeffrey Ramos	Wilkes County Health Department
Jennifer Wages	Health Foundation, Inc.
Martin Klingbeil	Wilkes County Health Department
Rachel Willard	Wilkes County Health Department
Sandra Sheppard	Wilkes Regional Medical Center
Tammy Love	Wilkes Regional Medical Center
Vanya Baker	Wilkes Regional Medical Center

Thank you also 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 for a comprehensive Community Health Needs Assessment which is the source document from which this report was derived.

The community health assessment process, source document, and final report were made possible by financial contributions from Wilkes Regional Medical Center, the Health Foundation, Inc., and Wilkes County Health Department.

INTRODUCTION

Local public health agencies in North Carolina (NC) are required to conduct a comprehensive Community Health Assessment (CHA) at least 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 Wilkes County, the CHA/CHNA leadership partners included the Wilkes County Health Department and the only hospital in the county, Wilkes Regional Medical Center. The leadership partnership also included The Health Foundation, Inc., a non-profit organization focused on improving health in Wilkes County. The Wilkes County CHA/CHNA project reached out for input from the community at-large via a community survey, and, via stakeholder forums, from representatives of the agencies and organizations that serve the health and human service needs of the local population. The Wilkes County Health Department provided staff to coordinate the project. The partners in Wilkes County agreed to call the dual-purpose 2015 project by one name, the 2015 Wilkes 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 2015 CHNA for Wilkes 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). The assessment also adheres to the 2014 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 Wilkes 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 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; (5) a decision-making phase among partners to

determine community health priorities. Upon completion of this work the assessment partners and the community have the tools they need to develop plans and activities that will improve the health and well-being of the people living in Wilkes County.

ASSESSMENT METHODOLOGY

In order to learn about the specific factors affecting the health and quality of life of Wilkes County residents, the consultant tapped numerous readily available secondary data sources. For data on Wilkes 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 Administration; NC Division of Medical Assistance; NC Division of Child Development; NC State Board of Elections; NC Division of Health Services Regulation; the Cecil B. Sheps Center for Health Services Research; and the Annie E. Casey Foundation *Kids Count Data Center*. Local sources for sociodemographic data included: the Wilkes County Department of Social Services; and Wilkes Public Schools, among other Wilkes County agencies and organizations. The author has made every effort to obtain the most current data available at the time the report was prepared.

The chief source for secondary health data cited in this report was the NC State Center for Health Statistics, including its County Health Data Books 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 Wilkes County Health Department, Wilkes Regional Medical Center (for sharing hospital emergency department, inpatient and ambulatory surgery admissions data), and Wilkes County Emergency Medical Services.

Because in any community health assessment it is instructive to relate local data to similar data in other jurisdictions, Wilkes County data is compared to like data describing the state of NC as a whole, as well as data from Surry County, NC, a state-approved “peer” county. In some cases Wilkes 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 Environment and Natural Resources Divisions of Air Quality and Waste Management, and the Section of Environmental Health in NCDPH.

This report represents a topical synthesis of all the secondary data researched in connection with the 2015 Wilkes County CHNA project. It is intended to serve as the master secondary data resource for guiding community deliberations about the most important health issues in Wilkes 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. Local data cites the name of the provider of the information, and readers should judge for themselves the authority of those sources. Finally, as is typical in all time-limited activities such as community health assessment, all secondary data

were mined at a point in time in the recent past, and may not represent present conditions. Numbers, entity names, program titles, etc. that appear in the data may no longer be current.

In addition to an analysis of a very broad set of secondary data, this report also presents an analysis of primary data collected by the CHNA partners, including the results of the 2015 Wilkes County Community Health Survey and a series of three Stakeholder Forums, as well as a summary of issues prioritization activities conducted by the partners.

The comprehensive report is available on-line in PDF format on the Wilkes County Health Department's website at www.wilkeshealth.com.

CHAPTER ONE: DEMOGRAPHIC DATA

POPULATION CHARACTERISTICS

General Population Characteristics

The following general population characteristics of Wilkes County, its peer county and the state of NC were based on 2014 US Census data estimates.

- The population of Wilkes County was 68,838.
- The population of Wilkes County had similar percentage of males and females.
- The median age in Wilkes County was 44.2, six (6) years older than the NC median age.

**Table 1. General Demographic Characteristics
(2014 US Census Bureau Estimate)**

Location	Total Population	Number Males	% Population Male	Median Age Males	Number Females	% Population Female	Median Age Females	Overall Median Age
Wilkes County	68,838	33,947	49.3	42.9	34,891	50.7	45.6	44.2
Surry County	72,968	35,693	48.9	41.4	37,275	51.1	44.4	43.0
State of NC	9,943,964	4,844,593	48.7	36.7	5,099,371	51.3	39.7	38.2
	a	a	c	b	a	c	b	b

a - 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.

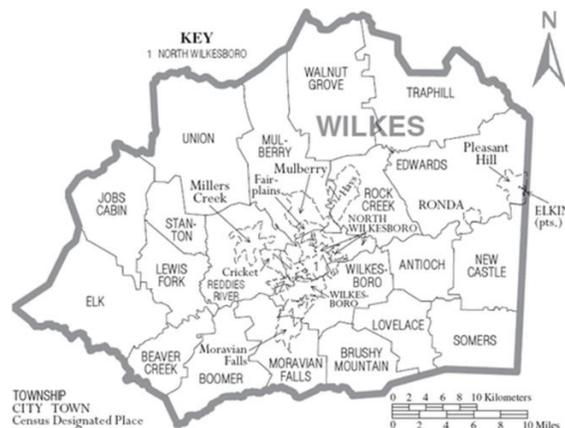
b - US Census Bureau, American Fact Finder, PEPAGESEX: Annual Estimates of the Resident Population for Selected Age Groups by Sex

c - Percentages are calculated

Population by Township

As noted in the following figure and table, Wilkes County is divided into 21 townships among which Reddies River and Wilkesboro townships had the largest populations and Job’s Cabin Township had the smallest. Lewis Fork Township had the “oldest” median age (54.1 years), and Brushy Mountain Township the “youngest” (32.8 years).

Figure 1. Map of Wilkes County



**Table 2. Population by Township, Wilkes County
(2009-2013 US Census Bureau Estimate)**

Township	No. of Persons	% of County Population	Median Age
Antioch township	996	1.4	37.9
Beaver Creek township	775	1.1	43.9
Boomer township	1,577	2.3	48.3
Brushy Mountain township	1,039	1.5	32.8
Edwards township	7,643	11.0	45.7
Elk township	1,253	1.8	52.5
Jobs Cabin township	490	0.7	38.7
Lewis Fork township	1,192	1.7	54.1
Lovelace township	614	0.9	43.8
Moravian Falls township	3,212	4.6	37.0
Mulberry township	6,631	9.6	40.9
New Castle township	2,164	3.1	40.9
North Wilkesboro township	7,398	10.7	36.8
Reddies River township	11,112	16.1	40.8
Rock Creek township	5,865	8.5	41.7
Somers township	898	1.3	49.6
Stanton township	535	0.8	47.8
Traphill township	2,861	4.1	46.7
Union township	1,202	1.7	43.7
Walnut Grove township	1,595	2.3	41.9
Wilkesboro township	10,132	14.6	44.1
Wilkes County Total	69,184	100.0	42.9

Source: US Census Bureau, American Fact Finder, 2013 ACS, Table S0101, Age and Sex (by Township); <http://factfinder2.census.gov>

Population Growth

The next table illustrates that the rate of population growth in Wilkes County population has been slowing since 2000, and this pattern is projected to continue through at least 2030. Note, however, that the Wilkes County rate of growth is smaller than the rate for the state as a whole in every period covered by the table below.

**Table 3. Decadal Population Growth
(1980-2030 US Census Counts and Projections)**

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
Wilkes County	58,657	59,393	1.3	65,636	10.5	69,340	5.6	72,769	4.9	76,119	4.6
Surry County	59,449	61,704	3.8	71,209	15.4	73,673	3.5	78,346	6.3	82,901	5.8
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

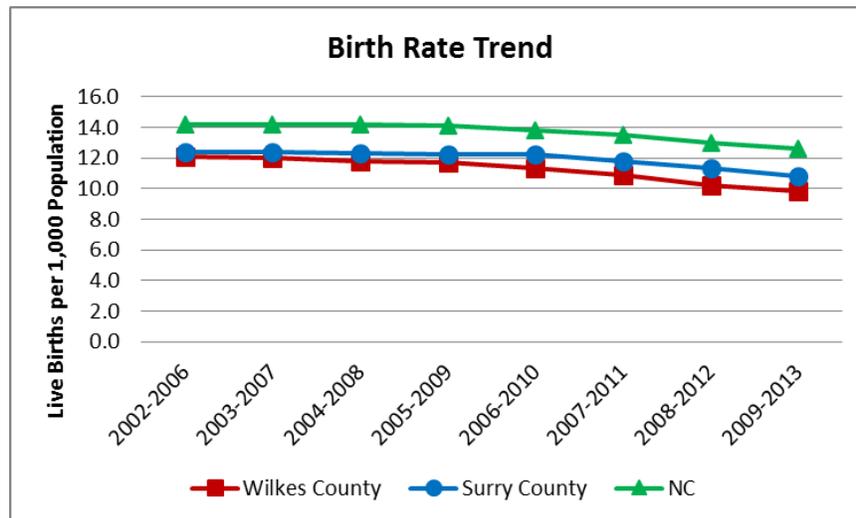
Note: percentage change is calculated.

Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population (Data Item 5001); http://data.osbm.state.nc.us/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 is declining in NC and both counties in the comparison, but at the fastest rate (steepest slope) in Wilkes County.

Figure 2. Birth Rate Trend, Live Births per 1,000 Total Population (Five-Year Aggregates, 2002-2006 through 2008-2012)



Source: NC State Center for Health Statistics, Health Data, County Level Data, County Health Databooks 2008-2015; <http://www.schs.state.nc.us/schs/data/databook/>.

Population Density

As seen in the table below, population density in Wilkes County has increased every decade since 1980, a trend projected to continue in the next two decades. However, the population density in Wilkes County was lower than the population density statewide in every decade.

Table 4. Decadal Population Density (1980-2030)

Location	Persons per Square Mile					
	1980	1990	2000	2010 (Estimate)	2020 (Projection)	2030 (Projection)
Wilkes County	77.98	78.44	86.68	90.63	95.15	99.15
Surry County	110.23	115.00	132.74	142.59	153.71	165.35
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.us/pls/linc/dyn_linc_main.show.

Race and Ethnicity

The population of Wilkes County is less diverse than the population of NC as a whole. In Wilkes County as of a 2014 US Census Bureau estimate:

- Whites composed 93.3% of the total population; statewide the comparable figure was 71.5%.
- Blacks/African Americans composed 4.5% of the total population; statewide the comparable figure was 22.1%.
- American Indians and Alaskan Natives composed 0.4% of the total population; statewide the comparable figure was 1.0%.
- Asians, Native Hawaiians and Other Pacific Islanders composed 0.5% of the total population; statewide the comparable figure was 2.8%.
- Hispanics/Latinos of any race composed 5.8% of the total population; statewide the comparable figure was 9.0%.

**Table 5. Population Distribution by Race/Ethnicity
(2014 US Census Bureau Estimate)**

Location	Total	Number and Percent											
		White		Black or African-American		American Indian and Alaskan Native		Asian, Native Hawaiian and Other Pacific Islander		Two or More Races		Hispanic or Latino of Any Race	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	68,838	64,255	93.3	3,089	4.5	261	0.4	351	0.5	882	1.3	4,002	5.8
Surry County	72,968	68,121	93.4	2,988	4.1	418	0.6	616	0.8	825	1.1	7,406	10.1
State of NC	9,943,964	7,108,057	71.5	2,196,390	22.1	154,735	1.6	279,315	2.8	205,467	2.1	894,276	9.0
Source	a	a	b	a	b	a	b	a	b	a	b	a	b

a - 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>
b - Percentages were calculated

Race and Ethnicity by Township

The following information about racial and ethnic population diversity at the township level in Wilkes County was derived from 2010 US Census data presented in the table below.

- Boomer Township is home to the highest proportion of African Americans (10.6%) followed by Wilkesboro Township (9.7%) and North Wilkesboro Township (9.6%).
- Walnut Grove Township is home to the highest proportion of American Indians/Alaskan Natives (0.7%).
- Wilkesboro Township is home to the highest proportion of Asian, Native Hawaiian or Other Pacific Islanders (1.2%).
- North Wilkesboro Township is home to the highest proportion of Hispanics (13.3%), followed by Moravian Falls Township (10.1%).

Table 6. Population by Race/Ethnicity, Wilkes County by Township (2010 US Census)

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.	%	
Antioch township	1,103	1,000	90.7	66	6.0	2	0.2	4	0.4	19	1.7	12	1.1	30	2.7	
Beaver Creek township	600	559	99.5	28	4.7	2	0.3	1	0.2	7	1.2	3	0.5	8	1.3	
Boomer township	2,286	1,971	86.2	242	10.6	2	0.1	5	0.2	38	1.7	28	1.2	56	2.4	
Brushy Mountain township	551	541	98.2	2	0.4	0	0.0	0	0.0	1	0.2	7	1.3	4	0.7	
Edwards township	7,318	6,910	94.4	179	2.4	10	0.1	14	0.2	131	1.8	74	1.0	243	3.3	
Elk township	1,002	940	93.8	43	4.3	1	0.1	2	0.2	4	0.4	12	1.2	9	0.9	
Jobs Cabin township	567	549	96.8	8	1.4	0	0.0	1	0.2	0	0.0	9	1.6	2	0.4	
Lewis Fork township	1,585	1,541	97.2	15	0.9	5	0.3	3	0.2	7	0.4	14	0.9	12	0.8	
Lovelace township	719	694	96.5	10	1.4	1	0.1	4	0.6	5	0.7	5	0.7	6	0.8	
Moravian Falls township	3,007	2,600	86.5	136	4.5	12	0.4	22	0.7	179	6.0	58	1.9	304	10.1	
Mulberry township	6,688	6,487	97.0	49	0.7	6	0.1	9	0.1	91	1.4	46	0.7	182	2.7	
New Castle township	1,740	1,590	91.4	79	4.5	1	0.1	9	0.5	39	2.2	22	1.3	72	4.1	
North Wilkesboro township	7,319	5,704	77.9	700	9.6	25	0.3	36	0.5	692	9.5	162	2.2	973	13.3	
Reddies River township	10,870	10,302	94.8	110	1.0	16	0.1	50	0.4	266	2.4	126	1.2	482	4.4	
Rock Creek township	6,046	5,716	94.5	95	1.6	14	0.2	11	0.1	152	2.5	58	1.0	230	3.8	
Somers township	1,077	1,050	97.5	8	0.7	3	0.3	0	0.0	4	0.4	12	1.1	17	1.6	
Stanton township	541	537	99.3	0	0.0	0	0.0	0	0.0	0	0.0	4	0.7	3	0.6	
Traphill township	3,391	3,278	96.7	40	1.2	6	0.2	11	0.3	24	0.7	32	0.9	91	2.7	
Union township	1,259	1,250	98.5	2	0.2	0	0.0	1	0.1	7	0.6	9	0.7	23	1.8	
Walnut Grove township	1,223	1,183	96.7	2	0.2	9	0.7	0	0.0	18	1.5	11	0.9	25	2.0	
Wilkesboro township	10,448	8,432	80.7	1,016	9.7	18	0.2	133	1.2	628	6.0	221	2.1	1,000	9.6	
Wilkes County Total	69,340	62,834	90.6	2,830	4.1	133	0.2	316	0.5	2,312	3.3	925	1.3	3,772	5.4	

Note: percentages are calculated from population figures.

Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

Age

Regarding the age (and gender) distribution of the Wilkes County population according to 2014 US Census Bureau estimates shown in the following table:

- In terms of both numbers (5,286) and percent (7.7%), the largest segment of the population in Wilkes County was the age group 50-54.
- Persons 65 years of age or older composed 19.9% of the population in Wilkes County, and 14.6% of the population of NC; persons 19 years of age and younger composed 23.2% of the population in Wilkes County, and 25.8% of the population of NC.

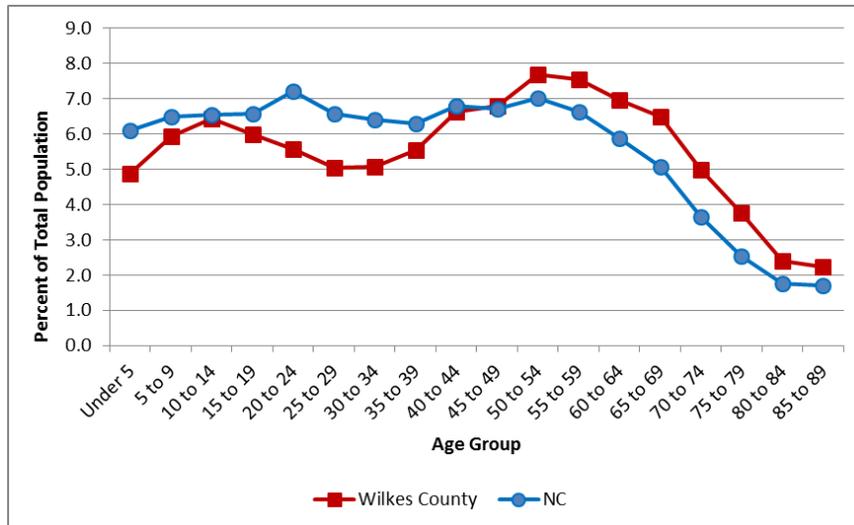
Table 7. Population Distribution by Age and Gender, Number and Percent (2014 US Census Bureau Estimate)

Age Group	Wilkes 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	68,838	33,947	34,891	100.0	49.3	50.7	9,943,964	4,844,593	5,099,371	100.0	48.7	51.3
Under 5	3,349	1,730	1,619	4.9	2.5	2.4	607,476	310,355	297,121	6.1	3.1	3.0
5 to 9	4,084	2,068	2,016	5.9	3.0	2.9	644,895	328,815	316,080	6.5	3.3	3.2
10 to 14	4,427	2,264	2,163	6.4	3.3	3.1	651,864	332,271	319,593	6.6	3.3	3.2
15 to 19	4,127	2,145	1,982	6.0	3.1	2.9	652,941	333,645	319,296	6.6	3.4	3.2
20 to 24	3,846	2,049	1,797	5.6	3.0	2.6	718,261	376,049	342,212	7.2	3.8	3.4
25 to 29	3,480	1,718	1,762	5.1	2.5	2.6	654,475	324,122	330,353	6.6	3.3	3.3
30 to 34	3,496	1,747	1,749	5.1	2.5	2.5	637,775	312,509	325,266	6.4	3.1	3.3
35 to 39	3,820	1,968	1,852	5.5	2.9	2.7	625,513	305,953	319,560	6.3	3.1	3.2
40 to 44	4,570	2,303	2,267	6.6	3.3	3.3	677,245	331,038	346,207	6.8	3.3	3.5
45 to 49	4,682	2,400	2,282	6.8	3.5	3.3	668,371	327,819	340,552	6.7	3.3	3.4
50 to 54	5,286	2,594	2,692	7.7	3.8	3.9	699,194	338,657	360,537	7.0	3.4	3.6
55 to 59	5,201	2,617	2,584	7.6	3.8	3.8	658,373	314,339	344,034	6.6	3.2	3.5
60 to 64	4,794	2,300	2,494	7.0	3.3	3.6	584,219	273,695	310,524	5.9	2.8	3.1
65 to 69	4,470	2,111	2,359	6.5	3.1	3.4	505,469	236,107	269,362	5.1	2.4	2.7
70 to 74	3,440	1,621	1,819	5.0	2.4	2.6	362,314	165,643	196,671	3.6	1.7	2.0
75 to 79	2,585	1,118	1,467	3.8	1.6	2.1	251,577	109,253	142,324	2.5	1.1	1.4
80 to 84	1,647	661	986	2.4	1.0	1.4	173,620	69,325	104,295	1.7	0.7	1.0
85 and older	1,534	533	1,001	2.2	0.8	1.5	170,382	54,998	115,384	1.7	0.6	1.2

Source: US Census Bureau, American FactFinder, 2014 Population Estimates, PEPAGESEX: Annual Estimates of the Resident Population for Selected Age Groups by Sex. <http://factfinder2.census.gov/>. Percentages are calculated.

The next figure compares the age distribution of the NC population to the age distribution of the population in Wilkes County according to 2014 US Census Bureau estimates. In Wilkes County there was a smaller proportion of persons in most age groups under the age of 45-49 and a larger proportion of persons over the age of 49 than demonstrated in the state age distribution profile.

Figure 3. Population Distribution by Age, Wilkes County and NC (2014)



Source: US Census Bureau, American FactFinder, 2014 Population Estimates, PEPAGESEX: Annual Estimates of the Resident Population for Selected Age Groups by Sex. <http://factfinder2.census.gov/>. Percentages are calculated.

Age by Township

According to 2010 US Census data presented in the table below:

- Beaver Creek Township had the highest proportion of persons under the age of 18 (29.2%), followed by Antioch Township (24.2%).
- Brushy Mountain Township had the highest proportion of persons ages 65 and older (21.6%), followed by Elk Township and Union Township (both 21.4%).

**Table 8. Population by Age, by Township, Wilkes County
(2010 US Census)**

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
Antioch township	24.2	7.1	10.0	13.7	16.9	12.6	15.6
Beaver Creek township	29.2	4.8	9.7	14.0	12.7	11.3	18.3
Boomer township	21.6	6.1	10.6	12.0	16.2	16.2	17.2
Brushy Mountain township	18.7	4.4	8.0	12.5	16.5	18.3	21.6
Edwards township	21.9	8.0	9.8	13.9	15.5	13.1	17.8
Elk township	16.9	3.8	8.5	11.1	17.8	20.7	21.4
Jobs Cabin township	19.0	5.5	8.6	12.7	16.0	18.2	19.9
Lewis Fork township	20.8	5.9	10.5	13.4	16.0	14.9	18.5
Lovelace township	21.7	5.1	9.6	15.4	16.7	16.0	15.4
Moravian Falls township	22.9	6.8	10.6	13.4	14.8	15.2	16.4
Mulberry township	22.4	7.2	10.4	13.9	15.7	14.4	16.1
New Castle township	21.3	6.7	10.2	13.4	16.7	13.2	18.5
North Wilkesboro township	23.7	8.4	11.5	11.6	14.5	12.2	18.1
Reddies River township	23.5	6.5	11.6	14.0	15.5	13.6	15.4
Rock Creek township	22.7	8.5	11.2	13.9	15.5	13.2	15.1
Somers township	20.6	6.2	9.1	12.3	18.2	14.8	18.8
Stanton township	20.3	7.0	10.2	12.4	19.6	14.6	15.9
Traphill township	23.4	6.6	10.2	14.0	16.0	14.5	15.4
Union township	18.6	5.8	9.3	13.8	15.1	16.0	21.4
Walnut Grove township	20.6	7.9	8.1	14.2	15.2	16.4	17.6
Wilkesboro township	22.1	7.4	11.4	12.4	15.4	13.6	17.7
Wilkes County Total	22.4	7.2	10.7	13.3	15.6	13.9	17.0

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Census Summary File 1 (SF-1), Table QT-P1, Age Groups and Sex (geographies as listed); <http://factfinder2.census.gov>.

Elderly Population

Because the proportion of the Wilkes 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.

- The proportion of the population in Wilkes County age 65 and older is projected to increase by 57% through the year 2030, when the number of persons in the county age 65 and older is expected to reach 18,472.

- Though 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, from 5.2% to 9.0% of the county population.
- The proportion of the segment age 65-74 will grow by 43% over the same period, and the proportion of the segment age 85 and older will grow by 69%.

Table 9. Growth Trend for the Elderly (Age 65 and Older) Population, by Decade (2000 through 2030)

Location	2000 Census								
	Total Population (2000)	# 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+
Wilkes County	65,632	9,246	14.1	5,157	7.9	3,080	4.7	1,009	1.5
Surry County	71,219	10,973	15.4	5,773	8.1	3,874	5.4	1,326	1.9
State of NC	8,049,313	969,048	12.0	533,777	6.6	329,810	4.1	105,461	1.3
Source	a	a	d	a	d	a	d	a	d

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+
Wilkes County	69,340	11,778	17.0	6,820	9.8	3,602	5.2	1,356	2.0
Surry County	73,673	12,250	16.6	6,750	9.2	3,931	5.3	1,569	2.1
State of NC	9,535,483	1,234,079	12.9	697,567	7.3	389,051	4.1	147,461	1.5
Source	b	b	d	b	d	b	d	b	d

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+
Wilkes County	70,615	15,528	22.0	8,822	12.5	5,031	7.1	1,675	2.4
Surry County	73,842	14,982	20.3	8,594	11.6	4,738	6.4	1,650	2.2
State of NC	10,573,611	1,778,622	16.8	1,056,714	10.0	530,489	5.0	191,419	1.8
Source	c	d	d	c	d	c	d	c	d

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+
Wilkes County	71,823	18,472	25.7	9,726	13.5	6,460	9.0	2,286	3.2
Surry County	73,841	17,072	23.1	9,057	12.3	6,014	8.1	2,001	2.7
State of NC	11,629,556	2,262,855	19.5	1,241,404	10.7	765,598	6.6	255,853	2.2
Source	c	d	d	c	d	c	d	d	d

a - US Census Bureau, American FactFinder. Profile of General Demographic Characteristics: 2000 (DP-1), SF1; <http://factfinder2.census.gov>.

b - US Census Bureau, American FactFinder. Profile of General Population and Housing Characteristics: 2010 (DP-1); <http://factfinder2.census.gov>.

c - NC Office of State Budget and Management, County/State Population Projections. Age, Race, and Sex Projections, Age Groups - Total, July 1, 2020 and July 1, 2030 County Total Age Groups - Standard;

http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_projections.shtm.

d - Percentages were calculated using age group population as numerator and total population as denominator.

Non-English Speaking Population

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 2013 US Census Bureau data summarized in the table below:

- There were an estimated 2,909 foreign-born residents residing in Wilkes County in 2010. Using a base 2010 total population of 69,340 as the denominator, foreign-born residents made up approximately 4% of the total county population at that time.
- The largest influx of the foreign-born population in Wilkes County—1,065 persons—arrived between 2000 and 2009. The population of foreign-born residents grew little after 2009.

**Table 10. Growth of the Foreign-Born Population
(Before 1990 through 2013)**

Location	Number of Persons Arriving				% Increase 2000-2013
	Before 1990	1990-1999	2000-2009	After 2010	
Wilkes County	931	865	1,065	48	1.7
Surry County	885	1,838	1,782	166	3.7
State of NC	225,160	241,832	324,570	42,765	5.4

Source: US Census Bureau, American Fact Finder, 2013 ACS 5-Year Estimates, Table B05005: Year of Entry by Citizenship Status in the United States. <http://factfinder2.census.gov>.
Note: Percent increase is calculated.

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 2009-2013 five-year US Census Bureau estimates presented in the next table.

- Of the 27,512 Wilkes County households included in the statistic, an estimated 1,331 (4.8%) spoke a language other than English. An estimated 351 of these households were linguistically isolated; in 100% of these cases the isolated residents were Spanish-speaking.

**Table 11. Household Language by Linguistic Isolation
(Five-Year Estimate, 2009-2013)**

Location	Total Households	Number of Households								
		English-Speaking	Spanish-Speaking		Speaking Other Indo-European Languages		Speaking Asian or Pacific Island Languages		Speaking Other Languages	
			Isolated	Not isolated	Isolated	Not isolated	Isolated	Not isolated	Isolated	Not isolated
Wilkes County	27,512	26,181	351	786	0	96	0	98	0	0
Surry County	29,967	27,552	682	1,366	41	213	10	56	4	43
State of NC	3,715,565	3,316,345	73,130	167,418	7,872	72,220	12,867	43,169	2,695	16,849

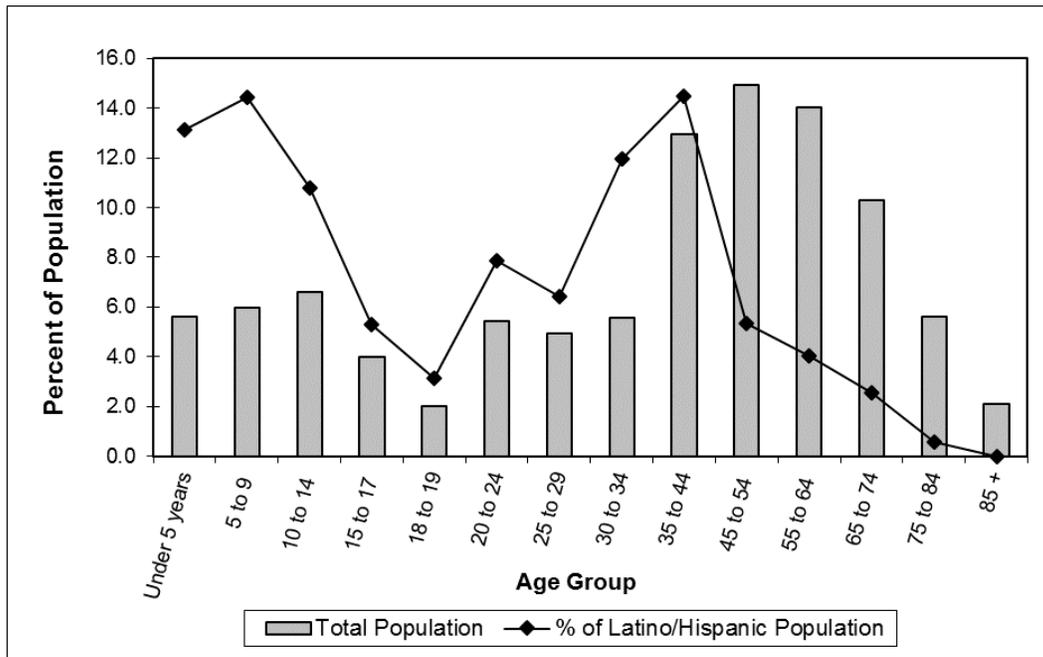
Source: US Census Bureau, American Fact Finder, American Community Survey, ACS 2013 5-Year Estimates, Table B16002: Household Language by Linguistic Isolation; <http://factfinder2.census.gov>.

Age Distribution of the Latino Population

The following figure is a graphic depiction of the population profiles, by age group, of the total Wilkes County population and the Hispanic/Latino population. These data are based on the 2009-2013 population estimate via the US Census Bureau American Community Survey for 2013.

- In Wilkes County all age groups under the age of 45 were present in higher proportions in the Hispanic/Latino population than in the overall county population. There were lower proportions for Hispanics/Latinos than for the general population in all the other age groups.
- The highest proportions of the Hispanic/Latino population in Wilkes County occurred in the 5-9 and 35-44 age groups.

Figure 4. Age Distribution of Overall and Latino Populations in Wilkes County (2013)



Sources - US Census Bureau, American Fact Finder, 2013 ACS 5-Year Estimates, Table B01001: Sex by Age, and Sex by Age (Hispanic or Latino); <http://factfinder2.census.gov>.

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 2009-2013.

- Veterans composed 8.9% of Wilkes County's overall adult civilian population in the period cited, lower than the NC (9.9%) and national (9.0%) averages, but higher than the Surry County average (8.4%).
- A larger proportion of the veterans in Wilkes County were age 65 and older (50.8%) than in NC as a whole (39.1%) in Surry County (48.9%), or nationally (43.7%).
- The Veterans Administration Medical Center nearest to Wilkes 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 Hickory, Fayetteville, Raleigh and Supply, NC; Community-Based Outpatient Clinics serving veterans are located in Winston-Salem, Charlotte, Durham, Elizabeth City, Franklin, Goldsboro, Hamlet, Jacksonville, Morehead City, Pembroke, Raleigh, Rutherfordton, and Wilmington, NC; and Vet Centers are located in Greensboro, Charlotte, Fayetteville, Greenville, and Jacksonville, NC (1).

**Table 12. Veteran Status of Population
(Five-Year Estimate, 2009-2013)**

Location	Civilian Population 18 years and over					% Veterans by Age				
	Total	# Non-Veterans	% Non-Veterans	# Veterans	% Veterans	18 to 34 years	35 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Wilkes County	53,752	48,992	91.1	4,760	8.9	4.2	21.6	23.4	28.2	22.6
Surry County	56,511	51,751	91.6	4,760	8.4	4.3	22.3	24.6	22.2	26.7
State of NC	7,282,130	6,557,835	90.1	724,295	9.9	8.6	28.9	23.3	20.4	18.7
National Total	236,576,902	215,313,123	91.0	21,263,779	9.0	8.1	25.1	23.1	21.2	22.5

Source: US Census Bureau, American Fact Finder, American Community Survey, 2013 ACS 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 13. Blind/Visually Impaired Populations

Location	Number Blind/Visually Impaired (2011)
Wilkes County	239
Surry County	132
State of NC	20,972

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.

At the present time there is no Special Needs Registry in Wilkes County (2).

CIVIC ENGAGEMENT

Electoral Process

One measure of a population's engagement in community affairs is its participation in the electoral process. The table below summarizes current voter registration figures.

Registered Voters

- The proportion of the overall voting age population registered to vote in Wilkes County in August, 2015 was 74.1%, lower than the state percentage of 82.9% but higher than the Surry County percentage of 69.3%.

**Table 14. Registered Voters, by Race/Ethnicity, Number and Percent
(As of August, 2015)**

Location	Estimated Voting Age Population (2015)	Number and Percent of Voting Age Population Registered to Vote ¹											
		Total		White		Black		American Indian		Other		Hispanic	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	55,082	40,829	74.1	38,330	69.6	1,657	3.0	32	0.1	810	1.5	441	0.8
Surry County	61,541	42,665	69.3	39,601	64.3	1,769	2.9	54	0.1	1,241	2.0	670	1.1
State of NC	7,677,231	6,365,462	82.9	4,490,653	58.5	1,430,702	18.6	52,058	0.7	392,049	5.1	125,200	1.6

Source:

¹ 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%.

a - Log Into North Carolina (LINC) Database, Topic Group Government, Voters and Elections, Voting Age Population (Data Item 1714), 2012; http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

b - NC State Board of Elections, Voter Registration, Voter Statistics, Voter Registration Statistics, By County; http://www.app.sboe.state.nc.us/webapps/voter_stats/.

c - Percentages are calculated

Voter Turnout

The next table shows voter turnout figures for the 2008 and 2012 General Election.

- Higher or equal proportions of Wilkes County voters turned out to vote in these two elections than the average statewide.

**Table 15. Voter Turnout in General Elections
(2008 and 2012)**

Location	% of Registered Voters that Voted	
	2008	2012
Wilkes County	71.90	68.96
Surry County	66.10	66.98
State of NC	71.90	68.17

Source - Registered Voters (125), % Registered Voters Voting in General Election (1717) for the Years as Noted. North Carolina Office of State Budget and Management, State Data Center, Log Into North Carolina (LINC): http://data.osbm.state.nc.us/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 Wilkes County as of 2010.

**Table 16. Religious Bodies in Wilkes County
(2010)**

Religious Bodies	Tradition	Family	Number of Congregations	Number of Adherents
African Methodist Episcopal Zion Church	Black Protestant	Methodist/Pietist	3	392
Amish Groups, undifferentiated*	Evangelical Protestant	European Free-Church	0	7
Assemblies of God	Evangelical Protestant	Pentecostal	2	143
Associate Reformed Presbyterian Church	Evangelical Protestant	Presbyterian-Reformed	1	0
Bahá'í	Other	Other Groups	0	6
Catholic Church	Catholic	Catholicism	1	407
Church of God (Cleveland, Tennessee)	Evangelical Protestant	Pentecostal	4	257
Church of God of Prophecy	Evangelical Protestant	Pentecostal	1	24
Church of Jesus Christ of Latter-day Saints	Other	Latter-day Saints	1	510
Church of the Brethren	Evangelical Protestant	European Free-Church	1	86
Churches of Christ	Evangelical Protestant	Baptist	3	250
Episcopal Church	Mainline Protestant	Episcopalianism/Anglicanism	1	532
Friends General Conference*	Mainline Protestant	European Free-Church	2	0
International Pentecostal Holiness Church	Evangelical Protestant	Pentecostal	3	215
Jehovah's Witnesses	Other	Adventist	2	---
Lutheran Congregations in Mission for Christ	Evangelical Protestant	Lutheran	1	290
National Missionary Baptist Convention, Inc.	Black Protestant	Baptist	1	181
Non-denominational	Evangelical Protestant	---	9	1,901
North American Lutheran Church	Evangelical Protestant	Lutheran	1	---
Pentecostal Fire-Baptized Holiness Church	Evangelical Protestant	Pentecostal	1	---
Presbyterian Church (U.S.A.)	Mainline Protestant	Presbyterian-Reformed	2	735
Seventh-day Adventist Church	Evangelical Protestant	Adventist	2	77
Southern Baptist Convention	Evangelical Protestant	Baptist	86	30,932
U.S. Mennonite Brethren	Evangelical Protestant	European Free-Church	1	17
United Methodist Church	Mainline Protestant	Methodist/Pietist	17	3,129
Total			146	40,091

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

Wilkes County Sheriff's Office

The Wilkes County Sheriff's Office is headquartered in Wilkesboro. The Sheriff's Office is responsible for ensuring all residents' and visitors' safety in a county that covers 758 square Units within the department include:

- Jail
- Civil
- Criminal Investigation
- Communications
- Criminal Response Group (CRG)
- Field Operations
- School Resource Officers
- 911 Addressing (3).

Police Departments in Wilkes County

Each of the three largest municipalities in Wilkes County, Wilkesboro, North Wilkesboro, and Elkin (part) maintain their own police departments.

Wilkesboro Police Department

The Wilkesboro Police Department consists of 21 full-time officers, 1 reserve officer and 2 administrative assistants. There are 2 Divisions within the department, the Patrol Division and the Support Services Division:

- **Patrol Division.** The Patrol Division has 4 patrol teams to provide continuous, around-the-clock police service. In 2014 the division answered over 8,000 calls for service and made 458 arrests. This division includes a Crash Reconstruction Team that is specially trained for in-depth investigation of the most serious traffic crashes. To enhance the safety of children while they travel, the division has 2 certified Child Safety Seat Technicians. The division also is the Wilkes County Coordinator for the NC Governor's Highway Safety Program and all patrol officers receive high levels of training in patrol functions. It also has a Bicycle Patrol officer for areas such as Main St., the Greenway, and the town's parks so that people in these general public locations are better served.
- **Support Division.** The Support Services Division consists of 2 General Investigators, 1 Information Technology Administrator, and 1 Specialized Investigator. The department's Special Weapons and Tactics Team (S.W.A.T.) is part of Support Services and is staffed by 7 officers with specialized training in high risk operations (4).

North Wilkesboro Police Department

The primary functions of the North Wilkesboro Police Department are the preservation of the public peace and order, the prevention and detection of crime, the apprehension of offenders, and the protection of life and property. The North Wilkesboro Police Department strives to be a community-oriented police department. Currently the department is broken down into different divisions, with each one specializing in certain areas as well as working closely with other divisions.

- **Criminal Investigations Division (CID)** - The Criminal Investigation Division is made up of 3 Investigators who are on call 24 hours a day. CID is responsible for the follow up investigation of all reported crimes. These investigations consist of locating and interviewing victims and witnesses; locating, identifying, and preserving physical evidence; recovering stolen property; locating, interviewing, and arresting criminal suspects; and presenting criminal cases to the District Attorney's office for prosecution. The North Wilkesboro Police Department's Crime Prevention Unit is also housed within the Criminal Investigations Division. The Narcotics Investigator is assigned to this division and reports to the commander of CID. The Narcotics Investigator also serves as the ABC Enforcement Officer for the department.
- **Narcotics Division** – The narcotics unit is responsible for all illegal drug violations that occur inside North Wilkesboro. The narcotics unit is assisted by the Criminal Investigations Division in establishing cases against drug offenders along with setting up controlled buys of illegal drugs and charging the persons involved. The Narcotics Investigator reports to the Commander of CID.
- **Patrol Division** – The Patrol Division is made up of all uniformed officers. The Patrol Division is broken down into 4 squads. Each of the squads is supervised separately by a Sergeant who is assigned to work road duty as well as supervision. The Auxiliary Unit for the department is also under the Patrol Division. The Patrol Division is made up of 18 full time officers and 4 part time officers (5).

Elkin Police Department

Part of the Town of Elkin falls jurisdictionally in Wilkes County, but most of the town lies in Surry County, so its resources are not covered in this report.

Fire Departments

Fire protection in Wilkes County is provided by the municipal and volunteer fire departments listed alphabetically by town in the following table.

**Table 17. Fire Departments Serving Wilkes County
(September, 2015)**

Department Name	Location
Station 39	Boomer
Station 25 - Cricket	Boone Trail
Station 33 - Pleasant Hill	Elkin
Station 34 - Austin	Elkin
Ferguson Station 1	Ferguson
Ferguson Station 2	Ferguson
Champion Station 1	Ferguson
Champion Station 2	Ferguson
Mountain View Station 1	Hays
Mountain View Station 2	Hays
Traphill Station 2	Hays
Station 36	McGrady
Millers Creek Station 1	Millers Creek
Station 46 - Wilbar	Millers Creek
Station 28	Moravian Falls
Station 44 - Brushy Mountain	Moravian Falls
Station 21	North Wilkesboro
Station 26 - Mulberry-Fairplains	North Wilkesboro
Station 43 - Knotville	North Wilkesboro
Station 89 - Wilkes Rescue Squad	North Wilkesboro
Millers Creek Station 2	Purlear
Champion Station 3	Purlear
Roaring River Station 1	Roaring River
Roaring River Station 2	Roaring River
Station 42 - Shepherds Crossroads	Roaring River
Ronda Station 1	Ronda
Ronda Station 2	Ronda
Traphill Station 1	Traphill
Station 22	Wilkesboro
Station 27 - Broadway	Wilkesboro
Station 38 - Goshen	Wilkesboro
Station 45 - Little Brushy Mountain	Wilkesboro
Station 23	Wilkes-Iredell

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

Community Resources

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

Wilkes County Health Department Community Resource Guide

The Wilkes County Health Department maintains an on-line, 28-page guide to community resources arranged by category of service. The guide provides a brief description of each service as well as addresses, phone numbers and hours of operation (if applicable). The guide can be accessed at:

<http://wilkescounty.net/health/wp-content/uploads/sites/3/2016/02/Community-Resource-Guide-Updated-8-13-15.pdf>.

2-1-1 of Wilkes County

With the help of the United Way, many communities in NC, including Wilkes 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.nc211.org/index.php/component/cpx/?task=search.advanced>.

Wilkes Regional Medical Center “Find a Doctor” Webpage

Wilkes Regional Medical Center offers an on-line search tool that locates primary care providers currently accepting new patients. The URL is:

http://wilkesregional.com/find_a_doctor/primary_care_providers_accepting_new_patients.aspx.

SAFE, Inc. Wilkes County, NC – Resources and Links

SAFE offers survivors of domestic and sexual violence options for safety, empowerment, healing and hope. It maintains a web listing of resources of interest to its clients and others.

The resource list can be located via the following URL:

<http://www.safewilkes.org/resources-links>

Wilkes Faith Help – Local Medical Resources

FaithHealth mobilizes the caring strengths of congregations to improve health and bring hope to those who are ill. Part of FaithHealthNC, a statewide movement bringing together individuals, congregations, community partners and health care providers to improve health, the local office maintains a webpage with links for local medical resources such as clinics, counseling, dental care, insurance, prescriptions, respite care, urgent care and “find a doc.” It can be located at:

<http://wilkesfaithhealth.weebly.com/local-medical-resources.html>.

United Way of Wilkes County

The United Way maintains a brief alphabetized list of links to partner agencies, most of which provide advocacy or direct assistance to the public. The list is accessed via:

<http://www.uwwilkes.org/links.php>

Wilkes Community Partnership for Children

The Partnership, through its Smart Start initiative, maintains a webpage with links not to organizational resources but to *information* resources on topics pertaining to early childhood and child development. The list can be accessed at:

http://www.wilkesmartstart.com/n_hints.php.

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 2015 Wilkes County was assigned the Tier 2 designation; its peer Surry County was assigned the Tier 1 designation (6).

County Revenue Indicators

For the period covering FY2005-2006 through FY2013-2014, gross collections of state sales and use taxes in Wilkes County were only about 41% of the average for all NC counties, as shown in the table below. These taxes provide some of the money available to the county to fund public services; change in these collections point to changes in overall economic activity and fiscal confidence in a county.

Table 18. NC State Sales and Use Tax Gross Collections (FY2005-2006 through FY2013-2014)

Location	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14
Wilkes County	17,993,873	18,678,764	17,853,508	16,790,706	22,107,115	26,964,380	23,333,167	22,742,134	24,323,804
Surry County	27,538,711	29,117,015	26,840,713	27,853,497	36,411,056	40,344,276	34,358,847	34,555,562	35,291,172
State of NC (avg calculated)	45,605,858	46,004,427	46,029,546	43,169,210	50,252,290	55,679,535	49,906,563	50,164,100	62,256,514

Source: NC Department of Revenue, Tax Publications and Reports, State Sales and Use Tax Reports by Fiscal Year, by County Summary; <http://www.dornrc.com/publications/fiscalyearsales.html>.

Another measure of local economic vitality in a county that depends to some extent on income from tourism is occupancy tax revenue, the tax paid on hotel/motel lodging. Note that only the Town of Wilkesboro collects hotel occupancy tax revenue; Wilkes County does not. The occupancy tax is 3%, paid by guests of hotels within the Wilkesboro town limits (currently five hotels). These revenues have been increasing steadily since 2011. Although the data for 2015 represent only half a year, they appear to indicate another year-over-year increase.

Table 19. Occupancy Tax Revenue, Wilkes County (CY2011 through July, 2015)

	2011	2012	2013	2014	2015 (thru July)
Total tax collected	\$111,821	\$113,371	\$118,054	\$127,934	\$75,502

Source: Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department, to Sheila S. Pfaender, Public Health Consultant, September 14, 2015

Fees collected on land transfers reflect changes in real estate and property ownership, including new development. Figures in the table below show an annual increase in total fees from land transfers in Wilkes County over the period cited. Although the data for CY2014 represents only about eight months of the calendar year, it would appear to signal another annual increase.

**Table 20. Land Transfers in Wilkes County
(CY2011 through CY2014 [part])**

TYPE	CY2011		CY2012		CY2013		CY2014 ¹	
	Number	Fees	Number	Fees	Number	Fees	Number	Fees
Commissioners Deed	7	\$172.00	23	\$598.00	21	\$749.00	18	\$468.00
Deed	30	\$828.00	39	\$1,039.00	34	\$884.00	27	\$702.00
Fee Simple Deed	14	\$336.00	32	\$832.00	10	\$260.00	13	\$338.00
Non-Warranty Deed	92	\$2,378.00	114	\$3,012.00	95	\$2,499.00	113	\$1,938.00
Quit-Claim Deed	138	\$3,452.00	n/a	n/a	155	\$1,087.00	123	\$3,248.00
Special Warranty Deed	n/a	n/a	108	\$2,858.00	125	\$3,275.00	n/a	n/a
Substitute Trustee Deed	69	\$1,749.00	108	\$2,808.00	100	\$2,600.00	54	\$1,404.00
Trustees Deed	57	\$1,426.00	60	\$1,560.00	55	\$1,430.00	53	\$1,378.00
Warranty Deed	1,826	\$47,074.00	1,749	\$45,553.00	1,904	\$49,861.00	1,983	\$52,005.00
TOTAL	2,233	\$57,415.00	2,233	\$58,260.00	2,499	\$62,645.00	2,384	\$61,481.00

Note: "n/a" means not provided in source documentation

¹: Includes January 1, 2014 through August 26, 2014

Source: Personal communication, Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department, to Sheila S. Pfaender, Public Health Consultant, September 14, 2015

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 recent (August, 2015) income data for Wilkes County and its comparators. Among these jurisdictions:

- Projected 2014 per capita personal income in Wilkes County was \$5,792 *lower* than the comparable state average.

- Projected 2014 median household income in Wilkes County was \$11,305 *lower* than the comparable state average.
- Estimated 2013 median family income in Wilkes County was \$14,845 *lower* than the comparable state average.

**Table 21. Income Measures
(August, 2015)**

Location	2014 Projected Per Capita Income ¹	Per Capita Income Difference from State	2014 Projected Median Household Income ²	Median Household Income Difference from State	2013 Est Median Family Income ²	Median Family Income Difference from State
Wilkes County	\$19,492	-\$5,792	\$35,029	-\$11,305	\$42,083	-\$14,845
Surry County	\$19,918	-\$5,366	\$35,574	-\$10,760	\$44,788	-\$12,140
State of NC	\$25,284	n/a	\$46,334	n/a	\$56,928	n/a

¹ State number comes from the US Census Bureau, American Fact Finder. Table B19301: Per Capita Income in the Past 12 Months. 2013 ACS 5-Year Estimates. <http://factfinder2.census.gov>

² State number comes from the US Census Bureau, American Fact Finder. Table S1903: Median Income in the Past 12 Months. 2013 ACS 5-Year Estimates. <http://factfinder2.census.gov>

Source: NC Department of Commerce, AccessNC, Community Demographics, County Report, County Profile, <http://accessnc.commerce.state.nc.us/EDIS/page1.html>.

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 Wilkes County and its jurisdictional comparators for 2014, showing the number employed in each sector, the percentage of all employment that that number represents, and the average annual wage for people employed in each sector.

- The industry in Wilkes County that employed the largest percentage of the workforce (23.09%) was Manufacturing, with an average weekly wage of \$673.
- The Retail Trade sector accounted for the second largest percentage of the Wilkes County workforce, at 13.61% (average weekly wage of \$454), followed closely by Health Care and Social Assistance at 12.84% (average weekly wage of \$622).
- Statewide, the sector employing the largest percentage of the workforce was Health Care & Social Assistance (14.29%), followed by Retail Trade (11.79%) and Manufacturing (11.06%).
- The average weekly wage for all sectors in Wilkes County was \$646, \$288 less than the average weekly wage for all sectors in NC as a whole (\$934).

**Table 22. Insured Employment and Wages by Sector
(Annual Summary, 2014)**

Sector	Wilkes County			Surry 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	164	0.87	\$523	175	0.64	\$1,589	28,754	0.71	\$616
Mining	*	*	*	54	0.20	\$1,073	2,867	0.07	\$934
Utilities	43	0.23	\$1,115	118	0.43	\$1,077	14,905	0.37	\$1,625
Construction	527	2.81	\$650	2,526	9.28	\$963	178,986	4.41	\$876
Manufacturing	4328	23.09	\$673	3,806	13.98	\$661	448,623	11.06	\$1,061
Wholesale Trade	789	4.21	\$889	774	2.84	\$735	176,928	4.36	\$1,282
Retail Trade	2552	13.61	\$454	3,964	14.56	\$443	478,478	11.79	\$504
Transportation & Warehousing	421	2.25	\$835	1,320	4.85	\$716	132,682	3.27	\$886
Information	188	1.00	\$889	251	0.92	\$701	73,577	1.81	\$1,411
Finance & Insurance	329	1.75	\$972	588	2.16	\$870	153,707	3.79	\$1,635
Real Estate & Rental & Leasing	181	0.97	\$737	176	0.65	\$519	52,383	1.29	\$841
Professional, Scientific & Technical Services	411	2.19	\$908	351	1.29	\$914	210,768	5.19	\$1,388
Management of Companies & Enterprises	*	*	*	*	*	*	80,461	1.98	\$1,919
Administrative & Waste Services	582	3.10	\$451	1,844	6.77	\$385	284,159	7.00	\$622
Educational Services	2231	11.90	\$601	2,281	8.38	\$629	370,960	9.14	\$795
Health Care & Social Assistance	2408	12.84	\$622	4,124	15.14	\$658	579,594	14.29	\$880
Arts, Entertainment & Recreation	*	*	*	231	0.85	\$301	65,625	1.62	\$584
Accommodation & Food Services	1859	9.92	\$253	2,432	8.93	\$256	382,672	9.43	\$300
Other Services	477	2.54	\$361	829	3.04	\$524	102,771	2.53	\$587
Public Administration	1258	6.71	\$703	1,390	5.10	\$626	238,343	5.87	\$859
TOTAL ALL SECTORS	18,748	100.00	\$646	27,234	100.00	\$802	4,057,243	100.00	\$934

Source - NC Employment Security Commission, Labor & Economic Analysis Division (LEAD), 4D website. Quarterly Census Employment and Wages (QCEW), 2014 Annual. <http://esesc23.esc.state.nc.us/d4/>

* - 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 Wilkes County as of the end of the 4th Quarter, 2014.

- Three of the employers listed—Tyson Farms, Inc., Lowe’s Companies, Inc., and the Wilkes County Board of Education—employed more than 1,000 people.
- Three employers listed employed between 500 and 999 people; the others in the list each employed fewer than 500 people.

**Table 23. Largest 25 Employers in Wilkes County
(Fourth Quarter, 2014)**

Rank	Employer	Industry	No. Employed
1	Tyson Farms Inc	Manufacturing	1000+
2	Lowe's Companies Inc	Professional & Business Services	1000+
3	Wilkes County Board of Education	Education & Health Services	1000+
4	Wilkes Regional Medical Center	Education & Health Services	500-999
5	Wilkes County	Public Administration	500-999
6	Wilkes Community College	Education & Health Services	500-999
7	Louisiana-Pacific Corporation	Manufacturing	250-499
8	Lowe's Home Centers Inc	Trade, Transportation & Utilities	250-499
9	Wal-Mart Associates Inc	Trade, Transportation & Utilities	250-499
10	Tyson Poultry Inc	Manufacturing	250-499
11	NC Department of Transportation	Public Administration	100-249
12	Holly Mtn Enterprises	Trade, Transportation & Utilities	100-249
13	East Coast Millwork Dist Inc	Trade, Transportation & Utilities	100-249
14	Principle Long Term Care Inc	Education & Health Services	100-249
15	Carolina Resource Management LLC	Professional & Business Services	100-249
16	Wilkes Senior Village	Education & Health Services	100-249
17	Food Lion	Trade, Transportation & Utilities	100-249
18	Manzella Knitting & Company LLC	Manufacturing	100-249
19	Gardner Glass Products Inc	Manufacturing	100-249
20	Lowe's Foor Stores Inc	Trade, Transportation & Utilities	100-249
21	Suncrest Farms Country Hams Inc.	Manufacturing	100-249
22	The Interflex Group	Manufacturing	100-249
23	Culinary Services Group LLC	Leisure & Hospitality	100-249
24	Plycem Usa Inc	Manufacturing	100-249
25	Home Instead Senior Care	Education & Health Services	100-249

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 or not a county provides adequate employment opportunities for its own citizens.

- According to the estimate for 2009-2013 shown in the table below, 76.7% of Wilkes County resident workers were employed within the county.

**Table 24. Place of Work for Resident Workers Age 18 and Older
(Five-Year Estimate, 2009-2013)**

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	Total % Leaving County for Work
Wilkes County	25,733	25,609	99.5	19,733	76.7	5,876	22.8	124	0.5	6,000	23.3
Surry County	30,334	29,390	96.9	21,097	69.5	8,293	27.3	944	3.1	9,237	30.5
State of NC	4,227,986	4,121,984	97.5	3,039,407	71.9	1,082,577	25.6	106,002	2.5	1,188,579	28.1

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

Source: US Census Bureau, American Fact Finder, American Community Survey, 2013 ACS 5-Year Estimate, Table B08007: Sex of Workers by Place of Work, State and County Level; <http://factfinder2.census.gov>.

Modes of Transportation to Work

Besides serving as an indicator of environmental concern, 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 a Census Bureau estimate for 2009-2013.

In Wilkes County:

- Very few workers used public transportation to get to work in 2000, but the number for 2009-2013 was higher.
- The number of workers who carpoled decreased 35% between 2000 and 2009-2013.
- The number of workers who walked to work, while relatively small, increased 27% over the period cited.
- The number of workers who worked at home decreased 14% over the same period.

**Table 25. Modes of Transportation to Work
(2000 Count and 2009-2013 Five -Year Estimate, US Census Bureau)**

Location	Number of Persons											
	Drove Alone		Carpooled		Used Public Transportation		Walked		Taxicab, motorcycle, bicycle or other means		Worked at Home	
	2000	2009-2013	2000	2009-2013	2000	2009-2013	2000	2009-2013	2000	2009-2013	2000	2009-2013
Wilkes County	24,740	21,250	5,088	3,284	15	86	289	366	147	94	762	653
Surry County	26,234	25,644	5,511	2,489	19	194	465	204	407	249	822	700
State of NC	3,046,666	3,428,471	538,264	439,219	29,716	45,765	74,147	76,768	46,029	53,414	102,951	184,349

Source: a - US Census Bureau, American Fact Finder, 2000 US Census Data Sets, Summary File 3, Detailed Tables, Means of Transportation to Work for Workers 16 Years and Over; <http://factfinder2.census.gov>.
b - US Census Bureau, American Fact Finder, American Community Survey, 2013 ACS 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

Public Transportation in Wilkes County

WTA is public transportation and is authorized to operate within the state of North Carolina under guidance from the Department of Transportation. WTA is a non-profit organization dedicated to providing safe, reliable, and efficient transportation options to the general public and is not affiliated with any other government body or agency.

Wilkes Transportation Authority provides multiple transportation options for residents of Wilkes County, specializing in offering transportation alternatives to those with limited options in rural communities. Wilkes Transportation Authority can provide trips to anywhere in the state of North Carolina.

Public transportation fares within Wilkes County range from \$2-\$24, determined on the basis of “zonal rings” that are pre-determined distances from a central point.

All WTA drivers are certified in first aid and defensive driving, are trained to current driving standards, and are randomly drug tested. All WTA vehicles are regularly maintained, and are handicap-accessible to Americans with Disabilities Act standards. For safety and efficiency, all vehicles have two-way radios and are properly maintained. Most vehicles are equipped to board upright wheelchairs.

WTA offers both **on demand** and **set-schedule express shuttle** services. On-demand services are provided when the user calls in advance to schedule service. On-demand travel must be completed during the same business day. On-demand WTA services observe regular service hours (6:00 AM to 6:00 PM Monday through Friday), extended service hours (before 6:00 AM and after 6:00 PM weekdays, and weekend service), holiday services (on nationally recognized holidays) and rural general public service inside Wilkes County. Fare rates vary by category of service and travel zone.

Express shuttle services operate on a fixed schedule and operate fixed routes serving specific locations including commercial establishments such as Walmart and Lowe’s Foods, workplaces such as Tyson Foods, group housing such as apartment complexes, and public organizations and agencies such as Wilkes Community College, Wilkes County Library, and the Federal Building and Post Office. Intra-route stops are available to passengers on any route, and stops at other locations within ¼ mile of a fixed route are possible, but must be pre-arranged. Shuttle service operates on Monday through Friday only (7).

The first table below summarizes current (2015) WTA equipment. The second table summarizes WTA ridership for FY2012-2013 through FY2014-2015.

Table 26. Wilkes Transportation Authority (WTA) Vehicles and Capacity (August, 2015)

	Number	Capacity
7-passenger Vans	1	7
8-passenger Vans	22	176
10-passenger Vans	2	20
Total	25	203

Source: Rachel Willard, Wilkes County health Department, to Sheila S. Pfaender, Public Health Consultant, August 14, 2015.

Table 27. Wilkes Transportation Authority (WTA) Ridership

	FY2012-13	FY2013-14	FY2014-15
Total Miles	719,440	558,353	561,490
Total Passengers	78,879	58,972	58,912
Cost per Mile	\$1.43	\$2.21	\$1.65

Source: Rachel Willard, Wilkes County health Department, to Sheila S. Pfaender, Public Health Consultant, August 14, 2015.

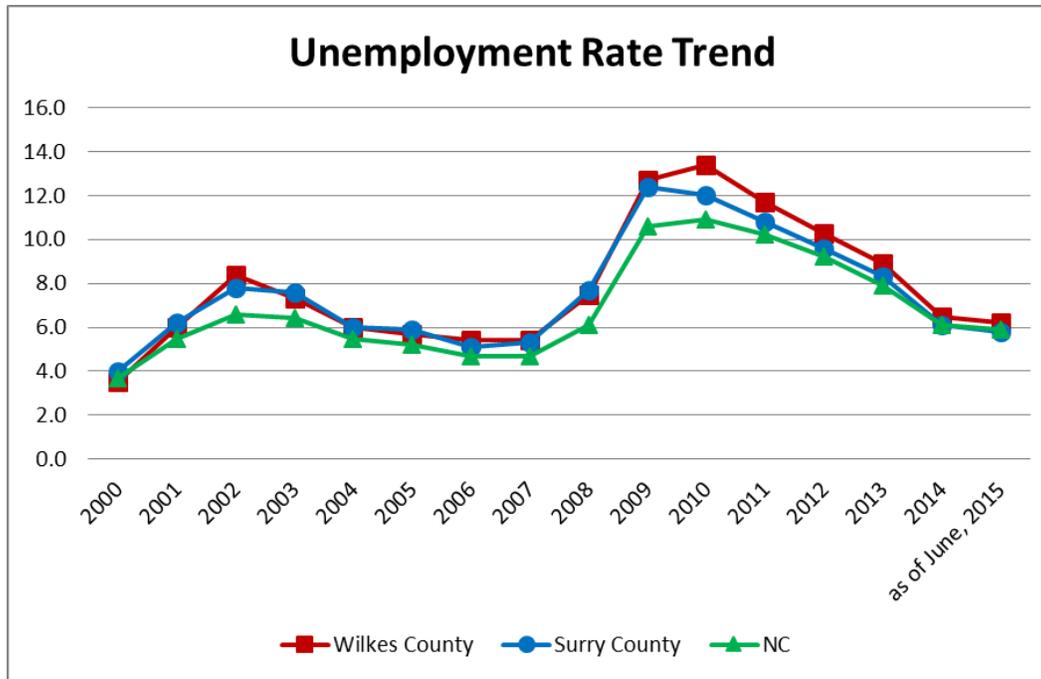
Unemployment

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

- Beginning after 2008, the unemployment rate rose significantly in all three jurisdictions. Unemployment in Wilkes County and NC as a whole began to decline after 2010, a year after the decline began in Surry County. The declines continue at the present time, although they have slowed appreciably in all three jurisdictions.

- The latest (June, 2015, un-plotted) annual unemployment rate for Wilkes County (6.2%) was slightly higher than the state rate of 5.9% (8).

**Figure 5. Annual Unemployment Rate
(2000 - June, 2015)**



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: North Carolina Department of Commerce, Labor and Economic Analysis Division (LEAD), D4 - Demand Driven Data Delivery System. Local Area Unemployment Statistics (LAUS) - Unemployment Rate.
<http://esesc23.esc.state.nc.us/d4/>

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 decadal poverty rate for the period from 1970 through 2000 and the estimated poverty rate for four five year periods: 2006-2010 through 2009-2013. 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 Wilkes County, the poverty rates after 2000 were almost all higher than the rates for 2000 or earlier.
- In Wilkes County as in the state of NC, the poverty rate fell each decade from 1970 through 2000, but rose after that in every period cited.

**Table 28. Annual Poverty Rate
(1970-2000; 2006-2010 through 2009-2013 Five-Year Estimates)**

Location	Percent of All People in Poverty							
	1970	1980	1990	2000	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	22.2	13.8	13.3	11.9	19.2	21.7	22.4	22.7
Surry County	17.8	13.7	11.4	12.4	16.9	18.0	18.3	19.9
State of NC	20.3	14.8	13.0	12.3	15.5	16.1	16.8	17.5
Source:	a	a	a	a	b	b	b	b

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Item 6094);

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

b - US Census Bureau, American Fact Finder, American Community Survey, 2010 through 2013 ACS 5-Year Estimates, Table DP03: Selected Economic Characteristics, County, North Carolina (Jurisdictions as listed); <http://factfinder2.census.gov/>.

The next table presents poverty data stratified by broad racial group (white/black) for the decades from 1980 through 2000, and stratified by white/black/Hispanic for four five-year aggregates from 2006-2010 through 2009-2013.

- Across all time periods and in all jurisdictions cited, the poverty rate among blacks was higher than the poverty rate among whites.
- In Wilkes County over the seven periods shown the poverty rate for blacks averaged 1.6 times the poverty rate for whites.
- The poverty rate among Hispanics in Wilkes was consistently higher than the comparable rate for whites *and* for blacks. Over the four periods shown the poverty rate for Hispanics averaged 2.3 times the poverty rate for whites.

**Table 29. Persons in Poverty, by Race
(1980-2000; 2006-2010 through 2009-2013 Five-Year Estimates)**

Location	1980				1990				2000			
	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty
Wilkes County	8,013	13.8	13.4	21.7	7,797	13.3	13.0	19.0	7,662	11.9	11.2	20.9
Surry County	8,042	13.7	13.2	22.1	6,956	11.4	10.9	18.0	8,685	12.4	10.6	26.0
State of NC	839,950	14.8	10.0	30.4	829,858	13.0	8.7	27.1	958,667	12.3	8.5	22.9

Source: Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6096, 6098); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

Location	2006-2010					2007-2011				
	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	% Hisp/Lat in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	% Hisp/Lat in Poverty
Wilkes County	13,081	19.2	17.2	28.5	44.9	14,775	21.7	20.0	26.4	42.3
Surry County	12,197	16.9	15.3	28.4	28.4	13,053	18.0	16.5	32.4	29.2
State of NC	1,399,945	15.5	11.2	25.6	29.8	1,473,556	16.1	11.8	26.1	31.5

Location	2008-2012					2009-2013				
	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	% Hisp/Lat in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	% Hisp/Lat in Poverty
Wilkes County	15,319	22.4	20.6	31.6	41.0	15,497	22.7	20.4	30.9	48.2
Surry County	4,025	43.9	16.7	34.5	34.2	14,383	19.9	18.1	40.4	44.5
State of NC	1,536,464	16.8	12.5	26.8	33.3	1,643,389	17.5	13.3	27.6	34.0

Source: US Census Bureau, American Fact Finder, American Community Survey, 2010 through 2013 American Community Surveys 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov/>.

The following table presents poverty data stratified by age group. Note that the youngest age category is defined somewhat differently in the two hemi-tables, so the summary data below focuses only on the data from the four aggregate periods. From these data it is apparent that children suffer disproportionately from poverty.

- In all jurisdictions 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 Wilkes County was 50% higher than the overall poverty rate.
- The poverty rate for children under the age of or 5 varied even more significantly from the overall rate. For the four aggregate periods cited the average poverty rate for children under age 5 in Wilkes County was 80% higher than the overall poverty rate.

**Table 30. Persons in Poverty, by Age
(1980-2000; 2006-2010 through 2009-2013 Five-Year Estimates)**

Location	1980				1990				2000			
	Total % in Poverty	% Children Under 6 in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Children Under 6 in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Children Under 6 in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty
Wilkes County	13.8	11.9	14.6	35.2	13.3	17.0	13.5	29.1	11.9	16.3	13.2	17.2
Surry County	13.7	18.5	15.4	25.5	11.4	13.4	12.5	22.9	12.4	17.5	15.0	17.4
State of NC	14.8	19.7	18.3	23.9	13.0	19.1	16.9	19.5	12.3	17.8	15.7	13.2

Source: Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6100, 6102, 6104); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show

Location	2006-2010				2007-2011				2008-2012				2009-2013			
	Total % in Poverty	% Related Children Under 5 in Poverty	% Related Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Related Children Under 5 in Poverty	% Related Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Related Children Under 5 in Poverty	% Related Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Related Children Under 5 in Poverty	% Related Children Under 18 in Poverty	% Adults 65 or Older in Poverty
Wilkes County	19.2	36.2	27.2	14.4	21.7	37.8	31.8	13.8	22.4	37.0	32.3	14.3	22.7	39.3	33.0	13.3
Surry County	16.9	28.3	22.4	15.5	18.0	21.8	24.3	16.2	18.3	29.3	23.6	15.1	19.9	34.3	27.5	15.4
State of NC	15.5	25.5	21.3	10.7	16.1	26.4	22.3	10.3	16.8	28.0	23.5	10.2	17.5	29.1	24.6	10.0

Source: US Census Bureau, American Fact Finder, American Community Survey, 2010, 2011, 2012, 2013 American Community Survey 5-Year Estimates. DP03 Selected Economic Characteristics (Counties as listed); <http://factfinder2.census.gov>

Children Receiving Free or Reduced-price School Lunch

One measure of poverty among children is the percent of school-age children who are eligible for and receive free or reduced-price school lunch.

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 Wilkes County LEA exceeded the NC average in every period cited.

**Table 31. Percent of Students Eligible for Free or Reduced-Price School Lunch (“Needy”)
(SY2006-07 through SY2013-14)**

Location	% of Students Determined to be "Needy"							
	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13	SY2013-14
Wilkes County	56.61	56.92	58.93	62.26	63.37	65.93	67.12	68.03
Surry County	53.65	56.19	57.58	61.12	58.77	65.47	66.29	64.64
Elkin City Schools	32.62	33.23	35.02	39.60	40.95	43.49	43.13	45.51
Mount Airy City Schools	50.79	55.60	57.72	57.43	60.98	60.94	63.95	69.30
State of NC	48.46	48.39	49.85	53.68	53.86	55.94	56.14	57.56

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 US Census Bureau data on housing by type in the jurisdictions being compared. This data covers two aggregate periods: 2006-2010 and 2009-2013.

- There were higher estimated proportions of vacant housing units in Wilkes County than in NC as a whole during both periods cited.
- Of the estimated total occupied housing units in Wilkes County, approximately 74% were owner-occupied and 26% were renter-occupied.
- In Wilkes County approximately 26% of all housing units were classified as mobile homes, a figure 86% higher than the NC average of 14%.

**Table 32. Housing by Type
(2006-2010 and 2009-2013 Five-Year Estimates)**

Location	2006-2010 Estimate											
	Total Housing Units		Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Renter Occupied Units		Mobile Home Units	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	
Wilkes County	32,605	4,791	14.7	27,814	85.3	20,658	74.3	7,156	25.7	8,601	26.4	
Surry County	33,374	3,706	11.1	29,668	88.9	22,037	74.3	7,631	25.7	8,269	24.8	
State of NC	4,229,552	603,373	14.3	3,626,179	85.7	2,468,489	68.1	1,157,690	31.9	605,418	14.3	

Location	2009-2013 Estimate											
	Total Housing Units		Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Renter Occupied Units		Mobile Home Units	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	
Wilkes County	32,916	5,404	16.4	27,512	83.6	20,339	73.9	7,173	26.1	8,445	25.7	
Surry County	33,514	3,547	10.6	29,967	89.4	21,807	72.8	8,160	27.2	8,164	24.4	
State of NC	4,349,023	633,458	14.6	3,715,565	85.4	2,466,388	66.4	1,249,177	33.6	593,510	13.6	

Source - US Census Bureau, American Fact Finder, American Community Survey, 2010 and 2013 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 2009-2013.

- In the periods cited the average estimated median monthly gross rent in Wilkes County was \$568, \$200 lower than the state average of \$768. Over the same period the average estimated monthly mortgage cost in Wilkes County was \$1,026, \$258 lower than the state average of \$1,284.
- The average percentage of renter occupied units in Wilkes County spending more than 30% of household income on housing in the periods cited was 53%, 4% *higher* than the state average of 51%. Over the same period the average percentage of mortgaged housing units in Wilkes County spending more than 30% of household income on housing was 37%, 16% *higher* than the state average of 32%.

**Table 33. Estimated Housing Cost as Percent of Household Income
(2008-12 and 2009-2013 Five-Year Estimates)**

Location	Renter Occupied Units							
	2008-2012				2009-2013			
	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
		#	%			#	%	
Wilkes County	6,012	3,146	52.4	\$562	5,892	3,182	54.0	\$573
Surry County	6,750	3,285	48.7	\$549	6,577	3,232	49.1	\$591
State of NC	1,095,577	554,428	50.6	\$759	1,125,192	574,369	51.0	\$776

Location	Mortgaged Housing Units							
	2008-2012				2009-2013			
	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
		#	%			#	%	
Wilkes County	10,095	3,886	38.5	\$1,030	9,942	3,619	36.4	\$1,021
Surry County	11,691	3,393	29.0	\$1,054	11,456	3,374	29.5	\$1,046
State of NC	1,658,483	539,993	32.6	\$1,287	1,636,185	523,069	31.9	\$1,281

¹ - The total units is the number of occupied units paying rent or mortgage for which the percentage of household income being spent on housing costs can be computed. It does not equal the total number of occupied housing units.
Source: US Census Bureau, American FactFinder. 2012, 2013 ACS 5-Year Estimates. Table DP04: Selected Housing Characteristics (geographies as listed). <http://factfinder2.census.gov>.

Affordable Housing

According to information from the NC Rural Economic Development Center based on 2006-2010 US Census data estimates, 28% of housing in Wilkes County was classified as “unaffordable”, compared to 26% in Surry County and 32% statewide (9). This data is at least partially reflective of the population living in households that pay more than 30% of the household income for housing costs.

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 (PHA) offices throughout NC. The HUD Field Office in North Carolina is located in Greensboro (10), and the public housing agency (PHA) office in North Wilkesboro can assist Wilkes County residents in accessing HUD services (11).

At the time this report was developed in February, 2016, there were four single-family HUD-subsidized homes available in Wilkes County, one in Boomer, one in Linwood, one in Roaring River, and one in Jonesville (12). In addition, there were seven affordable apartment options listed for the county, six in North Wilkesboro and one in Wilkesboro (13).

The US Department of Agriculture (USDA) catalogues information about rental properties available in rural areas. The agency’s Multi-Family Housing (MFH) Rental website provides an online guide to government-assisted rental projects. At the time this report was developed, the MFH website listed five qualifying rental properties in Wilkes County, two in North Wilkesboro and three in Wilkesboro (14).

Homelessness

According to data from the NC Housing Coalition, there is at the present time one homeless shelter in Wilkes County: the Catherine H. Barber Memorial Shelter in North Wilkesboro, a 501c-3 organization that provides temporary overnight shelter to anyone who is homeless. The clients get a safe place to rest, bathing facilities, washing facilities, and food is also available. A limit of 14 days is imposed to ensure that clients are seeking permanent shelter (15). The table below presents an annual summary of utilization data for this shelter.

Table 34. Catherine H. Barber Memorial Shelter Utilization Data (2010-2015)

Year	Total Annual Occupancy
2010	100
2011	161
2012	203
2013	177
2014	180
2015 (Jan-August 12)	230

Note: Total occupancy of the facility is 10 persons; average daily occupancy is 4-5 persons.

Source: Personal communication from Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department to Sheila Pfaender, Public Health Consultant; August 14, 2015.

The NC Coalition to End Homelessness assists local jurisdictions in conducting an annual “point-in-time” survey of homeless persons every autumn. No PiT homeless data was submitted from Wilkes County in either 2014 or 2015 (16).

HOUSEHOLDS

The following table describes households in the three comparator jurisdictions.

- The average number of persons per household in Wilkes County—2.48—was slightly lower than the state average of 2.53.
- The percent of one-person households in Wilkes County—25.9%—was lower than the comparable figure for the state as a whole (27.8%).
- The percent of one-person households where the resident is age 65 or older in Wilkes County—12.2%—was higher than the comparable state average of 9.5%.

**Table 35. Household Characteristics
(2009-2013 5-Year Estimate)**

Location	Total No. Households ¹	Average Persons per Household	% Households One-person	% One-person Households ≥Age 65
Wilkes County	27,512	2.48	25.9	12.2
Surry County	29,967	2.42	28.6	13.2
State of NC	3,715,565	2.53	27.8	9.5

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, American Community Survey, 2013 ACS 5-Year Estimates, Table S1101: Households and Families. <http://factfinder2.census.gov>.

Single-Parent Families

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

- Of the total households in Wilkes County in the 2009-2013 period, 55% were married couple family households, 4% were male householder family households, and 11% were female householder family households.
- Of the 1,054 male householder family households in Wilkes County, 596 (56.5%) included children under the age of 18. Of the 3,033 female householder family households, 1,491 (49.2%) included children under the age of 18.

**Table 36. Single-Parent Families
(2009-2013 ACS 5-Year Estimate)**

Location	Total Households ¹	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
Wilkes County	27,512	15,266	5,261	34.5	1,054	596	56.5	3,033	1,491	49.2
Surry County	29,967	15,511	5,329	34.4	1,187	490	41.3	3,617	1,903	52.6
State of NC	3,715,565	1,802,864	706,106	39.2	163,103	84,199	51.6	506,921	293,665	57.9
	a	a	a	b	a	a	b	a	a	b

a - US Census Bureau, American Fact Finder, 2013 ACS, Table S1101: Households and Families (geographies as noted).

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

b - Calculated

Grandparents Responsible for Minor Children

The following table presents data on grandparents with responsibility for minor children. Data on grandparents as primary caregivers were derived from US Census Bureau American Community Survey questions. 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 Wilkes County for the period cited, an estimated 67.4% of grandparents living with their minor grandchildren were also responsible for their care. This was by far the highest figure among the comparators.

**Table 37. Grandparents with Responsibility for Minor Children
(Five-Year Estimate, 2009-2013)**

Location	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*	
		Est. #	%
Wilkes County	1,649	1,111	67.4
Surry County	1,514	907	59.9
State of NC	206,632	100,422	48.6

Source: US Census Bureau, American FactFinder, American Community Survey, 2013 5-Year Estimates. Selected Social Characteristics in the United States (DP02); <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 (17).

In 1999, the NC Division of Child Development began issuing “star rated” licenses to all eligible Child Care Centers and Family Child Care Homes. NC’s Star Rated License System gave from one to five stars to child care programs based on how well they were doing in providing quality child care. A rating of one star meant that a child care program met the state’s minimum licensing standards for child care. Programs that chose to voluntarily meet higher standards could apply for a two to five star license. (Note: Religious-sponsored child care programs could opt to continue to operate with a notice of compliance and not receive a star rating.)

Three areas of child care provider performance were assessed in the star system: program standards, staff education, and compliance history. Each area had a range of one through five points. The star rating was based on the total points earned for all three areas.

Then, in 2005, the way facilities were evaluated was changed 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 their 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 table below:

- Of the 35 licensed child care centers in Wilkes County at the time of this report, 19 (54%) were five-star facilities and two (6%) were four-star facilities.
- Of the 17 licensed family child care homes in Wilkes County at the time of this report, one (6%) was a five-star facility and two (12%) were four-star facilities.

Table 38. NC-Licensed Child Care Facilities in Wilkes County (January, 2014)

Type of Facility	Number
Child Care Centers (35)	
Five-star	19
Four-star	2
Three-star	7
Two-star	0
One-star	0
GS 110-106 (Church-affiliated)	4
Temporary	3
Family Child Care Homes (17)	
Five-star	1
Four-star	2
Three-star	5
Two-star	6
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>.

The next table presents total enrollment summaries for NC-regulated child care facilities in Wilkes County and its comparators for 2008 through 2011.

**Table 39. Children Enrolled in NC-Regulated Child Care
(2008-2011)**

Location	No. Children (0-5) Enrolled in Child Care Centers				No. Children (0-12) Enrolled in Family Care Homes			
	2008	2009	2010	2011	2008	2009	2010	2011
Wilkes County	1,181	1,058	1,066	1,209	151	160	139	125
Surry County	1,280	1,212	1,232	1,520	136	122	133	108
State of NC	172,717	168,953	169,852	194,632	15,354	14,936	14,384	13,321

Source: Annie E. Casey Foundation, Kids Count Data Center, Community Level Data, North Carolina Indicators;
<http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=NC>.

EDUCATION

Higher Education

There is one college-level educational institution in Wilkes County: Wilkes Community College.

Wilkes Community College (WCC). Wilkes Community College, a member of the North Carolina Community College system, is a public, two-year, open-door institution serving the people of Wilkes, Ashe and Alleghany counties and beyond. In addition to its main campus in Wilkesboro, WCC operates satellite campuses in Jefferson (Ashe County) and Sparta (Alleghany County). WCC's mission is to provide:

- Quality education and workforce development, including basic-skills, occupational, technical and pre-baccalaureate programs;
- Economic development services to business and industry, both public and private;
- Community development through a variety of services, cultural activities and recreational opportunities.

WCC is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas, and certificates. The WCC Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon recommendation of the Medical Assisting Education Review Board (MAERB).

WCC has six academic divisions: Arts and Sciences, Business and Public Service Technologies, Continuing Education, Health Sciences, Industrial and Workforce Development, and Basic Skills. The college offers the following:

- Associate in Arts degrees leading to transfer to senior institutions
- Associate in Applied Science degrees, Diplomas, and Certificates leading to employment
- Non-credit (Continuing Education) programs leading to employment (18).

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 Wilkes County Local Educational Authority (LEA): Wilkes County Schools.

There is one public charter school in Wilkes County, serving students in kindergarten through eighth grade (19). In addition, there are three private schools in Wilkes County, all of them religiously affiliated (20).

**Table 40. Public Schools in the Wilkes County LEA
(SY2012-13)**

School	Location	School Type/Calendar	Grade Range
Boomer-Ferguson Elementary	Boomer	Regular School, Traditional Calendar	PK-5
CB Eller Elementary	Elkin	Regular School, Traditional Calendar	PK-5
CC Wright Elementary	North Wilkesboro	Regular School, Traditional Calendar	PK-5
Central Wilkes Middle	Moravian Falls	Regular School, Traditional Calendar	6-8
East Wilkes High	Ronda	Regular School, Traditional Calendar	9-12
East Wilkes Middle	Ronda	Regular School, Traditional Calendar	6-8
Millers Creek Elementary	Millers Creek	Regular School, Traditional Calendar	PK-5
Moravian Falls Elementary	Moravian Falls	Regular School, Traditional Calendar	PK-5
Mount Pleasant Elementary	Ferguson	Regular School, Traditional Calendar	PK-5
Mountain View Elementary	Hays	Regular School, Traditional Calendar	PK-5
Mulberry Elementary	North Wilkesboro	Regular School, Traditional Calendar	PK-5
North Wilkes High	Hays	Regular School, Traditional Calendar	9-12
North Wilkes Middle	North Wilkesboro	Regular School, Traditional Calendar	6-8
North Wilkesboro Elementary	North Wilkesboro	Regular School, Traditional Calendar	PK-5
Roaring River Elementary	Roaring River	Regular School, Traditional Calendar	PK-5
Ronda-Clingman Elementary	Ronda	Regular School, Traditional Calendar	PK-5
Traphill Elementary	Traphill	Regular School, Traditional Calendar	PK-5
West Wilkes High	Millers Creek	Regular School, Traditional Calendar	9-12
West Wilkes Middle	Wilkesboro	Regular School, Traditional Calendar	6-8
Wilkes Central High	Wilkesboro	Regular School, Traditional Calendar	9-12
Wilkes Early College High	Wilkesboro	Regular School, Traditional Calendar	9-13
Wilkesboro Elementary	Wilkesboro	Regular School, Traditional Calendar	PK-5
Bridges Academy	State Road	Charter School, Traditional Calendar	K-8

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards, School Year 2012-13; <http://www.ncreportcards.org/src>. Note that the referenced source maintains archive data only. Similar, recent data is not available at this site.

The table below summarizes data on the three private schools in Wilkes County

**Table 41. Private Schools in Wilkes County
(SY2012-2013)**

School	Location	School Type/Calendar	Grade Range
Gordon Baptist Christian School	North Wilkesboro	Religious Day School (41 students)	K-12
Harvest Time Christian Academy	Wilkesboro	Religious Day School (54 students)	K-11
Millers Creek Christian School	Millers Creek	Religious Day School (155 students)	K-12

Source: 2013 North Carolina Directory of Non-Public Schools; <http://www.ncdnpe.org/documents/12-13-CS-Directory.pdf>.

School enrollment figures in Wilkes County decreased annually in most years from SY2006-07 through SY2012-13, as seen in the table below.

**Table 42. K-12 Public School Enrollment
(SY2006-07 through SY2012-13)**

Location	Number of Students						
	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13
Wilkes County Schools	10,296	10,294	10,239	10,088	10,124	10,103	10,013
Surry County Schools	8,956	8,864	8,862	8,762	8,705	8,602	8,527
Elkin City Schools	1,237	1,264	1,233	1,177	1,206	1,210	1,225
Mount Airy City Schools	1,792	1,718	1,643	1,640	1,661	1,677	1,737
State of NC	1,452,420	1,458,156	1,456,558	1,446,650	1,450,435	1,458,572	1,467,297

Source: NC Department of Public Instruction, Data and Statistics, Education Data: NC Statistical Profile. NC Statistical Profile Online: Local Education Agencies Information, Pupil Accounting. <http://apps.schools.nc.gov/pls/apex/f?p=1:1:497147721913602>.

Educational Attainment

The next table presents data on several measures of educational attainment. It should be noted that SY2012-13 was the first year of implementation of NC's new statewide Standard Course of Study, new assessments, and a new school accountability model. As a result, student performance data from SY2012-13 is very different from, and is not directly comparable to, similar data from previous years.

- As of a 2009-2013 US Census Bureau estimate, both Wilkes County and Surry County had significantly lower percentages of residents with a high school diploma or higher and residents with a bachelor's degree or higher than NC as a whole.
- According to SY2013-14 End of Grade (EOG) Test results, third-graders and eighth-graders in Wilkes County public schools demonstrated grade-appropriate proficiency in reading and math at *lower* percentages than students statewide.
- In SY2013-14 the average total SAT score for students in Wilkes County Schools (988) was slightly below the average total SAT score for students statewide (994).

Table 43. Educational Attainment

Location	% Population High School Graduate or Higher ¹	% Population Bachelor's Degree or Higher ¹	% 3rd Graders Grade Level Proficient on EOG Reading Test	% 3rd Graders Grade Level Proficient on EOG Math Test	% 8th Graders Grade Level Proficient on EOG Reading Test	% 8th Graders Grade Level Proficient on EOG Math Test	SAT Participation Rate	Average Total SAT Scores
	2009-2013	2009-2013	SY2013-14	SY2013-14	SY2013-14	SY2013-14	SY2013-14	SY2013-14
Wilkes County Schools	74.2	12.5	54.5	56.3	50.9	39.9	32%	988
Surry County Schools	75.3	15.0	62.9	65.2	52.6	42.6	27%	999
Elkin City Schools	n/a	n/a	72.4	75.5	65.3	39.6	21%	1,018
Mount Airy City Schools	n/a	n/a	62.5	55.8	60.7	42.7	48%	1,017
State of NC	84.9	27.3	60.2	60.9	54.2	42.2	53%	994

Source: a - US Census Bureau, American Fact Finder, American Community Survey, 2009-2013 American Community Survey (ACS) 5-Year Estimates, Table DP02: Selected Social Characteristics, Educational Attainment, by State or County; <http://factfinder.census.gov>
b - NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. District Profile. <http://www.ncpublicschools.org/src/>

¹ Refers to the population aged 25 years and older

Educational Expenditures

The next table presents data on local, state and federal expenditures on education.

- In SY2013-14 the total per-pupil expenditure (the sum of Federal, state and local investments) in public schools in Wilkes County was \$150 lower than the state average.
- 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 44. Educational Expenditures
(SY2013-14)**

Location	Average Per Pupil Expenditure			
	Local	State	Federal	Total
Wilkes County Schools	\$1,666	\$5,576	\$1,062	\$8,304
Surry County Schools	\$1,554	\$5,765	\$1,117	\$8,436
Elkin City Schools	\$1,940	\$6,417	\$875	\$9,232
Mount Airy City Schools	\$2,070	\$6,025	\$1,435	\$9,530
State of NC	\$2,103	\$5,386	\$965	\$8,454

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. District Profile; Charter School Profiles <http://www.ncreportcards.org/src/>.

High School Drop-Out Rate

The table below 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 data below is specific to high school students in regular (non-charter) public schools.

- The high school drop-out rate Wilkes County declined steadily from year-to-year throughout most of the period cited and especially after SY2007-08.

**Table 45. High School Drop-Out Rate
(SY2004-05 through SY2013-14)**

Location	Drop-Out Rate									
	SY2004-05	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13	SY2013-14
Wilkes County Schools	7.14	6.14	6.12	6.81	5.49	3.50	2.62	2.46	2.22	1.71
Surry County Schools	5.00	5.77	6.54	4.70	4.77	4.90	4.72	3.48	2.75	2.03
Elkin City Schools	2.61	3.78	2.75	2.47	1.81	1.32	3.07	1.85	1.07	1.30
Mount Airy City Schools	3.10	2.83	2.90	2.77	2.60	3.19	2.20	1.41	1.55	1.40
State of NC	4.74	5.04	5.27	4.97	4.27	3.75	3.43	3.01	2.45	2.28

Source: NC Department of Public Instruction, Research and Evaluation, Dropout Data and Collection Process, Annual Dropout Reports; <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 SY2011-12 and graduating in SY2014-15 or earlier are presented for all comparator jurisdictions in the following table.

- The four-year cohort graduation rates in Wilkes County were higher than comparable state rates for *all* groups except for economically disadvantaged students.

**Table 46. Four Year Cohort Graduation Rate
(9th Graders Entering SY2011-12 and Graduating SY2014-15 or Earlier)**

School System	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
Wilkes County Schools	765	670	87.6	399	338	84.7	366	332	90.7	207	153	73.9
Surry County Schools	636	570	89.6	356	311	87.4	280	259	92.5	273	232	85.0
Elkin City Schools	87	80	92.0	44	41	93.2	43	39	90.7	32	25	78.1
Mount Airy City Schools	143	132	92.3	72	64	88.9	71	--	95.0	44	37	84.1
State of NC	110,469	94,380	85.4	56,294	46,212	82.1	54,175	48,168	88.9	44,069	34,992	79.4

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, 2011-12 Entering 9th Graders Graduating in 2014-15 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 following table summarizes crime and violence catalogued by the NC Department of Public Instruction for SY2008-09 through SY2013-14.

- The number and rate of acts of school crime and violence in Wilkes County Schools fluctuated without pattern over the period cited. Only the statewide average showed any stability, likely due to the large size of the sample.

**Table 47. School Crime and Violence¹ Trend, All Grades¹
(SY2008-09 through SY2013-14)**

Location	SY2008-09		SY2009-10		SY2010-11		SY2011-12		SY2012-13		SY2013-14	
	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate
Wilkes County Schools	70	7.02	58	5.89	44	4.46	75	7.64	79	8.09	35	3.56
Surry County Schools	42	4.88	40	4.72	70	8.29	82	9.86	93	11.28	39	4.71
Elkin City Schools	10	8.32	5	4.33	5	4.25	5	4.23	0	0.00	2	1.65
Mount Airy City Schools	12	7.60	7	4.39	18	11.20	14	8.58	10	5.96	2	1.20
State of NC	11,116	7.59	11,608	8.00	11,657	7.95	11,161	7.63	10,630	7.20	10,132	6.79

¹Rate 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 (years as noted); <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>

The next table displays detail on the acts of crime and violence committed in Wilkes County Schools in SY2012-13 and SY2013-14.

- The most common offense overall in Wilkes County Schools was possession of a controlled substance; the second most common offense overall was possession of a weapon.

**Table 48. School Crime and Violence in Wilkes County Schools, by Type of Offense
(SY2012-13 and SY2013-14)**

Type of Offense	No. Reportable Acts	
	SY2012-13	SY2013-14
Assault resulting in serious personal injury	1	1
Assault involving use of a weapon	0	1
Assault on school personnel	6	4
Bomb threat	0	0
Burning a school building	0	0
Homicide	0	0
Kidnapping	0	0
Possession of alcohol	2	3
Possession of controlled substance	47	15
Possession of a firearm	0	0
Possession of weapon	23	11
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	79	35

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

The following table presents data summarizing disciplinary activity in the public school systems of the comparator jurisdictions for the period SY2010-11 through SY2013-14. Since the data represent *counts* of activity of school systems of different sizes, direct comparisons are problematic.

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

**Table 49. School Disciplinary Activity
(SY2010-11 through SY2013-14)**

School System	SY2010-11			SY2011-12			SY2012-13			SY2013-14		
	Short-Term Suspensions	Long-Term Suspensions	Expulsions									
Wilkes County Schools	768	10	0	739	8	0	770	7	0	504	1	0
Surry County Schools	686	14	1	673	3	0	765	3	0	448	6	0
Elkin City Schools	81	1	0	28	0	0	90	2	0	26	0	0
Mount Airy City Schools	61	2	0	108	1	0	96	4	0	114	0	0
State of NC	262,858	2,586	59	258,197	1,609	30	247,919	1,423	37	198,254	1,088	37

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 following table presents the rates for index crime, violent crime, and property crime for the period from 2009 through 2013 for Wilkes County and its comparators. The three figures that follow present similar but slightly longer-term crime trend data.

- The overall index crime rate in Wilkes County fell 14% overall between 2009 and 2013, and was lower than the comparable state rate in each of the years cited.
- The largest component of Wilkes County index crime was property crime, rates for which also were consistently lower than the comparable rates for the state as a whole.

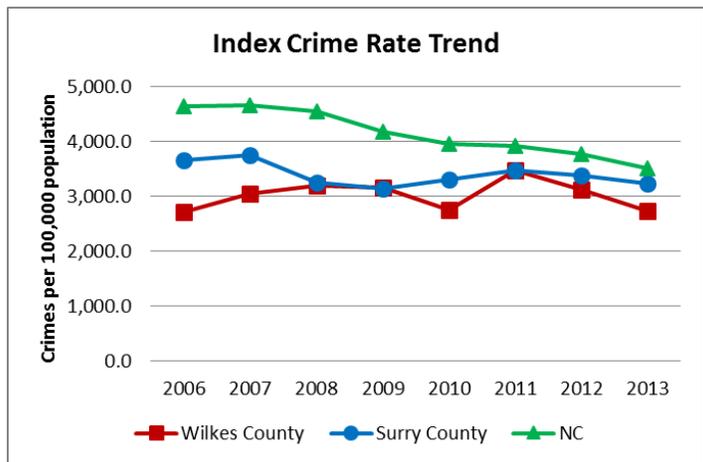
**Table 50. Crime Rates, Crimes per 100,000 Population
(2009-2013)**

Location	Crimes per 100,000 Population														
	2009			2010			2011			2012			2013		
	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
Wilkes County	3,164.3	245.5	2,918.8	2,747.5	225.4	2,522.2	3,480.0	268.2	3,211.8	3,118.9	231.6	2,887.3	2,733.5	212.8	2,520.7
Surry County	3,145.7	292.7	3,853.0	3,314.1	214.7	3,099.4	3,479.0	228.8	3,250.3	3,377.9	289.2	3,088.7	3,241.1	216.7	3,024.4
State of NC	4,178.4	417.2	3,761.2	3,955.7	374.4	3,581.4	3,919.8	354.6	3,565.2	3,770.6	358.9	3,411.7	3,506.2	339.5	3,166.6

* - Indicates incomplete or missing data.

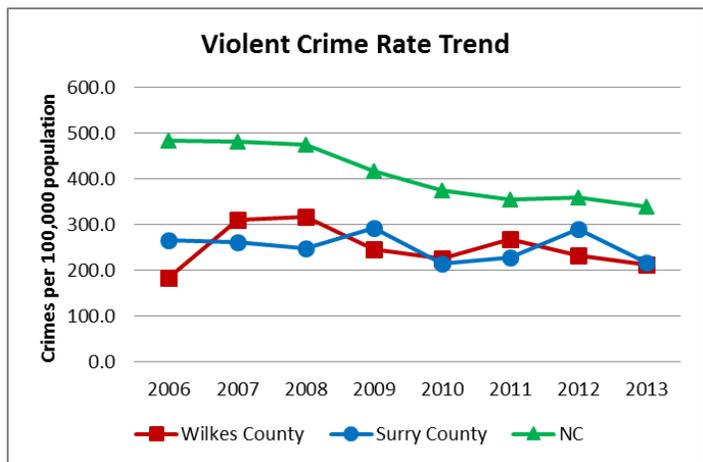
Source: NC Department of Justice, State Bureau of Investigation, Crime, View Crime Statistics, Crime Statistics (by Year); <http://ncdoj.gov/Crime/View-Crime-Statistics.aspx>.

Figure 6. Index Crime Rate (2006-2013)



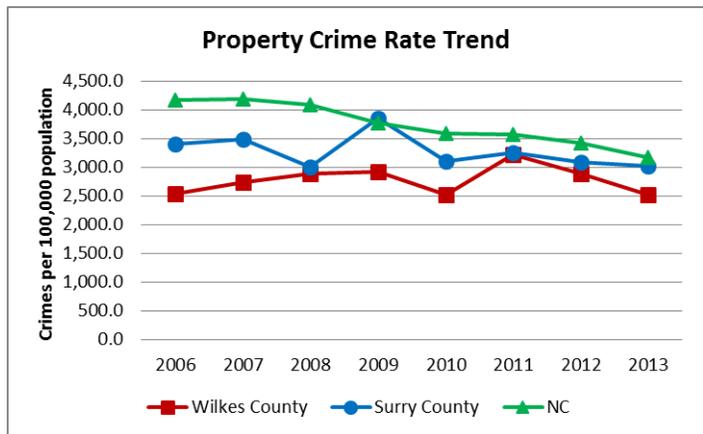
Source: Same as above

Figure 7. Violent Crime Rate (2006-2013)



Source: Same as above

Figure 8. Property Crime Rate (2006-2013)



Source: Same as above

The table below presents detail on index crime committed in Wilkes County from 2006-2013. 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 51. Types of Crimes Reported in Wilkes County (2006-2013)

Type of Crime	Number of Crimes							
	2006	2007	2008	2009	2010	2011	2012	2013
Violent Crime	123	207	213	165	152	186	161	148
<i>Murder</i>	3	3	2	3	3	2	2	6
<i>Rape</i>	6	6	9	10	4	4	7	4
<i>Robbery</i>	19	29	29	26	23	25	22	22
<i>Aggravated Assault</i>	95	169	173	126	122	155	130	116
Property Crime	1,691	1,830	1,934	1,962	1,701	2,227	2,007	1,753
<i>Burglary</i>	553	622	678	799	607	696	620	571
<i>Larceny</i>	1,032	1,100	1,146	1,047	1,025	1,425	1,320	1,115
<i>Motor Vehicle Theft</i>	106	108	110	116	69	106	67	67
Total Index Crimes	1,814	2,037	2,147	2,127	1,853	2,413	2,168	1,901

Source: NC State Bureau of Investigation, Crime in North Carolina, North Carolina Crime Statistics, Crime Statistics in Detailed Reports (By Year), 2013 Annual Reports, County Offenses Ten Year Trend, <http://crimereporting.ncdoj.gov/>.

Other Criminal Activities

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

- As of September 8, 2015 there were 142 registered sex offenders in Wilkes County.
- According to the NC Governor's Crime Commission, there were zero gangs reported in Wilkes County in 2013.
- According to the NC State Bureau of Investigation, there were 143 methamphetamine drug lab busts in Wilkes County during the period from 2005 through 2013. The 50 busts conducted in the county in 2013 was the highest number in the state, and the 59 busts conducted in 2012 was the second-highest number in NC.

Table 52. Other Criminal Activity

Location	No. Registered Sex Offenders (9/8/2015)	No. Gangs	No. Methamphetamine Lab Busts								
			2013	2005	2006	2007	2008	2009	2010	2011	2012
Wilkes County	142	0	4	1	0	1	2	7	19	59	50
Surry County	100	0	4	0	1	0	2	2	4	16	11
State of NC	14,469	982	328	197	157	197	206	235	344	460	561

a - NC Department of Justice, Sex Offender Statistics, Offender Statistics; <http://sexoffender.ncdoj.gov/stats.aspx>. (Note that the total does not include those who are incarcerated.) Accessed September 8, 2015.

b - NC Department of Crime Control and Public Safety, Governor's Crime Commission, Publications. Gangs in North Carolina 2013: An Analysis of GangNET Data, March 2013, Appendix 2. <https://www.ncdps.gov/div/GCC/PDFs/Pubs/Gangs2013.pdf>.

c - NC Department of Justice, State Bureau of Investigation, Crime, Enforce Drug Laws, Meth Focus, Meth Lab Busts; <http://www.ncdoj.gov/getdoc/b1f6f30e-df89-4679-9889-53a3f185c849/Meth-Lab-Busts.aspx>.

Data on gang activity and drug arrests provided to the Wilkes CHA/CHNA Team by local Wilkes County authorities are presented in the table below. Note that this data indicates gang activity unrecorded in the table above.

Table 53. Gang Activity and Drug Arrests, Wilkes County (2012-2015 [part])

Recorded Offenses	2012	2013	2014	2015 (Jan 1 to Aug 20)
Gang Activities	6	11	5	5
Drug Arrests	230	295	310	164

Source: Personal communication, Rachel Willard, Health Promotion Coordinator, to Sheila S. Pfaender, Public Health Consultant, September 14, 2015.

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 like: 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* for the period 2011 through 2014. The table after that presents the related juvenile justice *outcomes* for the same period.

- The number and rate of complaints for *undisciplined* youth in Wilkes County decreased throughout the period cited.
- The number and rate of complaints of *delinquent* youth in Wilkes County increased between 2011 and 2012 but decreased thereafter.

**Table 54. Juvenile Justice Complaints
(2011 through 2014)**

Location	Complaints															
	No. Undisciplined				No. Delinquent				Rate Undisciplined (Complaints per 1,000 Ages 6 to 17)				Rate Delinquent (Complaints per 1,000 Age 6 to 15)			
	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014
Wilkes County	50	43	38	25	222	251	197	148	4.7	4.0	3.6	2.4	25.0	28.4	22.5	17.0
Surry County	55	58	27	33	201	200	187	237	4.6	4.9	2.3	2.9	20.5	20.7	19.4	25.3
State of NC	3,603	3,194	2,738	2,277	33,556	31,575	29,353	29,288	2.3	2.5	1.7	1.5	26.1	24.7	22.9	22.5

Source: NC Department of Juvenile Justice and Delinquency Prevention, Statistics and Legislative Reports, County Databooks (Search by Year); <https://www.ncdps.gov/index2.cfm?a=000003,002476,002483,002482,002506,002523>.

- Over the four years cited, 68 Wilkes County youth were sent to secure detention, 3 were sent to youth development centers, and none were transferred to Superior Court.

**Table 55. Juvenile Justice Outcomes
(2011 through 2014)**

Location	Outcomes											
	No. Sent to Secure Detention				No. Sent to Youth Development Center				No. Transferred to Superior Court			
	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014
Wilkes County	17	19	9	23	2	1	0	0	0	0	0	0
Surry County	15	18	10	6	1	1	3	0	0	0	0	0
State of NC	3,558	2,767	2,352	2,244	307	216	219	202	28	36	28	14

Source: NC Department of Juvenile Justice and Delinquency Prevention, Statistics and Legislative Reports, County Databooks (Search by Year); <https://www.ncdps.gov/index2.cfm?a=000003,002476,002483,002482,002506,002523>.

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 FY2004-05 through FY2013-14.

- Sexual assault complaints in Wilkes County fluctuated without pattern and peaked at 66 in FY2009-10.

**Table 56. Sexual Assault Complaint Trend
(FY2004-05 through FY2013-14)**

Location	No. of Individuals Filing Complaints ("Clients")									
	FY2004-05	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14
Wilkes County	n/a	37	20	32	28	66	45	29	58	39
Surry County	0	n/a	11	9						
State of NC	8,564	8,721	7,444	6,527	8,494	13,392	13,881	13,214	12,971	13,736

* Program submitted partial data.

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <http://www.doa.state.nc.us/cfw/stats.htm>.

The next table presents details on the types of sexual assaults reported in FY2013-14.

- The largest proportions of sexual assault complaints in Wilkes County were for adult rape (48.7%) and in the category "Other" (23.1%).
- Statewide the largest proportion of sexual assault complaints involved child sexual offense (26.2%); the second largest proportion involved adult rape (19.1%).

**Table 57. Types of Sexual Assaults
(FY2013-14)**

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.	%
Wilkes County	39	19	48.7	0	0.0	5	12.8	2	5.1	2	5.1	2	5.1	9	23.1
Surry County	9	3	33.3	0	0.0	0	0.0	3	33.3	0	0.0	0	0.0	3	33.3
State of NC	13,736	2,624	19.1	1,037	7.5	2,485	18.1	1,120	8.2	3,598	26.2	823	6.0	2,049	14.9

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2013-2014 County Statistics; <http://www.doa.state.nc.us/cfw/stats.htm>.

The following table details the types of offenders involved in sexual assault complaints in comparator jurisdictions in FY2013-14.

- In Wilkes County the most common offender in sexual assault complaints was an acquaintance (45.5%) followed by a relative (30.3%).
- Statewide the most common offender was a relative (39.5%), followed by an acquaintance (24.9%).

**Table 58. Types of Offenders in Sexual Assaults
(FY2013-14)**

Location	Total Offenders	Type of Offender									
		Relative		Acquaintance		Boy/Girl Friend		Stranger		Unknown	
		No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	33	10	30.3	15	45.5	3	9.1	1	3.0	4	12.1
Surry County	9	6	66.7	0	0.0	3	33.3	0	0.0	0	0.0
State of NC	14,245	5,632	39.5	3,541	24.9	1,565	11.0	839	5.9	2,668	18.7

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2011-2012 County Statistics; <http://www.doa.state.nc.us/cfw/stats.htm>.

Domestic Violence

The table below summarizes data on the number of individuals who filed complaints of domestic violence from FY2004-05 through FY2013-14.

- 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, but in Wilkes County complaints appeared to be more numerous in FY2009-10 and later than in FY2008-09 and earlier. This is perhaps to be expected, since domestic violence tends to increase in times of economic hardship, such as the national recession that began around 2009-2010.

**Table 59. Domestic Violence Complaint Trend
(FY2004-05 through FY2013-14)**

Location	No. of Individuals Filing Complaints ("Clients")									
	FY2004-05	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14
Wilkes County	557	551	584	567	624	683	637	580	869	712
Surry County	108	105	83	305	297	458	454	57	681	482
State of NC	50,726	48,173	47,305	41,787	51,873	66,320	61,283	51,563	57,345	55,274

* Program submitted partial data.

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); <http://www.doa.state.nc.us/cfw/stats.htm>.

The next table provides details on the services received by domestic violence complainants in FY2013-14.

- The most common service provided to domestic violence complainants in Wilkes County in the period cited was advocacy.
- The local domestic violence shelter serving Wilkes County was full on 69 days.

**Table 60. Services Received by Domestic Violence Complainants
(FY2013-14)**

Location	Total Domestic Violence Clients	Services Received									Days Local Shelter was Full
		Total	Information	Advocacy	Referral	Transport	Counseling	Hospital	Court	Other	
Wilkes County	712	6,138	1,304	2,059	1,308	202	952	0	303	0	69
Surry County	482	3,352	1,014	528	1,006	6	176	3	415	201	0
State of NC	55,274	465,463	136,058	89,745	69,043	31,783	42,762	677	38,369	57,026	8,086

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2010-11 County Statistics; <http://www.doa.state.nc.us/cfw/stats.htm>.

The table below presents data on the number of domestic violence-related homicides in Wilkes County from 2008-2013. (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 seven domestic violence-related homicides in Wilkes County over the period cited.

**Table 61. Domestic Violence-Related Homicides
(2008-2013)**

Location	Number of Domestic Violence Related Homicides					
	2008	2009	2010	2011	2012	2013
Wilkes County	2	0	1	0	0	4
Surry County	2	1	1	0	2	0
State of NC	137	99	107	107	106	108

Source: NC Department of Justice, Help for Victims, Domestic Violence Victims, Domestic Violence Statistics. <http://ncdoj.gov/getdoc/e79bb308-90e3-44e5-be11-1c847f65a1b0/Domestic-Violence-Murders.aspx>

SAFE, Inc. Wilkes County

SAFE (Sheltered Aid to Families in Emergency) Inc., Wilkes County is a non-profit agency, founded in 1981, that serves women, men, teens and children whose lives have been affected by domestic and sexual violence. Services include:

- **Emergency Shelter.** The SAFE shelter is open 24 hours a day, seven days a week to provide immediate, safe housing to women and children who have left home due to domestic violence. (Men are sheltered in a separate location.) There is no charge to stay in the shelter for those who qualify.
- **Help Line.** SAFE's help line, (336) 838-SAFE (7233) is available 24 hours a day to provide support services to victims and survivors of sexual assault and family violence.
- **Advocacy.** SAFE's trained advocates provide support to victims, including: assistance in seeking protective orders, support during court hearings, and referral to community resources. SAFE advocates do not give legal advice; they provide support and help victims understand their options.
- **Counseling and Support.** SAFE offers two support groups for survivors a *domestic violence support group* and a *sexual assault support group*. Members of the public are welcome to participate in the support groups. SAFE also offers individual counseling for adult and child survivors of domestic or sexual violence. Therapy is provided by licensed professional counselors.
- **Child Advocacy Center.** SAFE operates SAFE Spot, the Child Advocacy Center of Wilkes County. SAFE Spot provides comprehensive, community-based services to children and families affected by sexual abuse or severe physical abuse. The center is currently providing forensic interviews, victim advocacy and case coordination services. Trauma focused mental health care and child medical evaluations are provided by center partners.
- **Community Education.** SAFE provides informative presentations to church groups, middle and high school classes, college classes and community groups. Topics include: *SAFE Dates* (relationship training for teens), *Introduction to SAFE and Its Services*, *Elder Abuse*, *Stand Up: Bystander Involvement Training*, *Behind Closed Doors: Domestic Violence 101*, and *Preventing Child Sexual Abuse: Best Practices for Youth Serving Organizations*. SAFE can also provide free educational materials to churches, schools or workplaces.
- **Sexual Assault Services.** SAFE's sexual assault program serves victims of sexual assault through hospital response, crisis call response, advocacy, counseling and psychoeducation. All services are free and confidential. Wilkes Regional Medical Center

has sexual assault nurse examiners to provide specialized care to victims of sexual assault (21).

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 speaking, 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 following table presents data for Wilkes County from the state's Child Welfare website for the period FY2004-05 through FY2013-14.

- The total number of findings of child abuse, neglect or dependency in Wilkes County fluctuated without a clear pattern, but findings tended to be higher in 2008-09 and earlier than in 2009-10 and later. The average annual number of findings per year throughout the 10-year period cited was 64. The most frequent finding was for neglect.

Table 62. Reports of Child Abuse and Neglect, Wilkes County (FY2004-05 through FY2013-14)

Category	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Total No. of Findings of Abuse, Neglect, Dependency	84	75	107	77	83	64	35	26	34	55
No. Substantiated ¹ Findings of Abuse and Neglect	4	4	2	3	2	5	6	2	6	16
No. Substantiated Findings of Abuse	0	3	3	6	10	1	0	0	2	2
No. Substantiated Findings of Neglect	80	68	102	68	71	58	29	24	26	37
Services Needed	0	0	2	18	19	36	38	54	64	38
Services Recommended	0	0	7	11	45	19	10	50	53	42
No. Unsubstantiated Findings	465	385	426	357	234	123	129	77	57	99
Services Not Recommended	2	29	27	86	90	100	181	249	210	227

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://sasweb.unc.edu/cgi-bin/broker?_service=default&_program=cwweb.tbReport.sas&county=Alamance&label=County&format=html&entry=10&type=CHILD&fn=FRST&vtype=xfind.

The next table presents demographic detail from the same source as above on the complaints of child maltreatment tracked in FY2013-14.

- All but four of the 55 substantiated findings of abuse, neglect, or abuse and neglect involved white children; three involved Hispanic children, and one a child of "other races".
- For the year cited, 33 (60%) of the substantiated findings involved males.
- The largest proportion of victims (69%) were under the age of six.

Table 63. Demographic Detail of Child Maltreatment Cases, Wilkes County (FY2013-14)

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	16	16	0	0	0	16	13	3	10	5	1	0
Abuse	2	2	0	0	0	2	1	1	1	1	0	0
Neglect	37	36	0	1	3	34	19	18	27	7	3	0
Dependency	8	6	2	0	4	4	2	6	3	3	2	0
Services Needed	38	30	4	4	7	31	15	23	28	6	3	1
Services Provided, No Longer Needed	43	37	0	6	10	33	24	19	24	10	8	1
Services Recommended	42	33	6	3	14	28	20	22	16	17	8	1
Unsubstantiated	99	88	6	5	9	90	49	50	51	21	27	0
Services Not Recommended	227	195	16	16	33	194	117	110	125	66	33	3

Source: Child Welfare, Reports of Abuse and Neglect section, Table of Summary Data: Type of Finding by Category (Longitudinal). http://sasweb.unc.edu/cgi-bin/broker?_service=default&_program=cwweb.icans.sas&county=North%20Carolina&label=&entry=10.

The following table displays local data on Children’s Services relative to child maltreatment investigation and outcomes provided by the Wilkes County Department of Social Services.

Table 64. Children’s Services Provided by Wilkes County Department of Social Services (FY2011-12 and FY2012-13)

Service/Program and (Metric)	2011-2012	2012-2013
<i>Adoption Services</i> (Adoptions completed)	22	27
<i>Foster Home Licensure</i> (New foster homes licensed)	5	2
<i>Foster Care</i> (Children served monthly in licensed placements)	88	83
(Children served monthly in unlicensed placements)	45	39
(Children returned home)	8	7
<i>Protective Services</i> (Neglect/abuse investigations/assessments)	922	699
(Families provided Case Planning/Case Management services)	101	171
(Children involved in Case Planning/Case Management)	194	345

Source: Wilkes County Department of Social Services Agency Brochures, 2011-2012 and 2012-2013.

Adult Maltreatment

The responsibility for identifying and reporting cases of adult abuse, neglect and exploitation falls to the adult protective services program within a county’s department of social services. The table below presents data on Adult Protective Services delivered by the Wilkes County Department of Social Services in FY2011-12 and FY2012-13.

Table 65. Adult Protective Services Provided by Wilkes County Department of Social Services (FY2011-12 and FY2012-13)

Service/Program and (Metric)	2011-2012	2012-2013
Adult Services		
<i>Protective Services/Crisis Intervention</i> (Abuse, neglect/exploitation reports received)	181	230
(Referrals made to other agencies)	206	251

Source: Wilkes County Department of Social Services Agency Brochures, 2011-2012 and 2012-2013.

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 following table presents data on the proportion of the population (by age group) without health insurance of any kind. Prior to the adoption of the Affordable Care Act (ACA) the health insurance system in the US was built largely upon employer-based insurance coverage, so an increase in the number of unemployed people usually resulted in an increase in the number of uninsured. This may change due to activity in the ACA Insurance Marketplace; time will tell.

- During the period cited, the percent of the Wilkes County population overall (under age 65) without health insurance was highest in 2010 (21.7%), and improved only to 20.5% in 2011 and 2013.
- In all jurisdictions the younger age group (under age 19) had a significantly lower percent without health insurance than the older age group (<65). This is due at least in part to NC Health Choice, a children’s insurance program discussed below.

Table 66. Percent of Population without Health Insurance, by Age Group (2010-13)

Location	2010			2011			2012			2013		
	<19	18-64	<65	<19	18-64	<65	<19	18-64	<65	<19	18-64	<65
Wilkes County	8.9	26.5	21.7	7.1	25.4	20.5	7.9	26.6	21.6	7.4	25.3	20.5
Surry County	9.2	27.1	22.0	8.9	25.9	21.1	9.1	27.0	22.0	7.5	25.1	20.2
State of NC	8.3	23.5	19.1	7.9	23.0	18.7	7.9	23.4	19.0	6.9	22.5	18.1

Source: *Small Area Health Insurance Estimates*, (years as noted)... U.S. Census Bureau, Small Area Health Insurance Estimate (SAHIE) Interactive Data Tool. Geographies and age groups as noted. www.census.gov/did/www/sahie/data/interactive.

As will be reported on fully in a later chapter in this report, the 2015 Wilkes County Community Health Survey asked participants whether or not any in a list of problems prevented them from accessing necessary health care in the past 12 months. Among the 842 respondents who answered the question, 142 (16.9%) sourced their healthcare access problem to not having health insurance, a figure well less than the admittedly dated figures in the table above. Among Wilkes County males participating in the survey the apparent approximate percent uninsured was 13.3%; the percent of females who were uninsured was 17.4%. 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), and an economy that had improved since 2013. It is also possible that the lower survey figure was connected to persons recently having gained coverage through the Affordable Care Marketplace.

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 (22).

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). 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 (23). In NC, the maximum income limit for participation in the NCHC program is 200% of the Federal Poverty Guideline.

The following table presents enrollment figures for NCHC for 2008 through 2013.

- In Wilkes County the percent of eligible children enrolled rose almost annually over the period cited to a high of 99.1% in 2013.

Table 67. NC Health Choice Enrollment (2008-2013)

Location	January, 2008		January, 2009		January, 2010		January, 2011		January, 2012		January, 2013	
	# Children Eligible	% Eligibles Enrolled										
Wilkes County	1,160	86.0	1147	96.0	1,211	98.0	1,209	97.8	1,320	98.9	1,346	99.1
Surry County	1,347	90.0	1407	97.0	1,385	99.0	1,423	98.0	1,489	98.5	1,431	99.7
State of NC	116,712	65.0	124,434	77.0	131,499	83.0	137,825	88.9	1,455,992	92.5	151,262	96.1

Source: NC Division of Medical Assistance, Statistics and Reports, N.C. Health Choice Monthly Enrollment/Exemption Reports, 2008-2013; <http://www.ncdhhs.gov/dmA/ca/nchcenroll/index.htm>.

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 FY2007 through FY2010.

- The number of Wilkes County residents eligible for Medicaid increased annually every year cited. The percent of residents eligible stabilized briefly from FY2008 to FY2009 before increasing again in FY2010.
- The average Medicaid cost per adult enrollee in Wilkes County decreased overall between FY2007 and FY2010.

Table 68. Medicaid Eligibility and Expenditures (FY2007 through FY2010)

Location	FY2007			FY2008			FY2009			FY2010		
	No. Eligible	% Eligible	Average Cost per Adult Enrollee	No. Eligible	% Eligible	Average Cost per Adult Enrollee	No. Eligible	% Eligible	Average Cost per Adult Enrollee	No. Eligible	% Eligible	Average Cost per Adult Enrollee
Wilkes County	11,896	18.0	\$8,301	12,562	19.0	\$8,445	13,027	19.0	\$8,293	13,537	20.0	\$7,906
Surry County	13,048	18.0	\$7,052	13,542	19.0	\$7,393	14,459	20.0	\$7,765	15,036	20.0	\$7,012
State of NC	1,330,486	15.0	\$7,254	1,397,732	15.0	\$7,244	1,500,204	16.0	\$7,389	1,577,121	17.0	\$7,256

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County-Specific Snapshots for NC Medicaid Services, 2008-2011 (geographies as noted); <http://www.ncdhhs.gov/dma/countyreports/index.htm>.

The next table presents data for Wilkes County on the number of Medicaid-eligible persons by program area for six recent calendar years. Note that the figure presented represents the number eligible in December of each year.

- The total number of eligibles increased annually in most years between 2008 and 2013.
- The program areas with the largest number of eligibles were Infants and Children, followed by AFDC (Aid to Families with Dependent Children).

Table 69. Wilkes County Medicaid Eligibles, by Program Area (as of December 31, 2008 through 2013)

Year	Number of Eligibles											Total Eligibles
	Aged	Blind	Disabled	ADFC	Foster Care	Pregnant Women	Infants & Children	Medicaid CHIP	Medicare Catastrophic	Refugees Aliens	BCC	
2008	1,378	20	2,182	2,412	136	254	4,440	372	665	5	0	11,864
2009	1,340	19	2,245	2,754	140	215	4,782	338	706	2	0	12,541
2010	1,372	24	2,266	2,702	155	250	5,006	310	788	7	1	12,881
2011	1,332	22	2,333	2,593	172	218	5,196	369	846	9	3	13,093
2012	1,284	24	2,359	2,460	175	223	5,242	348	888	16	1	13,020
2013	1,280	22	2,432	2,385	206	233	5,263	355	934	16	2	13,128

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data: Authorized Eligibles by County and Program Aid Category. Title XIX Authorized Medicaid Eligibles (years as noted); <http://www2.ncdhhs.gov/dma/elig/index.htm>

AFDC - Medicaid Aid to Families with Dependent Children
BCC - Breast and Cervical Cancer Program

Health Check Early Periodic Screening, Diagnosis and Treatment

Federal law requires that Medicaid-eligible children under the age of 21 receive any medically necessary health care service covered by the federal Medicaid law, even if the service is not normally included in the NC State Medicaid Plan. This requirement is called Early Periodic Screening, Diagnosis and Treatment (EPSDT). In NC, Health Check EPSDT covers complete medical and dental check-ups, provides vision and hearing screenings, and referrals for treatment (24).

The following table presents a four-year summary of the participation of eligible children in the NC Health Check program.

- The number of Wilkes County children eligible for Health Check services increased annually between FY2008-09 and FY2010-11 before decreasing in FY2011-12.
- The Health Check participation ratio in Wilkes County was highest in FY2011-12 (67.4%).

**Table 70. Participation in Health Check EPSDT
(FY2008-09 through FY2011-12)**

Location	FY2008-09			FY2009-10			FY2010-11			FY2011-12		
	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio
Wilkes County	8,389	7,264	57.6	8,680	7,637	57.4	8,891	7,637	64.6	8,863	7,639	67.4
Surry County	9,428	8,037	51.6	9,909	8,615	52.4	10,017	8,464	54.8	10,049	8,665	63.1
State of NC	n/a*	594,043	80.0	1,185,510	963,619	53.8	1,146,716	961,381	54.7	1,161,170	999,141	57.1

Note - The participation ratio is calculated by dividing the number of eligibles receiving at least one initial screening service by the number of eligibles who should receive at least 1 initial or period screenings (not shown in the table).

Source: NC Division of Medical Assistance, Statistics and Reports, Health Check Participation Data; <http://www.ncdhhs.gov/dma/healthcheck/participationdata.htm>.

Medicaid Services Provided by Wilkes County Department of Social Services

The table below presents data on Medicaid services provided by the Wilkes County Department of Social Services in FY2011-12 and FY2012-13.

**Table 71. Medicaid Services Provided by Wilkes County Department of Social Services
(FY2011-12 and FY2012-13)**

Service/Program and (Metric)	2011-2012	2012-2013
Adult Services		
<i>Aid to the Blind</i> (Monthly service cases)	86	86
<i>Transportation</i> (Individuals authorized for transportation)	302	330
Children's Services		
<i>Medicaid Transportation</i> (Clients served)	596	275
<i>Perinatal Services</i> (Women served)	235	244
Family Support Services		
<i>Adult Medicaid</i> (Individuals assisted monthly)	4,654	4,759
(Individuals in nursing homes)	350	349
<i>Care Connection Pharmacy</i> (Individuals receiving pharmacy cards)	114	105
<i>Special Assistance</i> (Aged/disabled persons monthly receiving nursing home subsidies)	182	174
<i>Family and Children Medicaid</i> (Households served)	5,140	5,195
<i>Food and Nutrition Services</i> (Households receiving assistance per month)	6,732	6,920
<i>Low-Income Energy Assistance (LIEP)</i> (Households approved)	499	893
<i>Crisis Intervention Program (CIP)</i> (Applications approved)	1,591	1,279
<i>Work First Family Assistance (WFFA)</i> (Average monthly cases)	312	299
<i>Work First Employment Program</i> (Persons assessed)	284	280
(Persons participating in GED, ABE, post-secondary education, vocational training, job search)	105	123
(Participants obtaining employment)	82	71
(Families moved off public assistance and into jobs)	38	47
<i>North Carolina Health Choice (NCHC)</i> (Average eligible children in Wilkes County)	1,327	1,337
(Households receiving NCHC)	875	875

Source: Wilkes County Department of Social Services Agency Brochures, 2011-2012 and 2012-2013.

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 table below presents those data (which for simplicity's sake will be referred to simply as the "ratio") for Wilkes County, Surry County, the state of NC and the US for five key categories of health care professionals: physicians, primary care physicians, registered nurses, dentists and pharmacists. The period covered is 2009-2012.

- The health professional ratios in Wilkes County for MDs, primary care MDs, registered nurses, dentists and pharmacists were lower than the comparable state and national ratios in each year cited.

Table 72. Active Health Professionals per 10,000 Population (2009-2012)

Location	2009					2010					2011					2012				
	MDs	Primary Care MDs	DDSs	RNs	Pharms	MDs	Primary Care MDs	DDSs	RNs	Pharms	MDs	Primary Care MDs	DDS	RNs	Pharms	MDs	Primary Care MDs	DDS	RNs	Pharms
Wilkes County	12.1	6.5	2.7	66.5	5.3	11.81	6.19	2.74	64.82	5.62	11.21	5.75	2.73	65.09	5.32	11.90	5.88	2.58	62.93	5.73
Surry County	16.5	10.7	3.2	86.5	8.3	18.02	11.11	3.66	85.78	8.54	18.35	9.24	3.13	87.80	8.43	17.63	8.14	3.26	87.90	8.55
State of NC	21.2	9.2	4.4	96.9	9.3	21.68	9.42	4.36	97.29	9.15	22.07	7.78	4.35	98.60	9.51	22.31	7.58	4.51	99.56	10.06
United States	23.4 ²	8.5 ²	5.3 ³	92.5 ³	8.7 ³	22.7 ²	8.2 ²	5.7 ³	92.0 ³	8.3 ³	22.7 ²	8.2 ²	5.7 ³	92.0 ³	8.3 ³	22.7 ²	8.2 ²	5.7 ³	92.0 ³	8.3 ³

Abbreviations used: MDs (Physicians), RNs (Registered Nurses), DDSs (Dentists), Pharms (Pharmacists)

¹ Primary Care Physicians are those who report their primary specialty as family practice, general practice, internal medicine, pediatrics, or obstetrics/gynecology.

² US ratio from US Census Bureau estimates. Comparison data is for date two years previous.

³ US ratio from Bureau of Labor Statistics. Comparison data matches.

Source for NC Data: Cecil G. Sheps Center for Health Services Research, North Carolina Health Professions Data System, North Carolina Health Professions Data Books, Table 14 (2009 - 2012); <http://www.shepscenter.unc.edu/hp/publications.htm>.

The following table lists the number of active health professionals in Wilkes County, by specialty, for 2012.

- As of 2012 representatives of most specialties were present in Wilkes County, although there were no certified nurse midwives or practicing psychologists, and there were particularly low numbers of general practitioners, obstetricians/gynecologists, and podiatrists.

Table 73. Number of Active Health Professionals in Wilkes County, by Specialty (2012)

Category of Professional	Wilkes
Physicians	
Non-Federal Physicians	83
Primary Care Physicians	41
<i>Family Practice</i>	12
<i>General Practice</i>	1
<i>Internal Medicine</i>	16
<i>Obstetrics/Gynecology</i>	3
<i>Pediatrics</i>	9
Other Specialities	42
Dentists and Dental Hygienists	
Dentists	18
Dental Hygienists	42
Nurses	
Registered Nurses	439
<i>Nurse Practitioners</i>	17
<i>Certified Nurse Midwives</i>	0
Licensed Practical Nurses	61
Other Health Professionals	
Chiropractors	8
Occupational Therapists	11
Occupational Therapy Assistants	13
Optometrists	6
Pharmacists	40
Physical Therapists	17
Physical Therapy Assistants	27
Physician Assistants	13
Podiatrists	1
Practicing Psychologists	0
Psychological Assistants	5
Respiratory Therapists	24

¹ Numbers reported include those active within the profession and those newly licensed in 2009 with unknown activity status; inactives are excluded.
Source: Cecil G. Sheps Center for Health Services Research, North Carolina Health Professions Data System. Publications. 2011 North Carolina Health Professions Databook;
http://www.shepscenter.unc.edu/hp/publications/2012_HPDS_DataBook.pdf.

There were 18 dentists in Wilkes County at the time of the census above, but because many dental practices do not accept Medicaid and/or NC Health Choice clients, accessing dental care may be a particularly difficult problem for Medicaid enrollees. The table below lists dental practices in Wilkes County that accept Medicaid and/or NC Health Choice clients.

**Table 74. Wilkes County Dentists Accepting Medicaid/Health Choice Clients
(As of February 2, 2015)**

Practice Name/Provider Name	Location	Medicaid/ Health Choice	Currently Accepting New Medicaid Clients	Currently Accepting New Health Choice Clients
Michael Andreski/Michael J. Andreski DDS PA	Wilkesboro	Both	Yes	No
Derwood Ashworth	North Wilkesboro	Medicaid	Yes	n/a
Phillip Brame	North Wilkesboro	Medicaid	Yes	n/a
Lindsay Carlton/Wilkes County Health Dept	Wilkesboro	Medicaid	Yes	n/a
Stacy Conn/MJ Mayhew PA	North Wilkesboro	Medicaid	No	n/a
Mona Curran/Wilkes County Health Dept	Wilkesboro	Medicaid	Yes	n/a
Mona Curran/Wilkes Dental Consortium	North Wilkesboro	Health Choice	n/a	Yes
Rufus Hensley/Rick Hensley Family Dentistry	Ferguson	Both	Yes	No
Kristin Kaelke/Wilkes County Health Dept	Wilkesboro	Medicaid	Yes	n/a
Amy Kinlaw/Southern Dental Associates	Wilkesboro	Both	Yes	No
Kathleen Morey/Wilkes County Health Dept	Wilkesboro	Medicaid	Yes	n/a
Kathleey Morey/Wilkes Dental Consortium	North Wilkesboro	Both	No	Yes
Ribert Ricketts	North Wilkesboro	Medicaid	No	n/a
Chad Shobe/Southern Dental Associates	Wilkesboro	Medicaid	Yes	n/a
Jagruti Thakkar	Wilkesboro	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>.

Respondents to the 2015 Wilkes County Community Health Survey were asked several questions about their access to healthcare and their experience with and opinion about the availability of healthcare practitioners. Details of those responses will be presented later in this report, but a summary of responses relative to provider access are presented here.

- Survey participants were asked whether they (or a family member) had had a problem accessing a healthcare provider in the past 12 months. For the 185 respondents (21%) who did have access problems, the provider types presenting the highest proportions of access problems were dentists (52%) and general practitioners (34%).
- When asked why they or a family member had difficulty accessing a healthcare provider, 7% of respondents reported they couldn't get an appointment, and 8% reported the wait for an appointment was too long. Approximately 6% reported that the doctor or dentist could not accept their insurance/Medicaid.
- Fifty-three percent of 857 respondents reported they had visited an Urgent Care Center in Wilkes County in the past 12 months. Of the 401 respondents who had *not* patronized a Wilkes County Urgent Care, 14% (54) reported they had visited an Urgent Care Center *outside* of Wilkes County in the past 12 months.
- Approximately 70% of 842 respondents reported they had visited a physician outside of Wilkes County. They listed a variety of reasons for this, including a referral from their personal physician, or the lack of a particular specialist in Wilkes County, but 8% said it was because they perceived that doctors in other places (specifically, "other hospitals") were "better".
- Over half (53%) of 668 respondents said they thought there was a need for additional medical service providers in Wilkes County. Provider specialty areas mentioned most frequently were mental health, dentistry, obstetrics/gynecology, pediatrics, orthopedics, cardiology, endocrinology, cardiology and general practice/family medicine.

Hospitals

Wilkes Regional Medical Center

Wilkes Regional Medical Center (WRMC) is owned by the Town of North Wilkesboro, and governed by the Hospital Operation Corporation, a conscientious group of leaders of the community who volunteer their time. WRMC is fully accredited by the Joint Commission on Accreditation of Healthcare Organizations.

WRMC opened in 1952 as a 100-bed hospital on 19 acres, donated by Dr. Frederick C. Hubbard. Today, WRMC is licensed for 130 beds, including a 10-bed skilled nursing unit on the main campus. WRMC had expanded outpatient services to include a Dialysis Center and a state of the art Rehabilitation Center, located offsite.

WRMC has over 800 employees, with an active medical staff of 93 including 21 physicians (25).

Physician specialties at Wilkes Regional Medical Center include:

Anesthesiology	Cardiology	Medical Imaging
Emergency Medicine	ENT	Family Practice
Gastroenterology	Internal medicine	Nephrology
Neurology	OB/GYN	Ophthalmology
Pathology	Pediatrics	Psychiatry
General surgery	Orthopedic Surgery	Vascular Surgery
Urology		

WRMC Demographic Utilization Data

WRMC provided the CHA/CHNA consultant with proprietary hospital admissions data for 2012, 2013 and 2014.

Regarding emergency department (ED) admissions shown in the table below:

- Females represented on average more than half (55%) of all ED admissions in the period cited.
- Whites represented an average of 88.4% of all ED admissions, while composing approximately 93.3% of the overall Wilkes County population in 2014.
- African-Americans/Blacks are somewhat over-represented in the ED: this group represented an average of 7.3% of all ED admissions, while composing 4.5% of the overall Wilkes County population in 2014.
- The group Hispanic/Latino/Other represented an average of 4.1%% of all ED admissions, while composing 5.8% of the overall Wilkes County population in 2014.
- The Adult age group (18-64 years) is over-represented in the ED: this age group represented an average of 68.2% of all ED admissions, while composing approximately 57% of the overall county population.
- Pediatric (under age 18) and Geriatric (age 65 and older) patients were under-represented in the ED. Pediatric patients represented an average of 18.3% of all ED admissions while composing approximately 23% of the overall county population, and Geriatric patients represented an average of 13.5% of all ED visits while composing approximately 20% of the Wilkes County population in 2014.

- An average of 18% of all ED admissions were for “self-pay” or “indigent” patients; an average of 6.5% ED admissions were classified by the hospital as “charity”. Medicaid patients represented an average of approximately 29% of all ED admissions.

Table 75. WRMC Emergency Department Admissions (2012-2014)

Demographic Parameter	Total Number of Admissions					
	2012		2013		2014	
	Number	Percent	Number	Percent	Number	Percent
Gender						
<i>Male</i>	12,816	44.8	12,845	43.9	13,130	43.9
<i>Female</i>	15,760	55.1	16,428	56.1	16,790	56.1
<i>Unknown/Declined/Unavailable</i>	6	0.0	10	0.0	6	0.0
Total	28,528	100.0	29,283	100.0	29,926	100.0
Race						
<i>African American/Black</i>	2,028	7.1	2,103	7.2	2,237	7.5
<i>Asian</i>	9	0.0	9	0.0	17	0.1
<i>Caucasian/White</i>	25,437	89.0	25,858	88.3	26,269	87.8
<i>Hispanic/Latino/Other</i>	1,026	3.6	1,221	4.2	1,307	4.4
<i>Native American</i>	24	0.1	17	0.1	19	0.1
<i>Native Hawaiian/Pacific Islander</i>	0	0.0	2	0.0	0	0.0
<i>Oriental</i>	41	0.1	45	0.2	53	0.2
<i>Unknown/Declined/Unavailable</i>	17	0.1	28	0.1	24	0.1
Total	28,528	100.0	29,283	100.0	29,926	100.0
Age Group						
<i>Pediatric (<18 years)</i>	5,244	18.3	5,450	18.6	5,393	18.0
<i>Adult (18-64 years)</i>	19,645	68.7	19,840	67.8	20,342	68.0
<i>Geriatric (≥65 years)</i>	3,693	12.9	3,993	13.6	4,191	14.0
Total	28,582	100.0	29,283	100.0	29,926	100.0
Payer Group						
<i>Charity</i>	1,712	6.0	1,688	5.8	2,320	7.8
<i>Commercial (incl. Managed Care)</i>	3,372	11.8	4,315	14.7	5,183	17.3
<i>Liability Insurance</i>	505	1.8	420	1.4	344	1.1
<i>Managed Care - Other</i>	2,038	7.1	1,421	4.9	1,091	3.6
<i>Medicaid</i>	8,647	30.3	8,268	28.2	8,821	29.5
<i>Medicare</i>	6,108	21.4	6,761	23.1	6,882	23.0
<i>Military/Other Government</i>	216	0.8	225	0.8	211	0.7
<i>Self-Pay/Indigent/No Summary Group</i>	5,647	19.8	5,855	20.0	4,757	15.9
<i>Workers Compensation</i>	318	1.1	293	1.0	298	1.0
<i>Other</i>	4	0.0	5	0.0	4	0.0
<i>Unknown/Declined/Unavailable</i>	15	0.1	32	0.1	15	0.1
Total	28,528	100.0	29,283	100.0	29,926	100.0

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wilkes Regional Medical Center...

Regarding inpatient (IP) hospitalization discharges shown in the next table:

- Females represented an average of 61.7% of all IP discharges over the period cited.
- Whites represented an average of approximately 90.0% of all IP discharges, while composing 93.3% of the overall Wilkes County population in 2014.
- African-Americans/Blacks represented an average of 5.5% of all IP discharges, while composing 4.5% of the overall Wilkes County population in 2014.
- Hispanics/Latinos represented an average of 4.1% of all IP discharges, while composing 5.8% of the overall Wilkes County population in 2014.

- The Adult age group (18-64 years) age group represented an average of 42.3% of all IP discharges, while composing approximately 57% of the overall county population.
- Pediatric patients (<18 years of age) represented an average of 11.8% of all IP discharges while composing approximately 23% of the overall county population.
- Geriatric patients (age 65 and older) were over-represented in terms of IP discharges, representing an average of 45.9% of all IP discharges while composing approximately 20% of the Wilkes County population in 2014.
- An average of 4.4% of all IP discharges were of “self-pay” or “indigent” patients; an average of 1.9% of IP discharges were classified by the hospital as “charity”. Medicaid was the primary payer for an average of 21.8% of all IP discharges. Medicare was the payer of record for the highest proportion of IP discharges, accounting for an average of 55.1% of all IP discharges.

Table 76. WRMC Inpatient Hospital Discharges (2012-2014)

Demographic Parameter	Total Number of Admissions					
	2012		2013		2014	
	Number	Percent	Number	Percent	Number	Percent
Gender						
<i>Male</i>	1,996	38.2	1,899	38.3	1,756	38.3
<i>Female</i>	3,231	61.8	3,056	61.7	2,834	61.7
<i>Total</i>	5,227	100.0	4,955	100.0	4,590	100.0
Race						
<i>African American/Black</i>	273	5.2	265	5.3	274	6.0
<i>Asian</i>	4	0.1	9	0.2	4	0.1
<i>Caucasian/White</i>	4,711	90.1	4,468	90.2	4,119	89.7
<i>Hispanic/Latino</i>	224	4.3	203	4.1	176	3.8
<i>Native American</i>	4	0.1	3	0.1	3	0.1
<i>Native Hawaiian/Pacific Islander</i>	2	0.0	1	0.0	0	0.0
<i>Oriental</i>	6	0.1	6	0.1	12	0.3
<i>Unknown/Declined/Unavailable</i>	3	0.1	0	0.0	2	0.0
<i>Total</i>	5,227	100.0	4,955	100.0	4,590	100.0
Age Group						
<i>Pediatric (<18 years)</i>	611	11.7	570	11.5	557	12.1
<i>Adult (18-64 years)</i>	2,183	41.8	2,128	42.9	1,940	42.3
<i>Geriatric (≥65 years)</i>	2,433	46.5	2,257	45.5	2,093	45.6
<i>Total</i>	5,227	100.0	4,955	100.0	4,590	100.0
Payer Group						
<i>Charity</i>	73	1.4	108	2.2	93	2.0
<i>Commercial</i>	565	10.8	603	12.2	614	13.4
<i>Liability Insurance</i>	3	0.1	3	0.1	3	0.1
<i>Managed Care - Other</i>	301	5.8	207	4.2	130	2.8
<i>Medicaid</i>	1,122	21.5	1,070	21.6	1,018	22.2
<i>Medicare</i>	2,878	55.1	2,704	54.6	2,553	55.6
<i>Military/Other Government</i>	23	0.4	21	0.4	15	0.3
<i>Self-Pay/Indigent/No Summary Group</i>	256	4.9	233	4.7	159	3.5
<i>Workers Compensation</i>	6	0.1	6	0.1	4	0.1
<i>Other</i>	0	0.0	0	0.0	0	0.0
<i>Unknown/Declined/Unavailable</i>	0	0.0	0	0.0	1	0.0
<i>Total</i>	5,227	100.0	4,955	100.0	4,590	100.0

Source: Based on proprietary data provided to Sheila S. Pfaender, Public Health Consultant, by Wilkes Regional Medical Center.

Wilkes County Health Department

The Wilkes County Health Department is located in the heart of Downtown Wilkesboro. It has been serving the community for over 50 years, offering services including well/sick visits, health promotion and healthy lifestyle choices, diabetes and nutritional counseling, maternity and postpartum care, and immunizations as well as environmental health services such as well water testing, septic and waste water services, and restaurant inspections.

The Wilkes County Health Department cares for men, women and children by providing comprehensive services focused on wellness, education and prevention. Agency programs include: disease prevention and control, preparedness and response to emergent diseases and events, environmental health, WIC, and personal health programs, such as prenatal care services, well and sick adult and child healthcare, and adult and child dental services.

Specific services and programs include:

For Children

- Well/sick care
- Immunizations
- Dental health
- Care Coordination for Children

For Teens

- Well/sick care
- MESH (School health)
- Dental health
- Sexual health
- Plan First!/birth control

For Pregnant Women

- Prenatal care
- Sexual health
- Text4Baby

For Adults

- Well/sick care
- Immunizations
- Dental health
- Sexual health
- Plan First!/birth control
- Prenatal care
- Breast and Cervical Cancer Control Program (BCCCP)

WCHD also provides Women, Infant and Children (WIC) services, offers diabetes education and medical nutrition therapy, operates a public health dental clinic, monitors communicable diseases, and offers a complete range of environmental health services, including food and lodging inspections and well and septic system permitting and monitoring (26).

The table below provides health department utilization data, by program area, for the five-year period 2010 through 2014.

Table 77. Wilkes County Health Department Utilization (2010-2014)

Service/Program	2010	2011	2012	2013	2014
Adult Health - Uninsured/Medicaid					
Patients	2,356	2,148	1,998	1,183	1,186
Visits	6,025	5,516	5,225	6,028	3,766
Diabetes Visits	204	394	n/a	n/a	n/a
Child Health					
Patients	1,125	1,981	1,763	1,375	1,082
Patient Visits	2,944	3,872	2,939	3,380	1,577
Physicals	614	677	570	1,512	1,160
Lead Screening	107	85	57	53	18
Dental Screenings	77	67	36	21	16
Diabetes and Nutrition Center					
Diabetes Education Visits	n/a	n/a	633	633	1,163
Medical Nutrition Visits	n/a	n/a	222	253	
Laboratory					
Lab Tests Performed	13,897	15,989	15,989	3,883	1,258
Prenatal Care					
Patients	5	n/a	n/a	n/a	n/a
Maternity Clinic Visits	12	n/a	n/a	n/a	n/a
Ultrasounds Performed	0	n/a	n/a	n/a	n/a
Family Planning					
Patients	898	990	938	832	644
Visits	1,993	1,936	1,815	1,627	1,220
Vasectomies	0	1	2	1	2
Breast & Cervical Cancer Screenings					
Cancer Screenings	175	71	60	68	56
Abnormal Results	54	14	12	15	18
Cancer Identified	1	3	3	1	0
Susan G. Komen Grant Funding					
Cancer Screenings	140	179	242	196	107
Abnormal Results	31	26	28	34	9
Cancer Identified	0	3	6	1	0
Child Service Coordination					
Children Served	126	n/a	n/a	n/a	n/a
Home Visits	615	n/a	n/a	n/a	n/a
Care Coordination for Children (CC4C)					
Medicaid children age 0-5	n/a	2,334	2,334	2,334	2,029
Maternal Outreach Services					
Clients Served	392	n/a	n/a	n/a	n/a
Home Visits	1,579	n/a	n/a	n/a	n/a
Pregnancy Care Management					
Medicaid women age 14-44	n/a	2,339	2,339	2,339	2,526
Mobile Expanded School Health (MESH)					
Mental Health Visits	649	536	645	688	718
Student Visits	1,636	1,800	1,850	1,396	743
Sports Physicals	415	325	640	450	406
Newborn/Postpartum Services					
Newborn Visits	230	294	236	164	51
Postpartum Services	206	296	234	153	52
Pharmacy					
Medications filled	1,594	1,976	2,030	1,723	1,437
Vital Records					
Live Births Recorded	501	480	533	468	464
Deaths Recorded	514	470	569	555	529
Women/Infants/Children (WIC)					
Clients	2,050	1,726	1,677	1,646	1,795
Health Choice					
Children Eligible	1,235	n/a	n/a	n/a	n/a
Children Enrolled	820	n/a	n/a	n/a	n/a
Immunizations					
Total Vaccines Administered	n/a	n/a	9,504	13,095	2,462
Total Hepatitis A Vaccines	n/a	n/a	1,273	120	176
Total T-Dap Vaccines	n/a	n/a	4,884	390	298
Flu Vaccines Administered	n/a	n/a	n/a	n/a	888
Health Check					
Children Eligible	n/a	8,680	8,891	8,863	8,863
Eligible Children Receiving Annual Physical	n/a	4,383	4,933	4,933	4,933
Participation Rate (%)	n/a	57.4	64.6	67.4	67.4
Communicable and Sexually Transmitted Disease					
Patient Services	3,542	3,389	3,133	n/a	n/a
HIV Tests	744	818	709	599	456
TB Patients	1	4	1	0	0
Rabies Investigations	91	80	70	74	62
Reportable Diseases	79	208	230	183	230

Source: Wilkes County Health Department Annual Reports, 2010, 2011, 2012, 2013 and 2014.

Wilkes Public Health Dental Clinic

The Wilkes Public Health Dental Clinic is a 501c3 non-profit corporation led by a board of community leaders. Its mission is to serve the unserved and underserved children and adults of Wilkes County (and the surrounding region on a space available basis) in need of dental care. It accepts Medicaid, Health Choice, Vocational Rehab, BROCC Head Start, private insurance, and self-pay patients. A sliding fee scale is applied for self-pay patients. Clinic services include dental exams, cleanings and x-rays; fillings, root canal therapy, extractions, crowns, dentures and partials, bridges; whitening, fluoride treatment, varnishes and sealants; and dental education.

The Wilkes Public Health Mobile Dental Clinic began operation in 2001. For the past 10 years, the Mobile Dental Clinic has treated children in the Wilkes County School System; school children are seen when parents or guardians return a signed, completed consent form for treatment to the school. Currently, the mobile clinic also serves both children and adults around the county by appointment (27).

Federally-Qualified Health Center

Currently there are no FQHCs in Wilkes County. The nearest are in Sparta (Alleghany County), Jefferson (Ashe County), Boone (Watauga County) and Statesville (Iredell County) (28).

Wilkes County Emergency Medical Services

Established in 1971, Wilkes County Emergency Medical Services (Wilkes EMS) is a county government owned and operated medical service headquartered in North Wilkesboro. Employing 39 full time and 20 part time field paramedics, Wilkes EMS operates from two full-time bases, providing around-the-clock advanced life support care for the citizens of Wilkes County. Wilkes EMS responds to over 10,000 calls per year. Equipment includes four 24-hour ambulances, one 12-hour ambulance and one quick-response vehicle.

Wilkes EMS offers Continuing Education for EMS employees and Rescue Squad members to continue their education and help to provide more knowledge in the field for emergency situations (29).

The following table lists the Wilkes EMS calls for 2014, categorized by nature of call. The highest percentages of calls over the period cited were for:

- Transfer/inter-facility/palliative care (23.5%)
- Not available (11.1%)
- Sick person (10.9%)
- Not applicable (9.4%)
- Fall victim (7.7%)
- Breathing problems (5.9%)
- Traffic accident (5.9%)
- Chest pain (5.1%)
- Unconscious/fainting (2.6%)
- Convulsion/seizure (2.2%)

Table 78. Wilkes County Emergency Medical Service Calls (2014)

Diagnosis Group	Count of Calls	Frequency (Percent)
Abdominal pain	813	2.1
Allergies	125	0.3
Animal bite	43	0.1
Assault	250	0.7
Back pain	286	0.8
Breathing problems	2,246	5.9
Burns	38	0.1
CO Poisoning/Hazmat	3	0.0
Cardiac arrest	267	0.7
Chest pain	1,913	5.1
Choking	41	0.1
Convulsion/seizure	835	2.2
Diabetic problem	567	1.5
Drowning	6	0.0
Electrocution	6	0.0
Eye problem	24	0.1
Fall victim	2,906	7.7
Headache	148	0.4
Heart problems	100	0.3
Heat/cold exposure	38	0.1
Hemorrhage/laceration	435	1.1
Industrial accident	7	0.0
Ingestion/poisoning	403	1.1
Myocardial infarction	8	0.0
Not applicable	3,557	9.4
Not available	4,192	11.1
Not known	339	0.9
Pain	540	1.4
Pregnancy/childbirth	86	0.2
Psychiatric problems	296	0.8
Respiratory arrest	11	0.0
Sick person	4,109	10.9
Stab/gun wounds ("hot")	69	0.2
Stroke/CVA	380	1.0
Traffic accident	2,244	5.9
Transfer/interfacility/palliative care	8,879	23.5
Trauma, arrest	10	0.0
Traumatic injury	297	0.8
Unconscious/fainting	970	2.6
Unknown problems	364	1.0
TOTAL	37,851	100.1

Source: Personal communication, Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department, to Sheila S. Pfaender, Public Health Consultant, August 14, 2015.

School Health

For the 2015-2016 school year, Wilkes County Schools employed 10 school nurses, all of whom split their time among two—and sometimes three—schools (30). Student's needs for nursing care range from first aid for cuts, acute illness nursing and hygiene counseling to chronic disease management (

The most recent (SY2012-2013) ratio of school nurses to students in Wilkes County schools was 1:1,009; during the same school year the ratio for the state was 1:1,177 (31). The recommended ratio is 1:750.

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, adult care homes, and family care homes. Each category of long-term care is discussed subsequently, but the following table summarizes numbers of facilities in each category in Wilkes County. There is a total of 614 long-term beds in the county.

Table 79. NC-Licensed Long-Term Care Facilities in Wilkes County (September, 2015)

Facility Type/Name	Location	# Beds SNF (ACH) ¹	NC ACLS Star Rating (of 5)
Nursing Homes/Homes for the Aged			
Avante at Wilkesboro	Wilkesboro	120 (0)	n/a
Westwood Hills Nursing and Rehabilitation Center	Wilkesboro	176 (10)	n/a
Wilkes Senior Village	North Wilkesboro	111 (19)	n/a
Adult Care Homes/Homes for the Aged			
The Villages of Wilkes Traditional Living/Noations Inc	North Wilkesboro	102	4
Wilkes County Adult Care/Raintree Healthcare of Wilkesboro LLC	Wilkesboro	99	1
Family Care Homes			
Pendry FCH II	Wilkesboro	6	4

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); <http://www.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 (32).

At the time this report was prepared, there were three state-licensed nursing home in Wilkes County, offering a total of 407 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 (33).

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 (34).

At the time this report was prepared, there were two state-licensed adult care homes in Wilkes County (neither of which was rated "5-star"; one was a "4-star" and the other a "1-star" facility) and one state-licensed family care home (which was rated "4-star"). The Adult Care Homes offer a total of 201 beds, and the family care home 6 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 Wilkes 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 Wilkes County.

Home Care, Home Health and Hospice Services

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

**Table 80. Licensed Home Care and Hospice Services in Wilkes County
(September, 2015)**

Facility Name	Location	Services
Aerocare	North Wilkesboro	Home Care Only
Aeroflow Inc	Wilkesboro	Home Care Only, Accredited
Continuum Home Care of Wilkesboro	Wilkesboro	Home Care Only
Continuum Home Care and Hospice of Wilkesboro	Wilkesboro	Hospice
Gentiva Health Services	Wilkesboro	Home Care Only, Accredited
Haven Home Care Inc	North Wilkesboro	Home Care Only
Home Instead Senior Care	North Wilkesboro	Home Care Only
Lincare, Inc	North Wilkesboro	Home Care Only, Accredited
PruittHealth Hospice - Wilkes	North Wilkesboro	Hospice Facility
Team Nurse - North Wilkesboro	North Wilkesboro	Home Care Only
Wake Forest Baptist Health Care at Home, LLC	Wilkesboro	Home Care Only, Accredited
Wake Forest Baptist Health Care at Home, Hopsice - Wilkes	Wilkesboro	Hospice Facility
Wilkes Senior Resources	North Wilkesboro	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>.

Wilkes County Department of Social Services

The Wilkes County Department of Social Services (WCDSS) assists adults and families with finding appropriate living and healthcare arrangements when care can no longer be maintained at home. Part of this also includes help in returning home or to more independent living arrangements. WCDSS also works with the NC Division of Facility Services to license and monitor the facilities in Wilkes County that serve this population. This includes receiving and evaluating complaints made by or on behalf of residents.

WCDSS also provides limited home management 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 their needs. This can include locating and contacting other providers as well as coordinating and monitoring the delivery of services.

The table below summarizes some of WCDSS services to the frail elderly and disabled adults.

**Table 81. Adult Services Provided by Wilkes County Department of Social Services
(2011-2012 and 2012-2013)**

Service/Program and (Metric)	2011-2012	2012-2013
Adult Services		
<i>Adult Care Home Case Management</i> (Enhanced Care cases)	15	7
<i>Adult Home Care Licensure</i> (Licensed homes supervised)	4	4
<i>Adult Home Specialist Services</i> (Placement inquiries)	9	11
	(Complaints investigated)	12
<i>Aid to the Blind</i> (Monthly service cases)	86	86
	(Individuals served by In-home Aid Services)	3
<i>In-Home Aide Level III Home Management</i> (In-home Aide service cases)	11	12
	(Clients served by the SA In-home Program)	4

Source: Wilkes County Department of Social Services Agency Brochures, 2011-2012 and 2012-2013.

Adult Day Care/Adult Day Health Centers

These facilities offer organized services that are provided during the day in a community group setting for helping individuals improve their self-reliance and delay or avoid placement in a long-term care facility. Family members benefit as the program allows them to continue to work or provide full-time caregivers with respite time.

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.

Adult day health services are similar programs to adult day care programs in 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 (35).

The Ruby Pardue Blackburn Adult Day Health Care Center provides this service in Wilkes County.

The Ruby Pardue Blackburn Adult Day Health Care Center

Adult Enrichment Services of Wilkes is a non-profit organization doing business as The Ruby Pardue Blackburn Adult Day Care Center. The center was named after the mother and sister of one of its major contributors. The Ruby Pardue Blackburn Adult Day Health Care Center has been caring for families since 2008. The Center is conveniently located in North Wilkesboro, near Wilkes Regional Medical Center in West Park Medical Park in the 1915 building.

The original idea for an adult day care center in the Wilkes County area began as a Task Force in 1998. Adult Enrichment Services of Wilkes along with The Health Foundation, Inc. Board developed this program over a seven year period of study and development following the recommendations and best practices identified by Partners in Caregiving, the NC Adult Day Health Services Association, and by visiting the top ranked facilities in North Carolina.

The Center offers services for participants and families:

Services for Participants

- **Health Care Monitoring** – A nurse on staff (the Health Care Coordinator) is available full time to assess and monitor participants throughout the day, and to give participants their medication. The Health Care Coordinator also serves as a family resource to help families identify other health care needs that may be needed for their loved.
- **Personal and Incontinent Care** – Each Program Assistant on staff has been trained in caring for the elderly or adults with disabilities, and can assist participants with activities of daily living, such as, eating, ambulating, toileting, bathing, personal care and grooming. All Program Assistants are CPR/First Aide certified to assure quality care in case of an emergency.
- **Therapy Services** – From time to time, a participant may be in need of physical, occupational or speech therapy. The center is equipped with a room designated for therapy, and a licensed therapist may be obtained through an order from the participant's physician and by the choice of the participant. Therapists may be arranged through a local agency.
- **Enriching Activities** – The Center Program Director and other staff work with participants and their families to identify activities based on the interests, needs, and abilities of each participant, emphasizing his/her strengths and abilities rather than impairments. Participants are encouraged to take part in activities, but may choose not to do so or may choose another activity.
- **Food & Snacks** – Participants enjoy a nutritional breakfast, lunch, and an afternoon snack during their stay at the center. Menus for breakfast, lunch, and snacks are developed and approved by a Registered Dietician. A Registered Dietician is also available for consultation and on-going staff training. The Center complies with the North Carolina Adult Day Care Standard in reference to nutritious meals. Special diets are available, if ordered by the participant's physician.
- **Beauty/Barber Service** – Optional beauty/barber services are available for an additional fee by a licensed beautician.

Services for Families

- **Caregiver Support Group Meeting** – A facilitated meeting conducted at the Center the first and third Monday of every month; free.
- **Respite Care** – Respite care is available free of charge; provided by The RPBADC staff (36).

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/Managed Care Organizations (LME/MCOs). LME/MCOs 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/MCO responsibilities include offering consumers 24/7/365 access to services, developing and overseeing providers, and handling consumer complaints and grievances.

At the time this report was prepared, the LME/MCO for Wilkes County was the Smoky Mountain Center, headquartered in Asheville, NC (37).

Smoky Mountain LME/MCO is a public managed care organization that oversees Medicaid and state and local funding, and oversees services for individuals and families in need of mental health, substance use or intellectual /developmental disability services. It manages prevention, treatment and crisis services in 23 counties in western North Carolina, with staff in 21 counties, and regional offices in Sylva, Asheville, Boone, Lenoir and Waynesville.

Smoky Mountain is a local government agency that manages services for people enrolled in Medicaid and those who do not qualify for Medicaid or have other insurance. Although Smoky Mountain does not provide services directly, it ensures people who need treatment receive quality care in a timely manner. These services are delivered by a network of more than 650 private providers system-wide who contract with the LME/MCO for that purpose.

It operates a 24-hour call center available to anyone with concerns or questions about mental health, intellectual/developmental disability or substance use. It also educates the community about these issues and how to seek help through a robust public outreach program (38).

Smoky Mountain LME/MCO maintains an on-line provider directory to help prospective patients understand their local provider options. For FY2015 the Smoky Mountain LME/MCO on-line Provider Directory listed 24 contracted providers with physical addresses in Wilkes County (39).

There is a list of NC-licensed mental health *facilities* (not providers) *physically located* in Wilkes County, as 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 82. NC-Licensed Mental Health Facilities (G.S. 122C) in Wilkes County (September, 2015)

Name of Facility/Operator	Location	Category
268 Home/RHA Health Services Inc	North Wilkesboro	Supervised Living DD Adult
AFL-Espenshade/Omni Visions Inc	Wilkesboro	Supervised Living/Alternative Family Living
Barium Springs Home for Children - Kulynych Cottage	North Wilkesboro	Residential Treatment Level II
Daymark Recovery Services - Wilkes/Daymark Recovery Services Inc	North Wilkesboro	Psychosocial Rehabilitation, SA Intensive Outpatient Program
Hackett III Home/RHA Health Services, Inc	North Wilkesboro	Supervised Living DD Adult
Holly Hills Group Home/Brushy Mountain Group Homes Inc.	North Wilkesboro	Supervised Living DD Adult
Lakewood/RHA North Carolina MR, Inc	Wilkesboro	Supervised Living DD Adult
Lewis Fork Homes I & II	Ferguson	Supervised Living DD Adult
Mountain Health Solutions - North Wilkesboro/ATS of North Carolina Inc	North Wilkesboro	Outpatient Methadone
Mulberry Group Home/Brushy Mountain Group Homes Inc.	North Wilkesboro	Supervised Living DD Adult
Old 60 Home/RHA Health Services Inc	Wilkesboro	Supervised Living DD Adult
Sparta Road Home	North Wilkesboro	Supervised Living DD Adult
Swain Street Group Home/Brushy Mountain Group Homes Inc.	North Wilkesboro	Supervised Living DD Adult
Synergy Recovery at the Bundy Center/Synergy Recovery, Inc	North Wilkesboro	Residential Treatment/Rehabilitation, Day Treatment for SA, Non-hospital Medical Detoxification, Facility Crisis Services for all Disability Groups
VOCA - Apple Valley/VOCA Corporation of America	Wilkesboro	Supervised Living DD Adult
VOCA - Blairfield	Wilkesboro	Supervised Living DD Adult
VOCA - College Street	Wilkesboro	Supervised Living DD Adult
VOCA - Kimsey	Wilkesboro	Supervised Living DD Adult
VOCA - Wellborn Ave	Wilkesboro	Supervised Living DD Adult
Wilkes ADAP	North Wilkesboro	Adult Developmental Vocational Programs
Wilkes Vocational Services, Inc.	North Wilkesboro	Adult Developmental Vocational Programs

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Mental Health Facilities (G.S. 122C) (by County); <http://www.ncdhhs.gov/dhsr/reports.htm>.

(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 and a review of mental health service utilization by Wilkes County residents.)

Other Healthcare Resources

Other Healthcare Facilities

- As of September 15, 2015 there was one ambulatory surgical facility, no licensed cardiac rehabilitation facilities, and no licensed nursing pools in or proximal to Wilkes County, as shown below.
- There was one Medicare-approved dialysis facility in Wilkes County as of September, 2015.

**Table 83. Other NC-Licensed Healthcare Facilities in Wilkes County
(As of September, 2015)**

Type and Name of Facility	Location
Licensed Ambulatory Surgical Facilities	
Wilkes Regional Medical Center Ambulatory Surgical Facility	North Wilkesboro
Licensed Cardiac Rehabilitation Facilities	
	None
Licensed Nursing Pools	
	None

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

**Table 84. Medicare-Approved Dialysis Facilities in Wilkes County
(As of September, 2015)**

Facility	Location	Features
Wilkes Regional Dialysis Center	North Wilkesboro	7 hemodialysis stations; no shifts after 5:00pm

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 Wilkes County.

Table 85. Public Recreational Facilities in Wilkes County

Category/Name	Location	Facilities/Programs
Parks and Recreational Facilities		
Cub Creek Park	Wilkesboro	Baseball fields, batting cages, concessions, basketball courts, walking tracks, tennis courts, pickle ball courts, playground, trout waters, birding activities. Community Garden. Picnic shelters, restrooms. Dog park. Rain gardens.
Rolling Pines Disc Golf Course	Wilkesboro	18 hole Frisbee golf course
School Street Park	Wilkesboro	Nature trail, birding trail, picnic tables
Westwood Park	Wilkesboro	Baseball fields, playground, restrooms, concessions, basketball court, picnic shelter
Smoot Park	North Wilkesboro	Swimming pool
Memorial Park	North Wilkesboro	
Woodlawn Park and Community Center	North Wilkesboro	
Highland Park	North Wilkesboro	
Main Street Park	North Wilkesboro	
North Wilkesboro Skateboard Park	North Wilkesboro	
Yadkin River Greenway	North Wilkesboro	Preserved natural area, walking/hiking trails, fishing access
W. Kerr Scott Dam and Reservoir	Wilkesboro	Multi-use trails, public swimming, boating, biking, fishing

Sources: <http://www.north-wilkesboro.com/attractions/>

<http://www.north-wilkesboro.com/government/?id=recreation>

<http://www.wilkesboronorthcarolina.com/departments-128/parks-a-recreation/48-parks-rec>

Note: Youth baseball, softball, basketball, volleyball offered. Adult softball and flag football offered. Listed on the Wilkes County Parks and Rec site. <http://wilkescounty.net/parks-recreation/parks-recreation-links/>

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 speaking, mortality refers to death; morbidity refers to illness or disability among the living. These data, which are readily available in the public domain, typically use standardized definitions, 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 a number of 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 given period by the population size in the same period. Mortality typically is described as a rate, usually presented as number of deaths per 100,000 residents. Mortality rates are readily available since the underlying (or primary) cause of death is routinely reported on death certificates, the submission of which is more or less 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. The most significant factor 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 just because of its age distribution. 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 population size 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 population. Morbidity data usually is presented as a percentage, or a count, but not a rate.

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. Prevalence expresses a proportion, not a rate. Prevalence is often estimated by consulting hospital records; for instance, hospital discharge records available from NCSCHS show the number of residents within a county who use hospital in-patient services for given diseases during a specific period. Typically, these data underestimate the true prevalence of the given disease in the population, since individuals who do not seek medical care or who are diagnosed outside of the hospital in-patient setting are not 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 multiplier 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 can yield very unstable trends due to the often small number 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.) In an effort 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 such as Wilkes County 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 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)

Wilkes County residents participate in the state’s annual Behavioral Risk Factor Surveillance System (BRFSS) Survey, as part of an aggregate 24-county sample that encompasses the entire western third of the state (“Western North Carolina”). It is not possible to isolate survey responses from Wilkes 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 Wilkes County. As a result, BRFSS data will not be used in this document *except* for local BRFSS data manipulated by the CDC to yield a county-level *estimate*.

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. Together the metrics for those measures help calculate an overall rank. The table below shows where NC stood in the 2014 overall rankings and in rankings of specific categories relative to the “best” and “worst” states, and those states ranked on either side of NC. Note that first ranked (Hawaii) is best and 50th ranked (Mississippi) is worst.

Table 86. Rank of North Carolina in America’s Health Rankings (2014)

Location	National Rank (Out of 50) ¹								
	Overall	Determinants	Outcomes	Diabetes	Smoking	Binge Drinking	Drug Deaths	Obesity	Physical Inactivity
Hawaii	1	3	1	9	3	38	18	2	9
Missouri	36	37	34	22	41	31	38	34	40
North Carolina	37	36	40	43	33	8	24	25	34
Georgia	38	40	32	37	23	9	10	33	31
Mississippi	50	50	50	48	47	5	11	49	50

Source: United Health Foundation, 2014. America’s Health Rankings; <http://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 next table presents the 2015 county rankings for Wilkes County and its comparator in terms of health outcomes and health factors.

- In 2015 Wilkes County was ranked 67th in the state of NC in terms of health outcomes, and 61st in terms of health factors.

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 very old. 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 87. County Health Rankings
(2015)**

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
Wilkes County	66	64	67	68	68	54	66	61
Surry County	58	56	53	74	80	45	75	64

Source: County Health Rankings and Roadmaps, 2015. University of Wisconsin Population Health Institute;
<http://www.countyhealthrankings.org/app/north-carolina/2014/rankings/outcomes/overall>.

The following table presents additional comparative County Health Rankings detail.

**Table 88. County Health Rankings Details
(2015)**

Outcome or Determinate	Wilkes	Surry	NC County Average	Top US Performers ¹
Mortality	66	58		
Premature death	8,673	8,092	7,212	5,200
Morbidity	64	56		
Poor or fair health	20%	24%	18%	10%
Poor physical health days	4.8	4.4	3.6	2.5
Poor mental health days	4.4	3.5	3.4	2.3
Low birthweight	8.3%	8.3%	9.1%	5.9%
Health Factors	61	64		
Health Behaviors	68	74		
Adult smoking	28%	28%	20%	14%
Adult obesity	29%	31%	29%	25%
Food Environment Index	6.8	7.3	6.6	8.4
Physical inactivity	33%	31%	25%	20%
Access to exercise opportunities	55%	57%	76%	92%
Excessive drinking	9%	n/a	13%	10%
Alcohol-impaired driving deaths	32%	32%	33%	14%
Sexually transmitted infections	231	218	519	138
Teen births	50	48	42	20
Clinical Care	68	80		
Uninsured	22%	22%	19%	11%
Primary care physicians	2475:1	1337:1	1448:1	1045:1
Dentists	3137:1	2922:1	1970:1	1377:1
Mental health providers	645:1	821:1	472:1	386:1
Preventable hospital stays	78	88	57	41
Diabetic monitoring	90%	90%	89%	90%
Mammography screening	73.4%	65.8%	68.2%	70.7%
Social and Economic Factors	54	45		
High school graduation	87%	85%	81%	n/a
Some college	49.3%	51.6%	63.8%	71.0%
Unemployment	9.3%	8.6%	8.0%	4.0%
Children in poverty	32%	31%	25%	13%
Income Equality	4.7	4.7	4.8	3.7
Children in single-parent households	29%	30%	36%	20%
Social associations	14.60	14.8	11.70	22.00
Violent crime	239	244	355	59
Injury deaths	88	82	64	50
Physical Environment	66	75		
Air pollution - particulate matter	12.9	12.9	12.3	9.5
Drinking water violations	0%	0%	4%	0%
Severe housing problems	16%	15%	16%	9%
Driving alone to work	83%	85%	81%	71%
Long commute - driving alone	25%	31%	30%	15%

Source: County Health Rankings and Roadmaps, 2015. University of Wisconsin Population Health Institute; <http://www.countyhealthrankings.org/app/north-carolina/2015/rankings/granville/county/outcomes/overall/snapshot>

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 death 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
- Birth rate = number of live births per 1,000 *population* (Note that in the birth rate calculation the denominator includes the entire population, both men and women, not just women of reproductive age.) Since the birth rate is a measure of population growth, it was presented among the demographic data in Chapter One of this report.

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

The table below presents total annual pregnancy, fertility and abortion rates for women age 15-44 for the period from 2005-2009.

Beginning in 2010, NCSCSHS began reporting stratified pregnancy, fertility and abortion data in a different manner than previously. Prior to 2010 the data was stratified by “Total”, “White” and “Minority”. After that date and up until 2012, the data was stratified by “Total”, “White non-Hispanic”, “African-American non-Hispanic”, “Other non-Hispanic”, and “Hispanic”. Beginning in 2013, the racial category “American Indian non-Hispanic” was separated from the “Other non-Hispanic” category. Because of this change, stratified data prior to 2010 is not directly comparable to 2010 through 2012 or 2013 data. The next table presents pregnancy, fertility, and abortion rates stratified according to the model in use from 2005 through 2009.

Table 89. Pregnancy, Fertility and Abortion Rates, Ages 15-44 (Single Years, 2005-2009)

Location		Females Ages 15-44														
		2005			2006			2007			2008			2009		
		Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Wilkes County	Total	68.9	62.8	5.8	70.6	63.5	7.0	74.1	67.6	6.2	68.2	63.4	4.5	63.2	57.5	5.1
	White	66.9	61.8	4.9	69.5	66.2	6.0	71.0	65.6	5.1	66.1	62.1	3.7	62.3	57.5	4.2
	Minority	100.5	83.5	17.0	92.3	60.9	24.4	129.1	108.2	20.9	96.6	88.4	8.2	69.3	58.2	11.1
Surry County	Total	71.9	62.9	8.6	74.3	66.6	7.3	76.8	61.1	8.3	74.4	67.4	6.6	69.3	62.2	6.7
	White	71.0	63.8	6.8	73.1	66.9	5.7	76.1	67.9	6.2	74.6	68.7	5.7	68.4	62.3	5.7
	Minority	64.4	47.0	17.3	76.3	61.5	14.8	61.1	69.3	13.4	58.8	49.6	9.2	74.9	60.6	14.3
State of NC	Total	82.2	66.8	15.0	84.8	68.5	15.8	84.7	69.1	15.1	83.9	69.1	14.4	78.9	65.1	13.4
	White	77.2	67.8	9.0	79.1	69.3	9.5	79.3	69.8	9.1	78.6	69.9	8.4	74.0	66.0	7.7
	Minority	89.9	64.1	25.0	93.2	66.7	25.8	92.4	67.5	24.2	91.2	67.1	23.3	85.4	62.8	21.9

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): <http://www.schs.state.nc.us/data/vital/pregnancies/>.

The next table presents pregnancy, fertility and abortion rates stratified according to the models in use from 2010 through 2013.

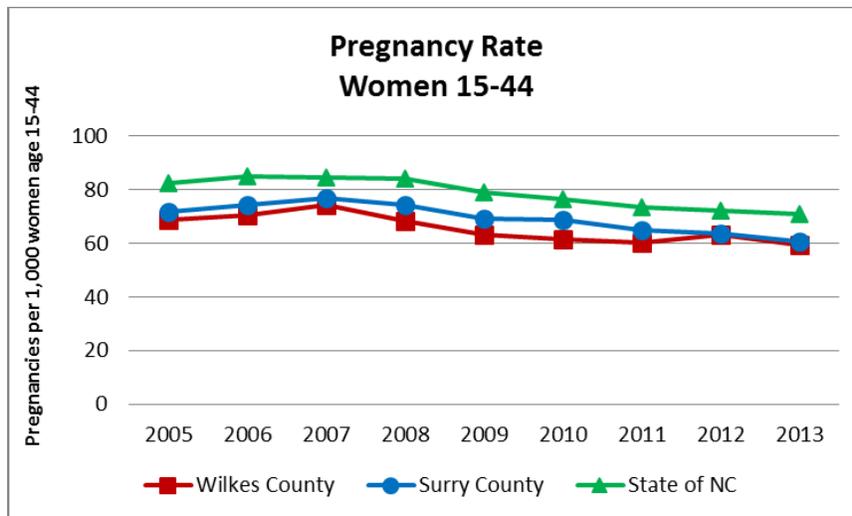
**Table 90. Pregnancy, Fertility and Abortion Rates, Ages 15-44
(Single Years, 2010-2013)**

Location	Females Ages 15-44											
	2010			2011			2012			2013		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Wilkes County Total	61.4	57.2	3.8	60.3	60.3	2.8	63.0	60.0	2.4	59.2	56.1	2.7
White, Non-Hispanic	56.1	52.2	3.4	57.8	57.8	2.8	58.4	56.0	1.9	54.3	51.6	2.2
African American, Non-Hispanic	63.6	57.0	n/a	41.3	41.3	n/a	75.4	60.3	n/a	77.1	70.8	n/a
American Indian, Non-Hispanic										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	127.8	123.8	n/a	102.3	102.3	n/a	110.1	106.3	n/a	109.0	101.5	n/a
Surry County Total	68.7	62.1	6.2	64.9	64.9	4.6	63.6	61.4	2.1	60.7	57.4	2.9
White, Non-Hispanic	63.3	57.3	5.4	59.5	59.5	4.0	58.7	56.8	n/a	56.2	53.9	1.9
African American, Non-Hispanic	58.1	49.7	n/a	83.0	83.0	n/a	59.8	47.0	n/a	75.2	59.7	n/a
American Indian, Non-Hispanic										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	105.2	96.9	n/a	93.3	93.3	n/a	95.9	94.6	n/a	84.2	79.0	n/a
State of NC Total	76.4	62.7	13.2	73.3	34.8	11.4	72.1	61.0	10.7	70.8	60.3	10.1
White, Non-Hispanic	65.6	57.1	8.2	63.6	25.2	7.0	63.0	56.1	6.6	61.8	55.4	6.1
African American, Non-Hispanic	86.1	61.0	24.4	81.5	45.5	21.1	79.6	59.1	19.8	79.0	59.7	18.6
American Indian, Non-Hispanic										71.5	62.9	8.2
Other, Non-Hispanic	84.5	71.3	12.8	80.6	32.9	10.9	79.7	69.7	9.5	79.4	69.5	9.5
Hispanic	114.0	99.0	14.7	106.6	62.7	12.2	102.6	91.4	10.8	98.6	87.9	10.3

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): <http://www.schs.state.nc.us/data/vital/pregnancies/>.

The following three figures present graphic representations of some of the data in the two tables above.

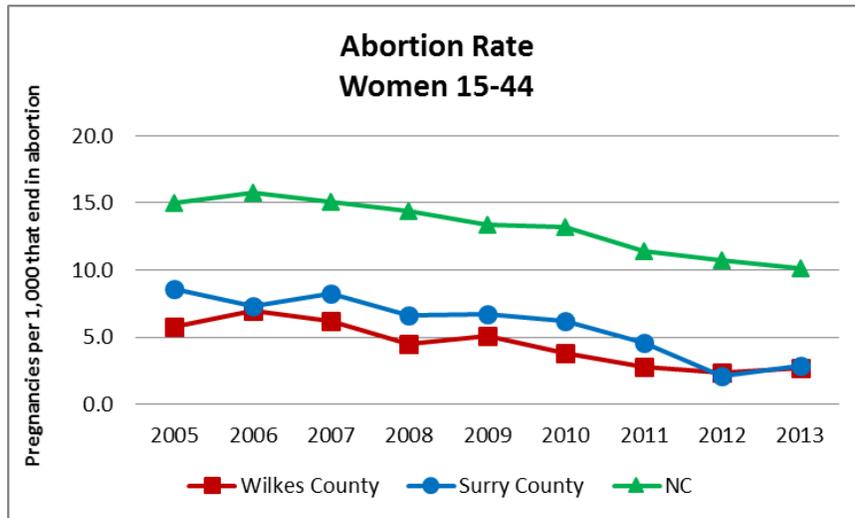
Figure 9. Total Pregnancy Rate Trend, Ages 15-44



Derived from data in tables above.

- The total pregnancy rates in all three jurisdictions cited have fallen between 2005 and 2013.
- The total pregnancy rate in Wilkes County was lower than both the Surry County and NC rates throughout most of the period cited.
- The Wilkes County total pregnancy rate in 2013 (59.2) was the lowest it had been since 2005.

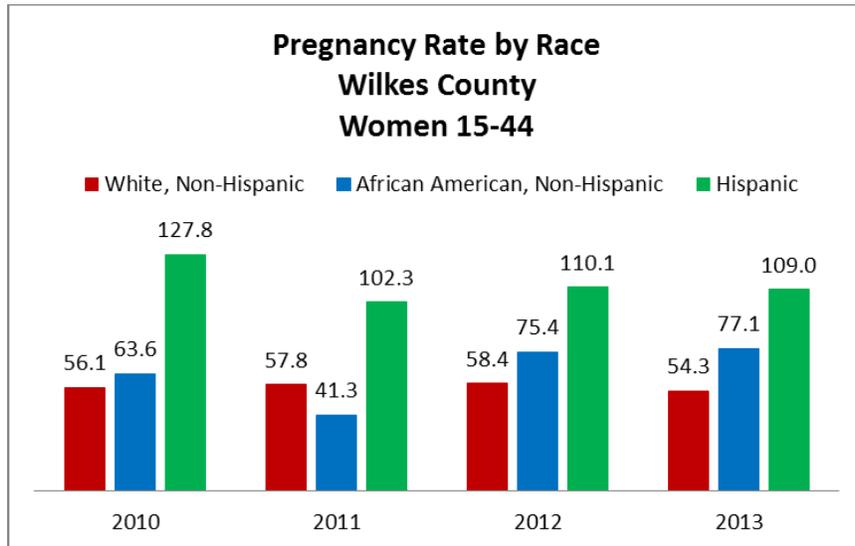
Figure 10. Total Abortion Rate Trend, Ages 15-44



Derived from data in tables above.

- The total abortion rates in all three jurisdictions have fallen dramatically since 2005.

Figure 11. Pregnancy Rate by Race, Ages 15-44, Wilkes County 2010 - 2013



Derived from data in tables above.

- When stratified by race and ethnicity, the *stable* total pregnancy rates for Wilkes County in every year cited were highest among Hispanic women.
- The second highest pregnancy rates occurred among African-American non-Hispanic women in every year cited except 2011.

Pregnancy, Fertility and Abortion Rates, Women Age 15-19 (“Teens”)

The next two tables present total annual pregnancy, fertility and abortion rates for girls age 15-19 (“teens”) for the period from 2005-2013, following the same conventions as were used for the 15-44 age group.

Table 91. Pregnancy, Fertility and Abortion Rates, Ages 15-19 (Single Years, 2005-2009)

Location	Females Ages 15-19															
	2005			2006			2007			2008			2009			
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	
Wilkes County	Total	57.2	51.2	5.6	55.6	46.2	9.3	60.0	55.0	4.5	61.9	57.5	3.9	55.0	48.0	6.0
	White	57.8	52.0	5.3	55.1	46.3	8.7	59.3	54.6	4.2	61.8	58.2	3.1	57.8	50.3	6.4
	Minority	45.5	34.1	11.4	65.9	44.0	22.0	63.2	63.2	0.0	45.9	45.9	0.0	14.9	14.9	0.0
Surry County	Total	55.4	43.4	12.0	56.0	49.2	6.3	68.4	58.1	9.3	56.9	46.6	10.0	48.5	43.7	4.9
	White	50.6	41.6	9.0	56.5	50.7	5.1	67.4	59.2	7.2	58.8	49.3	9.0	48.5	44.2	4.4
	Minority	82.4	64.7	17.6	44.2	33.1	11.0	56.5	45.2	11.3	25.5	15.3	10.2	43.0	37.6	5.4
State of NC	Total	61.7	47.0	14.3	63.1	48.3	14.5	63.0	48.4	14.3	58.6	45.7	12.5	56.0	43.4	12.2
	White	50.9	40.9	9.8	52.9	42.8	9.8	52.3	42.3	9.8	47.8	39.6	8.0	45.4	37.9	7.4
	Minority	82.3	60.6	21.0	82.1	60.0	21.3	82.5	61.5	20.3	77.7	58.3	18.7	74.3	55.0	18.8

Note: Bold type and/or “n/a” indicates an unstable rate based on a small number (fewer than 10 cases)
 NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2011). Pregnancy and Live Births.
 Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; <http://www.schs.state.nc.us/SCHS/data/databook/>

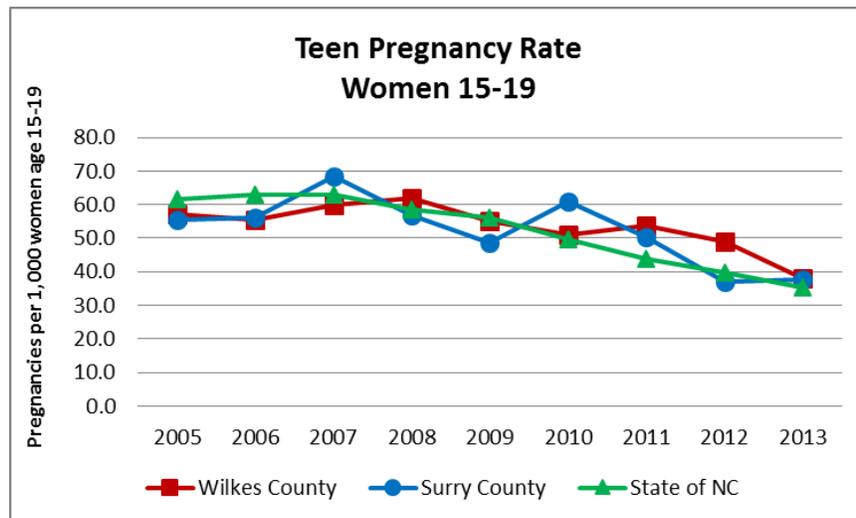
Table 92. Pregnancy, Fertility and Abortion Rates, Ages 15-19 (Single Years, 2010-2013)

Location	Females Ages 15-19												
	2010			2011			2012			2013			
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	
Wilkes County	Total	50.9	46.3	n/a	53.9	51.9	n/a	48.8	45.2	n/a	38.1	35.6	n/a
	White, Non-Hispanic	59.6	45.0	n/a	54.0	52.8	n/a	46.6	43.0	n/a	36.9	35.7	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
	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
Surry County	Total	60.8	53.3	n/a	50.5	46.8	n/a	37.0	35.6	n/a	37.7	36.8	n/a
	White, Non-Hispanic	58.8	50.8	n/a	46.7	43.2	n/a	35.0	33.9	n/a	36.1	35.5	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
	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
State of NC	Total	49.7	38.3	11.0	43.8	34.8	8.7	39.6	31.8	7.6	35.2	28.4	6.6
	White, Non-Hispanic	34.4	27.2	7.0	30.8	25.2	5.5	28.3	23.1	5.1	24.7	20.3	4.2
	African American, Non-Hispanic	70.2	50.9	18.7	61.6	45.5	15.6	55.0	41.4	13.1	49.2	37.3	11.5
	American Indian, Non-Hispanic										52.6	46.4	6.0
	Other, Non-Hispanic	48.9	38.8	9.5	39.4	32.9	6.4	36.4	29.8	6.3	19.9	14.3	5.4
Hispanic	82.7	70.6	11.7	71.1	62.7	8.2	62.0	55.7	6.2	57.9	51.2	6.2	

Note: Bold type and/or “n/a” indicates an unstable rate based on a small number (fewer than 10 cases)
 NC Center for Health Statistics, County-level Data, County Health Data Books (2012-2015). Pregnancy and Live Births.
 Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; <http://www.schs.state.nc.us/SCHS/data/databook/>

The figure below plots overall teen pregnancy rate trends in the comparator jurisdictions.

Figure 12. Total Pregnancy Rate Trend, Ages 15-19



Derived from data in tables above.

- Teen pregnancy rates have fallen in all three jurisdictions since 2005.

Note that the numbers of teen abortions and of teen pregnancies among minority groups were below the threshold for calculating meaningful rates, so due to rate suppression by NC SCHS it is not possible to graph either parameter.

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

The following two tables present the *number* of teen pregnancies and adolescent (under age 15) pregnancies in each jurisdiction from 2004-2013.

Table 93. Number of Teen Pregnancies (Ages 15-19) (Single Years, 2004-2013)

Location	Number of Pregnancies, Ages 15-19									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	118	113	113	120	128	110	101	107	96	75
Surry County	125	120	125	154	137	120	139	109	82	83
State of NC	18,143	18,259	19,192	19,615	19,398	18,142	15,957	13,909	12,535	11,178

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. (2004-2013). (Counties and age groups as indicated); <http://www.schs.state.nc.us/interactive/query/>

**Table 94 Number of Adolescent Pregnancies (Under Age 15)
(Single Years, 2004-2013)**

Location	Number of Pregnancies, Age 14 and Younger									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0	1	2	2	2	3	1	0	2	2
Surry County	6	2	1	2	0	2	1	1	2	0
State of NC	472	468	405	404	376	324	282	255	214	182

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data (2004-2013). (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, etc. 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 sometimes contribute to complicated pregnancies and/or poor birth outcomes.

The table below presents data on high-parity and short interval births for the period 2009-2013.

- Among its comparators, Wilkes County had the highest percentage of high-parity births among women under age 30 and the second highest percentage among women age 30 or older.
- The percentage of short-interval births was highest among the comparators in Wilkes County.

**Table 95. High Parity and Short Interval Births
(Single Five-Year Aggregate Period, 2009-2013)**

Location	High Parity Births				Short Interval Births	
	Mothers < 30		Mothers ≥ 30		No. ³	% ⁴
	No. ¹	% ²	No. ¹	% ²		
Wilkes County	417	16.7	205	22.8	324	14.4
Surry County	442	15.7	268	23.4	373	14.2
State of NC	61,454	16.0	48,339	21.7	50,564	12.6
Source:	a	a	a	a	b	b

¹ Number at risk due 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 (2015), Pregnancy and Births, 2009-2013 Number At Risk NC Live Births due to High Parity by County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

b - NC State Center for Health Statistics, County-level Data, County Health Data Book (2015), Pregnancy and Births, 2009-2013 NC Live Births by County of Residence, Number with Interval from Last Delivery to Conception of Six Months or Less; <http://www.schs.state.nc.us/SCHS/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 (40).

The following table presents data on smoking during pregnancy for the period from 2006-2013.

- Note that while eight years of data are presented in the table below, data from prior to 2010 should not be compared to subsequent data because the format of the instrument used to collect the data was changed in 2010.
- The percent of births to mothers who smoked during pregnancy in Wilkes County was highest among the comparator jurisdictions in every year cited except 2011 and 2013.
- In 2013, the percent of births to mothers who smoked during pregnancy in Wilkes County was 18.9%, 83% higher than the comparable rate statewide.

**Table 96. Smoking during Pregnancy Trend
(Single Years, 2006-2013)**

Location	Number and Percent of Births to Mothers Who Smoked Prenatally															
	2006		2007		2008		2009		2010		2011		2012		2013	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	179	22.5	167	19.9	170	21.7	133	18.9	n/a	n/a	156	23.2	171	24.5	122	18.9
Surry County	202	22.1	179	19.3	178	19.4	153	17.8	n/a	n/a	182	23.5	164	20.8	155	21.4
State of NC	14,668	11.5	14,426	11.0	13,621	10.4	12,975	10.2	n/a	n/a	13,159	10.9	12,727	10.6	12,242	10.3

Source: NC State Center for Health Statistics, Vital Statistics, Volume 1 (2006 through 2013): Population, Births, Deaths, Marriages, Divorces, (geography as noted), Mother Smoked; <http://www.schs.state.nc.us/schs/data/vitalstats.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.

- Note that while eight years of data are presented in the table below, data from prior to 2010 should not be compared to subsequent data because the format of the instrument used to collect the data was changed in 2010.
- The percent of pregnant women in Wilkes County who received early prenatal care was the highest among the comparators in every year cited except 2013.

**Table 97. Women Receiving Prenatal Care in the First Trimester
(Single Years, 2006-2013)**

Location	Number and Percent of Women Receiving Prenatal Care in the First Trimester															
	2006		2007		2008		2009		2010		2011		2012		2013	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	714	89.8	711	84.8	688	87.6	611	87.0	n/a	n/a	527	78.3	565	81.1	497	77.1
Surry County	744	81.6	767	82.7	757	82.6	698	81.4	n/a	n/a	577	74.6	606	76.8	589	81.5
State of NC	104,528	81.9	105,849	80.9	107,183	82.0	105,626	83.3	n/a	n/a	85,706	71.2	85,380	71.3	83,663	70.3

Source: NC State Center for Health Statistics, Basic Automated Birth Yearbook (BABY Book), North Carolina Residents (2006 through 2013) (geographies as noted): Table 6 (and others): County Resident Births by Month Prenatal Care Began, All Women; <http://www.schs.state.nc.us/schs/births/babybook/>.

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 (41).

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

- The total proportion of low birth-weight births in Wilkes County averaged 8.5% throughout the period cited.
- Over the period cited the average proportion of low birth-weight births among black non-Hispanic women in Wilkes County was 17.1%, more than twice the comparable average proportion of low birth weight births among white non-Hispanic women (8.4%).

**Table 98. Low Birth-Weight Births
(Five Year Aggregate Periods, 2006-2010 through 2009-2013)**

Location	Percent of Low Birth Weight (≤ 2,500 Gram) Births																			
	2006-2010					2007-2011					2008-2012					2009-2013				
	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	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Wilkes County	8.6	8.9	13.7	12.2	4.3	8.3	8.2	16.1	11.1	5.7	8.5	8.3	19.2	14.5	5.5	8.4	8.1	19.2	3.9	7.3
Surry County	8.4	9.2	12.8	12.8	4.3	8.2	8.9	12.5	11.3	4.3	7.9	8.5	12.3	12.7	4.3	7.8	8.2	14.7	7.3	5.1
State of NC	9.1	7.7	14.4	9.3	6.3	9.1	7.7	14.3	9.4	6.5	9.0	7.6	14.1	9.3	6.5	9.0	7.5	13.9	9.3	6.6

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 (2012, 2013, 2014), Pregnancy and Births, Low and Very Low Weight Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

The following 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 statewide were 2½ times the comparable rates among white non-Hispanic women.

**Table 99. Very Low Birth-Weight Births
(Five-Year Aggregate Periods, 2006-2010 through 2009-2013)**

Location	Percent of Very Low Birth Weight Births																			
	2006-2010					2007-2011					2008-2012					2009-2013				
	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	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Wilkes County	1.5	1.5	1.4	4.4	0.9	1.5	1.4	2.9	4.9	1.1	1.6	1.5	4.0	5.8	0.7	1.7	1.5	6.2	2.0	1.0
Surry County	1.6	1.8	2.4	0.0	0.7	1.5	1.7	2.5	0.0	0.9	1.4	1.3	3.9	3.6	1.0	1.3	1.2	4.0	3.6	1.2
State of NC	1.8	1.3	3.4	1.5	1.2	1.8	1.3	3.3	1.5	1.2	1.8	1.3	3.3	1.4	1.2	1.8	1.3	3.3	1.5	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 (2012, 2013, 2014), 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% of all births in Wilkes County and 30% statewide.

**Table 100. Cesarean Section Deliveries, Primary and Repeat
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**

Location	Percent of Resident Births Delivered by Cesarean Section							
	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	31.7	32.4	33.4	34.6	35.4	35.3	35.1	36.1
Surry County	25.5	26.6	27.0	27.6	27.3	27.7	28.2	28.6
State of NC	28.7	29.6	30.3	30.9	31.2	31.2	31.1	30.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Pregnancy and Births, Births Delivered by Caesarian Section (Primary and Repeat); <http://www.schs.state.nc.us/SCHS/data/databook/>.

Infants Born with Medical Problems

The Diagnosis Related Group (DRG) method of coding diagnoses associated with inpatient hospitalizations offers a series of codes describing newborns and neonates having certain conditions originating in the perinatal period. Wilkes Regional Medical Center (WRMC) provided the CHA Consultant with proprietary hospital data for inpatient hospital discharges coded in this manner. These coded diagnoses are presented in the table below for the period 2012 through 2014.

- The percentage of newborns and neonates hospitalized with “major” or “significant” problems appeared to increase over the period cited.
- Full-term neonates with “major” or “significant” problems composed approximately 18% of all births in the period from 2012 through 2014.

**Table 101. WRMC In-Patient Discharges of Newborns and Neonates with Conditions
Originating in Perinatal Period
(2012-2014)**

Condition (DRG Code)	Number and Percent of Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
Extreme immaturity or respiratory distress, Neonate (790)	2	0.4	0	0.0	0	0.0	2	0.1
Prematurity with major problems (791)	1	0.2	2	0.4	4	0.8	7	0.5
Prematurity without major problems (792)	24	4.7	25	5.1	28	5.7	77	5.2
Full-term neonate with major problems (793)	8	1.6	4	0.8	15	3.0	27	1.8
Neonate with other significant problems (794)	83	16.2	82	16.8	96	19.5	261	17.5
Normal newborn (795)	379	73.9	361	73.8	325	65.9	1,065	71.2
TOTAL (789-795)	513	100.0	489	100.0	493	100.0	1,495	100.0

DRG Codes included: 789-795

Infant Mortality

Infant mortality is the number of infant (under one year of age) deaths per 1,000 live births. The next two tables and one graph present infant mortality data. Note: the data tables are split to accommodate changes in the way NC SCHC stratified figures over time.

**Table 102. Total Infant Deaths
(Five-Year Aggregate Periods, 2001-2005 through 2005-2009)**

Location	Infant Deaths										
	2001-2005		2002-2006		2003-2007		2004-2008		2005-2009		
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	
Wilkes County	Total	29	7.1	32	7.9	31	7.7	33	8.3	29	7.4
	White	25	6.4	28	7.3	26	6.9	29	7.8	25	6.8
	Minority	4	18.3	4	18.6	5	22.2	4	16.7	4	16.3
Surry County	Total	29	6.4	27	6.0	36	8.0	43	9.6	46	10.3
	White	26	6.4	25	5.9	34	7.9	41	9.6	44	10.3
	Minority	3	12.2	2	8.4	2	9.5	2	9.5	2	9.1
State of NC	Total	5,056	8.5	5,084	8.4	5,234	8.4	5,333	8.4	5,289	8.3
	White	2,648	6.1	2,680	6.1	2,773	6.2	2,818	6.2	2,764	6.0
	Minority	2,404	14.7	2,400	14.5	2,457	14.4	2,515	14.3	2,525	14.0

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 (2007-2011), Mortality, Infant Death Rates per 1,000 Live Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 103. Total Infant Deaths
(Five-Year Aggregate Periods, 2006-2008 through 2009-2013)**

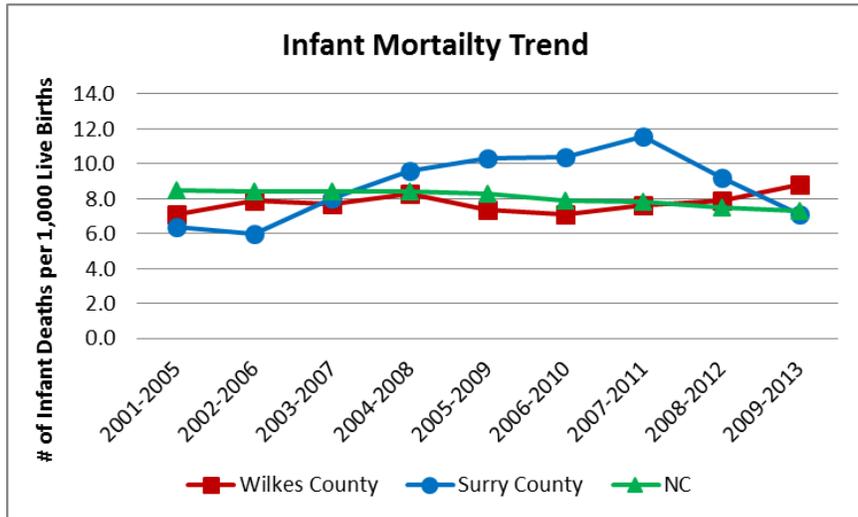
Location	Infant Deaths								
	2006-2010		2007-2011		2008-2012		2009-2013		
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	
Wilkes County	Total	27	7.1	28	7.6	28	7.9	30	8.8
	White, Non-Hispanic	21	6.8	21	7.0	20	6.9	22	7.9
	African American, Non-Hispanic	2	14.4	2	26.7	2	16.0	3	n/a
	Other, Non-Hispanic	1	11.1	0	0.0	0	0.0	0	n/a
	Hispanic	3	6.4	5	11.0	6	13.9	5	n/a
Surry County	Total	46	10.4	48	11.6	38	9.2	28	7.1
	White, Non-Hispanic	1	11.9	42	13.1	35	11.2	25	8.3
	African American, Non-Hispanic	2	12.2	2	12.5	2	13.0	1	n/a
	Other, Non-Hispanic	0	0.0	0	0.0	0	0.0	0	n/a
	Hispanic	5	5.3	4	4.6	1	1.2	2	n/a
State of NC	Total	5,066	7.9	4,899	7.8	4,675	7.5	4,441	7.3
	White, Non-Hispanic	2,074	5.9	2,001	5.7	1,918	5.6	1,850	5.4
	African American, Non-Hispanic	2,208	14.7	2,129	14.3	2,064	14.0	1,967	13.6
	Other, Non-Hispanic	187	6.3	188	6.2	181	5.9	178	5.7
	Hispanic	597	5.8	581	5.8	512	5.3	446	4.8

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 (2012-2015), Mortality, Infant Death Rates per 1,000 Live Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

The following figure plots infant mortality trend data for the three comparator jurisdictions.

**Figure 13. Infant Death Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in tables above.

Racially/ethnically- stratified infant mortality rates in Wilkes County were unstable or suppressed, and therefore have not been graphed.

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 comparator jurisdictions.

- Overall life expectancy at birth in Wilkes County increased by 1.5 years (2%) between 1990-1992 and 2011-2013.
- Life expectancy for Wilkes County males in 2011-2013 was 2.2 years longer than male life expectancy in 1990-1992. The 2011-2013 figure for females was 0.9 years higher than the figure for females in 2011-2013.
- In 1990-1992 life expectancy for females in Wilkes County was 6.3 years longer than the comparable life expectancy for males. By 2011-2013 the disparity had diminished to 5 years.
- In Wilkes County in 1990-1992 the life expectancy for African Americans was 6.4 years shorter than life expectancy for whites. By 2011-2013 the gap had narrowed to 0.5 years.

Table 104. Life Expectancy at Birth, by Gender and Race (1990-1992 and 2011-2013)

Location	Life Expectancy in Years									
	Person Born in 1990-1992					Person Born in 2011-2013				
	Overall	Male	Female	White	African-American	Overall	Male	Female	White	African-American
Wilkes County	75.7	72.5	78.8	76.0	69.6	77.2	74.7	79.7	77.1	76.6
Surry County	76.1	71.9	80.2	76.6	66.8	77.1	74.2	79.8	77.0	76.8
State of NC	74.9	71.0	78.7	76.4	69.8	78.2	75.7	80.6	78.8	75.9

Source: NC State Center for Health Statistics, County-level Data, Life Expectancy, State and County Estimates, Life Expectancy: North Carolina 1990-1992 and 2011-2013, State and County; <http://www.schs.state.nc.us/schs/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 Wilkes County, Surry County, NC and the US for the five-year aggregate period 2009-2013 (or as otherwise noted). The causes of death are listed in descending order of rank in Wilkes 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 105. Overall Age-Adjusted Mortality Rates for the 15 Leading Causes of Death, Wilkes County and Comparators (Single Five-Year Aggregate Period, 2009-2013 or as Noted)¹

Rank/Cause of Death	Wilkes County			Surry County			State of NC			United States (2012)	
	Number	Rate	Rank	Number	Rate	Rank	Number	Rate	Rank	Rate	Rank
1. Cancer	860	182.7	1	981	199.3	1	90,717	173.3	1	185.6	2
Trachea, Bronchus, and Lung	282	58.2	a	340	68.2	a	27,364	51.6	a	50.2	a
Prostate	35	19.4	b	51	26.7	b	4,287	22.1	b	8.7 ²	e
Colon, Rectum and Anus	76	16.4	c	88	18.4	d	7,520	14.5	d	16.6	b
Breast	42	16.4	d	55	19.8	c	6,361	21.7	c	13.2 ²	c
Pancreas	61	12.7	e	49	10.1	e	5,573	10.6	e	12.4	d
2. Diseases of the Heart	766	166.4	2	880	178.5	2	86,285	170.0	2	191.0	1
3. Chronic Lower Respiratory Disease	250	53.0	3	324	65.8	3	23,346	46.1	3	45.7	3
4. All Other Unintentional Injuries	170	47.0	4	138	35.0	5	14,403	29.3	5	40.7	5
5. Cerebrovascular Disease	191	41.7	5	221	45.0	4	21,816	43.7	4	40.9	4
6. Pneumonia and Influenza	130	29.4	6	104	21.1	8	8,890	17.9	8	16.1	8
7. Diabetes Mellitus	114	24.8	7	107	22.0	6	11,220	21.7	7	23.6	7
8. Alzheimer's Disease	103	22.7	8	101	20.3	8	14,000	28.9	6	26.6	6
9. Unintentional Motor Vehicle Injuries	61	17.7	9	58	16.1	11	6,687	13.7	10	11.6	11
10. Septicemia	78	17.1	10	91	18.1	10	6,731	13.3	11	11.4	12
11. Nephritis, Nephrotic Syndrome, and Nephrosis	73	16.1	11	106	21.6	7	8,850	17.6	9	14.5	9
12. Suicide	53	13.6	12	59	15.0	12	6,070	12.2	12	12.9	10
13. Chronic Liver Disease and Cirrhosis	49	11.5	13	60	12.9	13	5,128	9.5	13	11.1	13
14. Homicide	19	5.4	14	17	4.9	14	2,742	5.8	14	5.3	14
15. Acquired Immune Deficiency Syndrome	4	1.4	15	8	1.9	15	1,471	2.9	15	2.3	15
Total Deaths All Causes (incl. some not listed above)	3,689	826.7		4,164	868.6		400,347	790.9		810.2	

Source:

a - NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/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, 2013. <http://www.schs.state.nc.us/data/vital.cfm#vitalvol2>

c - Calculated

d - National Center for Health Statistics, National Vital Statistics Reports, Volume 63, No. 1 to Present. Deaths: Final Data for 2012. http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.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 the whole population

Specific differences between Wilkes County and NC mortality rates for 2009-2013, 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 Wilkes County mortality rate *higher* than the comparable state rate by the percent cited; a minus sign (“-”) and the color **green** indicates a Wilkes County rate *lower* than the comparable state rate by the percent cited. 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 106. Leading Causes of Death in Wilkes County Compared to NC (2009-2013)

Age-Adjusted Rates (2009-2013)	Wilkes County No. of Deaths	Wilkes County Mortality Rate	Wilkes Rate Difference from NC
1. Total Cancer	860	182.7	+5.4%
2. Diseases of the Heart	766	166.4	-2.1%
3. Chronic Lower Respiratory Disease	250	53.0	+15.0%
4. All Other Unintentional Injuries	170	47.0	+60.4%
5. Cerebrovascular Disease	191	41.7	-4.6%
6. Pneumonia and Influenza	130	29.4	+64.2%
7. Diabetes Mellitus	114	24.8	+14.3%
8. Alzheimer’s Disease	103	22.7	-21.5%
9. Unintentional Motor Vehicle Injuries	61	17.7	+29.2%
10. Septicemia	78	17.1	+28.6%
11. Nephritis, Nephrotic Syndrome, Nephrosis	73	16.1	-8.5%
12. Suicide	53	13.6	+11.5%
13. Chronic Liver Disease and Cirrhosis	49	11.5	+21.1%
14. Homicide	19	5.4	+7.4%
15. AIDS	4	1.4	-51.7%

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

From the data in the two tables above it is apparent that in the 2009-2013 aggregate period, mortality rates in Wilkes County were *higher* than comparable rates statewide for the following nine leading causes of death (in descending order of percent difference):

- Pneumonia and influenza
- All other unintentional (non-motor vehicle) injuries
- Unintentional motor vehicle injuries
- Septicemia
- Chronic liver disease and cirrhosis
- Chronic lower respiratory disease
- Diabetes mellitus
- Suicide
- Total cancer

In the 2009-2013 period mortality rates in Wilkes County were *lower* than comparable rates statewide for four of the leading causes of death:

- Alzheimer’s disease
- Nephritis, Nephrotic Syndrome, Nephrosis (kidney disease)
- Cerebrovascular disease
- Diseases of the heart

The Wilkes County mortality rates for homicide and AIDS in the 2009-2013 period were unstable, and cannot be definitively measured against the comparable NC rates.

The next table summarizes changes in the leading causes of death between the last CHA (2006-2010 aggregate period) and the present CHNA (2009-2013 aggregate period), an interval of three years.

- There was one change in rank among the first five leading causes of death, with chronic lower respiratory disease and all other unintentional injuries switching places. Mortality rates for the first five leading causes of death improved in the intervening period.
- Mortality rates for five leading causes of death increased between 2006-2010 and 2009-2013: kidney disease, pneumonia and influenza, chronic liver disease and cirrhosis, diabetes, and septicemia.

**Table 107. Changes in Leading Causes of Death, Wilkes County
(Between 2006-2010 and 2009-2013)**

Wilkes County Rank by Descending Overall Age-Adjusted Rate (2009-2013)	Rank 2006-2010	Rank Change 2006-2010 to 2009-2013	% Rate Change 2006-2010 to 2009-2013
1. Total Cancer	1	nc	-1%
2. Diseases of the Heart	2	nc	-5%
3. Chronic Lower Respiratory Disease	4	+1	-1%
4. All Other Unintentional Injuries	3	-1	-13%
5. Cerebrovascular Disease	5	nc	-15%
6. Pneumonia and Influenza	8	+2	+15%
7. Diabetes Mellitus	9	+2	+7%
8. Alzheimer’s Disease	7	-1	-15%
9. Unintentional Motor Vehicle Injuries	6	-3	-36%
10. Septicemia	11	+1	+3%
11. Nephritis, Nephrotic Syndrome, Nephrosis	12	+1	+29%
12. Suicide	10	-2	-22%
13. Chronic Liver Disease and Cirrhosis	13	nc	+12%
14. Homicide	14	n/a	n/a
15. AIDS	15	n/a	n/a

Note: The use of "n/a" in lieu of a numeral indicates that unstable rates prevented calculation of change/difference.
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. The following table compares gender-stratified rates for leading causes of death in Wilkes County and its comparator jurisdictions. Note that comparisons are limited by occasional “N/As”, representing rates suppressed due to below-threshold numbers of events among stratified groups. The causes of death are listed in the overall order for Wilkes County.

- In Wilkes County in the 2009-2013 aggregate period, the overall mortality rate for males (985.7) was 42% higher than the overall mortality rate for females (695.2).
- In Surry County in the same period the overall mortality rate for males (1,046.4) was 44% higher than the overall mortality rate for females (724.2).
- In NC in the same period the overall mortality rate for males (940.6) was 40% higher than the overall mortality rate for females (673.4).

Table 108. Sex-Specific Age-Adjusted Death Rates for Leading Causes of Death, Wilkes County and Comparators (Single Five-Year Aggregate Period, 2009-2013)

Cause of Death	Wilkes County				Surry County				State of NC Rate	
	Males		Females		Males		Females		Males	Females
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
1. Cancer	481	233.5	379	144.8	546	264.4	435	154.8	217.6	143.0
2. Diseases of the Heart	403	208.2	363	131.5	427	215.3	453	146.9	217.3	134.0
3. Chronic Lower Respiratory Disease	118	59.4	132	49.5	155	79.6	169	58.7	52.9	42.0
4. All Other Unintentional Injuries	114	65.2	56	29.1	91	52.5	47	20.9	38.7	21.3
5. Cerebrovascular Diseases	82	44.7	109	38.2	85	45.8	136	42.6	44.1	42.5
6. Pneumonia and Influenza	56	32.8	74	27.7	47	24.6	57	17.9	20.5	16.2
7. Diabetes Mellitus	68	34.6	46	18.4	52	24.8	55	19.2	25.7	18.4
8. Alzheimer's Disease	25	15.0	78	26.9	27	15.3	74	22.6	23.0	32.0
9. Unintentional Motor Vehicle Injury	42	24.4	19	n/a	47	27.0	11	n/a	20.2	7.7
10. Septicemia	38	19.3	40	15.6	42	21.3	49	16.5	14.6	12.3
11. Nephritis, Nephrotic Syndrome and Nephrosis	33	18.7	40	14.8	50	27.1	56	18.3	21.4	15.1
12. Suicide	41	21.2	12	n/a	50	26.2	9	n/a	19.8	5.4
13. Chronic Liver Disease and Cirrhosis	35	16.7	14	n/a	37	16.8	23	9.3	13.2	6.2
14. Homicide	17	n/a	2	n/a	13	n/a	4	n/a	9.0	2.5
15. Acquired Immune Deficiency Syndrome	2	n/a	2	n/a	7	n/a	1	n/a	4.1	1.8
Total Deaths All Causes (Some causes are not listed above)	1,879	985.7	1,810	695.2	2,041	1,046.4	2,123	724.2	940.6	673.4

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 (2015), Mortality, 2009-2013 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

The next table summarizes the gender differences in mortality specific to Wilkes County.

Table 109. Leading Causes of Death in Wilkes County, Gender Comparison (2009-2013)

Wilkes County Rank by Descending Overall Age-Adjusted Rate (2009-2013)	Rank Among Males	Rank Among Females	% Male Rate Difference from Females
1. Total Cancer	1	1	+61%
2. Diseases of the Heart	2	2	+58%
3. Chronic Lower Respiratory Disease	4	3	+20%
4. All Other Unintentional Injuries	3	5	2.2X
5. Cerebrovascular Disease	5	4	+17%
6. Pneumonia and Influenza	7	6	+18%
7. Diabetes Mellitus	6	8	+88%
8. Alzheimer's Disease	13	7	-44%
9. Unintentional Motor Vehicle Injuries	8	11	n/a
10. Septicemia	10	9	+24%
11. Nephritis, Nephrotic Syndrome, Nephrosis	11	10	+26%
12. Suicide	9	13	n/a
13. Chronic Liver Disease and Cirrhosis	12	12	n/a
14. Homicide	14	14	n/a
15. AIDS	15	15	n/a

Note: The use of "n/a" in lieu of a numeral indicates that unstable rates prevented calculation of change/difference.
Source – Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS.

In Wilkes County in the 2009-2013 period, mortality rates for *males* were *higher* than comparable rates for females for the following nine causes of death (in descending order of percent difference):

- All other unintentional (non-motor vehicle) injuries
- Diabetes mellitus
- Total cancer
- Diseases of the heart
- Nephritis, nephrotic syndrome, nephrosis
- Septicemia
- Chronic lower respiratory disease
- Pneumonia and influenza
- Cerebrovascular disease

In Wilkes County in the same period, the mortality rates for males were lower than comparable rates for females for only one of the leading causes of death:

- Alzheimer's disease

Gender stratified mortality rate differences could not be calculated for five leading causes of death due to unstable stratified mortality rates.

Racial Disparities in Leading Causes of Death

Because of below-threshold numbers of deaths for some causes during the 2009-2013 period, age-adjusted mortality rates among Wilkes County minorities are available only for African Americans and for only two causes of death, as shown in the table below.

- In Wilkes County in the 2009-2013 period, the overall mortality rate for African American non-Hispanics (868.0) was 3.8% higher than the comparable rate for white non-Hispanics (836.4).

Table 110. Race-Specific Age-Adjusted Death Rates for Leading Causes of Death (Single Five-Year Aggregate Period, 2009-2013)

Cause of Death	Wilkes County											
	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
1. Cancer	812	182.7	40	229.0	0	n/a	0	n/a	8	n/a	860	182.7
2. Diseases of the Heart	730	168.2	32	172.3	1	n/a	0	n/a	3	n/a	766	166.4
3. Chronic Lower Respiratory Disease	247	55.1	3	n/a	0	n/a	0	n/a	0	n/a	250	53.0
4. All Other Unintentional Injuries	160	48.8	7	n/a	0	n/a	0	n/a	3	n/a	170	47.0
5. Cerebrovascular Diseases	174	40.0	16	n/a	0	n/a	0	n/a	1	n/a	191	41.7
6. Pneumonia and Influenza	122	29.2	7	n/a	0	n/a	0	n/a	1	n/a	130	29.4
7. Diabetes Mellitus	107	24.7	6	n/a	0	n/a	0	n/a	1	n/a	114	24.8
8. Alzheimer's Disease	102	23.6	1	n/a	0	n/a	0	n/a	0	n/a	103	22.7
9. Unintentional Motor Vehicle Injuries	57	18.4	0	n/a	0	n/a	0	n/a	4	n/a	61	17.7
10. Septicemia	75	17.5	3	n/a	0	n/a	0	n/a	0	n/a	78	17.1
11. Nephritis, Nephrotic Syndrome and Nephrosis	66	15.6	7	n/a	0	n/a	0	n/a	0	n/a	73	16.1
12. Suicide	53	15.0	0	n/a	0	n/a	0	n/a	0	n/a	53	13.6
13. Chronic Liver Disease and Cirrhosis	45	11.5	3	n/a	0	n/a	0	n/a	1	n/a	49	11.5
14. Homicide	15	n/a	3	n/a	0	n/a	0	n/a	1	n/a	19	n/a
15. Acquired Immune Deficiency Syndrome	4	n/a	0	n/a	0	n/a	0	n/a	0	n/a	4	n/a
Total Deaths All Causes (Some causes not listed above)	3,502	836.4	154	868.0	2	n/a	1	n/a	30	370.9	3,689	826.7

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 (2015), Mortality, 2009-2013 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

The next table presents derivative Wilkes County data specific for whites and African Americans only.

Table 111. Leading Causes of Death in Wilkes County, Racial Comparison (2009-2013)

Wilkes County Rank by Descending Overall Age-Adjusted Rate (2009-2013)	Rank Among White Non- Hispanic	Rank Among Black non- Hispanic	% Blacks Rate Difference from Whites
1. Total Cancer	1	1	+25%
2. Diseases of the Heart	2	2	+2%
3. Chronic Lower Respiratory Disease	3	n/a	n/a
4. All Other Unintentional Injuries	4	n/a	n/a
5. Cerebrovascular Disease	5	n/a	n/a
6. Pneumonia and Influenza	6	n/a	n/a
7. Diabetes Mellitus	7	n/a	n/a
8. Alzheimer's Disease	8	n/a	n/a
9. Unintentional Motor Vehicle Injuries	9	n/a	n/a
10. Septicemia	10	n/a	n/a
11. Nephritis, Nephrotic Syndrome, Nephrosis	11	n/a	n/a
12. Suicide	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

Note: The use of "n/a" in lieu of a numeral indicates that unstable rates prevented calculation of change/difference.
Source – Sheila S. Pfaender, Public Health Consultant, after data from NCSCHS

In Wilkes County in the 2009-2013 period mortality rates were *higher* among African Americans than among whites for two leading causes of death (in descending order of percent difference):

- Total cancer
- Diseases of the heart

In Wilkes County African American mortality rates for the 13 other leading causes of death were unstable, and cannot be definitively compared to rates for whites.

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 age group for the five-year aggregate period from 2009-2013. (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 Wilkes County were:

- 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 112. Three Leading Causes of Death by Age Group, Number of Deaths and Unadjusted Death Rates (Single Five-Year Aggregate Period, 2009-2013)

Age Group	Rank	Wilkes County	Surry County	State of NC
00-19	1	Conditions originating in the perinatal period	Conditions originating in the perinatal period Motor Vehicle Injuries	Conditions originating in the perinatal period
	2	Congenital abnormalities (birth defects)	Congenital abnormalities (birth defects)	Congenital anomalies (birth defects)
	3	Motor Vehicle Injuries	Other Unintentional Injuries	Motor vehicle injuries
20-39	1	Other Unintentional Injuries	Other Unintentional Injuries	Other Unintentional injuries
	2	Motor Vehicle Injuries	Motor Vehicle Injuries	Motor vehicle injuries
	3	Cancer - All Sites	Suicide	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	Other Unintentional Injuries	Chronic low er respiratory diseases	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 low er respiratory diseases	Chronic low er respiratory diseases	Chronic low er 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	Cerebrovascular Disease	Cerebrovascular Disease	Alzheimer's disease

Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, Death Counts and Crude Death Rates per 100,000 for Leading Causes of Death, by Age Groups, NC, 2009-2013; <http://www.schs.state.nc.us/SCHS/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 rank in Wilkes 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.

Total 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 (42).

Total cancer (cancers of all types) was the leading cause of death in Wilkes County, Surry County and the state as a whole in the 2009-2013 period (cited previously).

Malignant Neoplasm Hospitalizations

The table below presents the hospital discharge rate trend data for malignant neoplasms of all types. In all periods the malignant neoplasm discharge rate in Wilkes County was higher than the comparable rate for the state as a whole. The highest discharge rates among the comparators were seen in Surry County.

Table 113. All Malignant Neoplasms Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							2013
	2006	2007	2008	2009	2010	2011	2012	
Wilkes County	4.3	4.2	4.3	4.2	3.4	3.7	3.5	3.7
Surry County	5.0	4.5	4.6	4.4	3.6	3.9	3.7	4.3
State of NC	3.9	3.9	3.6	3.4	3.3	3.2	3.0	2.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, 256 Wilkes County residents were hospitalized somewhere in NC with diagnoses of malignant neoplasms in 2013 (43).

The hospital in Wilkes County provided data associated with all cancer (neoplasm)-related ICD-9 codes, as summarized in the table below. Emergency department (ED) admissions and inpatient hospitalization (IP) discharges are presented separately. Note that this data is specific to Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 0.07% of all ED admissions were associated with diagnoses of cancer.
- In the same period, 1.4% of all IP discharges were associated with diagnoses of cancer.

**Table 114. Wilkes County Hospital Data: All Cancer (Neoplasms)
(2012-2014)**

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	20	0.07	13	0.04	26	0.09	59	0.07
IP	78	1.5	59	1.2	65	1.4	202	1.4

ICD-9 Codes included: 140-239xx

Total Cancer Mortality Rate Trend

The next table and its companion figure display the total cancer mortality rate trend.

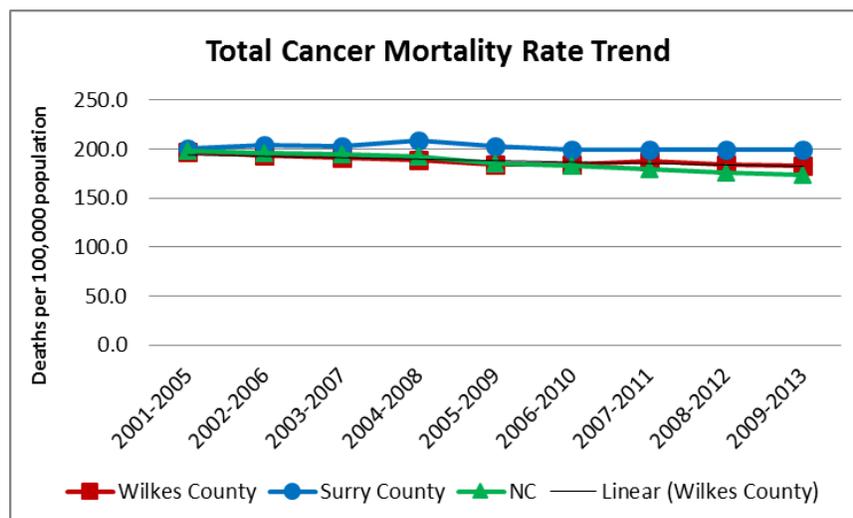
- The total cancer mortality rate in Wilkes County decreased by a very modest amount annually between 2003-2007 and 2009-2013 except for 2007-2011. The total cancer mortality rate in the county decreased overall by 7%.
- The total cancer mortality rate in Wilkes County exceeded the comparable rate for NC in the last four periods cited (2006-2010 through 2009-2013).

**Table 115. Overall Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	196.9	193.7	190.8	188.6	184.5	184.5	188.1	184.3	182.7
Surry County	200.7	204.6	203.0	208.8	202.9	199.8	199.6	198.9	199.3
State of NC	197.7	196.4	194.9	192.5	185.6	183.1	179.7	175.9	173.3

NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 14. Overall Total Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Total Cancer Mortality

The next table presents total cancer mortality data for the aggregate period 2009-2013, 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 Wilkes County the total cancer mortality rate among African American non-Hispanics exceeded the comparable rate for white non-Hispanics by 25%.

Table 116. Race/Ethnicity-Specific Total Cancer Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	812	182.7	40	229.0	0	n/a	0	n/a	8	n/a	860	182.7
Surry County	930	200.6	44	265.1	1	n/a	1	n/a	5	n/a	981	199.3
State of NC	70,043	171.3	18,515	201.5	786.0	163.1	597	163.1	776	65.2	90,717	173.3

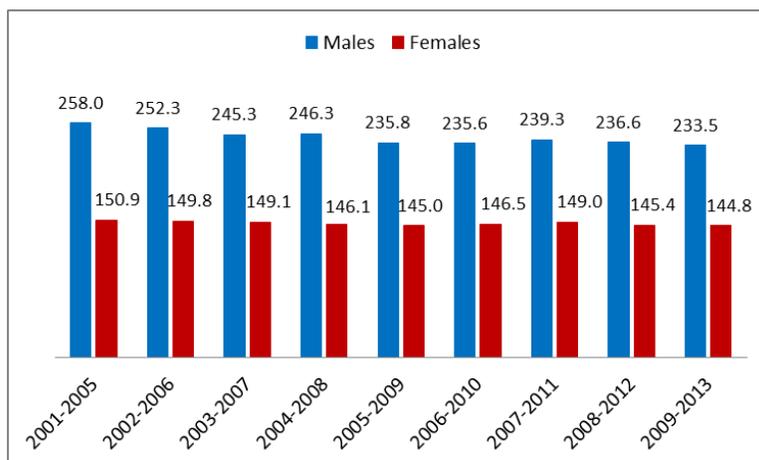
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Total Cancer Mortality

The figure below depicts gender-stratified total cancer mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- It appears that the gender difference in total cancer mortality noted in Wilkes County for 2009-2013 is actually longstanding.
- The total cancer mortality rates for both males and females in Wilkes County have been decreasing slowly.

Figure 15. Sex-Specific Total Cancer Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/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 was 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 table and its companion figure display total cancer incidence rate trends.

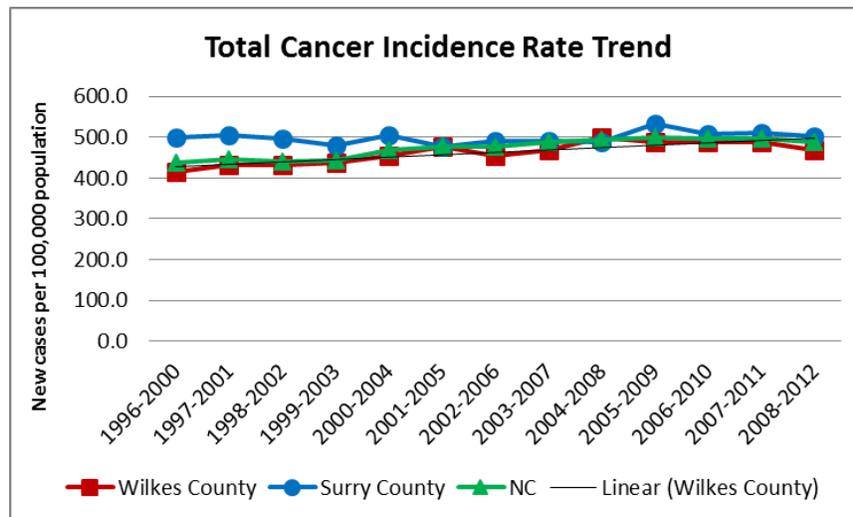
- The total cancer incidence rate in Wilkes County fluctuated over time, but increased overall by 13% over the period cited.

**Table 117. Overall Total Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**

Location	Rate (New cases per 100,000 Population)												
	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012
Wilkes County	414.7	432.9	431.4	437.6	454.3	476.1	455.7	469.4	500.1	488.0	489.7	487.4	468.2
Surry County	499.1	504.3	497.2	478.6	504.4	476.5	492.3	490.2	487.8	533.8	507.1	510.3	503.6
State of NC	437.2	445.3	440.5	444.0	469.8	475.9	477.0	487.0	495.2	500.1	498.1	496.7	488.9

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>.

**Figure 16. Overall Total Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**



Graph derived from data in the table above.

To this point the discussions of cancer mortality and incidence have focused on figures for total cancer. In Wilkes 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 (and prostate cancer) used in this report are gender-specific.

The table below presents age-adjusted *mortality* data for the five prominent site-specific cancers for the 2009-2013 period.

- In Wilkes County, lung cancer was the site-specific cancer with the highest mortality rate. Prostate cancer caused the next highest mortality rate, followed in order by breast and colon cancer, and pancreas cancer.
- In NC as a whole, lung cancer presents the highest mortality rate, followed by prostate cancer, female breast cancer, colon cancer, and pancreas cancer.

**Table 118. Mortality for Five Major Site-Specific Cancers
(Single Five-Year Aggregate Period, 2009-2013)**

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer		Pancreas Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Wilkes County	42	16.4	35	19.4	282	58.2	76	16.4	61	12.7
Surry County	55	19.8	51	26.7	340	68.2	88	18.4	49	10.1
State of NC	6,361	21.7	4,287	22.1	27,364	51.6	7,520	14.5	5,573	10.6

Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2015). 2009-2013 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates (counties and cancer sites as indicated); <http://www.schs.state.nc.us/schs/data/databook/>.

The next table presents age-adjusted *incidence* data for four of the five site-specific cancers for the 2008-2012 period. (Note that incidence data for pancreas cancer was not available at the source.)

- In Wilkes 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 119. Incidence for Four Major Site-Specific Cancers
(Single Five-Year Aggregate Period, 2008-2012)**

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Wilkes County	320	139.6	309	138.5	360	76.4	185	40.6
Surry County	372	149.1	288	128.3	407	83.3	204	42.9
State of NC	43,740	157.0	34,064	139.4	37,215	71.9	20,343	39.8

Source: NC State Center for Health Statistics, County-level Data, Cancer, Annual Reports: NC Cancer Incidence Rates, 2012, All Counties by Specified Site. http://www.schs.state.nc.us/data/cancer/incidence_rates.htm.

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 Wilkes County.

Lung Cancer

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

Lung, Trachea and Bronchus Cancer Hospitalizations

The table below summarizes hospital discharge rates for trachea, bronchus and lung neoplasms. The hospital discharge rate for lung cancer in Wilkes County was higher than or equal to the comparable state rate in every year cited.

Table 120. Malignant Trachea, Bronchus, Lung Neoplasms Hospital Discharge Rate Trend (Single Years, 2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0.6	0.6	0.6	0.8	0.6	0.6	0.4	0.5
Surry County	0.7	0.7	0.8	0.7	0.6	0.5	0.5	0.7
State of NC	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, 35 Wilkes County residents were hospitalized somewhere in NC with a diagnosis of malignant neoplasm of the trachea, bronchus or lung in 2013 (43).

Lung Cancer Mortality Rate Trend

The next table and its companion figure display lung cancer mortality rate trends.

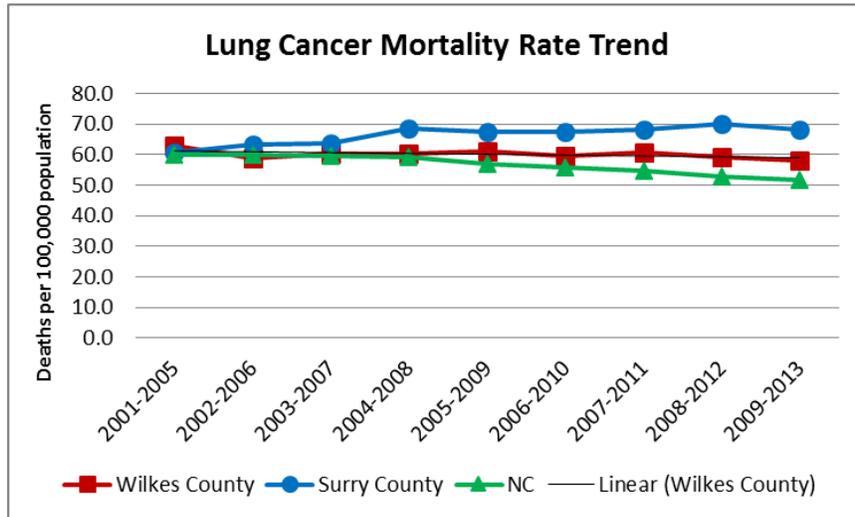
- The lung cancer mortality rate in Wilkes County fluctuated over the period cited, but was 8% lower in 2009-2013 than in 2001-2005.
- The lung cancer mortality rate in Wilkes County was higher than the comparable state rate in every aggregate cited except 2002-2006.
- The NC lung cancer mortality rate decreased overall by 14% over the same period.

Table 121. Lung Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	63.1	58.7	60.2	60.2	61.2	59.5	60.7	59.0	58.2
Surry County	60.5	63.3	63.6	68.7	67.6	67.4	68.1	70.0	68.2
State of NC	59.9	59.8	59.6	59.1	57.0	55.9	54.5	52.8	51.6

NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 17. Lung Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Lung Cancer Mortality

The following table presents lung cancer mortality data for 2009-2013, stratified by race/ethnicity.

- Due to below-threshold numbers of lung cancer deaths among most racially-stratified populations, those mortality rates were suppressed.
- In NC as a whole the lung cancer mortality rate was highest among American Indians, followed by whites and African Americans.

**Table 122. Race/Ethnicity-Specific Lung Cancer Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	270	58.9	11	n/a	0	n/a	0	n/a	1	n/a	282	58.2
Surry County	327	69.5	12	n/a	1	n/a	0	n/a	0	n/a	340	68.2
State of NC	22,024	53.0	4,816	51.6	266	53.1	147	24.3	111	11.0	27,364	51.6

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.

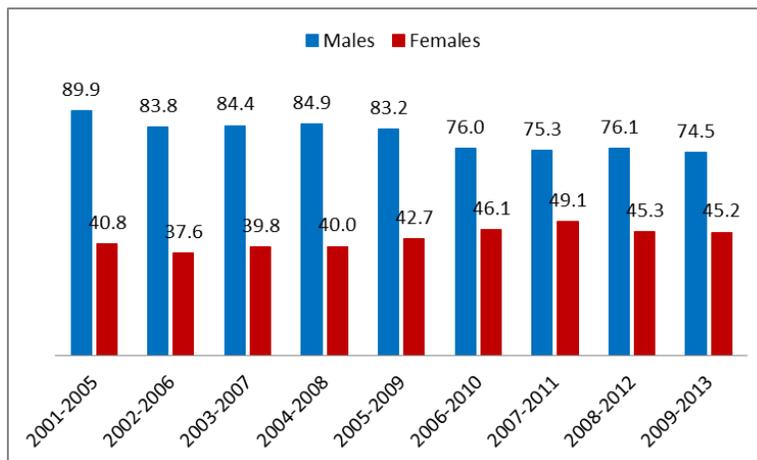
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Lung Cancer Mortality

The figure below displays gender-stratified lung cancer mortality rates in Wilkes County.

- The lung cancer mortality rate among Wilkes County males was significantly higher than the comparable rate among females over the period cited.
- The gender disparity in lung cancer mortality rates in Wilkes County appears to be decreasing, as the rates for males fall and the rates for females rise.

**Figure 18. Sex-Specific Lung Cancer Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2015), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Lung Cancer Incidence

The next table and its companion figure display incidence rate trend data for lung cancer.

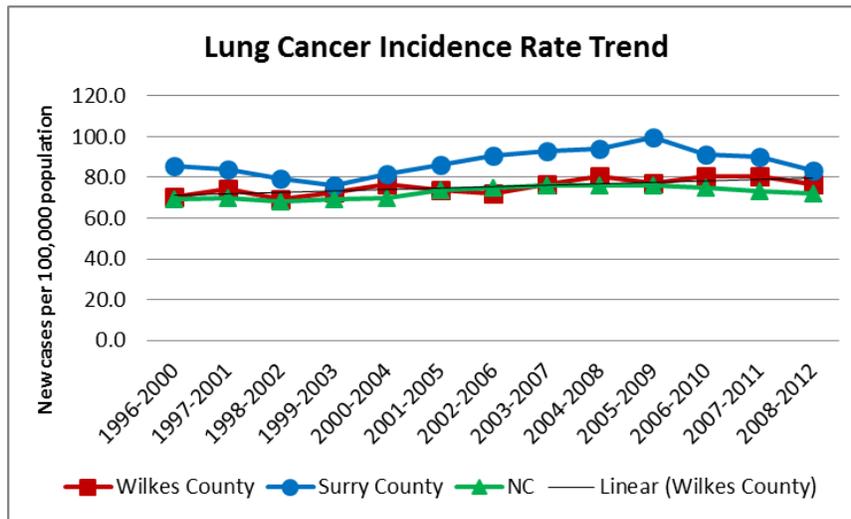
- Lung cancer incidence rates in all three jurisdictions fluctuated from aggregate to aggregate but in net increased over the period cited.
- The lung cancer incidence rate in Wilkes County increased overall by 8% over the period cited.
- The lung cancer incidence rate in Wilkes County was higher than the comparable state rate in every aggregate period cited except 2001-2005 and 2002-2006

**Table 123. Lung Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**

Location	Rate (New cases per 100,000 Population)												
	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012
Wilkes County	70.7	74.5	69.5	72.9	76.5	73.7	72.2	76.7	80.6	77.2	80.3	80.7	76.4
Surry County	85.5	83.9	79.5	75.9	81.5	85.9	90.7	93.0	94.2	99.4	91.1	90.0	83.3
State of NC	69.3	69.7	68.0	69.3	69.7	73.8	75.0	75.8	76.3	75.9	74.8	73.4	71.9

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>

**Figure 19. Lung Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**



Graph derived from data in the table above.

Prostate Cancer

Prostate Cancer Hospitalizations

The table below summarizes hospital discharge rate data for prostate cancer. Prostate cancer discharge rates in Wilkes County were similar to Surry County and NC rates for most of the period cited.

**Table 124. Malignant Prostate Neoplasms Hospital Discharge Rate Trend
(Single Years, 2006-2013)**

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3
Surry County	0.2	0.4	0.4	0.2	0.3	0.2	0.2	0.3
State of NC	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2

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

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence;

<http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, there were 22 hospitalizations among Wilkes County men for malignant neoplasm of the prostate in 2013 (43).

Prostate Cancer Mortality Rate Trend

The next table and its companion figure display prostate cancer mortality rate trends.

- The prostate cancer mortality rate in Wilkes County was above the comparable state rate in the first four aggregate period cited and lower than the NC rate thereafter.

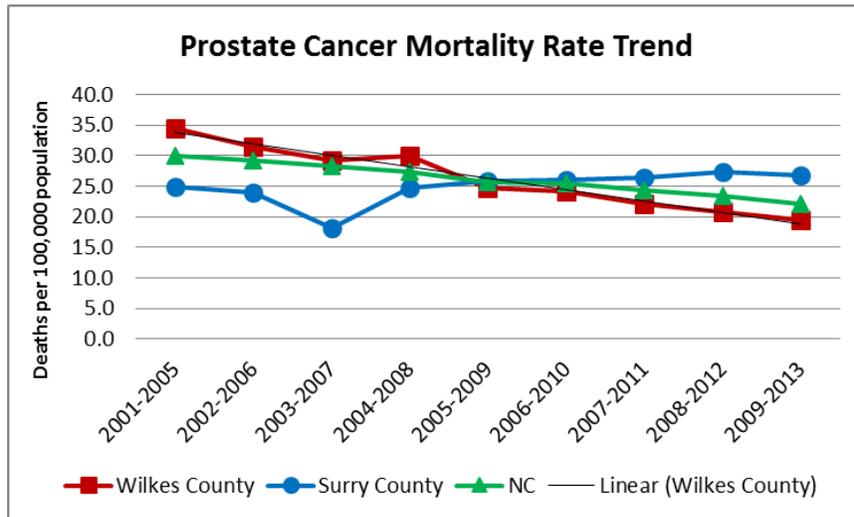
- The Wilkes County prostate cancer mortality rate decreased overall by 44% over the period cited, a more dramatic decrease than occurred at the state level. The prostate cancer mortality rate in Surry County increased.

**Table 125. Overall Prostate Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Overall Rate (Deaths per 100,000 Male Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	34.5	31.4	29.1	30.0	24.6	24.2	22.0	20.8	19.4
Surry County	24.8	24.0	18.2	24.6	25.9	26.0	26.3	27.3	26.7
State of NC	29.9	29.1	28.3	27.3	25.7	25.5	24.3	23.4	22.1

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Figure 20. Overall Prostate Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Prostate Cancer Mortality

The table below presents prostate cancer mortality data for 2009-2013, stratified by race/ethnicity.

- 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 2.6 *times* the comparable rate for white non-Hispanics.

**Table 126. Race/Ethnicity-Specific Prostate Cancer Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	33	19.3	2	n/a	0	n/a	0	n/a	0	n/a	35	19.4
Surry County	46	25.3	5	n/a	0	n/a	0	n/a	0	n/a	51	26.7
State of NC	2,875	18.2	1,319	47.4	49	33.7	12	n/a	32	9.8	4,287	22.1

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 (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Prostate Cancer Incidence

The following table and its companion figure display the incidence rate trend for prostate cancer.

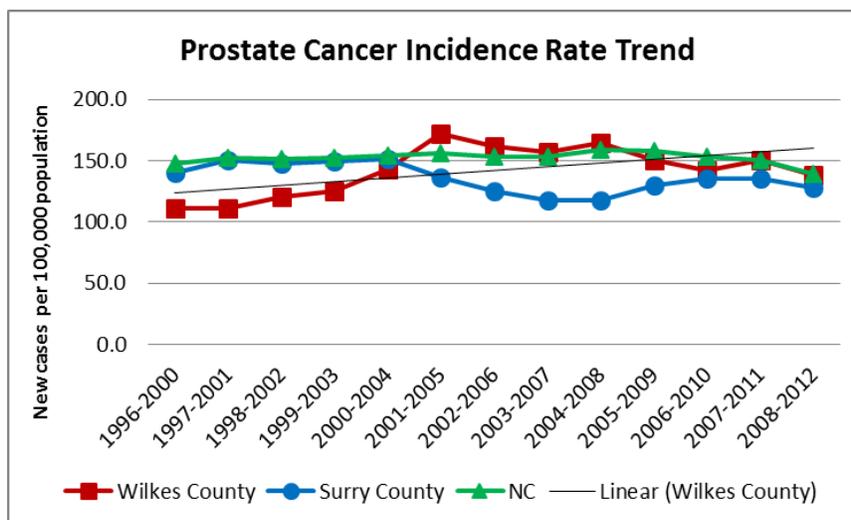
- The prostate cancer incidence rate in Wilkes County was lower than the comparable rate for NC throughout the period cited except for 2001-2005 through 2004-2008.
- The prostate cancer incidence rate in Wilkes County increased overall by 24% over the period cited. Over the same period the comparable rate in NC fell 5%.

**Table 127. Prostate Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**

Location	Rate (New cases per 100,000 Population)												
	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012
Wilkes County	111.5	111.6	120.5	125.1	143.1	171.8	161.9	157.5	164.3	150.5	142.3	150.5	138.5
Surry County	140.0	150.3	147.5	149.4	151.6	136.8	125.0	117.4	117.8	129.7	135.1	135.4	128.3
State of NC	147.3	152.5	151.2	152.0	154.7	156.1	153.2	153.8	158.8	158.3	153.7	150.6	139.4

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>

**Figure 21. Prostate Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**



Graph derived from data in the table above.

Breast Cancer

For purposes of this report, breast cancer pertains exclusively to women, although males can and do contract the disease. There were no breast cancer deaths among males in Wilkes County in the 2009-2013 period.

Breast Cancer Hospitalizations

The following table summarizes hospital discharge rate data for breast cancer. Note that several hospital discharge rates for breast cancer in both counties were unstable due to small numbers of events. Statewide, the discharge rate for female breast cancer was steady at 0.2 until the three most recent periods, when it fell to 0.1.

Table 128. Breast Neoplasms Hospital Discharge Rate Trend (Single Years, 2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Surry County	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.2
State of NC	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1

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

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, there were 12 hospitalizations for malignant neoplasms of the female breast among Wilkes County women in 2013 (43).

Breast Cancer Mortality Rate Trend

The next table and its companion figure display female breast cancer mortality rate trends.

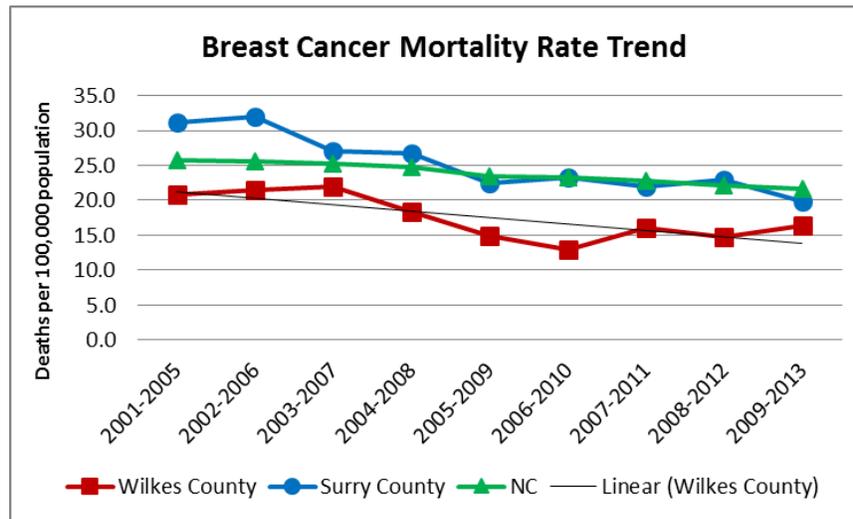
- The breast cancer mortality rates in all three jurisdictions have fallen over the period cited. The breast cancer mortality rate in Wilkes County decreased overall by 21% over the period cited. The NC breast cancer mortality rate decreased overall by 16% over the same period.
- The breast cancer mortality rate in Wilkes County was lower than the comparable rates for the comparators.

Table 129. Overall Female Breast Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Female Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	20.8	21.5	21.9	18.3	14.9	12.9	16.1	14.7	16.4
Surry County	31.2	31.9	27.1	26.8	22.5	23.3	21.9	23.0	19.8
State of NC	25.7	25.5	25.2	24.8	23.5	23.2	22.8	22.2	21.7

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 22. Overall Female Breast Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Breast Cancer Mortality

The following table presents breast cancer mortality data for 2009-2013, stratified by race/ethnicity.

- 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 41% *higher* than the comparable rate for white non-Hispanic women.

Table 130. Race/Ethnicity-Specific Female Breast Cancer Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	40	16.5	2	n/a	0	n/a	0	n/a	0	n/a	42	16.4
Surry County	50	19.3	5	n/a	0	n/a	0	n/a	0	n/a	55	19.8
State of NC	4,586	20.4	1,625	28.8	45	16.4	38	9.2	67	9.1	6,361	21.7

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 (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Breast Cancer Incidence

The table below and its companion figure display the incidence rate trend for breast cancer.

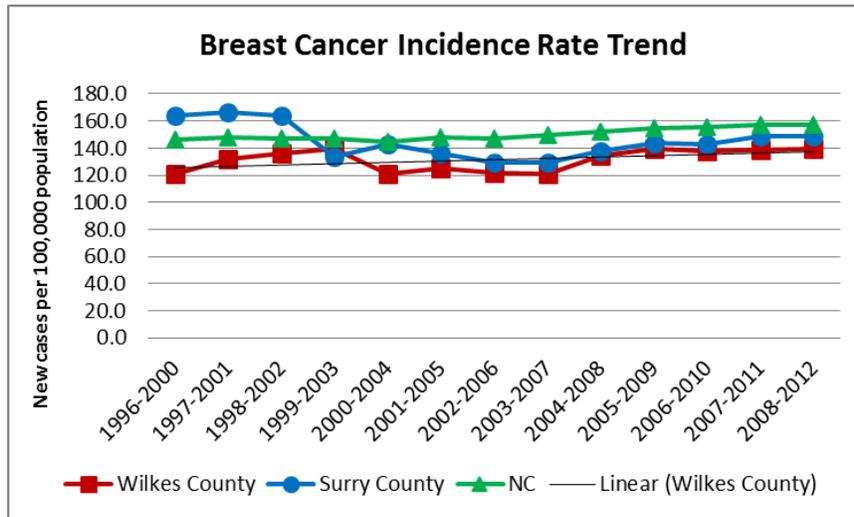
- Breast cancer incidence rates increased in Wilkes County and NC over the period cited.
- In Wilkes County the breast cancer incidence rate increased overall by 16% over the period cited.
- In NC the breast cancer incidence rate increased overall by 8% over the same period.

**Table 131. Breast Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**

Location	Rate (New cases per 100,000 Population)												
	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012
Wilkes County	120.7	132.0	136.0	139.4	121.3	125.2	121.8	120.7	134.5	139.9	138.2	138.7	139.6
Surry County	164.0	166.4	163.7	133.6	142.5	136.2	129.7	129.5	137.7	144.0	142.9	148.8	149.1
State of NC	145.9	148.2	147.1	147.3	144.9	148.2	147.2	149.6	151.9	154.5	155.9	157.4	157.0

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>

**Figure 23. Breast Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**



Graph derived from data in table above.

It is not known whether or not increased screening activity played a role in the increase in breast cancer incidence, although breast cancer screening activities are common.

Colon Cancer

The category of cancer referred to as colon cancer (sometimes referred to as *colorectal cancer*) traditionally *also* includes cancers of the rectum and anus.

Colon Cancer Hospitalizations

The table below summarizes hospital discharge rate data for malignant neoplasms of the colon, rectum and anus. Wilkes County had the highest or co-highest discharge rates in every period cited except the last two.

Table 132. Malignant Colon, Rectum and Anus Neoplasms Hospital Discharge Rate Trend (Single Years, 2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0.7	0.6	0.7	0.8	0.5	0.6	0.4	0.3
Surry County	0.6	0.6	0.5	0.7	0.5	0.6	0.6	0.6
State of NC	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, 24 Wilkes County residents were hospitalized somewhere in NC with diagnoses of malignant neoplasms of the colon, rectum and anus in 2013 (43).

Colon Cancer Mortality Rate Trend

The following table and its companion figure display the colon cancer mortality rate trend.

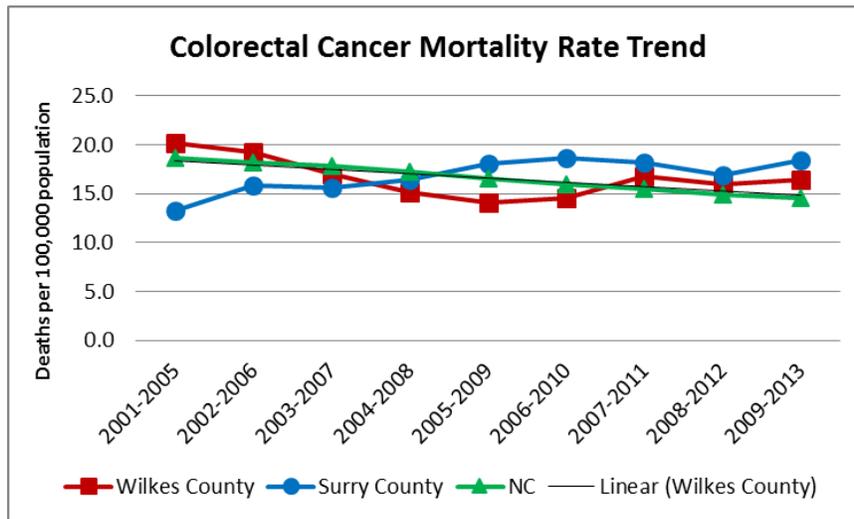
- The colon cancer mortality rate in Wilkes County was lower than the comparable NC rate from 2003-2007 through 2006-2010 and higher than the NC rate from 2007-2011 through 2009-2013.
- The colon cancer mortality rate in Wilkes County decreased overall by 19% over the period cited.

Table 133. Overall Colon Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	20.2	19.2	17.0	15.1	14.1	14.6	16.8	16.0	16.4
Surry County	13.3	15.8	15.6	16.4	18.1	18.7	18.2	16.9	18.4
State of NC	18.6	18.2	17.8	17.3	16.5	16.0	15.5	14.9	14.5

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Figure 24. Overall Colon Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Colon Cancer Mortality

The table below presents colon cancer mortality data for 2009-2013, 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 49% higher than the rate for white non-Hispanics.

**Table 134. Race/Ethnicity-Specific Colon Cancer Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	70	16.0	6	n/a	0	n/a	0	n/a	0	n/a	76	16.4
Surry County	84	18.7	4	n/a	0	n/a	0	n/a	0	n/a	88	18.4
State of NC	5,511	13.6	1,839	20.3	66	13.8	40	5.5	64	5.6	7,520	14.5

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.

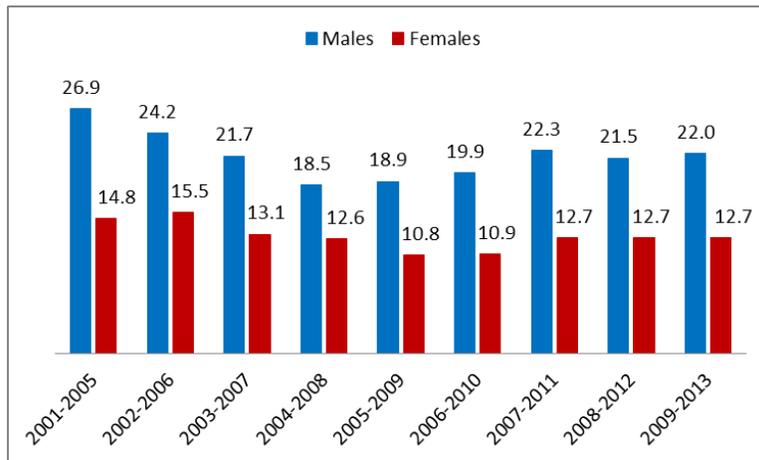
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Colon Cancer Mortality

The next figure depicts gender-stratified colon cancer mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- Colon cancer mortality rates for Wilkes County males were higher than the rates for females in every interval. The mortality rates for both males and females appear to be increasing after a period of decrease.

**Figure 25. Sex-Specific Colon Cancer Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2015), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County;
<http://www.schs.state.nc.us/SCHS/data/databook/>.

Colon Cancer Incidence

The next table and its companion figure display incidence rate trend data for colon cancer.

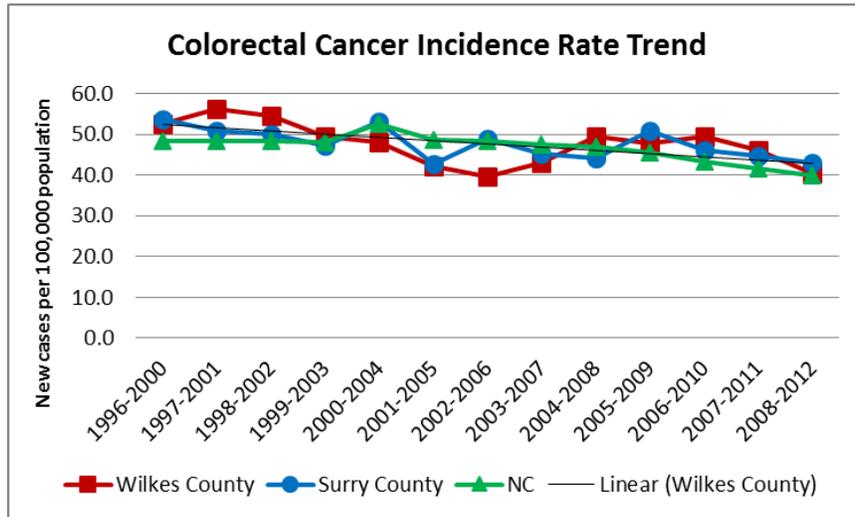
- The colon cancer incidence rate in Wilkes County, above the comparable NC rate prior to 2000-2004, was lower than the NC rate from 2000-2004 through 2003-2007 before again surpassing the state rate from 2004-2008 through 2008-2012.
- The colon cancer incidence rate in Wilkes County decreased overall by 23% over the period cited.
- Statewide, the colon cancer incidence rate fell overall by 18% over the same period

**Table 135. Colon Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**

Location	Rate (New cases per 100,000 Population)												
	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012
Wilkes County	52.5	56.1	54.5	49.6	48.2	42.1	39.5	42.9	49.4	47.8	49.6	46.0	40.6
Surry County	53.6	51.0	49.9	47.3	53.1	42.7	48.8	45.3	44.1	50.8	46.1	44.6	42.9
State of NC	48.4	48.4	48.3	48.2	52.5	48.6	48.4	47.4	46.8	45.5	43.4	41.5	39.8

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>

**Figure 26. Colon Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1996-2000 through 2008-2012)**



Graph derived from data in the table above.

Pancreas Cancer

Pancreas cancer is the fifth leading site-specific cause of cancer death in Wilkes County. Due to its relative rarity, the NCSCHS does not publish the same range of data for this cancer as it does for other, more common site specific cancers.

Pancreas Cancer Hospitalizations

NCSCHS does not routinely release hospitalization data relative to pancreas cancer.

Pancreas Cancer Mortality Rate Trend

The following table and its companion figure show the pancreas cancer mortality rate trend.

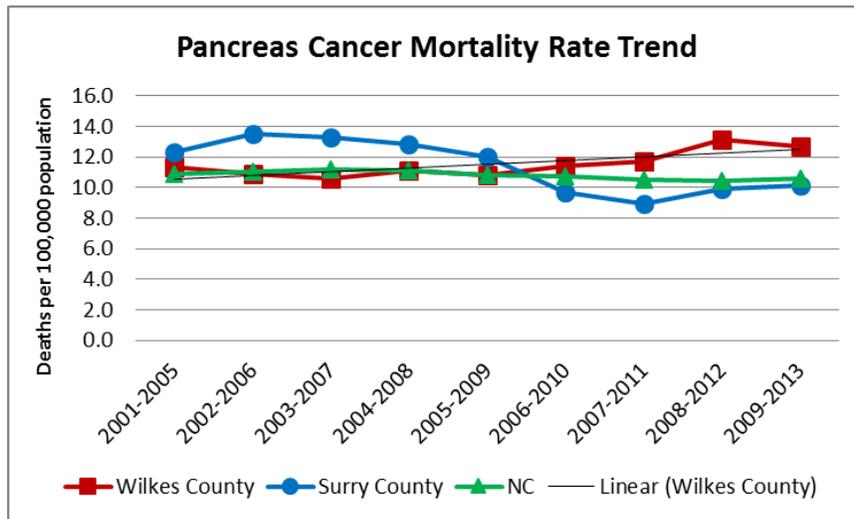
- The pancreas cancer mortality rate in Wilkes County was lower than or equal to the NC rate until 2006-2010, when the county rate began to exceed the state rate.
- The pancreas cancer mortality rate in Wilkes County increased overall by 12% over the period cited.

**Table 136. Overall Pancreas Cancer Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	11.3	10.9	10.6	11.1	10.8	11.4	11.7	13.1	12.7
Surry County	12.3	13.5	13.3	12.8	12.0	9.7	8.9	9.9	10.1
State of NC	10.9	11.0	11.2	11.1	10.8	10.7	10.5	10.4	10.6

Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 27. Overall Pancreas Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Pancreas Cancer Mortality

The table below presents pancreas cancer mortality data for 2009-2013, 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 rate for African American non-Hispanics was 32% higher than the rate for white non-Hispanics.

Table 137. Race/Ethnicity-Specific Pancreas Cancer Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	51	11.5	9	n/a	0	n/a	0	n/a	1	n/a	61	12.7
Surry County	48	10.5	1	n/a	0	n/a	0	n/a	0	n/a	49	10.1
State of NC	4,206	10.2	1,228	13.6	49	10.5	44	7.1	46	4.2	5,573	10.6

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.

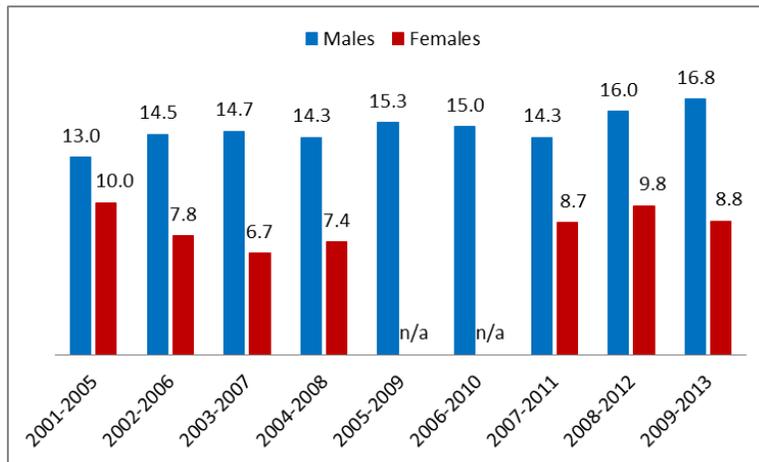
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Pancreas Cancer Mortality

The next figure shows gender-stratified pancreas cancer mortality rates in Wilkes County for 2001-2005 through 2009-2013.

- Wilkes County males have higher pancreas cancer mortality rate than females, and it appears that the size of the difference may be growing.

**Figure 28. Sex-Specific Pancreas Cancer Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2015), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County;
<http://www.schs.state.nc.us/SCHS/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 is an abnormal organic condition of the heart or of the heart and circulation. Heart disease is the number one killer in the US and a major cause of disability. The most common cause of heart disease—coronary artery disease—is a narrowing or blockage of the coronary arteries, the blood vessels that supply blood to the heart itself. Coronary artery disease is the major reason people have heart attacks, but other kinds of heart problems may originate in the valves in the heart, or the heart may not pump well and cause heart failure (44).

Heart disease was the second leading cause of death in Wilkes County, Surry County and NC in the 2009-2013 period (cited previously).

Heart Disease Hospitalizations

The table below presents hospital discharge rate trend data. According to this data from NCSCHS, heart disease has been cause for a high proportion of illness-related hospitalizations among Wilkes County residents over time, and at a rate higher than the rate for the state as a whole in every period cited.

Table 138. Heart Disease Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	16.9	14.8	15.4	15.4	15.1	15.7	14.8	14.6
Surry County	19.2	17.8	17.8	17.7	16.7	18.8	18.1	16.6
State of NC	12.7	12.2	11.8	11.4	11.3	10.9	10.7	10.3

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, there were 1,010 cases of heart disease from Wilkes County hospitalized somewhere in NC in 2013 (43).

The hospital in Wilkes County provided data broadly associated with heart disease-related ICD-9 codes, as summarized in the table below. Emergency department (ED) admissions and inpatient hospitalization (IP) discharges are presented separately. Note that this data is specific to Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represent.

- For the three years cited, 1.1% of all ED admissions were associated with diagnoses of heart disease.
- In the same period, 7.5% of all IP discharges were associated with diagnoses of heart disease.

Table 139. Wilkes County Hospital Data: Heart Disease (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	291	1.0	349	1.2	348	1.2	988	1.1
IP	399	7.6	364	7.3	345	7.5	1,109	7.5

ICD-9 Codes included: 390-398xx, 402xx, 404-429xx,

Heart Disease Mortality Rate Trend

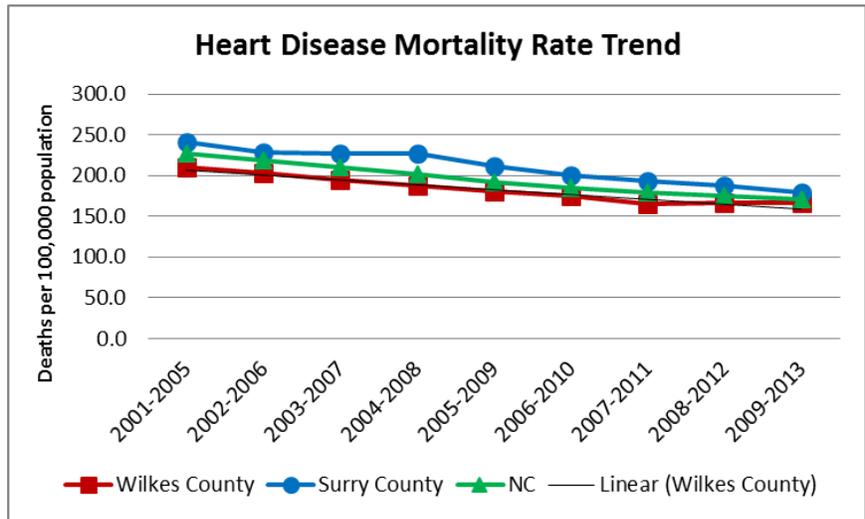
The following table and its companion figure capture heart disease mortality rate trends.

Table 140. Overall Heart Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	210.7	203.0	194.7	187.9	180.2	175.0	165.2	166.1	166.4
Surry County	240.5	228.1	227.0	227.5	211.9	200.2	192.8	188.0	178.5
State of NC	226.8	217.9	210.7	202.2	191.7	184.9	179.3	174.4	170.0

Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 29. Overall Heart Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in table above.

- Heart disease mortality decreased over time in all three jurisdictions.
- In Wilkes County the heart disease mortality rate decreased overall by 21% over the period cited; in NC the heart disease mortality rate fell 25% over the same period. The heart disease mortality rate in Wilkes County was consistently lower than the NC rate.

Racial Disparities in Heart Disease Mortality

The next table presents heart disease mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Due to below-threshold numbers of heart disease deaths among some minority populations at the county-level, mortality rates were suppressed for those groups.
- In Wilkes County the heart disease mortality rate among African American non-Hispanics was 25% higher than the comparable rate among white non-Hispanics.

Table 141. Race/Ethnicity-Specific Heart Disease Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	730	168.2	32	172.3	1	n/a	0	n/a	3	n/a	766	166.4
Surry County	841	181	31	172.2	2	n/a	1	n/a	5	n/a	880	178.5
State of NC	67,667	168.0	16,926	193.2	847	196.5	343	66.0	502	50.7	86,285	170.0

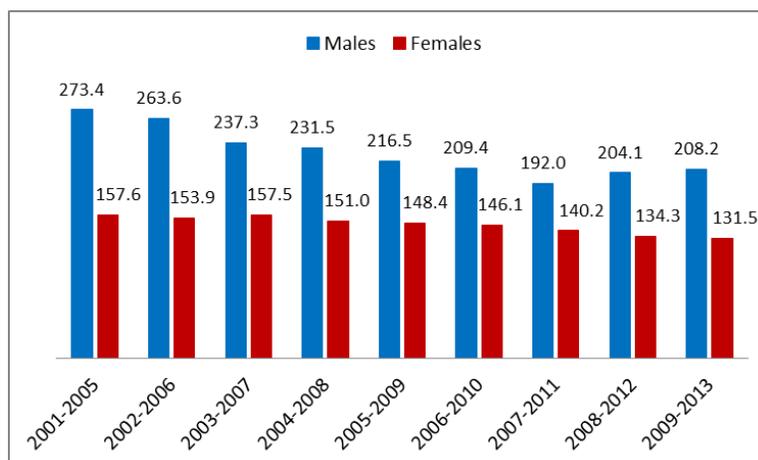
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Heart Disease Mortality

The figure below presents gender-stratified heart disease mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- It appears that the gender disparity noted previously for recent heart disease mortality rate data in Wilkes County is actually long-standing. Males have had higher heart disease mortality rates since at least 2001-2005.
- Heart disease mortality rates for both males and females in Wilkes County have decreased since 2001-2005, but the rate for males has increased recently.

Figure 30. Sex-Specific Heart Disease Mortality Rates, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Chronic Lower Respiratory Disease (CLRD)

Chronic lower respiratory disease (CLRD) is composed of three major diseases, chronic bronchitis, emphysema, and asthma, all of which are characterized by shortness of breath caused by airway obstruction and sometimes lung tissue destruction. The obstruction is irreversible in chronic bronchitis and emphysema, reversible in asthma. Before 1999, CLRD was called *chronic obstructive pulmonary disease* (COPD). Some in the field still use the designation COPD, but limit it to mean chronic bronchitis and emphysema only. In the US, tobacco use is a key factor in the development and progression of CLRD/COPD, but exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role (45).

CLRD was the third leading cause of death in Wilkes County, Surry County, and NC in the 2009-2013 period (cited previously).

CLRD/COPD Hospitalizations

The table below presents the hospital discharge rate trend data for COPD (the term still used by some data-compiling organizations). According to this data, COPD caused a significant proportion of illness-related hospitalizations among Wilkes County residents over time, and at a rate always higher than the comparable state rate.

Table 142. COPD Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	6.7	5.6	5.0	5.6	6.2	5.7	3.6	3.4
Surry County	4.5	4.4	4.7	4.4	4.9	5.8	5.0	3.9
State of NC	3.2	3.1	3.4	3.4	3.2	3.2	2.1	2.0

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, there were 237 hospitalizations for COPD and 53 hospitalizations for asthma somewhere in NC among Wilkes County residents in 2013 (43).

The hospital in Wilkes County provided data broadly associated with ICD-9 codes for COPD and Allied Conditions, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 2.0% of all ED admissions were associated with diagnoses of COPD and Allied Conditions (excluding pneumonia and influenza).
- In the same period, 0.03% of all IP discharges were associated with diagnoses of COPD and Allied Conditions (excluding pneumonia and influenza).

Table 143. Wilkes County Hospital Data: COPD and Allied Conditions (Including Asthma but Excluding Pneumonia and Influenza) (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	522	1.8	627	2.1	617	2.1	1,766	2.0
IP	40	0.8	2	0.04	0	0.0	42	0.03

ICD-9 Codes included: 490-493xx

CLRD Mortality Rate Trend

The next table and its companion figure display CLRD mortality rate trends.

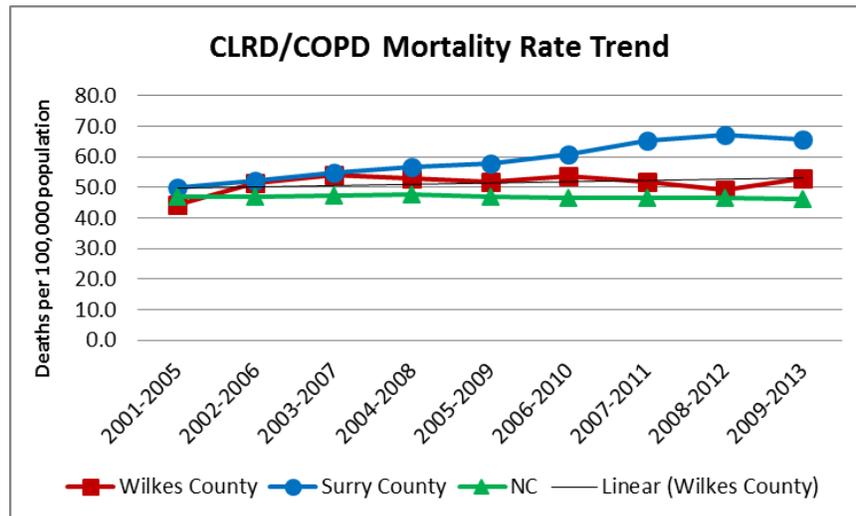
- The CLRD mortality rate in Wilkes County was higher than the comparable state rate throughout the period cited beginning in 2002-2006.
- The CLRD mortality rate in Wilkes County increased overall by 20% over the period cited.

Table 144. Overall CLRD Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	44.3	51.3	53.9	53.0	51.8	53.6	52.0	49.1	53.0
Surry County									
State of NC	46.9	47.1	47.5	47.8	47.0	46.4	46.6	46.6	46.1

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 31. Overall CLRD Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in CLRD Mortality

The following table presents CLRD mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of CLRD deaths among minority populations in the counties, mortality rates were suppressed for those groups.
- In NC as a whole the CLRD mortality rate for African-American non-Hispanics was approximately *half* the comparable mortality rate among white non-Hispanics.

Table 145. Race/Ethnicity-Specific CLRD Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	247	55.1	3	n/a	0	n/a	0	n/a	0	n/a	250	53.0
Surry County	318	68.3	5	n/a	0	n/a	0	n/a	1	n/a	324	65.8
State of NC	20,684	50.9	2,384	28.0	168	40.8	44	9.7	66	8.8	23,346	46.1

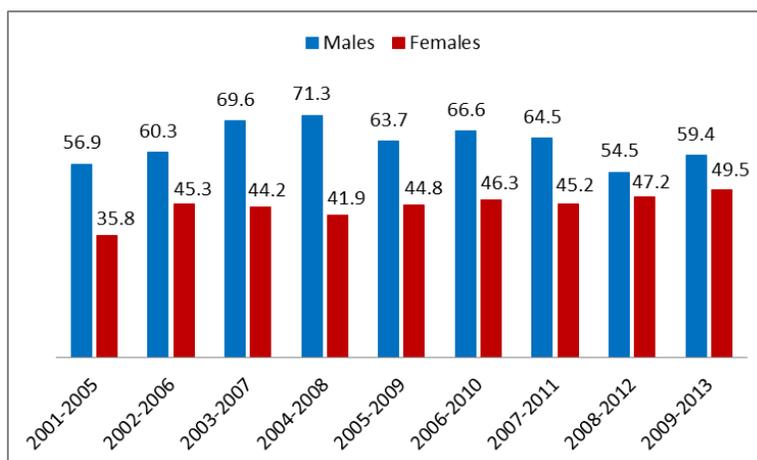
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in CLRD Mortality

The figure below presents gender-stratified CLRD mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The CLRD mortality rate among Wilkes County males was higher than the comparable rate among females over the entire period cited.
- Although the CLRD mortality rate among Wilkes County males fluctuated over the period cited, the comparable rate for females has risen steadily, closing the gender gap.

Figure 32. Sex-Specific CLRD Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

All Other Unintentional Injury

This category includes death without purposeful intent due to poisoning (including accidental drug overdoses), falls, burns, choking, animal bites, drowning, and occupational or recreational injuries; it expressly excludes unintentional injury due to motor vehicle crashes. (Death due to injury involving motor vehicles is a separate cause of death and will be covered subsequently.)

All other unintentional injury was the fourth leading cause of death in Wilkes County and the fifth leading cause of death in Surry County and NC in the 2009-2013 period (cited previously).

All Other Unintentional Injury Hospitalizations

The table below presents hospital discharge rate trend data for a category called *injuries and poisonings*, which also includes injuries resulting from motor vehicle crashes. According to this data, injuries and poisonings caused a significant proportion of hospitalizations among Wilkes County residents over time, at rates higher than the state average.

Table 146. Injuries and Poisonings Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	12.0	11.4	11.2	10.6	11.0	9.7	9.9	9.2
Surry County	12.2	11.5	12.8	11.1	11.2	11.6	11.6	10.4
State of NC	8.6	8.6	8.5	8.3	8.2	8.2	8.1	7.7

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 636 injury and poisoning hospitalizations among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

The hospital in Wilkes County provided data associated with ICD-9 codes for injury and poisoning, as summarized in the table below. Emergency department (ED) admissions and inpatient hospitalization (IP) discharges are presented separately. Note that this data is specific to Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 22.2% of all ED admissions were associated with diagnoses of injury or poisoning.
- In the same period, 5.1% of all IP discharges were associated with diagnoses of injury or poisoning.

Table 147. Wilkes County Hospital Data: Injury and Poisoning (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	6,276	22.0	6,479	22.1	6,766	22.6	19,521	22.2
IP	280	5.3	232	4.7	239	5.2	751	5.1

ICD-9 Codes included: 800-999xx

All Other Unintentional Injury Mortality Rate Trend

The table and its companion figure below display the mortality rate trend data for all other unintentional injuries.

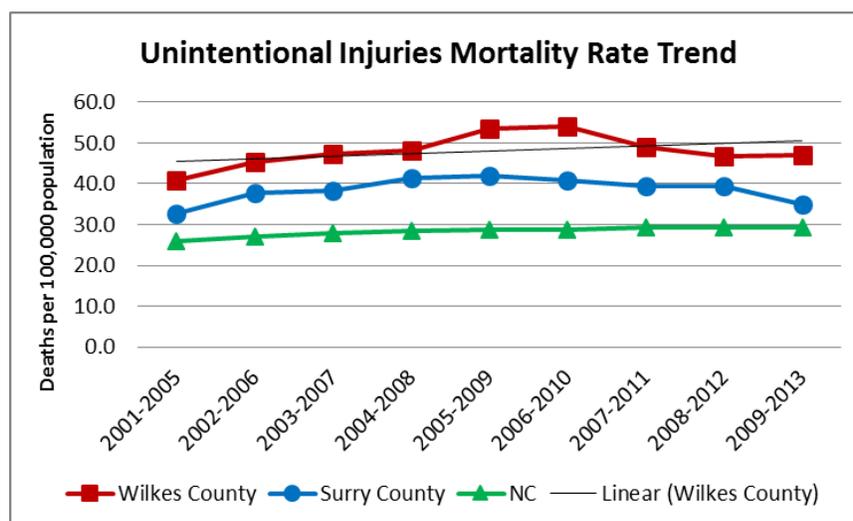
- The all other unintentional injury mortality rate in Wilkes County was higher than the comparable Surry County or NC rates throughout the period cited.
- The mortality rate in Wilkes County increased overall by 15% over the period cited.

Table 148. Overall All Other Unintentional Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	40.7	45.2	47.4	48.0	53.5	54.1	49.1	46.7	47.0
Surry County	32.8	37.6	38.3	41.3	42.0	40.9	39.5	39.3	35.0
State of NC	26.0	27.0	27.8	28.4	28.6	28.6	29.2	29.4	29.3

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 33. Overall All Other Unintentional Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in All Other Unintentional Injury Mortality

The next table presents mortality data for all other unintentional injuries for the aggregate period 2009-2013, 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 149. Race/Ethnicity-Specific All Other Unintentional Injury Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	160	48.8	7	n/a	0	n/a	0	n/a	3	n/a	170	47.0
Surry County	133	38.3	3	n/a	0	n/a	0	n/a	2	n/a	138	35.0
State of NC	11,970	33.9	1,891	19.7	190	36.1	74	9.8	278	11.6	14,403	29.3

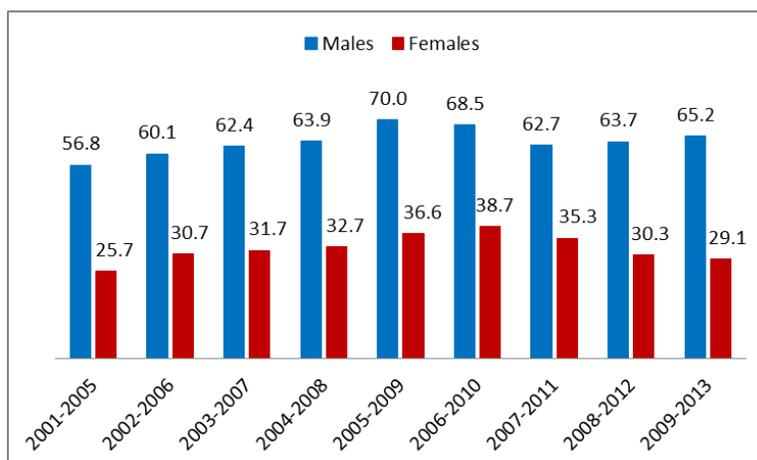
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in All Other Unintentional Injury Mortality

The following figure depicts gender-stratified mortality rates for all other unintentional injuries in Wilkes County for the aggregate period 2001-2005 through 2009-2013.

- Mortality rates for all other unintentional injury for males in Wilkes County historically have been roughly twice the comparable rates for females.

Figure 34. Sex-Specific All Other Unintentional Injury Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Cerebrovascular Disease

Cerebrovascular disease describes the physiological conditions that lead to stroke. Strokes happen when blood flow to the brain 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 (46).

Cerebrovascular disease was the fifth leading cause of death in Wilkes County, and the fourth leading cause of death in Surry County and NC in the 2009-2013 aggregate period (cited previously).

Cerebrovascular Disease Hospitalizations

The following table presents the hospital discharge rate trend data for cerebrovascular disease. According to this data, cerebrovascular disease caused a significant proportion of illness-related hospitalizations among Wilkes County residents over time, and at a rate higher than the state rate in every year cited.

Table 150. Cerebrovascular Disease Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	3.6	3.6	4.0	3.8	3.9	3.9	4.4	4.2
Surry County	3.9	4.1	4.2	4.2	4.4	4.3	4.4	3.7
State of NC	3.1	3.1	3.0	3.1	3.1	3.0	3.0	2.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, there were 292 hospitalizations for cerebrovascular disease somewhere in NC among Wilkes County residents in 2013 (43).

The hospital in Wilkes County provided data broadly associated with ICD-9 codes for cerebrovascular disease, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 0.3% of all ED admissions were associated with diagnoses of cerebrovascular disease.
- In the same period, 2.6% of all IP discharges were associated with diagnoses of cerebrovascular disease.

Table 151. Wilkes County Hospital Data: Cerebrovascular Disease (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	75	0.3	88	0.3	96	0.3	259	0.3
IP	149	2.9	123	2.5	117	2.5	389	2.6

ICD-9 Codes included: 430-438xx

Cerebrovascular Disease Mortality Rate Trend

The next table and its companion figure display cerebrovascular disease mortality rate trends.

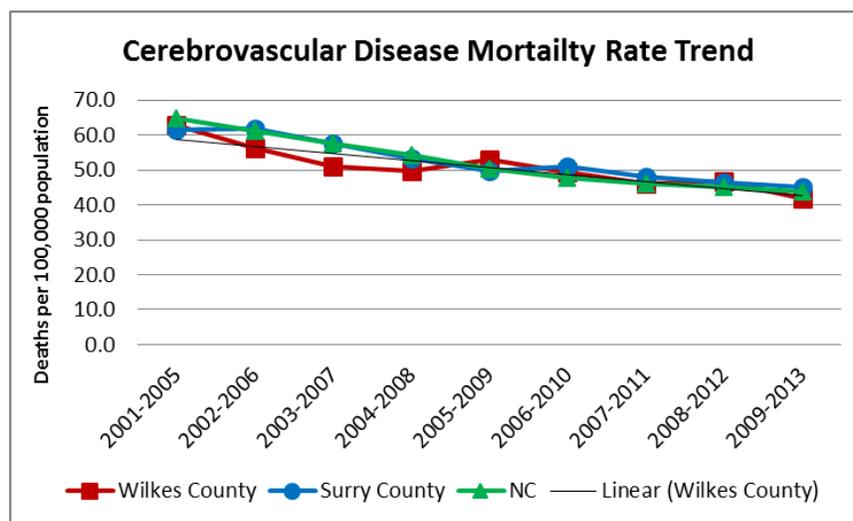
- The cerebrovascular disease mortality rate in Wilkes County was below the comparable state rate in every year cited except 2005-2009 through 2008-2012.
- The cerebrovascular disease mortality rate in Wilkes County decreased overall by 33% over the period cited.

Table 152. Overall Cerebrovascular Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	62.7	56.1	51.1	49.8	52.9	49.3	46.1	46.9	41.7
Surry County	61.6	61.8	57.5	53.4	49.8	51.1	48.2	46.5	45.0
State of NC	64.7	61.1	57.6	54.4	50.5	47.8	46.0	45.1	43.7

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 35. Overall Cerebrovascular Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Cerebrovascular Disease Mortality

The table below presents cerebrovascular disease mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Due to below-threshold numbers of cerebrovascular disease deaths among all minority populations at the county level mortality rates were suppressed for those groups.
- In NC as a whole the cerebrovascular disease mortality rate African American non-Hispanics was 38% higher than the comparable rate for white non-Hispanics.

Table 153. Race/Ethnicity-Specific Cerebrovascular Disease Mortality (Single Five-Year Aggregate Period, 2009-2013)

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		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Wilkes County	174	40	16	n/a	0	n/a	0	n/a	1	n/a	82	44.7	109	38.2	191	41.7
Surry County	211	45.3	6	n/a	1	n/a	1	n/a	2	n/a	85	45.8	136	42.6	221	45.0
State of NC	16,525	41.3	4,833	57.1	143	36.0	146	29.1	169	17.6	8,829	44.1	12,987	42.5	21,816	43.7

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

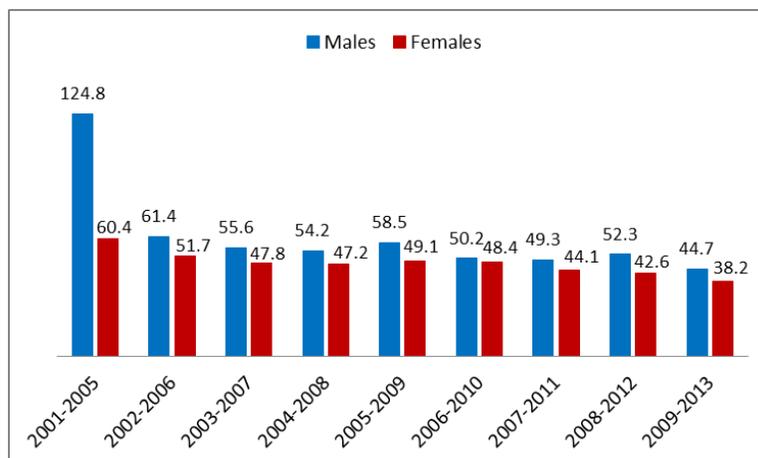
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Cerebrovascular Disease Mortality

The following table depicts gender-stratified cerebrovascular disease mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- It appears that throughout the period cited the cerebrovascular mortality rate among Wilkes County males was higher than the comparable rate among females.

Figure 36. Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Pneumonia and Influenza

Pneumonia and influenza are diseases of the lungs. Pneumonia is an inflammation of the lungs caused by either bacteria or viruses. Bacterial pneumonia is the most common and serious form of pneumonia and among individuals with suppressed immune systems it may follow influenza or the common cold. Influenza (the “flu”) is a contagious infection of the throat, mouth and lungs caused by an airborne virus (47).

Pneumonia/influenza was the sixth leading cause of death in Wilkes County, and the eighth leading cause of death in Surry County and NC in the 2009-2013 aggregate period (cited previously).

Pneumonia and Influenza Hospitalizations

The table below presents the hospital discharge rate trend data for pneumonia/influenza. According to this data from NCSCHS, pneumonia and influenza have caused a significant proportion of illness-related hospitalizations among Wilkes County residents over time, at rates significantly higher than the state average.

Table 154. Pneumonia and Influenza Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	6.8	5.7	5.2	5.7	5.8	6.0	6.1	5.4
Surry County	5.8	5.3	5.2	4.8	4.7	5.2	6.9	5.7
State of NC	3.7	3.4	3.3	3.5	3.1	3.2	3.2	3.1

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 372 hospital admissions for pneumonia/influenza among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

The hospital in Wilkes County provided data associated with ICD-9 codes for pneumonia and influenza, as summarized in the table below. Emergency department (ED) admissions and inpatient hospitalization (IP) discharges are presented separately. Note that this data is specific to Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 1.5% of all ED admissions were associated with diagnoses of pneumonia (mostly) and influenza. There was a surge of ED visits (4½ times the previous year’s total) associated with influenza in 2013.
- In the same period, 5.4% of all IP discharges were associated with diagnoses of pneumonia (mostly) and influenza. Data for 2013 did *not* demonstrate any surge in IP discharges for either pneumonia or influenza.

Table 155. Wilkes County Hospital Data: Pneumonia and Influenza (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	304	1.1	687	2.3	368	1.2	1,359	1.5
IP	283	5.4	293	5.9	218	4.7	794	5.4

ICD-9 Codes included: 480-488xx

Pneumonia and Influenza Mortality Rate Trend

The next table and its companion figure display pneumonia/influenza mortality rate trend data.

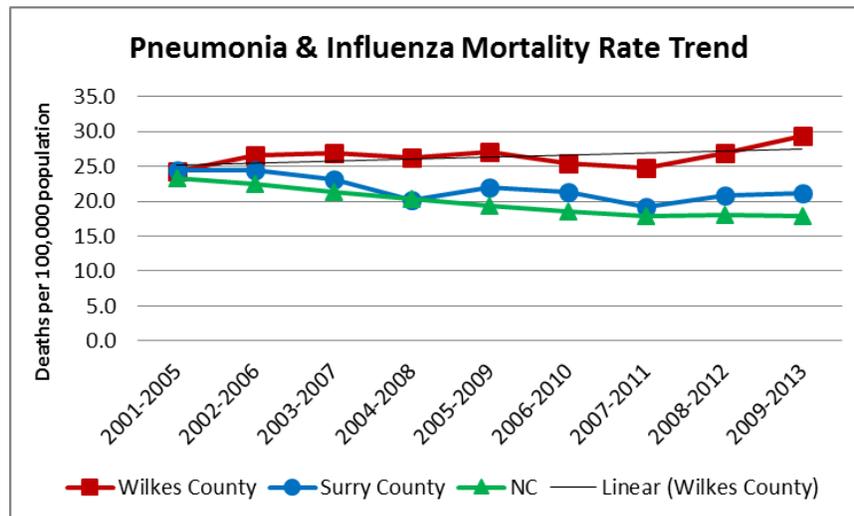
- The Wilkes County pneumonia/influenza mortality rate was higher than the comparable rates for the other jurisdictions throughout the period cited.
- The pneumonia/influenza mortality rate in Wilkes increased overall by 21% over the period cited.
- The comparable mortality rate statewide fell overall by 23% over the same period.

Table 156. Overall Pneumonia and Influenza Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	24.2	26.5	26.9	26.2	27.1	25.5	24.7	26.9	29.4
Surry County	24.4	24.4	23.2	20.2	22.0	21.4	19.2	20.8	21.1
State of NC	23.3	22.5	21.4	20.3	19.4	18.6	17.9	18.0	17.9

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 37. Overall Pneumonia and Influenza Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Pneumonia and Influenza Mortality

The table below presents pneumonia/influenza mortality data for the aggregate period 2009-2013, 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 157. Race/Ethnicity-Specific Pneumonia and Influenza Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	122	29.2	7	n/a	0	n/a	0	n/a	1	n/a	130	29.4
Surry County	98	20.9	6	n/a	0	n/a	0	n/a	0	n/a	104	21.1
State of NC	7,294	18.3	1,427	16.9	51	12.0	48	11.3	70	6.6	8,890	17.9

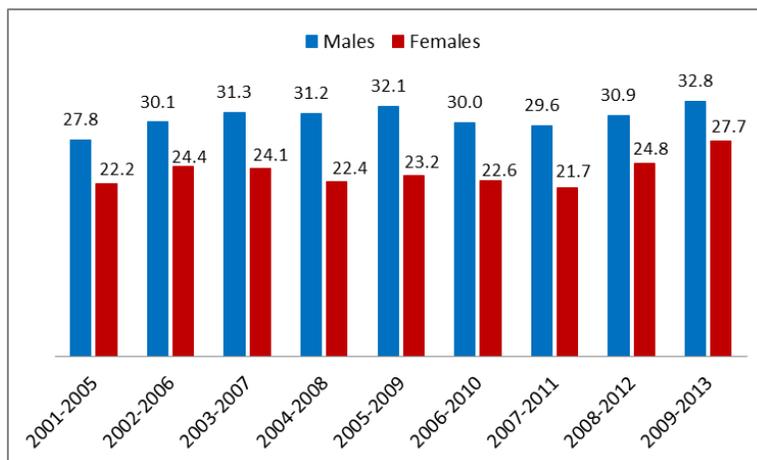
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Pneumonia and Influenza Mortality

The following figure depicts gender-stratified pneumonia/influenza mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- Males in Wilkes County historically have had higher pneumonia/influenza mortality rates than females. The size of the disparity has varied over time, as rates have fluctuated.

Figure 38. Sex-Specific Pneumonia and Influenza Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Diabetes Mellitus

Diabetes is a disease in which the body's blood glucose levels are too high due to problems with insulin production and/or utilization. Insulin is a hormone that helps glucose get to cells where it is used to produce energy. With Type 1 diabetes, the body does not make insulin. With Type 2 diabetes, the more common type, the body does not make or use insulin well. Without enough insulin, glucose stays in the blood. Over time, having too much glucose in the blood can damage the eyes, kidneys, and nerves. Diabetes can also lead to heart disease, stroke and even the need to remove a limb (48).

Diabetes was the seventh leading cause of death in Wilkes County and NC and the sixth leading cause of death in Surry County in 2009-2013 (cited previously).

Diabetes Mellitus Hospitalizations

The table below presents hospital discharge rates for diabetes. The rates for Wilkes County were higher than the comparable state rates in every year cited except 2007, 2008, and 2012.

Table 158. Diabetes Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	2.0	1.8	1.5	2.2	2.4	2.2	1.9	2.2
Surry County	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.5
State of NC	1.8	1.9	1.8	1.8	1.9	2.0	1.9	1.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 149 hospitalizations for diabetes among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

The hospital in Wilkes County provided data associated with ICD-9 codes for diabetes, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 0.5% of all ED admissions were associated with diagnoses of diabetes.
- In the same period, 1.7% of all IP discharges were associated with diagnoses of diabetes.

Table 159. Wilkes County Hospital Data: Diabetes (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	161	0.6	134	0.5	175	0.6	470	0.5
IP	86	1.6	87	1.8	83	1.8	256	1.7

ICD-9 Codes included: 250xx

Diabetes Mellitus Mortality Rate Trend

The following table and its companion figure display diabetes mortality rate trend data.

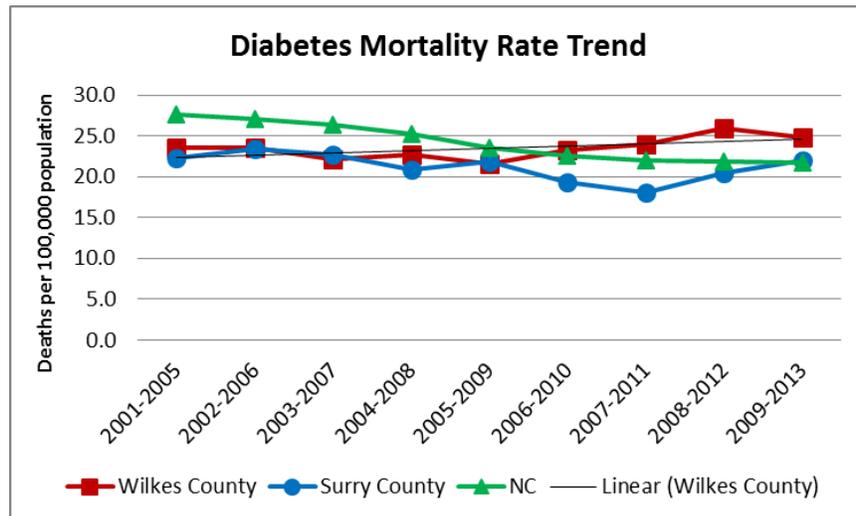
- The diabetes mortality rate in Wilkes County was lower than the comparable state rate throughout the period cited except for 2006-2010 when the Wilkes County rate surpassed the NC rate. The local rate remains the higher rate of the two.
- The diabetes mortality rate in Wilkes County increased overall by 6% over the period cited.

Table 160. Overall Diabetes Mellitus Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	23.5	23.5	22.2	22.7	21.6	23.2	24.0	25.9	24.8
Surry County	22.3	23.4	22.7	20.8	21.8	19.3	18.0	20.5	22.0
State of NC	27.6	27.1	26.4	25.2	23.6	22.5	22.0	21.8	21.7

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 39. Overall Diabetes Mellitus Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Diabetes Mellitus Mortality

The next table presents diabetes mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of diabetes deaths among minority populations at the county level mortality rates were suppressed for those groups.
- Statewide, the diabetes mortality rates for African American non-Hispanic persons and for American Indian non-Hispanic persons were 2.5 *times* the comparable rate among white non-Hispanic persons.

Table 161. Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	107	24.7	6	n/a	0	n/a	0	n/a	1	n/a	114	24.8
Surry County	99	21.7	7	n/a	0	n/a	0	n/a	1	n/a	107	22.0
State of NC	7,043	17.4	3,835	43.4	195	43.5	53	9.9	94	8.1	11,220	21.7

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.

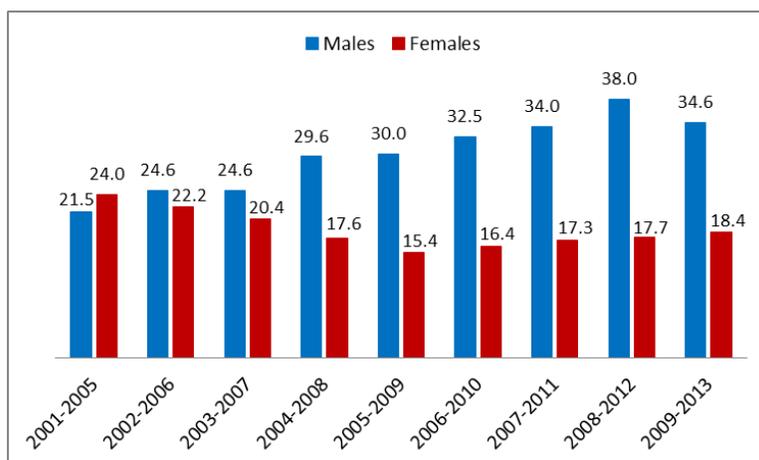
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Diabetes Mellitus Mortality

The following figure depicts gender-stratified diabetes mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- While the diabetes mortality rate among Wilkes County males was higher than the comparable rate among females for eight of the nine periods shown, the gap has grown recently as the rate for males increased.

Figure 40. Sex-Specific Diabetes Mellitus Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

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 (49).

Alzheimer’s disease was the eighth leading cause of death in Wilkes County and Surry County and the sixth leading cause of death in NC in the 2009-2013 aggregate period (cited previously).

Alzheimer’s Disease Hospitalizations

At the present time the NCSCHS does not track Alzheimer’s disease-related hospitalizations.

According to data provided to the consultant by the hospital in Wilkes County, in the period 2012 through 2014 there was a total of seven emergency department admissions and zero inpatient hospitalization discharges associated with a diagnosis of Alzheimer’s disease (ICD-9 code 331).

Alzheimer’s Disease Mortality Rate Trend

The following table and its companion figure display Alzheimer’s disease mortality rate trend data.

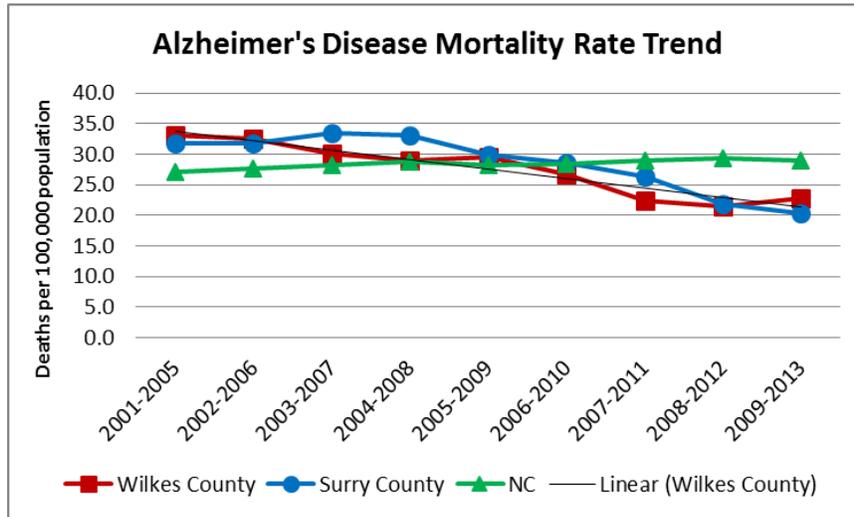
- The Alzheimer’s disease mortality rate in Wilkes County was both the highest and the lowest among the comparators over the period cited.
- The Alzheimer’s disease mortality rate in Wilkes County decreased overall by 31% over the period cited.
- The Alzheimer’s disease mortality rate in NC rose 7% over the same period/

Table 162. Overall Alzheimer’s Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	33.1	32.6	30.1	29.0	29.6	26.7	22.5	21.5	22.7
Surry County	31.8	31.8	33.4	33.1	30.0	28.6	26.3	21.8	20.3
State of NC	27.1	27.7	28.3	28.7	28.3	28.5	29.0	29.3	28.9

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 41. Overall Alzheimer’s Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Alzheimer’s Disease Mortality

The following table presents Alzheimer’s disease mortality data for the aggregate period 2009-2013, 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.
- In NC as a whole the Alzheimer’s disease mortality rate for American Indian non-Hispanics was the highest, followed by the rate for white non-Hispanics and African American non-Hispanics.

Table 163. Race/Ethnicity-Specific Alzheimer’s Disease Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	102	23.6	1	n/a	0	n/a	0	n/a	0	n/a	103	22.7
Surry County	99	20.9	1	n/a	1	n/a	0	n/a	0	n/a	101	20.3
State of NC	11,856	29.8	1,932	26.3	120	38.9	35	9.2	57	9.9	14,000	28.9

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 (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

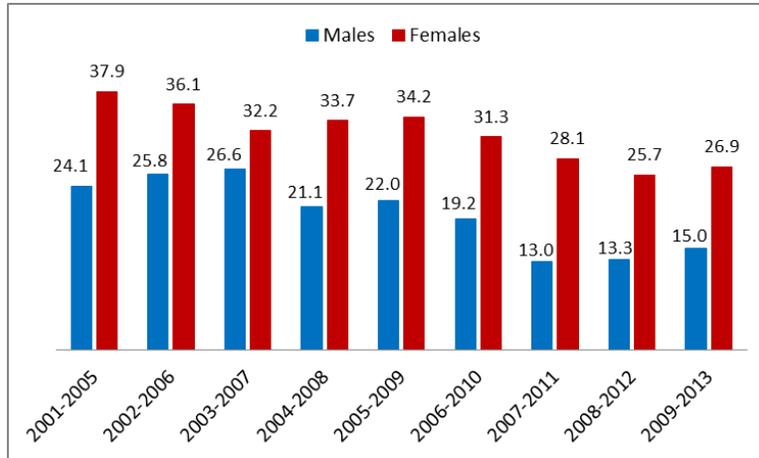
Gender Disparities in Alzheimer’s Disease Mortality

The figure below displays gender-stratified Alzheimer’s disease mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The Alzheimer’s disease mortality rate among Wilkes County females exceeded the comparable rate among males over the period cited.

- The Alzheimer's disease mortality rates among Wilkes County males and females have fallen overall through time, but both rates increased recently.

Figure 42. Sex-Specific Alzheimer's Disease Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

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 due to unintentional motor vehicle injury was the ninth leading cause of death in Wilkes County, the eleventh in Surry County, and the tenth in NC for 2009-2013 (cited previously).

Unintentional Motor Vehicle Injury Hospitalizations

A table cited previously presented the hospital discharge rate trend data from NCSCHS for a category called *injuries and poisonings*, which included injuries resulting from motor vehicle crashes as well as other unintentional injuries. Also noted previously were the 636 hospitalizations of Wilkes County residents at NC hospitals in 2013 for all injuries and poisonings, including motor vehicle injuries (43).

Unintentional Motor Vehicle Injury Mortality Rate Trend

The table and its companion figure below display unintentional motor vehicle injury mortality rate trends.

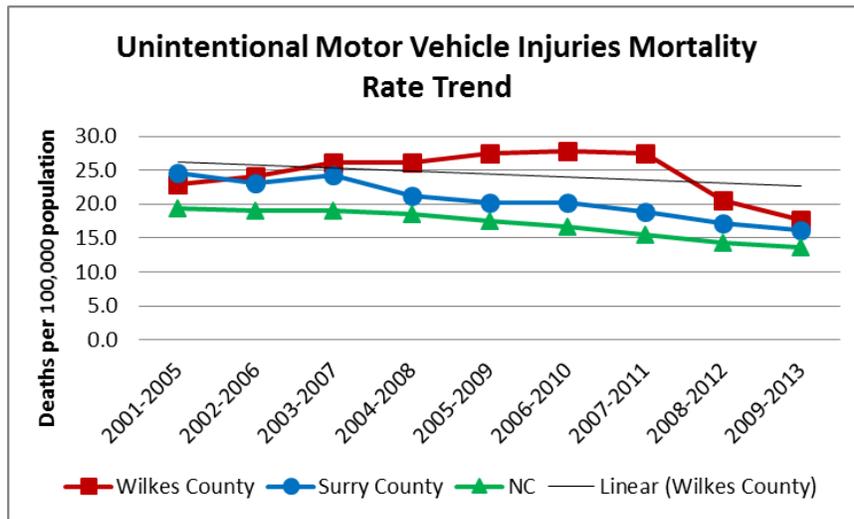
- The unintentional motor vehicle injury mortality rates in all three jurisdictions decreased over the period cited.
- The unintentional motor vehicle injury mortality rate in Wilkes County was higher than the comparable NC rate throughout most of the period cited.
- The unintentional motor vehicle injury mortality rate in Wilkes County decreased overall by 23% over the period cited.

**Table 164. Unintentional Motor Vehicle Injury Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	22.9	24.1	26.1	26.2	27.4	27.8	27.4	20.5	17.7
Surry County	24.6	23.1	24.3	21.3	20.2	20.3	18.9	17.2	16.1
State of NC	19.3	19.1	19.1	18.6	17.6	16.7	15.5	14.3	13.7

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 43. Unintentional Motor Vehicle Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph was derived from data in the table above.

Racial Disparities in Unintentional Motor Vehicle Injury Mortality

The next table presents unintentional motor vehicle injury mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of unintentional motor vehicle injury deaths among minority 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 closely by African-American non-Hispanics and white non-Hispanics.

Table 165. Race/Ethnicity-Specific Unintentional Motor Vehicle Injury Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	57	18.4	0	n/a	0	n/a	0	n/a	4	n/a	61	17.7
Surry County	54	17.7	2	n/a	0	n/a	0	n/a	2	n/a	58	16.1
State of NC	4,555	13.9	1,477	14.1	149	25.3	64	5.5	442	10.3	6,687	13.7

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 (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

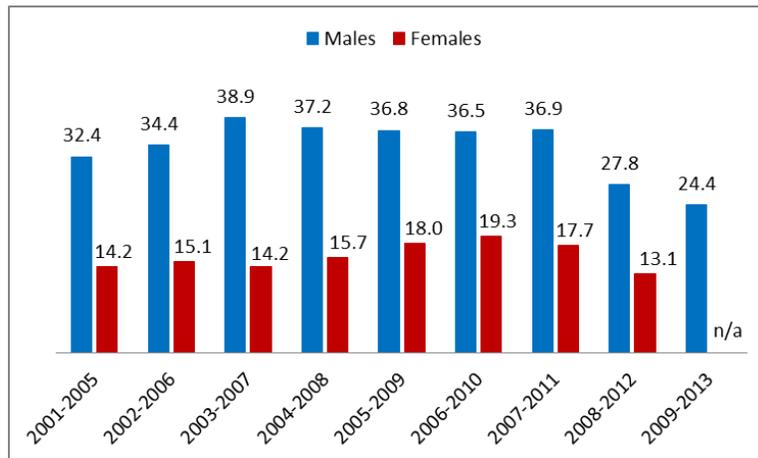
Gender Disparities in Unintentional Motor Vehicle Injury Mortality

The following figure depicts gender-stratified unintentional motor vehicle injury mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The unintentional motor vehicle injury mortality rate among males in Wilkes County appeared to decrease steadily after 2004-2006.

- The unintentional motor vehicle injury mortality rate for males in Wilkes County historically has been higher than the comparable rate for females by as much as a factor of nearly three.

**Figure 44. Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Age Disparities in Motor Vehicle Injury Mortality

The table below presents unintentional motor vehicle injury mortality data for the 2009-2013 aggregate period, stratified by age group. Note that this data is *not* age-adjusted. Note further that the “All Ages” category is denoted “n/a” because motor vehicle injury mortality was not listed among the 10 causes of death referenced at the data site for these jurisdictions.

- In Wilkes County the 20-39 age group had the highest motor vehicle injury mortality rate (23.8) followed by the 40-64 age group (21.6).
- 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 166 Motor Vehicle Injury Mortality, Numbers and Rates, by Age
(Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	n/a	n/a	7	8.4	18	23.8	27	21.6
Surry County	n/a	n/a	12	12.9	19	23.3	n/a	n/a
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, 2015 County Health Data Book, Death Counts and Crude Death Rates per 100,000 Population for Leading Causes of Death, by Age Groups, NC 2009-2013; <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 five-year period cited, an average of 5.8% of all traffic crashes in Wilkes County were alcohol-related. Over the same period, an average of 5.1% of all traffic crashes statewide were alcohol related.

**Table 167. Alcohol-Related Traffic Crashes Trend
(Single Years, 2009-2013)**

Location	2009			2010			2011			2012			2013		
	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes
Wilkes County	1,450	103	7.1	1,386	65	4.7	1,229	79	6.4	1,236	70	5.7	1,211	64	5.3
Surry County	1,697	124	7.3	1,691	108	6.4	1,492	106	7.1	1,444	105	7.3	1,308	73	5.6
State of NC	209,695	11,384	5.4	213,573	10,696	5.0	208,509	10,708	5.1	213,641	11,274	5.3	220,309	10,802	4.9

Note: statistical information for North Carolina Alcohol Facts was obtained from the NC Administrative Office of the Courts (AOC) and the NC Division of Motor Vehicles (DMV) for the years 2009 through 2013 (single years).

Source: UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2009-2013); <http://www.hsrb.unc.edu/ncaf/crashes.cfm>.

The next table presents detail on the outcomes of alcohol-related crashes in 2013.

- In 2013 in Wilkes County 5.3% of all crashes, 3.7% of all property damage only crashes, 7.4% of non-fatal crashes, and 22.2% of fatal crashes were alcohol-related. Note however, that the percentage for fatal crashes at the county level was based on a small number of deaths, and may be unstable.
- Statewide in 2013, 4.9% of all crashes, 3.5% of all property damage only crashes, 7.6% of all non-fatal crashes, and 28.0% of all fatal crashes were alcohol-related.

Table 168. Outcomes of Alcohol-Related Traffic Crashes (2013)

Location	Total Crashes			Property Damage Only Crashes			Non-Fatal Crashes			Fatal Crashes		
	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes
Wilkes County	1,211	64	5.3	729	27	3.7	473	35	7.4	9	2	22.2
Surry County	1,308	73	5.6	847	43	5.1	451	28	6.2	10	2	20.0
State of NC	220,309	10,802	4.9	149,604	5,172	3.5	69,547	5,306	7.6	1,158	324	28.0
Source	1	1	1	1	1	2	1	1	1	1	1	1

Note: Percentages appearing in **bold** type are based on fewer than 10 alcohol-related crashes per year. Such figures are likely unstable and should be interpreted with caution.

¹ - UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2013);

<http://www.hsrc.unc.edu/ncaf/crashes.cfm>.

² - Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

Septicemia

Septicemia is a rapidly progressing infection resulting from the presence of bacteria in the blood. The disease often arises from other infections throughout the body, such as meningitis, burns, and wound infections. Septicemia can lead to septic shock in which case low blood pressure and low blood flow cause organ failure (50). While septicemia can be community-acquired, some cases are acquired by patients hospitalized initially for other conditions; these are referred to as nosocomial infections. Sepsis is often a preferred term for septicemia, but NCSCHS continues to use the older term.

Septicemia was the tenth leading cause of death in Wilkes County and Surry County and the eleventh leading cause of death in NC in the 2009-2013 aggregate period (cited previously).

Septicemia Hospitalizations

The table below presents the hospital discharge rate data for septicemia. The discharge rate in Wilkes County was higher than the comparable state rate throughout the period cited, and has increased dramatically in the last two years shown.

Table 169. Septicemia Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	2.1	3.1	5.2	5.2	4.8	5.6	9.6	11.7
Surry County	4.3	5.4	5.8	7.1	7.3	7.2	6.6	6.5
State of NC	1.8	2.0	2.3	2.5	2.9	3.4	3.7	4.2

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 806 hospital discharges associated with a diagnosis of septicemia among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

Septicemia Mortality Rate Trend

The following table and companion figure display septicemia mortality rate trend data.

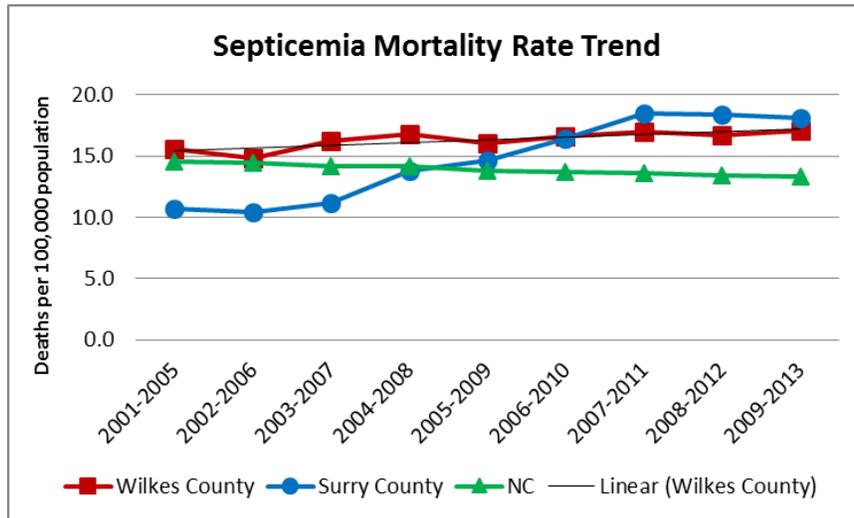
- The septicemia mortality rate in Wilkes County exceeded the comparable NC rate throughout the period cited, but the Surry County rate was the highest among the comparators in the three most recent aggregate periods.
- The septicemia mortality rate in Wilkes County increased overall by 10% over the period cited.

**Table 170. Overall Septicemia Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	15.6	14.8	16.2	16.8	16.0	16.6	17.0	16.7	17.1
Surry County	10.7	10.4	11.2	13.8	14.6	16.4	18.5	18.4	18.1
State of NC	14.5	14.4	14.2	14.2	13.8	13.7	13.6	13.4	13.3

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Figure 45. Overall Septicemia Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Septicemia Mortality

The next table presents septicemia mortality data for the aggregate period 2009-2013, 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 171. Race/Ethnicity-Specific Septicemia Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	75	17.5	3	n/a	0	n/a	0	n/a	0	n/a	78	17.1
Surry County	84	17.8	6	n/a	0	n/a	0	n/a	1	n/a	91	18.1
State of NC	4,912	12.3	1,660	19.2	57	14.0	26	5.0	76	5.7	6,731	13.3

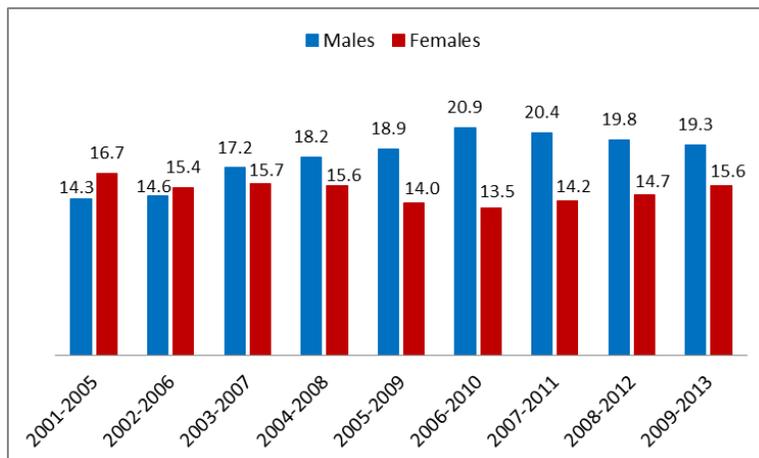
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Septicemia Mortality

The figure below depicts gender-stratified septicemia mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- According to the graph, the septicemia mortality rate among Wilkes County males has been higher than the comparable rate among county females since 2003-2007.
- The gender disparity for septicemia mortality in Wilkes County appears to be shrinking, as the rate for males decreases and the rate for females increases.

**Figure 46. Sex-Specific Septicemia Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Nephritis, Nephrotic Syndrome, and Nephrosis

Nephritis refers to inflammation of the kidney, which causes impaired kidney function. Nephritis can be due to a variety of causes, including kidney disease, autoimmune disease, and infection. 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. 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 (51,52).

This composite set of kidney disorders was the eleventh leading cause of death in Wilkes County, the seventh leading cause of death in Surry County and the ninth leading cause of death in NC in 2009-2013 (cited previously).

Nephritis, Nephrotic Syndrome and Nephrosis Hospitalizations

The table below presents the hospital discharge rate trend data for the composite of kidney disorders. The Wilkes County discharge rate varied without clear pattern, but was higher than the comparable state rate from 2008 through 2013.

Table 172. Nephritis, Nephrotic Syndrome, Nephrosis Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	1.3	1.6	2.1	1.7	1.8	2.9	2.4	3.1
Surry County	2.5	2.7	2.3	1.9	2.2	2.6	3.1	2.8
State of NC	1.3	1.7	1.6	1.4	1.5	1.8	1.8	1.8

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

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 214 hospital admissions for nephritis, nephrotic syndrome and nephrosis among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

According to experts at NIH, the two most common causes of kidney disease are diabetes and high blood pressure. Diabetes has been covered previously in this report. The hospital in Wilkes County provided data associated with ICD-9 codes for hypertensive disease, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 0.8% of all ED admissions were associated with diagnoses of hypertensive disease.
- In the same period, 1.1% of all IP discharges were associated with diagnoses of hypertensive disease.

Table 173. Wilkes County Hospital Data: Hypertensive Disease (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	163	0.6	221	0.8	293	1.0	677	0.8
IP	51	1.0	68	1.4	43	0.9	162	1.1

ICD-9 Codes included: 401-405xx.

Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend

The following table and its companion figure display kidney disease mortality rate trend data.

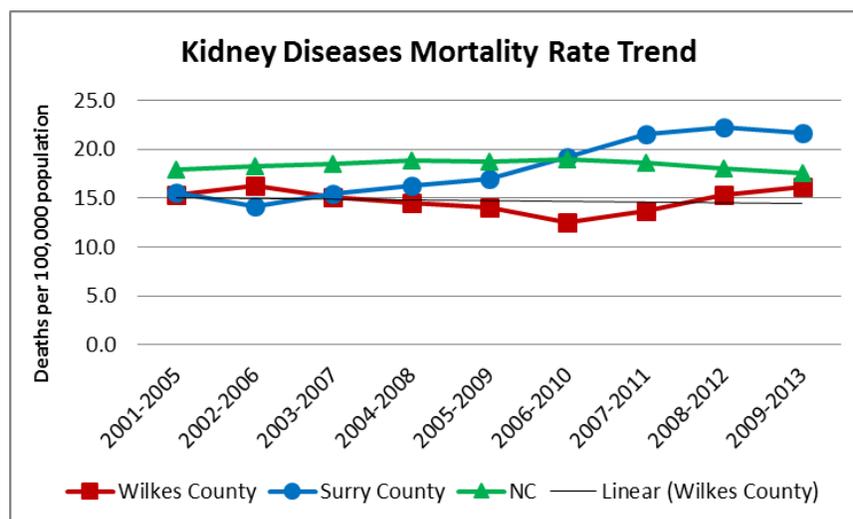
- The nephritis, nephrotic syndrome and nephrosis mortality rate in Wilkes County was lower than the comparable state rate throughout the period cited.
- The kidney disease mortality rate in Wilkes County in 2009-2013 was 5% higher than the rate in 2001-2006, but the overall trend over the entire period cited was slightly *negative* (decreasing).

Table 174. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	15.3	16.3	15.1	14.5	14.0	12.5	13.7	15.3	16.1
Surry County	15.6	14.1	15.4	16.2	17.0	19.2	21.5	22.2	21.6
State of NC	17.9	18.2	18.5	18.8	18.7	18.9	18.6	18.0	17.6

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

Figure 47. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Graph derived from data in the table above.

Racial Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality

The table below presents kidney disease mortality data for the aggregate period 2009-2013, 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.
- Statewide, the kidney disease mortality rate was highest among African-American non-Hispanics, followed by American Indian non-Hispanics and white non-Hispanics.

Table 175. Race/Ethnicity-Specific Nephritis, Nephrotic Syndrome and Nephrosis Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	66	15.6	7	n/a	0	n/a	0	n/a	0	n/a	73	16.1
Surry County	99	21.4	7	n/a	0	n/a	0	n/a	0	n/a	106	21.6
State of NC	5,724	14.3	2,919	34.1	87	23.4	42	7.9	78	8.6	8,850	17.6

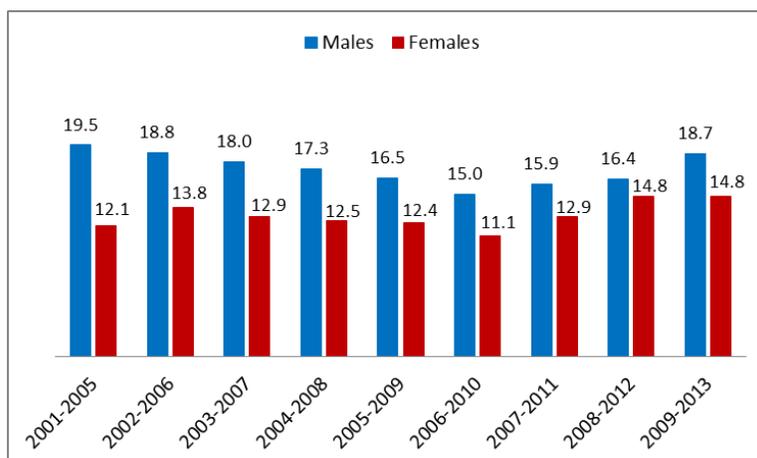
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality

The following figure depicts gender-stratified kidney disease mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The kidney disease mortality rate for males in Wilkes County exceeded the comparable mortality rate for females in every period cited. Mortality rates for both males and females in Wilkes County have increased over the past four periods.

Figure 48. Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Suicide

Suicide was the twelfth leading cause of death in Wilkes County, Surry County and NC in the period 2009-2013 (cited previously).

Suicide Hospitalizations

At the present time the NCSCHS does not track hospitalizations related to suicide or attempted suicide. Hospitals themselves, however, do employ an ICD code for the diagnosis of "Suicide Ideation" (ICD-9 V62.84).

The hospital in Wilkes County provided emergency department admissions data associated with ICD-9 code for suicide ideation, as summarized in the table below. Note that this data is specific to Wilkes County residents served in-county. The number column represents ED admissions; the percent column denotes the percent of all ED admissions the previous figure represents.

- For the three years cited, 0.3% of all ED admissions were associated with a diagnosis of suicide ideation.
- The number of ED admissions associated with a diagnosis of suicide ideation increased annually, by 70% between 2012 and 2013, and by 25% between 2013 and 2014.

Table 176. Wilkes County Hospital Data: Suicide Ideation (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	62	0.2	105	0.4	131	0.4	298	0.3

ICD-9 Codes included: V62.84.

Suicide Mortality Rate Trend

The table and its companion figure below display suicide mortality rate trend data.

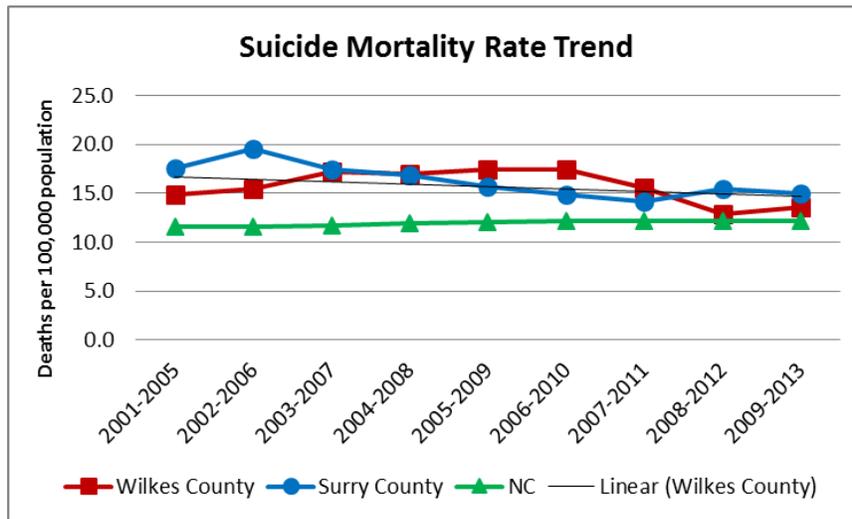
- The suicide mortality rate in Wilkes County exceeded the comparable NC rate in every period cited.
- The suicide mortality rate in Wilkes County fell overall by 8% over the period cited.

Table 177. Overall Suicide Mortality Rate Trend (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	14.8	15.4	17.2	17.0	17.4	17.4	15.5	12.9	13.6
Surry County	17.6	19.5	17.4	16.8	15.7	14.9	14.2	15.4	15.0
State of NC	11.6	11.6	11.7	11.9	12.0	12.1	12.1	12.2	12.2

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Figure 49. Overall Suicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Suicide Mortality

The following table presents suicide mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of suicide deaths among minority populations at the county level, mortality rates were suppressed for those groups.
- Statewide, the suicide mortality rate was highest among white non-Hispanics, followed American Indian non-Hispanics.

**Table 178. Race/Ethnicity-Specific Suicide Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	53	15	0	n/a	0	n/a	0	n/a	0	n/a	53	13.6
Surry County	56	16.0	1	n/a	1	n/a	0	n/a	1	n/a	59	15.0
State of NC	5,315	15.7	497	4.8	63	11.0	65	5.1	130	3.6	6,070	12.2

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.

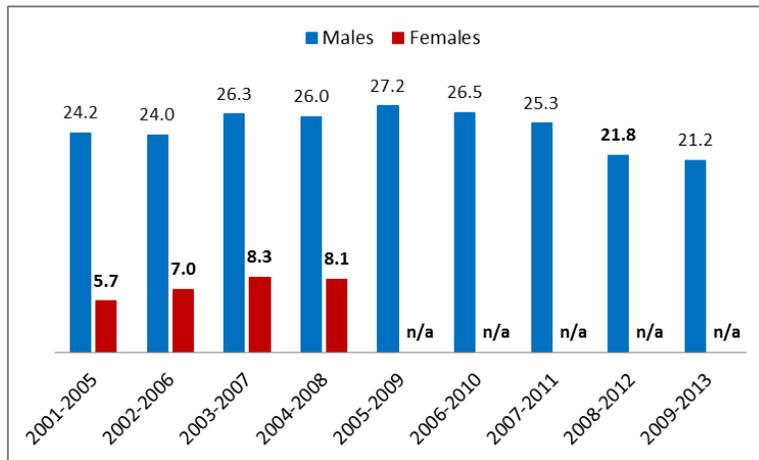
Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Suicide Mortality

The next figure depicts gender-stratified suicide mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The suicide mortality rate for males in Wilkes County historically has been up to four times the comparable rate for females. Note that rates for females were suppressed in the last five aggregate periods.

**Figure 50. Sex-Specific Suicide Mortality Rate Trend, Wilkes County
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

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 (53).

Chronic liver disease and cirrhosis was the thirteenth leading cause of death in Wilkes County, Surry County and NC in 2009-2013 (cited previously).

Chronic Liver Disease and Cirrhosis Hospitalizations

The following table presents hospital discharge rate trend data for chronic liver disease and cirrhosis. The rate in Wilkes County was variable and occasionally unstable.

Table 179. Chronic Liver Disease and Cirrhosis Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	0.4	0.3	0.5	0.5	0.3	0.2	0.4	0.3
Surry County	0.5	0.5	0.3	0.4	0.4	0.4	0.3	0.5
State of NC	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3

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

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence;

<http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 23 hospital discharges associated with chronic liver disease and cirrhosis among Wilkes County residents; this figure includes hospitalizations anywhere in NC (43).

Chronic Liver Disease and Cirrhosis Mortality Rate Trend

The following table and its companion figure display chronic liver disease and cirrhosis mortality rate trend data.

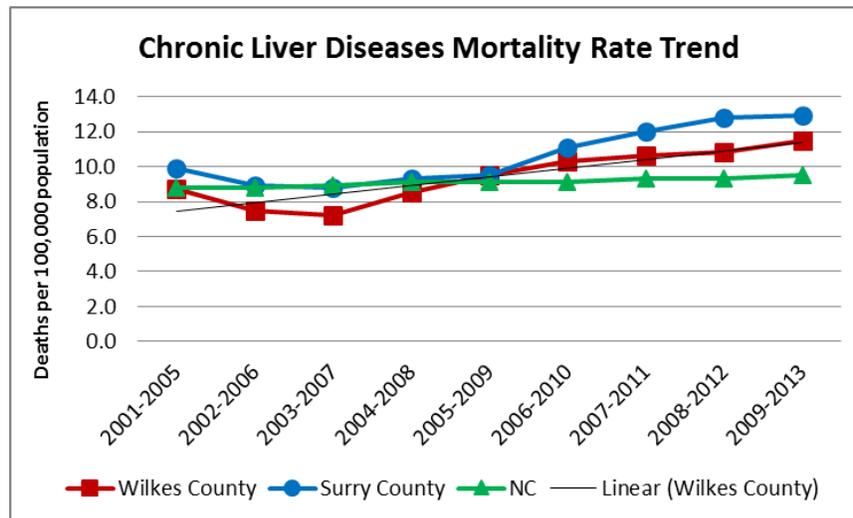
- The liver disease mortality rate in Wilkes County was lower than the comparable NC rate from 2001-2005 through 2004-2008 and higher than the state rate thereafter.
- The chronic liver disease and cirrhosis mortality rate in Wilkes County increased overall by 32% over the period cited.

**Table 180. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	8.7	7.5	7.2	8.5	9.5	10.3	10.6	10.8	11.5
Surry County	9.9	8.9	8.8	9.3	9.5	11.1	12.0	12.8	12.9
State of NC	8.8	8.8	8.9	9.1	9.1	9.1	9.3	9.3	9.5

Source - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Figure 51. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality

The next table presents chronic liver disease and cirrhosis mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of chronic liver disease and cirrhosis deaths among minority 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 181. Race/Ethnicity-Specific Chronic Liver Disease and Cirrhosis Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	45	11.5	3	n/a	0	n/a	0	n/a	1	n/a	49	11.5
Surry County	57	13.2	1	n/a	0	n/a	0	n/a	2	n/a	60	12.9
State of NC	4,207	10.5	759	7.1	65	11.4	23	3.0	74	4.0	5,128	9.5

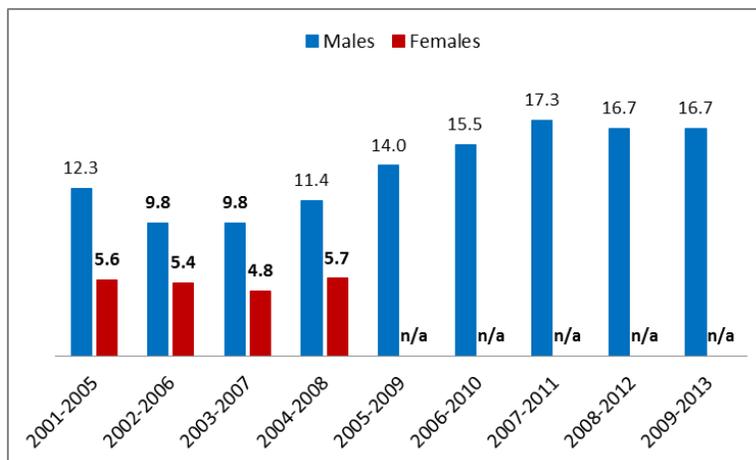
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender and Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality

The figure below depicts gender-stratified chronic liver disease and cirrhosis mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2009-2013.

- The liver disease mortality rate for males in Wilkes County historically has been significantly higher than the rate for females.
- The liver disease mortality rate for males in Wilkes County increased significantly over the period cited.

Figure 52. Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Homicide

Homicide was the fourteenth leading cause of death in Wilkes County, Surry County and NC in the 2009-2013 aggregate period (cited previously).

Homicide Hospitalizations

At the present time NCSCHS does not track hospitalizations related to homicide or attempted homicide.

Homicide Mortality Rate Trend

The table and its companion figure below display homicide mortality rate trend data.

- The homicide mortality rate in Wilkes County was lower than the comparable NC rate throughout the period cited.
- The homicide mortality rate in Wilkes County was 6% higher in 2009-2013 than in 2001-2005, although the overall trend was negative (decreasing). Note that all Wilkes County rates except one were unstable.

**Table 182. Overall Homicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

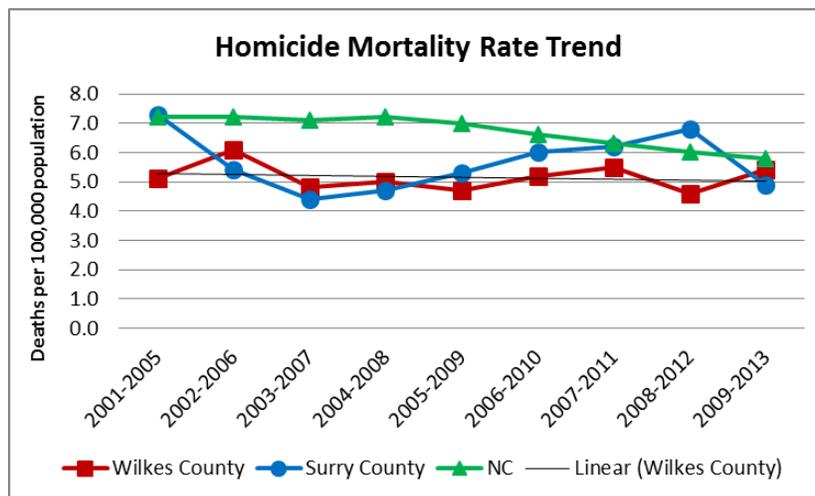
Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	5.1	6.1	4.8	5.0	4.7	5.2	5.5	4.6	5.4
Surry County	7.3	5.4	4.4	4.7	5.3	6.0	6.2	6.8	4.9
State of NC	7.2	7.2	7.1	7.2	7.0	6.6	6.3	6.0	5.8
Source:	a	a	a	a	b	b	b	b	b

a - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

b - NC State Center for Health Statistics, Statistics and Reports, Vital Statistics, NC Vital Statistics Volume II: Leading Causes of Death, 2009 through 2013; <http://www.schs.state.nc.us/data/vital.cfm#vitalvol2>

Note: The use of bold type or 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.

**Figure 53. Overall Homicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in Homicide Mortality

The table below presents homicide mortality data for the period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of homicide deaths among all stratified populations at the county level, mortality rates were suppressed for those groups.
- Statewide, the homicide rate was highest among American Indian non-Hispanics, followed by African-American non-Hispanics and Hispanics.

Table 183. Race/Ethnicity-Specific Homicide Mortality (Single Five-Year Aggregate Period, 2009-2013)

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
Wilkes County	15	n/a	3	n/a	0	n/a	0	n/a	1	n/a	19	n/a
Surry County	10	n/a	2	n/a	0	n/a	0	n/a	5	n/a	17	n/a
State of NC	1,026	3.2	1,390	12.9	87	14.8	38	3.3	201	4.8	2,742	5.8

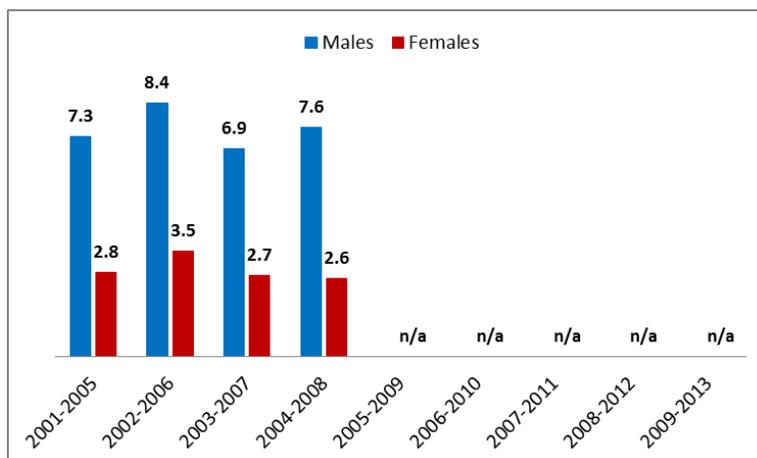
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in Homicide Mortality

The following figure depicts gender-stratified homicide mortality rates in Wilkes County for the aggregate periods 2001-2005 through 2004-2008. (Gender-stratified mortality rates for later periods were suppressed.)

- Although most of the homicide mortality rates for both sexes were either unstable or suppressed due to below-threshold numbers of events, the rates for males were significantly higher than the comparable rates for females. This disproportional gender-based pattern of homicide mortality is common throughout NC.

Figure 54. Sex-Specific Homicide Mortality Rate Trend, Wilkes County (Five-Year Aggregate Periods, 2001-2005 through 2004-2008)



Source: NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Acquired Immune Deficiency Syndrome (AIDS)

The human immune deficiency virus (HIV) is the virus that causes AIDS. HIV attacks the immune system by destroying CD4 positive (CD4+) T cells, a type of white blood cell that is vital to fighting off infection. The destruction of these cells leaves people infected with HIV vulnerable to other infections, diseases and other complications. The acquired immune deficiency syndrome (AIDS) is the final stage of HIV infection. A person infected with HIV is diagnosed with AIDS when he or she has one or more opportunistic infections, such as pneumonia or tuberculosis, and has a dangerously low number of CD4+ T cells (less than 200 cells per cubic millimeter of blood) (54).

AIDS was the fifteenth leading cause of death in Wilkes County, Surry County and NC in the 2009-2013 period (cited previously).

AIDS Hospitalizations

The table below presents hospital discharge rate trend data for AIDS. All the rates for Wilkes and Surry Counties were unstable or suppressed. Statewide, the AIDS hospital discharge was 0.2 for many years, but decreased to 0.1 in 2011 through 2013.

Table 184. AIDS Hospital Discharge Rate Trend (2006-2013)

Location	Rate (Discharges per 1,000 Population)							
	2006	2007	2008	2009	2010	2011	2012	2013
Wilkes County	n/a	0.1	0.1	0.0	0.1	0.0	n/a	0.0
Surry County	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.1
State of NC	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1

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

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2008-2015), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence;

<http://www.schs.state.nc.us/SCHS/data/databook/>.

According to NCSCHS, in 2013 there were 2 hospital discharges associated with HIV/AIDS among Wilkes County residents (43).

AIDS Mortality Rate Trend

The following table displays AIDS mortality rate trend data.

- All of the Wilkes County and Surry County AIDS mortality rates for the entire period cited were unstable. All county rates were lower than the comparable state rate.
- The AIDS mortality rate for NC as a whole decreased overall by 44% over the period cited.

**Table 185. Overall AIDS Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

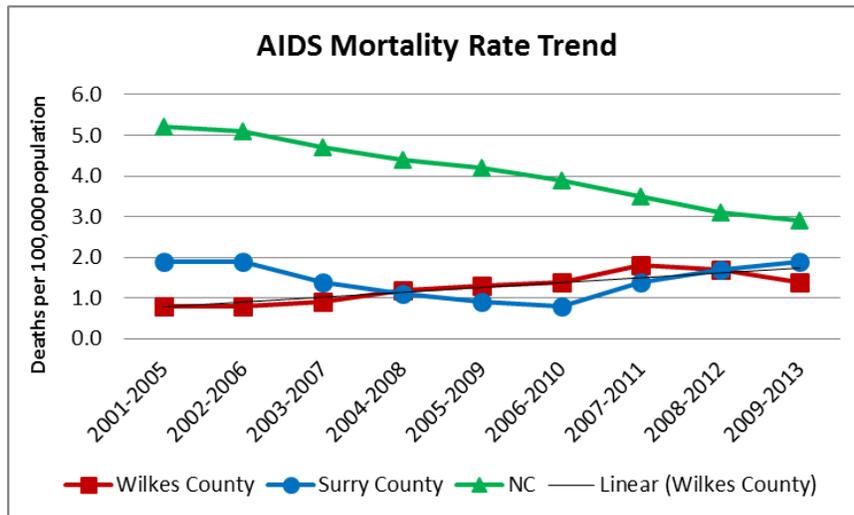
Location	Rate (Deaths per 100,000 Population)								
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Wilkes County	0.8	0.8	0.9	1.2	1.3	1.4	1.8	1.7	1.4
Surry County	1.9	1.9	1.4	1.1	0.9	0.8	1.4	1.7	1.9
State of NC	5.2	5.1	4.7	4.4	4.2	3.9	3.5	3.1	2.9
Source:	a	a	a	a	b	b	b	b	b

a - NC State Center for Health Statistics, County Health Data Books (2007-2015), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

b - NC State Center for Health Statistics, Statistics and Reports, Vital Statistics, NC Vital Statistics Volume II: Leading Causes of Death, 2009 through 2013; <http://www.schs.state.nc.us/data/vital.cfm#vitalvol2>

Note: The use of bold type or 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.

**Figure 55. Overall AIDS Mortality Rate Trend
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**



Graph derived from data in the table above.

Racial Disparities in AIDS Mortality

The following table presents AIDS mortality data for the aggregate period 2009-2013, stratified by race/ethnicity.

- Note that due to below-threshold numbers of AIDS deaths among all stratified populations at the county level, mortality rates were suppressed for those groups.
- Statewide, the AIDS mortality rate was highest among African-American non-Hispanics, followed by white non-Hispanics.

**Table 186. Race/Ethnicity-Specific AIDS Mortality
(Single Five-Year Aggregate Period, 2009-2013)**

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
Wilkes County	4	n/a	0	n/a	0	n/a	0	n/a	0	n/a	4	1.4
Surry County	4	n/a	4	n/a	0	n/a	0	n/a	0	n/a	8	1.9
State of NC	313	0.9	1,097	10.4	11	n/a	5	n/a	45	1.8	1,471	2.9

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 (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Gender Disparities in AIDS Mortality

All the gender-stratified AIDS mortality rates in Wilkes County were either unstable or suppressed. Statewide, males have an AIDS mortality rate two- to three- times the rate for females (55)

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.

The parameter most frequently used to describe the current extent of any condition of morbidity in a population is *prevalence*: the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence usually is expressed as a proportion, not a rate, and often represents an estimate rather than a direct count.

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, with an estimated 2.8 million new cases reported in the US each year. 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 (56).

The following table presents incidence data (i.e., new cases diagnosed) on chlamydia infections.

- There is considerable variability in the annual incidence rates for chlamydia at the county level, which is not uncommon for an infectious disease (see also disclaimer, below).
- The chlamydia incidence rate in Wilkes County was well below the comparable NC rate in every year cited, but higher than the rate for Surry County in 2009, 2010 and 2012.
- The NC Communicable Disease Branch provides the following disclaimer to these chlamydia incidence data:

Note: chlamydia case reports represent persons who have a laboratory-confirmed Chlamydial infection. It is important to note that Chlamydial infection is often asymptomatic in both males and females and most cases are detected through screening. Changes in the number of reported cases may be due to changes in screening practices. The disease can cause serious complications in females and a number of screening programs are in place to detect infection in young women. There are no comparable screening programs for young men. For this reason, Chlamydia

case reports are always highly biased with respect to gender. The North Carolina STD Surveillance data system has undergone extensive changes since 2008 when North Carolina implemented North Carolina Electronic Disease Surveillance System (NC EDSS). During this transition, Chlamydia morbidity counts for some counties may have been affected. Report totals for 2011 should be considered with this in mind. Reports are summarized by the date received in the Communicable Disease Surveillance Unit office rather than by date of diagnosis.

Table 187. Chlamydia Infection Incidence Trend (2009-2013)

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 population)									
	2009		2010		2011		2012		2013	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Wilkes County	154	231.4	141	203.5	136	196.5	160	230.9	105	151.5
Surry County	105	144.8	133	180.4	169	229.6	160	217.5	152	206.6
State of NC	43,734	466.2	42,167	442.2	53,854	564.8	50,606	524.1	48,417	496.5

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2013 HIV/STD Surveillance Report, Table 7; <http://epi.publichealth.nc.gov/cd/stds/figures/std12rpt.pdf>.

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 affects more than 1 million women in the US every year and 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 (57).

The next table presents incidence data (i.e., new cases diagnosed) for gonorrhea infections.

- County-level rates were quite variable, due likely to the small and varying numbers of cases each year.
- Wilkes County gonorrhea incidence rates were much lower than the comparable rates for NC, and lower than the rates for Surry County as well, in every year cited.

Table 188. Gonorrhea Infection Incidence Trend (2009-2013)

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 population)									
	2009		2010		2011		2012		2013	
	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate
Wilkes County	16	24.0	13	18.8	14	20.2	12	17.3	11	15.9
Surry County	24	33.1	16	21.7	19	25.8	19	25.8	15	20.4
State of NC	14,811	157.9	14,153	148.4	17,158	177.7	14,322	148.3	13,665	140.1

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.

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2013 HIV/STD Surveillance Report, Table 8; <http://epi.publichealth.nc.gov/cd/stds/figures/std13rpt.pdf>.

Human Immune Deficiency Virus (HIV)

The following table presents HIV incidence figures for the period 2009 through 2013.

- HIV incidence rates in Wilkes County were based on small numbers of events. Nevertheless, they were lower than the comparable NC rates in every year cited.

Table 189. HIV Infection Incidence Trend (2009-2013)

Location	HIV Cases by County of First Diagnosis									
	2009		2010		2011		2012		2013	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Wilkes County	0	0.0	3	4.3	2	2.9	5	7.2	4	5.8
Surry County	6	8.2	2	2.7	0	0.0	4	5.4	7	9.5
State of NC	1,643	17.5	1,461	15.3	1,487	15.4	1,409	14.6	1,525	15.6

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2013 HIV/STD Surveillance Report, Table 3; <http://epi.publichealth.nc.gov/cd/stds/figures/std13rpt.pdf>.

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, 2013 there were 44 persons living with HIV/AIDS in Wilkes County.

Table 190. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2013 (By County of Residence)

Location	Number of Living Cases
Wilkes County	44
Surry County	62
State of NC	28,101

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2013 HIV/STD Surveillance Report, Table 1; <http://epi.publichealth.nc.gov/cd/stds/figures/std13rpt.pdf>.

Local Communicable Disease Data

The Wilkes County Health Department, Communicable Disease Section is responsible by law for tracking cases of all communicable diseases. Below is a summary of the communicable disease cases identified in Wilkes County from 2011 through 2014 (58).

- As cited previously in the Health Resources section of this report, the Wilkes County Health Department recorded the following numbers of reportable diseases in recent years:

- 79 in 2010
- 208 in 2011
- 230 in 2012
- 183 in 2013
- 230 in 2014

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 (59).

The following table and companion figures present hospital discharge data for asthma, stratified by age, for the period 2008-2013. (At the present time this is the best measure of asthma prevalence available from NCSCHS.)

- The asthma discharge rate for all ages in Wilkes County, once higher than NC rate, was lower than the state rate in 2011 through 2013.
- The asthma discharge rate for youth (age 0-14) in Wilkes County was lower than the state rate in every year cited.

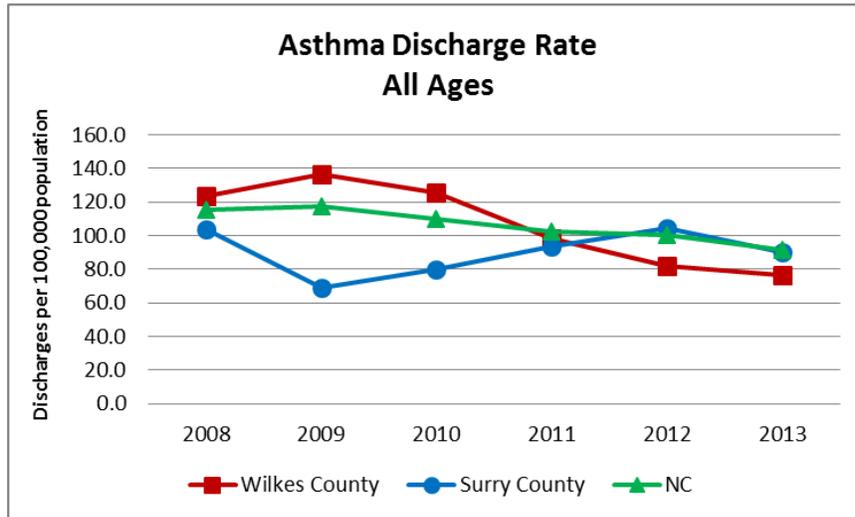
Table 191. NC Hospital Discharges with a Primary Diagnosis of Asthma, Numbers and Rates per 100,000 (2008-2013)

Location	Discharges, Number and Rate (Discharges per 100,000 Population)											
	2008				2009				2010			
	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
Wilkes County	83	123.3	17	137.7	92	136.3	10	80.7	87	125.5	7	54.6
Surry County	76	103.6	12	86.8	51	69.0	9	64.8	59	80.1	9	63.9
State of NC	10,644	115.4	2,778	151.9	10,986	117.1	3,228	175.0	10,470	109.8	3,152	166.0

Location	Discharges, Number and Rate (Discharges per 100,000 Population)											
	2011				2012				2013			
	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
Wilkes County	68	98.6	4	32.1	57	82.2	8	65.0	53	76.8	8	66.1
Surry County	69	93.6	15	107.2	77	104.7	17	123.4	66	90.3	11	82.2
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

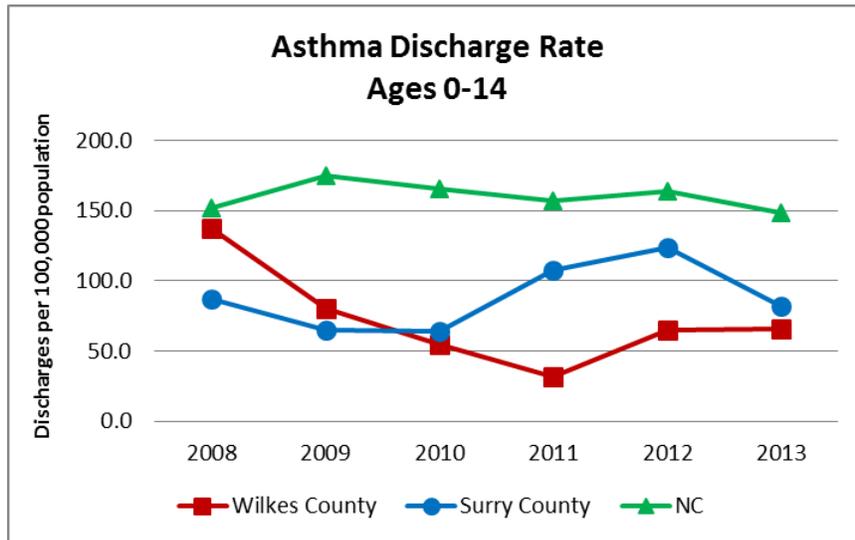
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2010-2015), Morbidity, Asthma Hospital Discharges (Total and Age 10-14) per 100,000 Population (years and counties as noted); <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 56. NC Hospital Discharge Rate, Primary Diagnosis of Asthma, All Ages (2008-2013)



Graph derived from data in the table above.

Figure 57. NC Hospital Discharge Rate, Primary Diagnosis of Asthma, Ages 0-14 (2008-2013)



Graph derived from data in the table above.

The hospital in Wilkes County provided data associated with asthma related ICD-9 codes, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 1.0% of all ED admissions were associated with diagnoses of asthma.

- In the same period, 0.05% of all IP discharges were associated with diagnoses of asthma.

Table 192. Wilkes County Hospital Data: Asthma (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	269	0.9	323	1.1	313	1.0	905	1.0
IP	7	0.1	0	0.0	0	0.0	7	0.05

ICD-9 Codes included: 293xx

Diabetes

Diabetes mellitus, or simply, diabetes, is a group of diseases characterized by high blood glucose levels that result from defects in the body's ability to produce and/or use insulin. Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. There are three major types of diabetes:

Type 1 diabetes results from the body's failure to produce insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" or "juvenile diabetes". *Type 2 diabetes* results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes combined with an absolute insulin deficiency. This form was previously referred to as "non-insulin-dependent diabetes mellitus" or "adult-onset diabetes". The third main form, *gestational diabetes*, occurs when pregnant women without a previous diagnosis of diabetes develop a high blood glucose level. Gestational diabetes is caused by the hormones of pregnancy or a shortage of insulin. Although this form of diabetes usually goes away after the baby is born, a woman who has had it is more likely to develop Type 2 diabetes later in life.

In recent years, medical professionals have begun to diagnose *prediabetes*, a condition in which blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. People with prediabetes are at increased risk for developing Type 2 diabetes and for heart disease and stroke (60).

As discussed previously, diabetes was the seventh leading cause of death in Wilkes County for the 2009-2013 aggregate period, causing 114 deaths. However, diabetes is a chronic condition, and, as noted above can have multiple significant health effects on its sufferers long before it might cause death.

The following table presents estimates of the prevalence of diagnosed diabetes in adults age 18 and older in Wilkes County and its comparators.

- Among the comparators, Wilkes County had the highest prevalence of diagnosed diabetes in adults in 2006, 2007, and 2010. The seven-year average prevalence in Wilkes County was 9.9%; the comparable seven-year average was 9.3% statewide and 10.4% in Surry County.
- In Wilkes County the estimated prevalence of diagnosed diabetes in adults increased overall by 3% between 2006 and 2012. Over the same period statewide prevalence increased overall by 8%.

**Table 193. Adult Diagnosed Diabetes Prevalence Estimate Trend
(Single Years, 2006 through 2012)**

Location	Estimated Prevalence, Number and Percent (Age-adjusted, Age 18 and Older)													
	2006		2007		2008		2009		2010		2011		2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wilkes County	5,580	9.9	5,505	9.7	5,424	9.3	5,935	10.0	6,798	11.0	6,456	10.4	5,836	9.2
Surry County	5,377	8.8	5,780	9.4	6,203	9.9	7,030	11.2	6,902	10.8	7,531	11.7	7,193	11.1
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

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. Source: 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

Obesity in Adults

The table below presents estimates of the prevalence of diagnosed obesity in adults age 18 and older. (Note that comparable data for the state as a whole was not available from the source.)

- Among the comparators, Wilkes County had the highest prevalence of diagnosed obesity in adults from 2006 through 2008. The seven-year average prevalence of adult obesity in Wilkes County was 28.5%; the comparable seven-year average in Surry County was 29.3%.
- In Wilkes County the estimated prevalence of diagnosed diabetes in adults was 3% lower in 2012 than in 2006, although the overall trend for the entire period cited was slightly positive (increasing). Over the same period prevalence in Surry County increased overall by 12%.

**Table 194. Adult Diagnosed Obesity Prevalence Estimate Trend
(Single Years, 2006 through 2012)**

Location	Estimated Prevalence, Number and Percent (Age-adjusted, Age 18 or Older)													
	2006		2007		2008		2009		2010		2011		2012	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Wilkes County	13,760	27.0	14,110	28.1	14,410	28.7	14,970	30.2	15,305	29.5	15,430	29.8	13,820	26.1
Surry County	13,850	25.7	14,780	27.6	15,250	28.5	16,802	31.9	16,782	31.0	17,202	31.5	15,911	28.9
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	n/a	n/a

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. Source: Source: Centers for Disease Control and Prevention, Obesity 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 NC Healthy Weight Initiative, using the NC Nutrition and Physical Activity Surveillance System (NC NPASS), collects height and weight measurements from children seen in NCDPH-sponsored WIC and Child Health Clinics, as well as some school-based Health Centers (61). (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 following table presents NC NPASS data for children ages 2-4 for the period 2008-2012.

- There was no consistent pattern of long-term change over time in either weight category in any of the three jurisdictions being compared.
- Over the period cited an annual average of 17.6% of the participating children in Wilkes County were deemed “overweight” and an additional annual average of 17.1% were deemed “obese”, for a total average of 34.7% above ideal weight.

Table 195. Prevalence of Obesity and Overweight in Children, Ages 2-4, NC NPASS (2008-2012)

Location	Prevalence of Overweight and Obesity in Children Ages 2-4, by Percent									
	2008		2009		2010		2011		2012	
	Overweight	Obese	Overweight	Obese	Overweight	Obese	Overweight	Obese	Overweight	Obese
Wilkes County	17.4	15.7	17.4	15.7	18.9	18.0	16.5	16.6	17.8	19.7
Surry County	16.8	16.2	16.8	16.2	14.7	20.3	17.0	18.1	13.0	15.8
State of NC	16.3	15.4	15.8	15.4	16.1	15.6	16.2	15.7	14.9	14.5

Note: NC-NPASS data for children ages 2 to 4 are reflective of the population at 185% of the federal poverty level. Approximately 85 to 95% of the children included in the NC-NPASS sample for ages 2 to 4 are WIC participants. Since children are not eligible to participate in WIC once they become 5 years old, the sample size for NC-NPASS data received from the child health clinics was not adequate to calculate county-specific rates for children age 5 and older.

Source: Eat Smart, Move More, Data on Children and Youth in NC, North Carolina Nutrition and Physical Activity Surveillance System (NC-NPASS), NC-NPASS Data (2007-2012), counties and age groups as noted; <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. Wilkes County responses are combined with those of 23 other counties in a western NC region BRFSS data summary. Consequently, it is necessary to look elsewhere to adequately describe the dental needs of adults in Wilkes County.

Since cost of dental care can be daunting but is covered for Medicaid-eligible patients, it is interesting to examine the proportion of Medicaid clients who actually receive dental services.

The table below presents dental service utilization figures for Medicaid clients for SFY2010.

- From this admittedly archaic data it appears that Medicaid-eligible persons under the age of 21 in Wilkes County receive dental services at an 83% higher proportion than

Medicaid-eligible persons age 21 and older. The direction, if not the proportion, of difference is the same in the other two jurisdictions.

Table 196. Dental Service Utilization by Medicaid Recipients, by Age Group (SFY2010)

Location	SFY2010					
	<21 Years Old			21+ Years Old		
	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services
Wilkes County	8,683	5,117	58.9	6,443	2,071	32.1
Surry County	9,890	5,103	51.6	6,947	2,111	30.4
State of NC	1,113,692	541,210	48.6	679,139	214,786	31.6

Source: NC DHHS, NC Division of Medical Assistance, Statistics and Reports, County Specific Snapshots for NC Medicaid Services (2011); <http://www.ncdhhs.gov/dma/countyreports/index.htm>.

Child Oral Health

Each year about 200,000 NC elementary school children participate in dental screenings, also called assessments. Public health dental hygienists screen for tooth decay and other disease conditions in individuals. The hygienists refer children who have dental problems and need dental care to public or private practice dental care professionals (62).

The next table presents partial summaries of the screenings conducted in SY2009-2010 and SY2012-2013.

- In Wilkes County the percent of kindergarteners and 5th graders screened remained roughly the same between the periods cited. The percent screened statewide dropped significantly between dates cited, but increased in Surry County.
- An average of 11% of kindergarteners and 1.5% of fifth graders in Wilkes County had untreated decay in the two school years cited. Statewide, an average of 14% of kindergarteners and 2.5% of fifth graders had untreated decay over the same period.

Table 197. Child Dental Screening Summary (SY2009-2010 and SY2012-2013)

Location	SY2009-2010				SY2012-13			
	Kindergarten		5th Grade		Kindergarten		5th Grade	
	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay
Wilkes County	89	9	87	2	88	13	92	1
Surry County	73	24	78	2	85	17	85	1
State of NC	74	15	69	3	58	13	52	2

Source: NC DHHS, Oral Health, References and Statistics, School Oral Health Assessments, NC County Level Oral Health Assessment Data by Year (years and counties as noted); <http://www.ncdhhs.gov/dph/oralhealth/stats/MeasuringOralHealth.htm>.

Utilization of the Hospital for Dental Services

Data provided to the consultant by the hospital in Wilkes County makes it apparent that the emergency department is a provider of emergency dental care, or at least is being used as a dental provider of last resort, with over 2,122 ED admissions for diseases of the oral cavity in the three year period 2012-2014.

Table 198. Wilkes County Hospital Emergency Department Admissions for Dental and Oral Problems (2012-2014)

Diagnosis (ICD-9 Code)	Number of ED Admissions			
	2012	2013	2014	Total
Diseases of the Oral Cavity (520-525.xx)	688	654	780	2,122
<i>(Includes disturbances in tooth eruption and dental caries, cracked teeth, gingival and periodontal disease and temporomandibular disorders)</i>				
Diseases of the Oral Soft Tissues (528xx)	18	29	10	57

The 2015 Wilkes County CHA process included a community survey (described subsequently in this report) that asked questions about respondents' access to healthcare services. Although, the survey did *not* inquire specifically about access to dental services, it did ask whether respondents had had a problem accessing health care in the past 12 months, and if so, what type of provider presented an access problem. The highest proportion of respondents who had an access problem (49%, or 69 of 141 respondents) cited accessing dental care as their issue, but did not specify if a lack of providers was the problem. The reasons respondents cited most often for access difficulties were lack of insurance and out-of-pocket expenses (deductible or co-pay) that were too high.

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 (63).

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 means to control and budget the costs of Medicaid-funded services. This program budgets and manages expenditures on the basis of 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 (64).

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, at which time NCDHHS proposed to consolidate the remaining 10 into four agencies (65). The LME/MCO serving Wilkes County is Smoky Mountain LME/MCO, which is headquartered in Asheville, NC.

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 jurisdiction served by LMEs/Area Programs from 2008 through 2014.

- The number of persons served in Wilkes County decreased 43% between 2009 and 2014.

Table 199. Persons Served by Mental Health Area Programs/Local Management Entities (2008-2014)

Location	Number of Persons Served						
	2008	2009	2010	2011	2012	2013	2014
Wilkes County	2,038	3,452	2,831	2,674	2,717	2,176	1,959
Surry County	4,152	3,387	3,604	3,021	2,624	2,443	2,890
State of NC	306,907	309,155	332,796	360,180	315,284	306,080	316,863

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.

The table below divides the persons served according to their category of disability.

- In the period covered by the table below, the vast majority of persons served (73%) had a mental health disability.
- The number of persons in Wilkes County served for a substance abuse disability nearly doubled between 2008 and 2012.

Table 200. Persons Served by LME, by Disability, Wilkes County (SFY 2008-SFY 2012)

Category of Disability	Number of Admissions					
	2008	2009	2010	2011	2012	Total
Mental Health	1,622	2,589	2,067	1,917	1,865	10,060
Developmental Disabilities	48	99	92	114	131	484
Substance Abuse	368	764	672	643	721	3,168
Total	2,038	3,452	2,831	2,674	2,717	13,712

Source: Trends in LME Admissions and Persons Served, by County, 5-Year Study. (Admissions) NC Department of Health and Human Services, Division of Mental Health, Developmental Disabilities and Substance Abuse Services, Consumer Data Warehouse (CDW) Reports website; http://www.ncdmh.net/dsis/REPORTS/5year_Study_By_County.pdf

Since mental health reform of the early 2000s, only the most seriously ill mental health patients statewide qualify for treatment at state psychiatric hospitals. The individual must be assessed as meeting the diagnostic criteria for (1) acute schizophrenia and/or other psychotic disorders, (2) acute mood disorders or (3) the combination of both, with or without medical and/or physical complications that are within the parameters of what the state hospital can manage (66).

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 2014.

- In Wilkes County the numbers of persons served annually in NC State Psychiatric Hospitals decreased overall by 87% over the period cited. Statewide the number of persons served fell every year cited; in 2014 the total number served statewide was 76% lower than in 2008.

Table 201. Persons Served in NC State Psychiatric Hospitals (2008-2014)

Location	Number of Persons Served						
	2008	2009	2010	2011	2012	2013	2014
Wilkes County	77	116	60	26	2	1	10
Surry County	105	71	54	22	2	1	14
State of NC	14,643	9,643	7,188	5,754	4,572	3,964	3,529

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.us/pls/linc/dyn_linc_main.show.

Developmental Disabilities Service Utilization

According to NC MH/DD/SAS, *developmental disability* means a severe, chronic disability of a person which:

- is attributable to a mental or physical impairment or combination of mental and physical impairments;
- is manifested before the person attains age 22, unless the disability is caused by a traumatic head injury and is manifested after age 22;
- is likely to continue indefinitely;
- results in substantial functional limitations in three or more of the following areas of major life activity: self-care, receptive and expressive language, capacity for independent living, learning, mobility, self-direction and economic self-sufficiency; and
- reflects the person's need for a combination and sequence of special interdisciplinary, or generic care, treatment, or other services which are of a lifelong or extended duration and are individually planned and coordinated; or
- when applied to children from birth through four years of age, may be evidenced as a developmental delay (67).

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 2014.

- The numbers of persons in Wilkes County served in NC State Developmental Centers were small but static, and likely represent many of the same people from year to year.

- At the state level, the number of developmentally disabled persons served in state facilities decreased by 6% overall between 2008 and 2014.

Table 202. Persons Served in NC State Developmental Centers (2008-2014)

Location	Number of Persons Served						
	2008	2009	2010	2011	2012	2013	2014
Wilkes County	13	15	14	14	14	15	14
Surry County	16	18	17	16	13	14	14
State of NC	1,409	1,404	1,375	1,355	1,340	1,331	1,282

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 table below presents a summary of the persons in each jurisdiction served in NC State ADATCs for the period from 2008 through 2014.

- The numbers of persons in Wilkes County served in NC State ADATCs fluctuated over the period cited. A maximum number served for the period—48 individuals—occurred in 2008. As noted previously, the number of persons in Wilkes County receiving substance abuse services from the LME/MCO increased dramatically after 2008 and remained in the range of 650-750 persons per year from 2009 to 2012.
- Unlike figures for state psychiatric hospitals, the number of persons statewide served in NC ADATCs did not decline dramatically at any point, and the total statewide served in 2014 was only 5% lower than the total served in 2008.

Table 203. Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2008-2014)

Location	Number of Persons Served						
	2008	2009	2010	2011	2012	2013	2014
Wilkes County	48	20	29	36	39	40	37
Surry County	6	14	15	13	3	16	5
State of NC	4,284	4,812	4,483	4,590	4,265	4,343	4,049

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.

Utilization of the Hospital for Mental Health Services

It is unclear whether local mental health resources are actually meeting the need in Wilkes County, because the hospital, especially the emergency department (ED) is seeing many mental health patients.

The hospital in Wilkes County provided the CHA Consultant with data associated with ICD-9 codes for mental, behavioral and neurological disorders, 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 Wilkes County residents served in-county. The number column represents ED admissions and IP discharges; the percent column denotes the percent of all ED admissions or IP discharges, respectively, the previous figures represents.

- For the three years cited, 3.7% of all ED admissions were associated with diagnoses of mental, behavioral and neurological disorders.
- In the same period, 0.7% of all IP discharges were associated with diagnoses of mental, behavioral and neurological disorders.

Table 204. Wilkes County Hospital Data: Mental, Behavioral and Neurological Disorders (2012-2014)

Service	Number and Percent of Admissions/Discharges							
	2012		2013		2014		Total	
	#	%	#	%	#	%	#	%
ED	1,049	3.7	1,060	3.6	1,144	3.8	3,253	3.7
IP	34	0.7	43	0.9	31	0.7	108	0.7

ICD-9 Codes included: 290-319xx

The ED data provided by the hospitals can be further separated into the specific diagnoses shown in the table below:

Table 205. Wilkes County Hospital Emergency Department Admissions for Mental Health Disorders (2012-2014)

Diagnosis (ICD-9 Code)	Number of ED Admissions			
	2012	2013	2014	Total
Psychosis (290-299.9)	203	228	192	623
<i>Alcohol-induced mental disorders (291-291.99)</i>	15	26	16	57
<i>Drug-induced mental disorders (292-292.99)</i>	69	69	48	186
Neurotic/Personality Disorders (300-316xx)	846	832	952	2,630
<i>Alcohol dependence syndrome (303-303.99)</i>	74	45	15	134
<i>Drug dependence (304-304.99)</i>	20	32	36	88
<i>Non-dependent abuse of drugs (305-305.99)</i>	229	250	360	839

It is apparent that residents of Wilkes 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.

Hospital Utilization Data: Outpatient Procedures

Utilization of the hospital in Wilkes County for emergency services and inpatient hospitalizations have been covered elsewhere in this document, in connection with leading causes of death and major causes of morbidity. This section covers hospital admissions for surgeries and other procedures, some of which are elective, and some of which are not; all were tallied by the hospital as “Outpatient Surgical Procedures”. It should be noted that the list below is not all-inclusive, but contains some of the most common procedures. It covers 2012 through 2014.

- Among the procedures cited in the table, the most common was phacoemulsification and aspiration of cataract (cataract removal)
- The second most common procedure was cholecystectomy (gall bladder removal).
- The third most common procedure was tonsillectomy.
- Gastroenterological procedure data is incomplete, as much 2013 data is missing.
- Note that mammography is conducted at the WRMC Diagnostic Center, a separate entity for the purposes of this data.

Procedure (ICD-9 Procedure Code)	Number of Patients			
	2012	2013	2014	Total
Phacoemulsification and aspiration of cataract (13.4x)	358	389	353	1,100
Colonoscopy (45.23; diagnosis code V76.5x)	74	n/a	167	241
Esophagogastroduodenoscopy (45.13, 45.16)	65	n/a	175	240
Endoscopic polypectomy of large intestine (45.42)	36	n/a	194	230
Gastroenterostomy without gastrectomy (44.3x)	51	61	69	181
Cholecystectomy (51.2x)	268	248	243	759
Myringotomy (20.01; 20.09)	107	92	73	272
Septoplasty (21.88)	83	185	114	382
Tonsillectomy (28.2 – 28.3)	165	119	154	438
Extracorporeal shockwave lithotripsy (98.5x)	15	14	20	49
Appendectomy (47.0x)	51	62	73	186
Apicoectomy and root canal therapy (23.7x)	86	132	62	280

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 Environment and Natural Resources (NCDENR).

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.

- As of the 2013 data release (the most recent available at the time this report was prepared) there was no EPA air quality monitoring station in either Wilkes County or Surry County (68).

Toxic Releases

Over 4 billion pounds of 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, is the tool the EPA uses to track these releases. Approximately 20,000 industrial facilities are required to report estimates of their environmental releases and waste generation annually to the TRI program office. These reports do not cover all toxic chemicals, and they omit pollution from motor vehicles and small businesses (69).

According to the table below, in 2014, 384,869 pounds of TRI chemicals were released in Wilkes County, the 32nd highest total volume of releases in the state. The NC county with the highest volume of releases in 2014 was Brunswick County, which reported over 5 million pounds of releases (70).

- Manufacturing facilities were responsible for the largest volumes of TRI chemicals/chemical compounds released in Wilkes County in 2014.
- The chemicals released in largest quantities in Wilkes County in 2014 were:
 - Methanol
 - Zinc compounds
 - Phenol
 - Formaldehyde
 - Styrene
 - Propionaldehyde
 - Acetaldehyde
- The vast majority of the releases were from Louisiana Pacific Corporation's plant in Roaring River, which manufactures reconstituted wood products.

Table 206. Toxic Release Inventory (TRI) Summary, Wilkes County (2014)

Location	Total On- and Off-Site Disposal or Other Releases, In Pounds	County Rank (of 87 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
Wilkes County	384,869	32	Methanol	156,132	Louisiana-Pacific Corp. (156,132)	Total On-site Disposal or Other Release	Roaring River
			Zinc Compounds	66,846	Louisiana-Pacific Corp. (66,843)	Total On-site Disposal or Other Release	Roaring River
			Phenol	45,214	Louisiana-Pacific Corp. (45,214)	Total On-site Disposal or Other Release	Roaring River
			Formaldehyde	34,093	Louisiana-Pacific Corp. (34,093)	Total On-site Disposal or Other Release	Roaring River
			Styrene	27,901	Jeld-Wen Composites (26,251)	Total On-site Disposal or Other Release	North Wilkesboro
			Propionaldehyde	26,561	Louisiana-Pacific Corp. (26,561)	Total On-site Disposal or Other Release	Roaring River
			Acetaldehyde	25,992	Louisiana-Pacific Corp. (25,992)	Total On-site Disposal or Other Release	Roaring River
			Ammonia	1,565	Louisiana-Pacific Corp. (1,565)	Total On-site Disposal or Other Release	Roaring River
			Lead Compounds	369	Louisiana-Pacific Corp. (369)	Total On-site Disposal or Other Release	Roaring River
			Lead	199	Gardner Glass Products, Inc. (199)	Total Off-site Disposal or Other Release	North Wilkesboro
			Dioxin and dioxin-like compounds	0.0857494	Louisiana-Pacific Corp. (0.0857494)	Total On-site Disposal or Other Release	Roaring River
NC Total	43,026,747						
NC County Avg (n=87)	494,560						

Source: TRI Release Reports: Chemical Reports, 2014. US EPA TRI Explorer, Release Reports, Chemical Reports website: http://iaspub.epa.gov/triexplorer/tri_release.chemical.

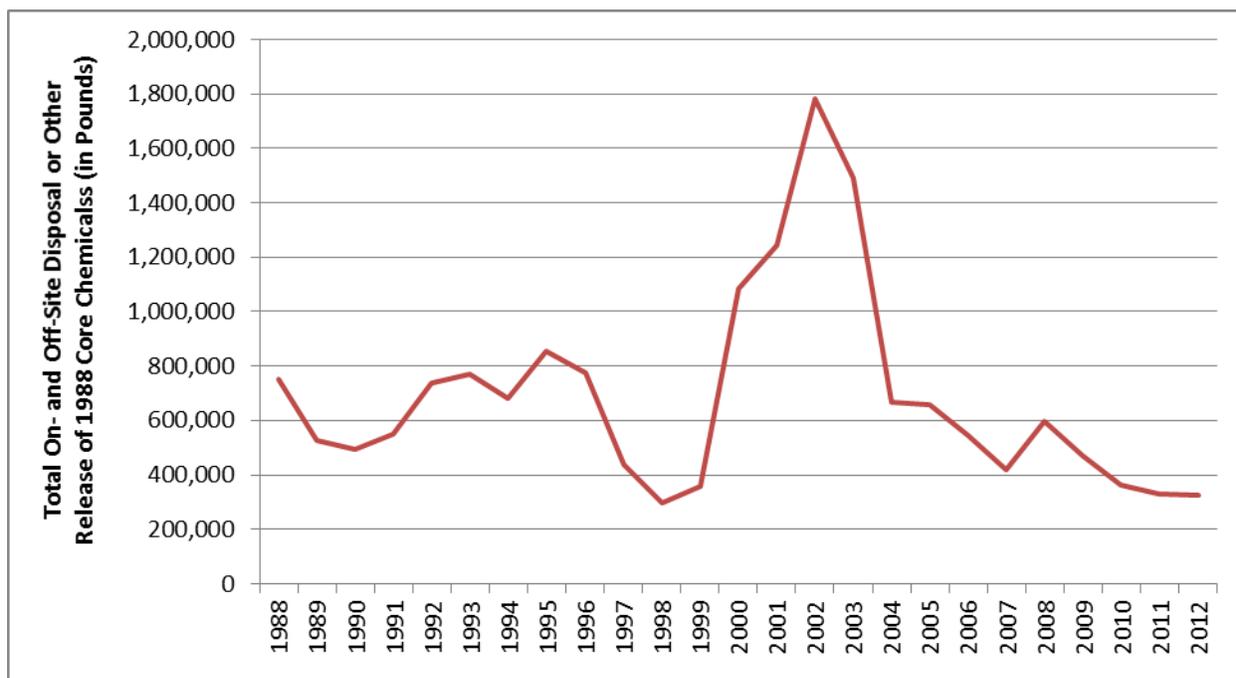
TRI chemical releases in Wilkes County have decreased dramatically since 2002, as shown in the following figure, which plots the weight, in pounds, of total TRI chemicals released annually by all industries in Wilkes County beginning in 1988.

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 (71).

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, in another NC county, the TRI chemicals released in highest quantities in the peak emission years 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. In Wilkes County, however, the primary industry (and facility) releasing toxic chemicals was the same in 2014 as in 2002, the year of peak releases. This would appear to indicate the facility changed its manufacturing practices or perhaps re-focused toward producing different products.

Figure 58. Total TRI Release Trend, Wilkes County (1988-2014)



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, Wilkes County.

http://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 (72).

In October 2015, SDWIS listed 103 active water systems in Wilkes County. Nine were *community water systems (CWS)* that served 43,469 people, or 63% of the estimated county population in 2014. (Note that the reported populations served by these community water systems overlap with other systems because the CWS serve both businesses and residences.) 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 nine community water systems in Wilkes County, there were also 91 *transient, non-community water systems (T/N-C)* serving 3,393 people (5% of the 2014 population). Water systems in the T/N-C category do not consistently serve the same people, and include rest stops, campgrounds and gas stations. Finally, there were three *non-transient, non-community (N-T/N-C) water systems* in Wilkes County, serving 830 people (1% of the 2014 population). This last group is composed of water systems that 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. The populations served by these types of water systems are summarized in the table below.

- Because community water systems (i.e., treated water) in Wilkes County reach only approximately 63% of the population, there remains 37% of the population who get their water from private wells or other untreated sources. These are the residents most at-risk for exposure to unknown contaminants in their drinking water.

Table 207. Population Served by Active Water Systems (as of October, 2015)

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	% Population Served by T/N-C WSs	Total Population Served by Active Water Systems
Wilkes County	68,838	9	43,469	63.1	3	830	1.2	91	3,393	4.9	47,692
Source	1	2	2	3	2	2	3	2	2	3	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 EPA also records in SDWIS any 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 CWS and N-T/N-C WS in Wilkes County as of October 28, 2015 including any *health-based* violations in those systems for the period from 2005 through 2015.

- Only one health violation was indicated for any of the water systems listed in the table, a trihalomethane exceedance for the Moravian Falls Water System in 2007.

There are too many (91) T/N-C WSs in Wilkes County to list here individually, but interested readers may learn about any of them by checking on the website listed as the table reference.

**Table 208. Active Water Systems in Wilkes County
(As of October 28, 2015)**

Type of System	Total Population Served	Primary Water Source Type	Town(s) Served	Health Violations 2005-2015
Community Water Systems				
Blue Ridge Water Association	8,052	Surface water purchased	Hays	None
Broadway Water Association	3,556	Surface water purchased	North Wilkesboro	None
Eckerd of Boomer	54	Ground water	Boomer	None
Moravian Falls Water System	3,175	Surface water purchased	Moravian Falls	Average MCL - Trihalomethanes (2007)
Mulberry-Fairplains Water Association	8,150	Surface water purchased	North Wilkesboro	None
North Wilkesboro, Town of	4,245	Surface water	North Wilkesboro	None
Ronda, Town of	884	Surface water purchased	Ronda	None
West Wilkes Water Association, Inc.	11,925	Surface water purchased	Miller Creek	None
Wilkesboro, Town of	3,428	Surface water	Wilkesboro	None
Total	43,469			
Non-Transient, Non-Community Water Systems				
Boomer-Ferguson Elementary School	245	Ground water	Boomer	None
Ronda-Clingman Elementary School	364	Ground water	Ronda	None
Traphill Elementary School	221	Ground water	Traphill	None
Total	830			
Transient, Non-Community Water Systems				
91 Different sites	3,393	Ground Water	Various	Check source
Total	3,393			

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 (73).

The table below lists the NPDES-permitted dischargers in Wilkes County and the destinations and permitted volumes of their discharges.

- Two of the three largest permitted dischargers are municipalities; the third is a manufacturing facility.
- Of the facilities permitted for minor discharges, most are governmental in nature.

Table 209. National Pollutant Discharge Elimination System (NPDES) Permitted Dischargers in Wilkes County (as of November 1, 2015)

Owner	Facility	Type	Discharge Destination	Permitted Flow (Gal/Day)
Major Facilities				
Town of Wilkesboro	Cub Creek Wastewater Treatment Plant	Municipal, Large	Yadkin River	6,600,000
Louisiana Pacific Corporation	Louisiana Pacific Roaring River Wastewater Treatment Plant	Industrial Process & Commercial	Yadkin River	2,000,000
Town of North Wilkesboro	Thurman Street Wastewater Treatment Plant	Municipal, Large	Yadkin River	2,000,000
Minor Facilities				
Wilkes County Schools	Roaring River Elementary School	WWTP, 100% Domestic <1MGD	Yadkin River	4,500
	Mountain View Elementary School	WWTP, 100% Domestic <1MGD	Mulberry Creek	10,000
	Traphill Elementary School	WWTP, 100% Domestic <1MGD	Little Sandy Creek	4,000
	Boomer-Ferguson Elementary School	WWTP, 100% Domestic <1MGD	Warrior Creek	3,000
Wilkesboro County Adult Care, Inc.	North Wilkes High School Wastewater Treatment Plant	WWTP, 100% Domestic <1MGD	Wolf Branch	10,500
	Wilkesboro County Adult Care Wastewater Treatment Plant	WWTP, 100% Domestic <1MGD	Naked Creek	13,000
Wilkes County Airport	Wilkes County Airport	WWTP, 100% Domestic <1MGD	Rock Creek	7,500
Mulberry-Fairplains Water Association	Reddies River Water Treatment Plant	Water Treatment Plant	Reddies River	Not limited
General Permits				
Call Family	Call Family Distillers, LLC	Non-contact Cooling, Boiler Blowdown	Yadkin River	n/a
Tony Jones	Tony Jones Mine	Sand Dredging Operations	Yadkin River	n/a
Carl Rose & Sons	Jordan Pit	Sand Dredging Operations	Roaring River	n/a
	Johnson Sand Pit	Sand Dredging Operations	Yadkin River	n/a
Tarheel Sand and Stone, Inc.	Prevette Pit	Sand Dredging Operations	Roaring River	n/a
	Settles Pit	Sand Dredging Operations	Yadkin River	n/a
NC DENR Division of Parks and Recreation	Stone Mountain State Park	Single Family Domestic Wastewater Discharge	East Prong, Roaring River	n/a
Maple Church	Maple Springs Baptist Church	Single Family Domestic Wastewater Discharge	Little Creek	n/a

Source: Major and Minor Permits: NC Department of Environment and Natural Resources, Division of Water Quality, Surface Water. NPDES Wastewater Permitting and Compliance Program. Permit Info, List of Active Individual Permits;

<http://portal.ncdenr.org/web/wq/swp/ps/npdes>.

Source: General Permits: NC Department of Environment and Natural Resources, Division of Water Quality, Surface Water. NPDES Wastewater Permitting and Compliance Program. Permit Info, List of Active General Permits;

<http://portal.ncdenr.org/web/wq/swp/ps/npdes>.

SOLID WASTE

Solid Waste Disposal

The next table presents figures summarizing tonnage of solid waste disposed in Wilkes County and comparators for the period FY2009-10 through FY2013-14.

- In FY2013-14, Wilkes County managed 53,370 tons of municipal solid waste (MSW) for a rate of 0.77 tons per capita. This tonnage represented a *decrease* of 21% 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 decreased 13% from the FY1991-92 base per capita rate.

**Table 210. Solid Waste Disposal
FY2009-10 through FY2013-14**

Location	MSW Tons Managed 1991-92	MSW Tons Disposed					Base Year Per Capita (1991-92)	Per Capita Rate 2013-14	% Change Base Year to 2013-14
		2009-10	2010-11	2011-12	2012-13	2013-14			
Wilkes County	58,818	49,575	48,031	51,474	52,801	53,370	0.97	0.77	-21
Surry County	73,595	75,241	55,117	53,336	53,695	51,926	1.18	0.71	-40
State of NC	7,257,428	9,395,457	9,467,045	9,443,380	9,149,130	9,150,471	1.07	0.93	-13

NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Program, NC Solid Waste Management Annual Reports, County Per Capita Report, Fiscal Year 2013-2014;

http://portal.ncdenr.org/c/document_library/get_file?p_l_id=4649434&folderId=15429422&name=DLFE-80542.pdf.

The next table lists the active/open solid waste facilities in Wilkes County that have been permitted by the state of NC.

Table 211. Open Permitted Solid Waste Facilities, Wilkes County (November 1, 2015)

Name	Waste	Activity	Location
Louisiana Pacific Corporation	Industrial	Landfill	Wilkesboro
Wilkes County MSWLF	Municipal Solid Waste	Landfill	Roaring River
Myers Septic Tank Service	Septage	Hauler	Wilkesboro
Gilreath Septic & Port-a-John Service	Septage	Hauler	Hays
S&J Septic Pumping & Rent-a-Jon	Septage	Hauler	North Wilkesboro

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section, NC Permitted Solid Waste Facility List; <http://portal.ncdenr.org/web/wm/sw/facilitylist>.

The table below presents the FY2013-14 County Waste Disposal Report for Wilkes County which lists the tons of solid waste originating in Wilkes County and disposed of in-county and facilities elsewhere.

- The vast majority of Wilkes County's solid waste (99.9%) is landfilled within the county, at the Wilkes County Municipal Solid Waste Landfill in Roaring River.

**Table 212. County Waste Disposal Report, Wilkes County
(FY2013-14)**

Facility	Facility Type	County	Tons Received	Tons Transferred
MWP-GDS Recycling Services	Recycling	Catawba	64.52	4.54
Abbey Green, Inc.	Construction & Demolition	Forsyth	11.55	4.33
Wilkes County MSWLF	Municipal Solid Waste	Wilkes	53,361.54	0.00

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section. Solid Waste Management Annual Reports, FY2013-2014; County Waste Disposal Report Fiscal Year 2013-2014.

<http://portal.ncdenr.org/web/wm/sw/swmar>.

The next table describes the capacity of Wilkes County landfills as of 2013-14.

- The municipal solid waste landfill in Wilkes County currently has capacity projected to last for approximately another 21 years.
- The Louisiana Pacific Industrial Landfill currently has capacity projected to last for approximately another 15 years.

**Table 213. Capacity of Landfills in Wilkes County
(FY2013-14)**

Facility Name	Open Date	Volume Overall	Volume Overall Remaining	Volume Overall Remaining in Tons	Volume Overall Remaining in Years (Fiscal Year Tons)
Louisiana Pacific Corporation Industrial Landfill	1981	232,300.00	126,797.00	179,548.75	14.68
Wilkes County MSW Landfill	1993	4,661,952.00	2,408,405.00	1,115,868.19	20.91

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section. Solid Waste Management Annual Reports, FY2013-14; Landfill Capacity Report Fiscal Year 2013-2014.

http://portal.ncdenr.org/c/document_library/get_file?p_l_id=4649434&folderId=15429422&name=DLFE-80550.pdf.

Wilkes County Solid Waste Management

Wilkes County Landfill and Solid Waste Division operates a municipal landfill and a recycling program, both dependent on residents' collecting and dropping off their waste (74).

Landfill

The Wilkes County Landfill and Recycling Center is located at 9219 Elkin Highway in Roaring River. The landfill collects 60,000 tons of trash annually. It collects trash from Wilkes County only, and all waste is subject to a screening procedure before being accepted. No liquid or hazardous waste is accepted, but the landfill does accept commercial waste, construction and demolition waste, electronics, whitegoods, certain exotic materials (e.g., mercury thermostats), and mobile homes. Most landfill charges are determined on a per-ton or per-bag basis; disposal fees for some items are determined on a per-unit basis.

Recycling

The Landfill and Recycling Center in Roaring River also accepts recyclables. Wilkes County also maintains five convenience centers at which residents may drop off recycling, three of which are manned during regular business hours (9:00 AM to 5:00 PM) on Monday, Wednesday, and Friday, and from 8:00 AM to 5:00 PM on Saturday. The two un-manned centers are accessible to the public at all times.

Recyclable Materials Accepted at no charge include:

- Aluminum and steel cans
- Used motor oil and filters
- Antifreeze
- Newspaper, magazines and cardboard
- Batteries (auto and household)
- Glass bottles and jars
- Plastic bottles (rim must be smaller than the bottle and have a screw top opening # 2-7)

- Plastic bags
- Tires (off-rim)
- White goods (refrigerators, freezers, washers, dryers and hot water heaters)

Town of North Wilkesboro Municipal Solid Waste Management

The Town of North Wilkesboro offers curbside recycling to all of its citizens and also operates a recycling center at Memorial Park. Recyclables accepted include (75):

- Plastic bottles and jugs
- Newspapers and magazines
- Aluminum cans
- Metal food cans
- Glass bottles and jugs
- Cardboard

In addition, the Town of North Wilkesboro provides special leaf collection during the fall months (approximately mid-October through mid-December). At this time, leaves may be raked to the curbside where they will be collected by the leaf vacuum machine (76).

Town of Wilkesboro Municipal Solid Waste Management

The Town of Wilkesboro Sanitation Department is responsible for collecting and disposing of garbage, recycling and many other items. The monthly fee citizens pay on their utility bill covers these items for residential and approved business accounts. Services include: (77).

- Weekly curbside trash collection
- Bi-weekly curbside recycling
- Curbside bulky item collection (must be scheduled by the resident)
- Curbside yard waste collection
- Seasonal curbside leaf collection
- Electronics recycling (by appointment)

The Town of Wilkesboro also operates three convenience centers within the city limits, located at the Wilkesboro Civic Center, Cub Creek Park, and Woodfield (for Woodfield residents only).

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 actually is more common. The following table lists the total number of rabies cases detected in Wilkes County and its comparators over the period from 2007-2014.

Major rabies discussion points are these: First of all, rabies is only moderately common in Wilkes County, with 148 cases identified in the seven years from 2007 through 2013, or 5% of the total number of rabies cases statewide over the same period. Second, rabies is more common in animals *other* than cats, dogs or bats. Of the 13 total rabies cases in Wilkes County

in 2013, five cases were in raccoons, five cases were in skunks, and three were in foxes. Statewide in 2013 54% of all animal rabies cases were in raccoons.

**Table 214. Animal Rabies Cases
(2007-2014)**

Location	Total Number of Animal Rabies Cases							
	2007	2008	2009	2010	2011	2012	2013	2014
Wilkes County	32	32	18	14	21	18	13	no report
Surry County	18	9	8	14	13	0	8	1
State of NC	474	452	473	397	429	431	380	352

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>.

WILKES COUNTY HEALTH DEPARTMENT ENVIRONMENTAL HEALTH ACTIVITIES

The Environmental Health Division of each local health department in NC is charged with assuring the health of the public through monitoring, permitting and enforcement activities relative to environmental issues that affect the residents of the public. Those activities cover a range of topics from water to food and lodging to animal control.

The On-site Water Protection program of the Wilkes County Health Department’s Environmental Health Division assures safe ground water to protect the public from illness caused by unsafe water. On the drinking water side, the agency’s responsibility covers only private drinking water wells, not community water systems.

The On-site Water Protection program also is responsible for activities associated with subsurface sewage collection, treatment, and disposal, with a focus on private septic systems, not municipal sewage systems.

Assuring proper sanitation in food and lodging establishments in Wilkes County also is the responsibility of the Wilkes County Health Department Environmental Health Division. Health Inspectors visit food and lodging establishments to enforce state and local governmental regulations. The Food and Lodging program administers 18 state-regulated programs including a variety of food and lodging establishments but also summer camps, meat markets, child day care facilities, school buildings, swimming pools and tattoo parlors.

A summary of Wilkes County Health Department Environmental Health Division program activities is presented in the table below.

**Table 215. Program Activity Summary, WCHD Environmental Health Division
(2010-2014)**

Service/Program	2010	2011	2012	2013	2014
Water Protection					
New Septic Permits	466	477	432	467	481
New Well Permits	108	102	112	85	96
Complaints	66	52	57	50	80
Water Samples	134	205	326	213	270
Methamphetamine Lab Notifications	n/a	n/a	21	31	15
Food and Lodging Inspections					
Restaurants	182	190	214	205	206
Temporary Food Establishments	67	49	33	36	30
Meat Markets	12	13	15	15	12
School Lunchrooms	22	22	22	22	22
Lodging Facilities	10	9	9	9	9
Public Pool Facilities	27	25	22	24	24
Child and Adult Care Centers	51	45	45	43	43
Nursing/Rest/Group Homes	39	39	39	40	41
Tattoo Permits	6	2	5	5	5

Source: Personal communication, Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department, to Sheila S. Pfaender, Public Health Consultant, August 14, 2015.

CHAPTER SIX: COMMUNITY HEALTH SURVEY

METHODOLOGY

The 2015 Wilkes County Community Health Survey solicited respondents' concerns about community issues, environmental health concerns, services needing improvement, information needed about healthy behaviors, and health topics about which youth needed information. The 2015 survey was conducted primarily electronically, using Survey Monkey, but paper copies also were made available in both English and Spanish. A stratified convenience sample approach was used.

SURVEY RESPONDENT POOL

The following table compares the demographics of the survey respondent pool to the overall population of Wilkes County as of 2014 US Census Bureau estimates (or other source and time period as noted).

- The survey sample significantly over-represented females.
- The survey sample was adequately balanced racially and ethnically to approximate census figures.
- 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 significantly over-represented persons in the age category 35-54 (45.8% survey vs. 26.6% census).
- The survey sample significantly under-represented persons without health insurance (7.5% survey vs. 20.5% census).
- The survey sample under-represented persons living in households earning less than \$25,000 (19.2% survey vs. 39.3% census) and over-represented persons living in households earning \$50,000 or more (56.0% survey vs. 32.3% census).
- The survey sample significantly under-represented those with less than a high school/GED diploma (4.0% survey vs. 25.8% census) and significantly over-represented those with a bachelor's degree or higher (47.3% survey vs. 12.5% census).

Demographic Comparison: 2015 Survey Respondents to Wilkes County Population

Demographic Category	2015 Survey Participants		County Population (2014)
	Number	Percent	Percent
Gender			
<i>Male</i>	163	19.5	49.4
<i>Female</i>	670	80.2	50.6
Race/Ethnicity			
<i>White/Caucasian</i>	769	93.0	93.3
<i>African American/Black</i>	45	5.4	4.5
<i>Asian</i>	1	0.1	0.5
<i>Native American</i>	7	0.8	0.4
<i>Two or more Races</i>	6	0.7	1.3
<i>Other</i>	10	1.2	n/a
<i>Of Hispanic or Latino Origin</i>	34	4.1	5.8
Age			
<i>18-19</i>	9	1.1	6.0 (15-19)
<i>20-34</i>	208	24.8	15.8
<i>35-54</i>	384	45.8	26.6
<i>55-64</i>	156	18.6	14.6
<i>65-74</i>	61	7.3	11.5
<i>75 and Older</i>	20	2.4	8.4
Other			
<i>Without health insurance</i>	62	7.5	20.5 (< age 65) ¹
<i>Household Income < \$25,000</i>	152	19.2	39.3 ²
<i>Household Income ≥ \$50,000</i>	444	56.0	32.3 ²
<i>Less than HS Diploma/GED</i>	33	4.0	25.8 ²
<i>Bachelor's Degree or Higher</i>	390	47.3	12.5 ²

¹ From 2013 US Census Bureau American Community Survey (2009-2013 Estimates)

² From 2013 US Census Bureau Small Area Health Insurance Estimates

SURVEY RESULTS

A total of 1,075 surveys were collected. Fifty-six (56) people started the survey process but were subsequently bumped out of the system by Survey Monkey because they answered that they were not residents of Wilkes County. All questions in those essentially blank surveys were counted by Survey Monkey as “skipped”. In order to get an accurate count of which questions were skipped by appropriate survey participants, 56 was subtracted from the Survey Monkey-generated count of “skipped questions”. Removing those 56 surveys from the grand total, 1,019 completed surveys were analyzed, yielding ultimately 936 useable surveys once all the significantly incomplete surveys were removed.

Survey responses were analyzed for frequency of response using the built-in capacities of Survey Monkey. 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 Wilkes County.

Compared to other surveys analyzed by this consultant, the Wilkes County results demonstrate a large proportion of skipped demographic questions, even after removing the 56 non-resident surveys. On average, 197 participants, or approximately 19% of all respondents, skipped the demographic questions. (For comparison, 9% of respondents in another NC county recently surveyed skipped the demographic questions). The omission frequency in Wilkes County could be an indication of survey fatigue or reflect a reluctance to share personal, potentially identifying information, despite assurances to the contrary. As a result of the high proportion of skipped demographic questions the demographic profile of the survey respondents is incomplete.

What is the ZIP code of your PRIMARY residence in Wilkes County? (n=773; 246 unanswered)

Zip Code	%	#
28659 (North Wilkesboro)	32.1%	248
28697 (Wilkesboro)	27.6%	213
28651 (Millers Creek)	9.8%	76
28635 (Hays)	6.7%	52
28654 (Moravian Falls)	3.2%	25
28669 (Roaring River)	2.8%	22
28665 (Purlear)	2.7%	21
28670 (Ronda)	2.7%	21
28624 (Ferguson)	2.5%	19
28649 (McGrady)	1.8%	14
28685 (Traphill)	1.7%	13
28606 (Boomer)	1.6%	12
28621 (Elkin)	1.6%	12
28676 (State Road)	0.5%	4
28683 (Thurmond)	0.5%	4
27020 (Hamptonville)	0.4%	3
28656 (North Wilkesboro)	0.4%	3
28642 (Jonesville)	0.3%	2
28689 (Union Grove)	0.3%	2
Other Zip Codes	0.6%	5
Total		773

Other zip codes input by one respondent each: 28166 (Troutman), 28638 (Hudson), 28644 (Laurel Springs), 28681 (Taylorsville), 28694 (West Jefferson), and two invalid zip codes (likely typos)

- 32% of respondents were from North Wilkesboro.
- Nearly 28% of respondents were from Wilkesboro.
- Around 10% were from Millers Creek and an additional 6.7% were from Hays.
- 23.8% of respondents were from elsewhere in Wilkes County.

How old are you? (n=838; 181 unanswered)

Answer Options	Percent	Count
18 – 19	1.1%	9
20 – 34	24.8%	208
35 – 54	45.8%	384
55 – 64	18.6%	156
65 – 74	7.3%	61
75 or older	2.4%	20

- Approximately 26% of the participants were between 18 and 36. Countywide, approximately 22% of the population is within this age range.
- Around 64% of respondents were between the age of 30 and 64. 46.2% of the county's population falls within this age range.
- Around 10% of those surveyed were over the age of 65. County-wide, 20% of the population is over 65.

Are you male or female? (n=835; 184 unanswered)

Answer Options	Percent	Count
Female	80.2%	670
Male	19.5%	163
Refuse to answer	0.2%	2

- Approximately 20% of the survey participants were male.
- The population of the county is split, roughly, 50/50.

Do you speak a language other than English at home? (n=840; 179 unanswered)

Answer Options	Percent	Count
Yes	8.9%	75
No	91.1%	765

- Just over 91% of respondents speak English at home.
- 47 individuals answered the follow-up questions: If yes, what language?
- 32 (68%) speak Spanish. 9 of those 47 answered that they speak English.
- Dutch, American Sign Language, French, German, and Italian were other languages named.

Are you of Hispanic, Latino, or Spanish origin? (n=826; 193 unanswered)

Answer Options	Percent	Count
Yes	4.1%	34
No	95.9%	792

- 4.1% of the survey respondents were of Hispanic origin. At the county level, 5.8% of the population is of Hispanic/Latino/Spanish origin.

What do you consider your race? (n=827; 192 unanswered)

Answer Options	Percent	Count
White or Caucasian	93.0%	769
Asian	0.1%	1
Black or African American	5.4%	45
American Indian or Alaska Native	0.8%	7
Native Hawaiian or other Pacific Islander	0.4%	3
Two or more races	0.7%	6

Other write-ins: Hispanic (6), Appalachian American, Human, none of your business

- The majority of the survey respondents were white.
- The representation of racial groups among survey respondents is similar to the profile of the county, which is 93.3% white and 4.5% African-American/black.

What is the highest level of school, college or training that you have finished? (n=825; 194 unanswered)

Answer Options	Percent	Count
Less than 9th grade	0.8%	7
9th to 12th grade, no diploma	3.2%	26
High school graduate (or GED / equivalent)	9.7%	80
Associate's degree or Vocational training	21.5%	177
Some college (no degree)	17.1%	141
Bachelor's degree	24.1%	199
Graduate or professional degree	23.2%	191

Other write-ins: post-graduate degree, doctor of education, in college now, in graduate school.

- Just over 47% of the respondents had a Bachelor's degree or higher, compared to 12.5% of Wilkes County residents estimated to be so educated.
- 96% of the respondents had at least a high school education, compared to 74.2% at the county-level.
- 4% of the participants had less than a high school education.

What type of health insurance do you have? (n=828; 191 unanswered)

Answer Options	Percent	Count
I do not have health insurance.	7.5%	62
Medicaid	5.0%	41
Medicare	8.6%	71
Blue Cross / Blue Shield	60.0%	497
United Health Care	4.6%	38
Other private insurance company	20.4%	169
Military-related coverage (CHAMPUS, Tricare, etc.)	1.9%	16

- 7.5% of participants do not currently have any kind of health insurance. County-wide, around 25% of 18-64 year olds are uninsured.
- 8.6% were on Medicare; 5% were insured through Medicaid.
- 85% have private insurance.

What was your total household income last year, before taxes? A household is all people in a housing unit sharing living arrangements; they may or may not be related. (n=793; 226 unanswered)

Answer Options	Percent	Count
Less than \$10,000	4.4%	35
\$10,000 to \$14,999	6.1%	48
\$15,000 to \$24,999	8.7%	69
\$25,000 to \$34,999	9.3%	74
\$35,000 to \$49,999	15.5%	123
\$50,000 to \$74,999	25.5%	202
\$75,000 or more	30.5%	242

- 10.5% of respondents have a household income less than \$15,000.
- 28.5% of participants reported a household income less than \$35,000.

- 41% of respondents make between \$35,000 and \$75,000.
- 30.5% have a household income of more than \$75,000.

Do you, or a family member in your household, work outside of Wilkes County at least 3 days a week? (n=1007; 12 unanswered)

Answer Options	Percent	Count
Yes	24.2%	244
No	75.8%	763

- Approximately three-quarters of survey participants work in Wilkes County.
- Around 25% of respondents report that they or a family member works outside of Wilkes County at least three days a week.

In general, would you say that your overall health is: (n=1008; 11 answered)

Answer Options	Percent	Count
Excellent	12.6%	127
Very Good	46.8%	472
Good	32.4%	327
Fair	6.8%	69
Poor	1.3%	13

- Almost 60% of respondents indicated that they were in “excellent” or “very good” health.
- Approximately 8% of respondents indicated that they were in “fair” or “poor” health.

Community Issues

Survey participants were asked to consider a list of 22 issues and select the three they thought most affect quality of life in Wilkes County. They also had the option of “writing-in” an issue. The list of responses below is arranged in descending order of the frequency with which an issue was chosen. (n=936; 83 unanswered)

Answer Options	Percent	Count
Drug / alcohol abuse	62.4%	584
Low income / poverty	46.4%	434
Lack of job opportunities	39.2%	367
Lack of higher paying jobs	34.2%	320
Affordable health care	21.8%	204
Mental Health	15.2%	142
Child Neglect and Abuse	15.1%	141
Lack of / inadequate health insurance	9.3%	87
Affordable housing	8.5%	80
Hunger	7.5%	70
Affordable higher education	6.0%	56
Dropping out of school	5.4%	51
Theft	3.8%	36
Lack of transportation	3.6%	34
Discrimination / racism	2.9%	27
Elder Neglect and Abuse	2.7%	25
Domestic violence	2.2%	21
Homelessness	1.8%	17
Lack of community support	1.7%	16
Violent crime	0.5%	5
Pollution	0.4%	4
Rape / sexual assault	0.2%	2
Other (please specify)	3.2%	30

Other write-ins: poor public school system (3), obesity (2), lack of entertainment/activities for youth (3).

- Drug and alcohol abuse was the most commonly identified issue affecting quality of life in Wilkes County, selected by 62.4% of respondents.
- Low income/poverty was the next most commonly selected issue, selected by 46.4% of respondents.
- Lack of job opportunities was identified as an issue by approximately 39% of respondents, followed by lack of higher paying jobs, selected by 34.2%.
- Among female and male respondents the top four issues were the same as among all respondents, although among males, lack of higher paying jobs ranked third while lack of job opportunities ranked fourth.

Environmental Health Concerns

Survey participants were asked to consider an alphabetized list of 17 environmental health issues and select the three they thought had the greatest impact on their own health. They also had the chance to write-in an answer. The list of responses below is arranged in descending order of the frequency with which a named behavior was chosen. (n=936; 83 unanswered)

Answer Options	Percent	Count
Secondhand smoke	40.0%	374
Air quality	35.8%	335
Drinking water quality	27.7%	259
Meth labs	27.1%	254
Food safety	24.9%	233
Mold	24.1%	226
Solid waste and recycling	16.2%	152
Household hygiene	13.2%	124
Ozone	9.4%	88
Fluoride-enriched water	6.7%	63
Drought	6.7%	63
Septic system failure	3.7%	35
Radon	3.3%	31
Lice	2.6%	24
Lead exposure	1.7%	16
Rabies	1.4%	13
Bed bugs	1.4%	13
Other (please specify)	4.3%	40

Other write-ins: none (10), lack of exercise (2), insects (4).

- Secondhand smoke was selected by 40% of respondents as the environmental health concern with the biggest impact on their health.
- Air quality was chosen by 35.8% of respondents.
- The next most commonly identified environmental health concerns were lack of drinking water quality (27.7%) followed by meth labs (27.1%).
- Among female respondents, the top three environmental concerns were the same.
- Among males the top three environmental concerns were secondhand smoke, air quality and meth labs. Drinking water quality ranked fourth.

Services Needing Improvement

Survey participants were asked to consider an alphabetized list of 20 services and select the three they thought needed the most improvement in their neighborhood or community. They also had the option of writing-in an answer. The list of responses below is arranged in descending order of the frequency with which a named issue was chosen. (n=936; 83 unanswered)

Answer Options	Percent	Count
Positive teen activities	36.8%	344
Affordable health services	27.9%	261
Substance abuse services	25.1%	235
Healthy family activities	18.8%	176
Healthy food choices	18.6%	174
Recreational facilities	16.6%	155
Mental health services	16.3%	153
Elder care options	15.4%	144
Child care options	13.8%	129
Road maintenance and safety	12.2%	114
Affordable housing	11.9%	111
Food banks / pantries	11.6%	109
Unemployment assistance	10.0%	94
Transportation options	9.7%	91
Services for the disabled	9.0%	84
Access to healthcare providers	8.7%	81
Counseling / support groups	8.1%	76
Animal Control	5.0%	47
Transitional / halfway housing	4.3%	40
Culturally appropriate health services	1.8%	17
Other (please specify)	3.3%	31

- “Positive teen activities” was the most commonly identified service in need of improvement in Wilkes County, selected by almost 37% of respondents.
- “Affordable health services” was the second most area in need of improvement (27.9%).
- “Substance abuse services” was the third most commonly chosen area in need of improvement, selected by approximately a quarter of respondents.
- Among female respondents, as well as among male respondents, the top three answers were the same; the differences appear in how items farther down the list were ranked.

Health Behaviors

Survey participants were asked to consider an alphabetized list of 27 health behaviors and select the three they thought people in the community needed more information about. They also had the option of writing in an answer. The list of responses below is arranged in descending order of the frequency with which a names issue was chosen (n=936; 83 unanswered)

Answer Options	Percent	Count
Substance abuse prevention	37.8%	354
Anxiety / Depression	27.5%	257
Eating well / nutrition	23.5%	220
Texting and driving	22.5%	211
Child care / parenting	22.2%	208
Managing weight	20.4%	191
Exercise / fitness	15.3%	143
Quitting smoking / tobacco prevention	15.1%	141
Stress management	14.4%	135
Preventing pregnancy	10.3%	96
Anger management	8.5%	80
Domestic violence prevention	8.1%	76
Elder care	8.0%	75
Driving safely	6.3%	59
Crime prevention	5.8%	54
Preparing for an emergency / disaster	5.7%	53
Going to a dentist regularly	5.2%	49
Caring for the disabled	5.0%	47
Going to a doctor regularly	4.9%	46
Personal Hygiene	4.7%	44
End-of-life resources	4.6%	43
Using child safety seats	3.4%	32
Suicide prevention	3.2%	30
Getting pre-natal care in pregnancy	2.7%	25
Preventing STDs	2.0%	19
Rape / sexual abuse prevention	1.6%	15
Getting flu shots & vaccines	1.4%	13
Other (please specify)	1.0%	9

Other write-ins: mental health services (3), self-esteem/self-worth (2), family preservation, for the disabled, how to become self-sufficient, how to break the cycle of poverty

- The most commonly identified health behavior was substance abuse prevention, chosen by 37.8% of the respondents.
- The next most frequently identified behavior participants thought the community needed more information about was anxiety/depression, chosen by 27.5% of the participants.
- Eating well/nutrition, texting and driving, and child care/parenting were each selected by 22-23% of the respondents.

Adolescent Issues

Survey participants who were the caretaker of children between the ages of 9 and 19 were asked to consider an alphabetized list of 20 health topics and choose three topics their children needed more information about. Participants were given the option to indicate that they were not the caretaker of a child between 9 and 19. They also had the option of writing in an answer. The list of responses below is arranged in descending order of the frequency with which a named issue was chosen (n=929; 90 unanswered).

Answer Options	Percent	Count
I am not a caretaker for a child between the ages of 9 and 19.	53.2%	494
Internet / social media safety	21.5%	200
Bullying	15.7%	146
Texting and driving	15.3%	142
Drug abuse	14.9%	138
Self esteem	12.8%	119
Sexual intercourse / pregnancy prevention	9.6%	89
Nutrition	7.1%	66
Making healthy food choices at school	5.0%	46
Mental health issues	4.4%	41
Alcohol	4.2%	39
Sexually transmitted diseases	3.4%	32
Reckless driving	3.3%	31
Other (please specify)	3.1%	29
Suicide prevention	2.5%	23
Dental hygiene	1.8%	17
Eating disorders	1.7%	16
Personal hygiene	1.7%	16
Tobacco	1.5%	14
Asthma management	1.0%	9
Diabetes management	1.0%	9
Infectious disease (flu, whooping cough, etc.)	0.4%	4

Other write-ins: n/a (6), not a caretaker (5), cutting, all topics, respect, study tips and organizational skills, making healthy choices in spite of inappropriate influences

- More than half of the respondents indicated that they were not the caretaker of a child between the ages of 9 and 19.
- 435 participants were caretakers of a child/children between 9 and 19 (929 minus 494).
- Among those caretakers, 46% thought their child needed more information about internet and social media safety.
- 33.5% thought their child needed more information about bullying and 32.6% thought their child needed more information about texting and driving.

Personal Health Questions

Survey participants were asked to respond to a series of questions describing their health and health behaviors.

From what source do you get most of your GENERAL health-related information? (Choose only one.) (n=914; 105 unanswered)

Answer Options	Percent	Count
Doctor/nurse	46.2%	422
Internet	28.7%	262
Print media (books, newspaper, magazine)	5.1%	47
Friends and / or family	4.3%	39
Television	3.6%	33
Hospital	3.2%	29
Other (please specify)	3.1%	28
Health department	2.1%	19
Pharmacist	2.1%	19
Church	1.2%	11
My child's school	0.3%	3
Help lines	0.2%	2

Other write-ins: personal research (3), work (8), it's my profession (5), health insurance plan (2), internet (2), NC Health Coach, school, no one, my gym, community organizations, continuing education

- Around 46% of survey respondents get their health-related information from a doctor or nurse.
- The internet was the second most popular source of health information (28.7%).

Where do you find out about LOCAL health news or events? (Choose all that apply.) (n=917; 102 unanswered)

Answer Options	Percent	Count
Electronic Media (Internet, Facebook, email updates, blogs, etc.)	49.8%	457
Newspapers	48.0%	440
Friends and / or family	35.4%	325
Workplace	26.3%	241
Television	20.9%	192
Radio	17.3%	159
School	14.7%	135
Church	12.2%	112
Billboards	12.0%	110
Direct mail	10.4%	95
Magazines	4.1%	38
Other (please specify)	1.3%	12

Other write-ins: senior center (2), I don't (2), community calendars, Smart Start, YMCA, Health Department, Facebook, library, internet, haven't heard of local info

- Approximately half of the respondents use electronic media (including social media, email, the Internet) for information about local health news and events.
- 48% report using newspapers as a source of local health news.

If you wanted to get information about Wilkes Regional Medical Center or its services, where would you turn to first to get that information? (Choose only one.) (n=917; 102 unanswered)

Answer Options	Percent	Count
Hospital website	34.1%	313
My own experience/ experience of my family from past usage of hospitals	15.8%	145
Visiting or calling the hospital directly	12.3%	113
Internet/ Social Media	10.5%	96
Doctor/ nurse	9.6%	88
Family/ friends	7.5%	69
Other (please specify)	2.6%	24
Hospital rating service website	2.1%	19
Newsletters or materials sent out by the hospital	1.9%	17
Advertising (print, radio, tv, billboard)	1.4%	13
Local news media (tv, radio, newspaper)	1.0%	9
Yellow pages	1.0%	9
Insurance company resources	0.2%	2

Other write-ins: do not follow/use the hospital (9), do not like the hospital (4), none (5), hospital employee (3), don't care, nowhere.

- 34% of respondents indicated that they would turn to the WRMC website for information about the hospital's services.
- Around 16% would rely on previous personal or family experiences with hospitals.

Do you currently use any tobacco products (cigarettes, cigars, cigarillos, dip, chewing tobacco, snuff, e-cigarettes, vaping, bidis, hookah, shisha, or other)? (n=913; 106 unanswered)

Answer Options	Percent	Count
Yes, I use tobacco now	8.4%	77
Yes, I am trying to quit	3.8%	35
No, I quit using tobacco	20.9%	191
No, I've never used tobacco	66.8%	610

- Approximately 67% of respondents have never used tobacco.
- 12.2% currently use some kind of tobacco product, but 3.8% are trying to quit.
- Among females, 10.1% currently smoke and 3.7% are trying to quit. 19% used to smoke but have quit.
- Among males, 21.1% currently smoke and 4.3% are trying to quit. 26% used to smoke but have quit.

If yes, where would you go for help if you wanted to quit? (Choose all that apply.) (n=114; 905 unanswered)

Answer Options	Percent	Count
N/A: I don't want to quit	20.2%	23
Church	1.8%	2
Doctor	30.7%	35
Free Quit Line NC	13.2%	15
Health Department	6.1%	7
Private counselor/ therapist	6.1%	7
Pharmacy	0.9%	1
I don't know	30.7%	35
Other (please specify)	7.9%	9

Other write-ins: family/friends (2), quit on my own (4), 12 step program, program through work

- Among those who answered this question (it may be assumed they are current smokers, but cannot be assured), around 20% do not wish to quit.
- Approximately 31% would see a doctor for help quitting, and another ~31% don't know where they would go for help if they wanted to quit.

In your opinion, what are the three biggest substance abuse problems among ADULTS in this county? (n=898; 121 unanswered)

Answer Options	Percent	Count
Abusing prescription drugs	76.7%	689
Methamphetamine (Meth)	58.1%	522
Alcohol abuse	46.0%	413
Abusing someone else's prescription drugs	38.1%	342
Tobacco	23.2%	208
Drinking & driving	17.8%	160
Marijuana	13.4%	120
Cocaine / crack	9.0%	81
Heroin	6.7%	60
I don't know	1.9%	17
Other (please specify)	0.9%	8
Huffing (inhaling glue, dust-off, etc.)	0.3%	3

Other write-ins: methadone (3), opiates in general, illegal drugs in general, IV drugs

- More than three-quarters of respondents identified the abuse of prescription drugs as the biggest substance abuse problem among adults in Wilkes County.
- Methamphetamine was the second most commonly identified adult substance abuse issue.

In your opinion, what are the three biggest substance abuse problems among YOUTH in this county? (n=898; 121 unanswered)

Answer Options	Percent	Count
Alcohol abuse	53.0%	476
Marijuana	44.5%	400
Abusing someone else's prescription drugs	42.9%	385
Tobacco	35.0%	314
Abusing prescription drugs	32.7%	294
Drinking & driving	27.4%	246
Methamphetamine (Meth)	25.7%	231
Huffing (inhaling glue, dust-off, etc.)	7.2%	65
I don't know	5.7%	51
Cocaine / crack	5.5%	49
Heroin	3.9%	35
Other (please specify)	0.8%	7

Other write-ins: drug abuse in general, any opiate, chronic hopelessness, drunk driving and texting while driving, salts and other items which can be purchased at tobacco shops

- Just over half of the respondents identified alcohol abuse as the biggest substance abuse issue among youth in Wilkes County.
- The next most commonly identified issues were marijuana use (44.5%) followed by abusing someone else's prescription drugs (43%).

If a friend or family member were thinking about suicide, who is the first person you would tell them to talk to? (Choose only one.) (n=891; 128 unanswered)

Answer Options	Percent	Count
Minister / religious official	21.4%	191
Crisis hotlines	16.3%	145
Friends and / or family	14.1%	126
Doctor	10.5%	94
Private counselor / therapist	9.5%	85
Call 9-1-1	8.9%	79
I don't know	4.5%	40
Local mental health agency	3.8%	34
Hospital emergency department	3.8%	34
Daymark	2.9%	26
School counselor	1.7%	15
Other (please specify)	1.2%	11
Care Connection	0.7%	6
Health Department	0.3%	3
Support group (AA, NA, etc.)	0.2%	2

Other write-ins: myself (4), it depends (3), CareNet, RAINN, 1-800 Suicide Hotline, ER

- Approximately 21% of respondents would refer someone thinking about suicide to a minister or religious official.
- Around 16% would refer a suicidal friend or family member to a crisis hotline.
- 10.5% would tell someone thinking about suicide to talk to a doctor, and 9.5% would tell them to talk to a private counselor or therapist.

If a friend or family member needed counseling for a mental health concern or issue, who is the first person you would tell them to talk to? (Choose only one.) (n=893; 126 unanswered)

Answer Options	Percent	Count
Doctor	25.3%	226
Private counselor / therapist	20.3%	181
Local mental health agency	13.2%	118
Minister / religious official	9.6%	86
Daymark	8.7%	78
Friends and / or family	6.0%	54
I don't know	4.4%	39
Crisis hotlines	3.8%	34
Call 9-1-1	2.0%	18
Health Department	1.3%	12
Hospital emergency department	1.3%	12
Other (please specify)	1.3%	12
Care Connection	0.9%	8
School counselor	0.9%	8
Support group (AA, NA, etc.)	0.8%	7

Other write-ins: CareNet (3), myself, an agency outside the county (2).

- Approximately 25% of respondents would send a friend or family member in need of help for a mental health issue to a doctor.
- Around 20% would refer someone to a private counselor or therapist.

If a friend or family member wanted help for a substance abuse problem, who is the first person you would tell them to talk to? (Choose only one.) (n=895; 124 unanswered)

Answer Options	Percent	Count
Doctor	28.7%	257
Support group (AA, NA, etc.)	14.9%	133
Daymark	10.1%	90
Private counselor / therapist	9.5%	85
I don't know	6.8%	61
Minister / religious official	6.6%	59
Local mental health agency	5.6%	50
Friends and / or family	5.4%	48
Crisis hotlines	4.0%	36
Hospital emergency department	2.6%	23
Health Department	1.6%	14
Call 9-1-1	1.6%	14
Other (please specify)	1.5%	13
Care Connection	0.9%	8
School counselor	0.4%	4

Other write-ins: Teen Challenge, Project Lazarus, Substance abuse clinic, private counselor outside the county, myself, I would research options for them, it would depend on the age, minister, not sure (2)

- Almost 29% of respondents said that they would refer someone with a substance abuse problem to a doctor.
- 15% would refer someone with a substance abuse issue to a support group like AA or NA.

The recommendation for physical activity is 30 minutes a day, 5 days a week (2 ½ hours per week). Please choose up to three main reasons that keep you from getting this much physical activity. (n=885; 134 unanswered).

Answer Options	Percent	Count
Nothing; I get this much physical activity (e.g. around the house, at work, or exercising).	41.6%	368
I don't have enough time to exercise.	33.7%	298
I'm too tired to exercise.	28.7%	254
It costs too much to exercise.	12.7%	112
I am uncomfortable working out in public.	12.1%	107
I don't like to exercise.	10.2%	90
I'd need child care & I don't have it.	9.8%	87
I don't have access to an exercise space / facility or the proper equipment.	9.0%	80
Other (please specify)	5.9%	52
I don't know how to get started.	5.6%	50
I don't know how to find an exercise partner.	3.7%	33
I'm physically disabled.	2.7%	24
There is no safe place to exercise.	2.1%	19
Exercise is not important to me.	0.9%	8

Other write-ins: too lazy (8), physical limitations (5), facilities too far (3), caring for family members (4).

- Approximately 42% of respondents say they get the recommended amount of physical activity in a week.
- Among those who say they don't get the recommended amount of exercise (n=517), the primary reason was lack of time (58%), followed by being too tired to exercise (49%).

What do you believe is important in order to promote physical activity or exercise for health in the county? (Choose all that apply.) (n=878, 141 unanswered)

Answer Options	Percent	Count
Indoor recreation centers or facilities	57.4%	504
Outdoor recreation centers or facilities (parks, playgrounds, greenways)	57.2%	502
Workplace activity promotion programs	54.8%	481
Sidewalks, crosswalks, & signs to aid pedestrians	35.8%	314
Community walking groups	33.9%	298
Bike route information, bike lanes, & other biking opportunities	33.1%	291
Safety campaigns for driving, biking, and walking	17.1%	150
Other (please specify)	4.6%	40
I don't believe promoting physical activity or exercise is important	1.5%	13

Other write-ins: more affordable (6), free (3), more support for it in schools (7), more locations (4).

- More than half of survey respondents feel that indoor recreation facilities (57.4%), outdoor recreation facilities (57.2%), and workplace activity promotion programs (54.8%) are important resources to promote physical activity in Wilkes County.

One of the recommendations for healthy eating is to eat at least 5 servings of fruits & vegetables a day. Please choose up to three main reasons that keep you from eating this way. (n=885; 134 unanswered)

Answer Options	Percent	Count
Nothing; I eat 5 or more servings a day.	35.5%	314
They are too expensive.	33.6%	297
They go bad before we eat them.	26.1%	231
I just don't think about it.	22.7%	201
I don't have time to fix them.	14.4%	127
Lack of fruits and vegetables in restaurants	12.4%	110
They're not available in the off-season.	5.9%	52
I (or my family) won't eat them.	5.4%	48
I don't know how to prepare them.	4.3%	38
Other (please specify)	4.1%	36
I don't have access to fresh fruits and vegetables	1.8%	16
I don't know where to buy them.	0.7%	6
I don't think they're important	0.6%	5

Other write-ins: availability (4), eat them but not 5 servings (3), don't like them (2), don't like to prepare for only one (2), junk food is easier (2).

- 35% of respondents reported eating the recommended 5 servings of fruits and vegetables a day.
- The most common reason for not eating enough fruits and vegetables was that they are too expensive.

Where do you get your fruits and vegetables most often? (Choose up to three.) (n=885; 134 unanswered)

Answer Options	Percent	Count
Grocery store	85.0%	752
Produce stands	36.7%	325
Grow my own garden	32.2%	285
Farmer's market	28.9%	256
Flea market / cattle sale	9.9%	88
Restaurant or cafeteria	7.9%	70
Community / convenience store	5.2%	46
Other (please specify)	2.9%	26
Food bank / pantry	2.4%	21
Community-supported agriculture (CSA box)	2.1%	19
I do not buy them.	0.1%	1

Other write-ins: family/friends' garden (13), Walmart (3), Whole Foods (2), local farms (2), WIC office, food banks, health food store out of town

- 85% of respondents purchase their produce from the grocery store.
- Around 37% purchase fruits and vegetables from produce stands and around 32% grow them in a garden.

Have you ever been told by a doctor, nurse, or other health professional that you have any of the following health conditions? (N is presented in the table; 140 unanswered)

Diagnoses	Yes		No		Don't Know		Response Count
	#	%	#	%	#	%	
Asthma	146	17.8%	671	81.7%	4	0.5%	821
Depression	205	25.0%	613	74.8%	2	0.2%	820
Hypertension/ high blood pressure	260	31.0%	578	68.9%	1	0.1%	839
High cholesterol	242	28.8%	593	70.7%	4	0.5%	839
Diabetes/ Sugar	94	11.4%	729	88.1%	4	0.5%	827
Osteoporosis	42	5.2%	758	94.2%	5	0.6%	805
Overweight/ Obesity	375	44.6%	462	54.9%	4	0.5%	841
Angina/ Heart disease	35	4.4%	766	95.3%	3	0.4%	804
Cancer	42	5.2%	759	94.5%	2	0.2%	803

- Nearly 18% of respondents have been diagnosed with asthma.
- A quarter of respondents have been diagnosed with depression.
- 31% of respondents have been diagnosed with hypertension or high blood pressure.
- Nearly 29% have been diagnosed with high cholesterol.
- 11.4% have been diagnosed with diabetes.
- Approximately 5% have been diagnosed with osteoporosis.
- Nearly 45% have been diagnosed as overweight or obese.
- 4.4% have been diagnosed with angina or heart disease.
- 5.2% have been diagnosed with cancer.
- Among female respondents, 46% have been diagnosed with overweight/obesity and around 28% have been diagnosed with depression or high blood pressure. Around 26% have been diagnosed with high cholesterol and around 19% with asthma.
- Among male respondents, just over 40% have been diagnosed with high blood pressure and around 39% have been diagnosed with high cholesterol. Approximately 33% have been diagnosed with overweight/obesity; 16.5% have been diagnosed with diabetes and 14.4% have been diagnosed with asthma.

Where do you go most often when you are SICK? (n=879; 140 unanswered)

Answer Options	Percent	Count
Doctor's office	81.8%	719
Urgent care center	6.3%	55
I do not receive care.	3.6%	32
Health Department	2.8%	25
Hospital emergency department	2.5%	22
Other (please specify)	0.9%	8
Pharmacy	0.8%	7
Free clinic	0.6%	5
Holistic health clinic (chiropractor, acupuncturist, etc.)	0.5%	4
Sobador / Curandero	0.2%	2
MESH Unit	0.0%	0

Other write-ins: CVS Minute Clinic in another town, home, do not go (2), never sick enough, work (2), integrative medicine doctor

- A majority of survey respondents, around 82%, go to a doctor's office when they are sick.
- The second most common was an Urgent care center, where around 6% of respondents go when sick.
- 3.6% do not seek care anywhere when sick.

Where do you go most often when you need your yearly CHECK-UP or PHYSICAL? (Choose only one.) (n=881; 138 unanswered)

Answer Options	Percent	Count
Doctor's office	76.0%	670
OB/GYN or Women's Health provider	12.1%	107
I do not receive a yearly physical.	7.8%	69
Health Department	2.5%	22
Urgent care center	0.7%	6
Free clinic	0.5%	4
Other (please specify)	0.3%	3

Other write-ins: VA clinic, integrative medicine, Physicians office

- A majority of respondents (76%) see a private doctor for their yearly physical or check-up.
- Around 12% see an OB/GYN or Women's Health provider for a physical.
- 7.8% of participants reported not getting an annual check-up or physical.

If you are over the age of 50, have you ever had a colonoscopy? (n=875; 144 unanswered)

Answer Options	Percent	Count
Yes	31.7%	277
No	9.0%	79
N/A I am under age of 50.	59.3%	519

- The age ranges provided in the demographic section don't allow for an exact count of the number of survey participants over the age of 50. 237 respondents were over the age of 54, though recall that 181 participants did not indicate their age at all.
- Of the 356 people who answered this question appropriately, 77.8% have had a colonoscopy.

If you are a male over the age of 40, do you have an annual prostate exam? (n=842; 177 unanswered)

Answer Options	Percent	Count
Yes	10.9%	92
No	4.6%	39
N/A, I am a female or under age 40.	84.4%	711

- The age ranges provided in the demographic section don't allow for an exact count of the number of survey participants over the age of 40. 135 male respondents were over the age of 35, though recall that 181 participants did not indicate their age at all and 184 did not indicate their gender.
- Of the 131 people who answered this question appropriately, 70.2% have an annual prostate exam.

If you are a female over the age of 40, do you have an annual mammogram? (n=862; 157 unanswered)

Answer Options	Percent	Count
Yes	39.9%	344
No	9.6%	83
N/A, I am a male or under age 40.	50.5%	435

- The age ranges provided in the demographic section don't allow for an exact count of the number of survey participants over the age of 40. 480 female respondents were over the age of 35, though recall that 181 participants did not indicate their age at all and 184 did not indicate their gender.
- Of the 427 respondents who answered this question appropriately, 80.6% have an annual mammogram.

If you are a female, do you have a pap smear at least every other year? (n=861; 158 unanswered)

Answer Options	Percent	Count
Yes	64.6%	556
No	17.9%	154
N/A, I am a male.	17.5%	151

- 670 participants indicated that they were female; 184 did not indicate their gender.
- Of the 710 respondents who answered this question appropriately, 78.3% have a pap smear at least every other year.
- [Authors note: Pap smears are currently recommended every three years for women 21-29 and every five years for women 30-65.]

In the past 12 months, have you been to visit a dentist? (n=870; 149 unanswered)

Answer Options	Percent	Count
Yes	77.1%	671
No	22.9%	199

- Approximately 70% of respondents have been to a dentist in the past year.

In the past 12 months, did you have a problem getting the health care you need for you personally or for a family member from any type of healthcare provider, dentist, pharmacy, or other facility? (n=875; 144 unanswered)

Answer Options	Percent	Count
Yes	21.1%	185
No	78.9%	690

- Around 21% of respondents (or a family member) had a problem getting needed healthcare in the past year.

If “yes”, what type of provider or facility did you or your family member have trouble getting health care from? (Choose all that apply.) (n=172; 847 unanswered)

Answer Options	Percent	Count
Dentist	51.7%	89
General practitioner	34.3%	59
Specialist	18.0%	31
Pharmacy / prescriptions	14.0%	24
Other (please specify)	11.6%	20
Optometrist / ophthalmologist	10.5%	18
Hospital	10.5%	18
OB / GYN	8.1%	14
Urgent care center	7.0%	12
Free clinic	6.4%	11
Health Department	5.2%	9
Pediatrician	1.2%	2
Holistic (chiropractor, acupuncture, etc.)	1.2%	2

Other write-ins: mental health-related (4), Adult Protective Services, affordable glasses and contacts, audiologist, dentist, drug abuse help, MRI, no (2), n/a (2)

- 185 participants indicated in the previous question that they had a problem getting care.
- Among the 172 who answered the follow-up question, more than half had a problem getting needed dental care (51.7%) and around 34% had trouble getting health care from a general practitioner.

Have any of the following problems prevented you or your family member from accessing necessary health care? (Choose all that apply.) (n=842; 177 unanswered)

Answer Options	Percent	Count
I have not had any issues accessing health care.	58.4%	492
The deductible / co-pay was too high	19.5%	164
No health insurance	16.9%	142
Insurance didn't cover what I / we needed	12.4%	104
The wait was too long	7.7%	65
Couldn't get an appointment	6.9%	58
Other (please specify)	3.8%	32
Dentist couldn't take my insurance / Medicaid	3.6%	30
Doctor couldn't take my insurance / Medicaid	2.6%	22
Didn't know where to go	1.5%	13
No way to get there	1.5%	13
Pharmacy couldn't take my insurance / Medicaid	1.2%	10
Hospital couldn't take my insurance / Medicaid	0.7%	6
Language Barrier	0.5%	4

Other write-ins: lack of money (3), too expensive (3), no problems (3), Medicare/Medicaid issues (2).

- While over 58% of respondents indicated that they (or a family member) have not had any issues accessing necessary health care, approximately 20% reported that the cost of a deductible or co-pay prevented them from accessing needed health care.
- Nearly 17% indicated that lack of health insurance prevented them from getting necessary health care.

- Among 12.4% of respondents, health insurance didn't cover the needed care.

In the past 12 months, did you or a family member in your household, contact a health care provider to ask about the cost of a specific test, treatment or surgical procedure? (n=848; 171 unanswered)

Answer Options	Percent	Count
Yes	38.1%	323
No	61.9%	525

- Approximately 38% of respondents said they have contacted a health care provider about the cost of a specific test, treatment, or procedure.

If "yes", for what type of health care service was it for? (Choose all that apply.) (n=324; 695 unanswered)

Answer Options	Percent	Count
Dental office visit or services	40.4%	131
Doctors office visit or services	26.9%	87
Outpatient surgery	20.1%	65
Lab Test	19.1%	62
Radiology / Diagnostic Imaging	17.0%	55
Inpatient surgery	9.6%	31
Emergency or Urgent Care	9.0%	29
Other (please specify)	7.4%	24
Physical or Occupational Therapy	6.2%	20
Mental Health Services	4.9%	16
Child birth	4.6%	15
GI procedure	4.0%	13

Other write-ins: eye care/glasses/contacts (6), hearing aids (2), prescriptions (2), MRI (2), annual physical, braces, contraception, shingles vaccine, stress test, thyroid surgery, wound care, vein specialist, circumcision

- 323 respondents indicated they contacted a provider for information about the cost of health care. Among the 324 who answered the follow up question, the most common contact was for information on costs related to dental care (40.4%).
- Nearly 27% of respondents contact a doctor's office for information on the cost of services or visits.
- Around 20% of respondents have sought information on the cost of outpatient surgery and lab tests.

In the past 12 months, did you or a family member in your household, visit an urgent care in Wilkes County? (n=857; 162 unanswered)

Answer Options	Percent	Response
Yes	53.2%	456
No	46.8%	401

- More than half of respondents (or a family member) have visited an urgent care center in Wilkes County in the past year.

If “no”, have you visited an urgent care outside of Wilkes County in the past 12 months? (n=397; 622 unanswered)

Answer Options	Percent	Count
Yes	13.6%	54
No	86.4%	343

- 401 individuals reported that they did not visit an urgent care center in Wilkes County. Among the 397 participants who responded to the follow up question, 86.4% did not visit an urgent care center outside of Wilkes County.

Were you aware that there are 3 urgent cares in Wilkes County (Rock Creek Family Med, West Park, and Fast Med)? (n=855; 164 unanswered)

Answer Options	Percent	Count
Yes	80.9%	692
No	19.1%	163

- 81% of respondents were aware of the three urgent care centers in Wilkes County.

If you or a family member went outside of Wilkes County to see a physician, what was the main reason? (Choose only one.) (n=842; 177 unanswered)

Answer Options	Percent	Count
I did not leave Wilkes County.	30.8%	259
My doctor referred me / us to that doctor.	19.2%	162
Lack of specialist in my area.	19.1%	161
Other (please specify)	13.5%	114
Perception that doctors are better at other hospitals.	8.0%	67
Long wait to see a doctor in my area.	3.3%	28
I wanted a second opinion.	3.1%	26
Insurance “in-network” requirements.	3.0%	25

Other write-ins: lack of trust/confidence in local providers (15), Elkin/Surry County closer (9), primary provider located outside of Wilkes (21), was out of town when care needed (8).

- Nearly 31% of respondents reported not leaving Wilkes County to see a physician.
- Among those who did leave the county (n=583), the most common reasons were a physician referring them to that doctor (27.8%) and lack of a specialist (27.6%).

Do you feel that there is a need for additional providers or medical services in Wilkes County? (n=586; 163 unanswered)

Answer Options	Percent	Count
Yes	52.8%	452
No	21.3%	182
I do not know	25.9%	222

- More than half of respondents (52.8%) feel that there is a need for additional providers or medical services in Wilkes County.
- More than a quarter of respondents did not know whether more providers were needed.
- 441 people answered the follow up question: If yes, what services? Below is a summary of their responses.

Primary Care/General/Family Practice	60
Obstetrics/Gynecology (including midwifery)	54
Mental health-related (including substance abuse)	45
Specialists	37
Pulmonologist	32
Cardiologist (including cardiac rehab, and invasive cardiology)	32
Dermatologist	30
Orthopedics (including back and arthritis specialists)	31
More doctors	26
Neurologist	24
Pediatricians and Pediatric Specialists	23
Cancer/Oncologists/Surgeons/screenings/radiation/chemo	20
More dentists	19
Gastrointestinal (including bariatric procedures)	18
Surgeons	17
All	14
Endocrinologist	12
Affordable/Free in general	11
Affordable/Free dental care	10
Holistic (integrative medicine, acupuncture, chiropractor)	9
Urologist	9
Higher Quality	8
Rheumatologist	8
Ear, Nose, Throat	7
Longer hours/more convenient locations	7
Diabetes care/education/Nutrition	7
Eye Doctors (optometrist, ophthalmology)	5
Vascular	5
Weight loss specialists	5
Nephrologist	5

Other suggestions: trauma care, seated MRI, podiatrist (4), Multiple sclerosis specialist (2), pain specialist (3), Spanish speaking (2), infectious disease (3), plastic/reconstructive surgery (3), larger MRI machine, more who take Medicaid, VA services, Health 5, physician for males over 60, immunologist

**What is the main reason you and your family would not be up-to-date on vaccines?
(Choose only one.) (n=841; 205 unanswered)**

Answer Options	Percent	Count
I keep me & my family's vaccines up-to-date.	75.4%	614
I don't know when they should be administered.	6.6%	54
I am afraid of the possible side effects.	6.0%	49
Other (please specify)	5.8%	47
Vaccines cost too much.	4.3%	35
I believe the vaccines cause the disease.	0.9%	7
I have a religious or medical reason.	0.9%	7
I don't want to see my child in pain.	0.1%	1

Other write-ins: we are up to date (29), n/a (6), don't get flu vaccine (2), not sure all are necessary (2), don't trust the science behind them fully, adults not sure what's needed, child scared of needles, only do required ones.

- Approximately three-quarters of respondents (and their family members) are up-to-date on their vaccines.
- The primary reason for not being current on vaccinations was not knowing when they should be administered (6.6%).
- 6% of respondents were worried about the possible side effects of vaccines.

**Which statement is TRUE about you or your family's plans for emergencies or disasters?
This would include fires, floods, ice, snow, hurricanes, etc. (Choose only one.) (n=834;
185 unanswered)**

Answer Options	Percent	Count
I have a plan in place for me and my family if we have a major emergency or disaster.	48.3%	403
I do not know how to plan for a major emergency or disaster for me and my family.	16.2%	135
I do not need a plan for a major emergency or disaster for me and my family.	4.2%	35
I don't know/ I'm not sure.	31.3%	261

- Approximately 48% of respondents have a plan in place if a major emergency or disaster occurs.
- Around 31% were not sure about what they would do in an emergency.
- Approximately 16% said they did not know how to plan for a major emergency or disaster.

CHAPTER SEVEN: STAKEHOLDER FORUMS

STAKEHOLDER FORUM PROCESS

The Wilkes County CHA/CHNA Advisory Team discussed whether or not to send out a survey to stakeholders or host forums. Ultimately, the Advisory Team, with the guidance from the consultant, decided to move forward with hosting forums. The group felt this would lead to a more in-depth knowledge of service strengths and barriers throughout the community. The group also decided that hosting multiple forums at different times and locations would allow for more representation from the community. The Advisory Team sent out invitations to the Steering Committee, along with other organizations whom the team felt could provide valuable input to the process. During this process no community members were present, since the forum was designed to specifically focus on agency strengths and barriers.

Wilkes hosted three Stakeholder Forums during the month of September 2015. The first Stakeholder forum consisted of four participants, while the second had 24, and the final forum had 28 participants.

The first forum used two facilitators during the interview process. One facilitator was in charge of asking the questions, keeping the group on time, and capturing big picture takeaways; the other facilitator functioned as the scribe. Throughout the course of an hour, stakeholders were asked a series of eight questions that were decided upon by the Advisory Team. The same eight questions would be asked throughout all three stakeholder forums. The stakeholder interview questions were:

- 1) What is your position in your agency?
- 2) What services does your agency provide for county residents?
- 3) Describe county residents who are most likely to use your services?
- 4) In the past 5 years, have there been any changes in the composition of the people who use your services?
- 5) In the past 5 years, have there been any changes in the needs of the people who use your services?
- 6) What barriers do residents face in accessing your services?
- 7) What does your agency do to help overcome those barriers?
- 8) What services or programs that aren't currently available in the community do you think are needed (whether or not they would be provided by your agency)?

Due to the higher response rate to the second and third forum, the process was modified. In those forums stakeholders were divided up into 3 groups of 8-10 persons each. If stakeholders from the same agency attended the same forum, they were asked to split up into different groups. Each group had 3 facilitators: one to keep the group on time and guide the group through the questions, one to scribe the group's discussion, and one to capture key or big takeaways during discussion. The last two forums each were completed within 2½ hours from start to finish. The timeframe allowed for all stakeholders to be active and engaged throughout the process.

STAKEHOLDER FORUM RESULTS

The results of the stakeholder interviews are summarized (briefly) below, according to the “themes” which emerged from discussion of each question or topic in the discussion guide. The results from all three forums have been combined. Note that the numbers do not necessarily imply any rank order. A copy of the discussion guide is appended to this document.

Changes in Agency/Organization Clientele

- 1. *Increased poverty, increased unemployment***
 - Greater need for food supports
 - Greater need for temporary crisis services
- 2. *Local transportation inadequate to meet need***
- 3. *More clients with mental health needs***
 - Greater need for crisis care
 - Inadequate services for substance abusers
- 4. *More clients with chronic illnesses***
- 5. *More elderly clients and retirees***
 - More grandparents in parental role
- 6. *Clients generally have more complex needs***
 - Problems arising at younger client ages
- 7. *Some say more uninsured; others say fewer***
- 8. *Growth of migrant populations (Hispanics, Burmese)***

Changes in Service Infrastructure and Agency Needs

- 1. *Inadequate coordination of services among agencies and organizations***
- 2. *Increased need for translators and translated written materials***
- 3. *Change/greater complexity in determining client eligibility and in cost reimbursement***
- 4. *Lack of funding/unmet needs for infrastructure improvements***
- 5. *Inadequate knowledge of how to market services and programs***
- 6. *Greater need for knowledge of resource finding/resource leveraging***

Client Barriers to Accessing Services and Care

- 1. Poverty**
- 2. Lack of transportation**
 - Physically “scattered” services; multiple trips sometimes required
 - Lack of evening transportation
- 3. Lack of insurance**
 - High cost of co-pays and deductibles for those insured
- 4. Inadequate inter-agency communication/coordination of services**
- 5. Shortages of some services (e.g., daycare)**
 - Lack of providers accepting Medicaid
 - Lack of services available in evenings/weekends
- 6. Stigma of seeking and accepting services, especially DSS and mental health services**
- 7. Lack of information or misinformation about available services and providers**
 - Language/cultural barriers

Needed but Currently Unavailable Resources and Services

- 1. County-wide transportation with regular routes**
- 2. Improved community-wide awareness of mental health issues and treatment options**
- 3. More local mental health providers and services**
 - Substance abuse treatment
 - On-site services for students
 - In-patient treatment facilities
- 4. Better inter-agency communication and cooperation; deconstruction of service and information “silos”.**
- 5. Better coordinated community advocacy**
- 6. Greater outreach to rural areas**
- 7. Greater use of electronic resources**
 - Electronic medical records
 - Resource lists
 - Volunteer coordination
 - Improved telecommunications/broader Internet access
- 8. More employment options, especially for the minimally prepared**
- 9. Affordable housing**

CHAPTER EIGHT: WILKES 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 Wilkes County are at greater risk for poor health outcomes than their wealthy, insured, white, and female counterparts. Given the geography of Wilkes 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 2009-2013 the overall poverty rate for Wilkes County was 22.7%, well above the NC average of 17.5%. Among African Americans in the county, however, the comparable poverty rate was 30.9%, 51% higher than the poverty rate among whites (20.4%). In the same period the poverty rate among Hispanics was 48.2%, more than twice the comparable rate among whites. Income levels in Wilkes County are well below state averages; for example, data cited previously show that in 2014 annual per capita income in Wilkes County lagged behind the average for NC by almost \$5,800. 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 Wilkes 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 2013 US Census data cited elsewhere in this document, in 2013, 20.5% of the Wilkes County population between the ages of birth and 64 was uninsured. Although not descriptive of a random, representative sample, results from the 2015 Wilkes County Community Health Survey revealed that 17% of all respondents reported they were uninsured at the time of the survey.

High utilization of the emergency department (ED) of the local hospital by certain groups may point to this insurance disparity. For example, African Americans were significantly over-represented in the ED, composing 7.3% of all ED admissions while representing only 4.5% of the overall population. According to the hospital, it classified 6.5% of all ED admissions as “charity” care. 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 constitute less than 5% of the overall Wilkes County population, and as a result there is little data available from NC SCHS that describes stable mortality rates. The limited stable data available shows, however, that African Americans suffer mortality for total cancer at a rate 25% higher than the comparable rate for whites. Statewide, African Americans have significantly higher mortality rates than whites due to a number of medical conditions, most notably diabetes and kidney disease.

Pregnancy outcomes for African American women in Wilkes 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 (+2.4 times, and +4 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 Wilkes 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, Wilkes County males suffer a 42% higher overall mortality rate than Wilkes County females. Further, males in the county have disproportionately higher mortality rates than females for 9 of the 10 leading causes of death for which there are stable gender-stratified rates. The margins of difference ranges from 17% to a factor of over two. 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 Wilkes 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 18,400 by 2030 (compared to 11,700 in 2010), and at that time will compose almost 26% 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.

RURAL COMMUNITIES

With the county population concentrated in just two towns, much of Wilkes County remains rural in character. Most health and human services are based in either Wilkesboro (the county seat) or North Wilkesboro, in the center of the county. The public transportation system in the county, Wilkes Transportation Authority (WTA) focuses its services in the most populous areas.

The highest proportions of persons age 50 and older live in Elk, Brushy Mountain and Union Townships, all of which are located on the borders of the county, which means that a significant elderly population is isolated from many of the services they may need.

POPULATIONS AT-RISK FOR PRIORITY HEALTH CONDITIONS

Besides the generalizations about populations at overall increased risk for poor health outcomes, certain populations are especially at-risk for poor outcomes relative to particular health conditions. Below are discussions of the five health priority areas selected for Wilkes County: Obesity and Chronic Disease, Mental Health and Substance Abuse, Access to Care, and Tobacco and Smoking. (See following section of this report for a discussion of the priority selection process.)

Obesity and Chronic Disease

As cited previously in this report, according to CDC data, the prevalence of diagnosed obesity in Wilkes County was 26.1% in 2012 and averaged 28.5% over the period from 2006 through 2012. Results from the 2015 Wilkes County Community Health Survey showed that almost 45% of respondents reported that they had been diagnosed as either overweight or obese. According to recent data from the CDC, more than one-third (34.9% or 78.6 million) of US adults are obese (78). By this measure, the figure representing the results of the Wilkes community survey seems low, since it includes both overweight and obese persons. However, the survey respondent pool included high proportions of respondents from the groups not traditionally most susceptible to overweight and obesity.

Obesity and overweight are precursors to a number of chronic diseases, some of which are prevalent in Wilkes County where they result in high mortality rates and numerous hospital admissions. Obesity-related conditions include heart disease, stroke, Type 2 diabetes and certain types of cancer, some of the leading causes of preventable death. Other chronic conditions, including high cholesterol and high blood pressure (hypertensive disease) are also associated with obesity or at least with an unhealthy diet. According to the CDC, the estimated annual medical cost of obesity in the US was \$147 billion in 2008 US dollars; the medical costs for people who are obese were \$1,429 per-person higher than those of normal weight (78).

Also as noted previously, diabetes, a chronic disease often related to obesity, was the seventh leading cause of death overall in Wilkes County in 2009-2013, at which time the county diabetes mortality rate exceeded the state rate by 14% and had increased by 7% since the last CHA. As previously cited, CDC data estimated the prevalence of diagnosed diabetes among adults age 18 and older in Wilkes County at 9.2% in 2012, with an average prevalence of 9.9% over the period from 2006 through 2012, and slightly more than 11% of the respondents to the 2015 Wilkes County Community Health Survey reported having received a medical diagnosis of diabetes.

According to data made available to the CHA/CHNA consultant by Wilkes Regional Medical Center (WRMC), there were 470 emergency department (ED) admissions associated with a primary diagnosis of diabetes (ICD-9 code 250xx) in 2012 through 2014, representing 0.05% of all ED admissions in that three-year period. Similarly, inpatient (IP) hospitalizations attributable to a primary diagnosis of diabetes accounted for 85 admissions, or 1.7% of all IP hospitalizations over the same period.

Other chronic conditions, including heart disease, high cholesterol and high blood pressure (hypertensive disease) are also associated with obesity or at least with an unhealthy diet. As noted earlier in this report, heart disease was the second leading cause of death in Wilkes County in 2009-2013, and a significant fraction of respondents to the 2015 Wilkes County Community Health Survey reported they had been diagnosed with high cholesterol (28%) or hypertension/high blood pressure (31%). Data from WRMC for 2012 through 2014 showed that 1,357 ED admissions (1.5% of all ED admissions over the period) and 415 IP hospitalizations (8% of total IP hospitalizations over the period) were associated with a primary diagnosis of heart disease (ICD-9 codes 390-414), while hypertensive disease (ICD-9 code 401-405xx) accounted for an additional 677 ED admissions (0.8% of total ED admissions) and 54 IP hospitalizations (1% of total IP hospitalizations).

Although not associated with obesity, chronic lung disease is a significant health problem in Wilkes County. For example, as cited previously, chronic lower respiratory disease (CLRD) was the third leading cause of death in the county in the 2009-2013 period, with a mortality rate 15% higher than the comparable rate statewide. According to WRMC admissions data for 2012 through 2014, there were 1,787 ED admissions (2% of all ED admissions) and 177 IP hospitalizations (3.5% of all IP hospitalizations) attributable to a diagnosis of COPD and Allied Conditions (ICD-9 code 490-496xx). Most experts agree that chronic lung disease, including cancer, is associated with smoking, a priority issue in its own right that will be discussed subsequently.

Specific Populations at Risk

The poor and uninsured. Obesity is sometimes—but not exclusively—associated with poverty, as the economically disadvantaged often do not have the same access to healthy food and lifestyle choices as wealthier persons. Members of the community who lack health insurance are always at-risk for poor health outcomes, and the percent of the Wilkes County population under age 65 without health insurance in 2013 was 20.5%, or more than 11,000 persons. While this report offers no racially stratified data pertaining to the uninsured, the high poverty rates for African Americans, often 50% higher than comparable rates for whites, are likely indicative of high proportions of uninsured, or at least limited access to healthcare, among blacks. It is likely, further, that the Hispanic/Latino population in Wilkes County is also vulnerable because of traditionally high rates of uninsured and poverty in this group. The proper treatment and management of chronic diseases is, by definition, ongoing, an expensive and often unattainable protocol for certain groups of limited means or lacking insurance.

Minorities. According to the CDC, non-Hispanic blacks have the highest age-adjusted rates of obesity (47.8%) followed by Hispanics (42.5%), non-Hispanic whites (32.6%), and non-Hispanic Asians (10.8%). While stable, racially-stratified diabetes mortality rates for African Americans in Wilkes County are not available, statewide the most recent diabetes mortality rate for African Americans was 2½ times the comparable rate for whites, and there is no reason to expect a lesser relative racial disparity in Wilkes County.

Males. As cited elsewhere in this report, mortality rates in Wilkes County for most chronic diseases are higher for males than for females. For example, cancer and heart disease mortality rates for Wilkes County males exceed comparable mortality rates for females by approximately 60%, and the mortality rate for diabetes among males exceeds the comparable rate for females by 88%.

Children. As a behavior-related health outcome, obesity affects all cross-sections of society, but we do know that habits—good and bad—learned and practiced at a young age can make a difference, which would point to children as perhaps the population most vulnerable to obesity and its life-long effects. In Wilkes County, limited data cited previously on obesity in toddlers ages 2-4 shows frequencies of overweight and obesity approaching 35%, a high prevalence for a very young population.

Middle-age adults. Nationally, the frequency of obesity is higher among middle age adults, 40-59 years old (39.5%) than among younger adults, age 20-39 (30.3%) or adults over 60 or above (35.4%) adults, according to the CDC.

Mental Health and Substance Abuse

As described in an earlier section of this report, utilization of state mental health services by Wilkes County residents has decreased over the past five years, 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 true diminished need for services.

While the actual number of persons with mental health needs in Wilkes County is not precisely known, 25% of respondents to the 2015 Wilkes Community Health Survey reported a personal diagnosis of depression (only one kind of mental health problem), and Wilkes County community stakeholders interviewed as part of the 2015 CHA/CHNA process reported that they were seeing more clients with mental health issues than they saw five years ago.

As noted previously, the fraction of all WRMC ED admissions attributable to mental health diagnoses (including substance abuse) currently is approaching 4%. Many if 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 Wilkes County (Smoky Mountain Center), utilization figures for which fell by 40% between 2009 and 2014. There are over 50 providers physically located in Wilkes County listed in the 2015 Smoky Mountain LME/MCO Provider Directory, but it's possible that many in the community do not know about them or how to access that network of services. As described previously, respondents to the 2015 Wilkes 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 "physician", a specific mental health facility (for example, Daymark) or an unnamed "mental health practitioner in private practice", a significant proportion would refer to someone outside of the network of mental health professionals, such as a member of the clergy (10%), friends or family (6%), or the hospital emergency department (1%). In addition, four-percent of the respondents said they "did not know" where to refer someone. Of course, with the fraction of uninsured in Wilkes County exceeding 20% and a poverty rate over 22%, 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 Wilkes County (ranking 12th in 2009-2013), the suicide mortality rate in the county exceeded the comparable state rate by almost 12%. According to data from WRMC, the number of ED admissions associated with a diagnosis of Suicide ideation (ICD-9 code V62.84) increased from 62 in 2012 to 131 in 2014.

Community opinion provided strong impetus to name mental health and substance abuse among Wilkes County health priorities. As reported elsewhere in this document, respondents to the community health survey named alcohol/drug abuse first among the community issues most affecting the quality of life in the county, and voted “mental health” to sixth place on the same list. Further, respondents identified substance abuse prevention as the leading topic about which the community needed more information, and voted “anxiety/depression” to second place on the same list. Finally, survey respondents chose “substance abuse services” third, and “mental health services” seventh, on the list of community services most in need of improvement.

Local hospital ED data demonstrates an increasing trend in visits related to diagnoses of substance abuse. WRMC ED admissions data for the period 2012 through 2014 provided to the consultant showed that ED visits for diagnoses related to drug dependence (ICD-9 code 304-304.99) increased from 20 in 2012 to 32 in 2013 and 36 in 2014. In this category, the most common diagnosis was opioid dependence, which increased from 9 admissions in 2012 to 15 in 2013 and 26 in 2014. ED admissions associated with *non-dependent* use of drugs (including alcohol) (ICD-9 code 305-305.99) increased dramatically recently, from 220 in 2012, to 248 in 2013, and to 360 in 2014. Alcohol was the agent in the largest proportion of the non-dependency-related diagnoses, followed by cases in the “other mixed, or unspecified drug abuse” category, which includes inhalant abuse, abuse of drugs not otherwise specified, and non-prescribed use of drugs or patent medicinals.

In response to some of the highest drug overdose death rates in the country, *Project Lazarus* was developed in 2008. *Project Lazarus* is a community-based overdose prevention program based in Wilkes County. In 2009 the unintentional poisoning mortality rate in Wilkes County was quadruple that of the state's and due almost exclusively to prescription opioid pain relievers, including fentanyl, hydrocodone, methadone, and oxycodone. After inception of the Project Lazarus program, preliminary unadjusted data for Wilkes County revealed that the overdose death rate dropped from 46.6 per 100,000 in 2009 to 29.0 per 100,000 in 2010. Further, there was a decrease in the number of victims who received prescriptions for the substance implicated in their fatal overdose from a Wilkes County physician: in 2008 82% of overdose decedents received a prescription for an opioid analgesic from a Wilkes prescriber; in 2010 the comparable figure was 10%.

Specific Populations at Risk

The poor and uninsured. The uninsured and those in poverty are always at risk for poor outcomes to their 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 seek “relief” in alcohol or drugs.

Youth and the elderly. Youth may initially experiment with drugs or alcohol for other reasons, including peer pressure, risk-taking, and escapism. 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. The elderly may fall into prescription drug abuse accidentally, but interestingly, age stratification of the WRMC ED data related to substance abuse does *not* reveal high proportions of abusers under age 19 or over age 64.

Whites. Neither African Americans nor Hispanics composed large percentages of the ED admissions for substance abuse; the vast majority were whites.

Access to Care

One of the best predictors of likely difficulty in accessing health care is being uninsured. As noted many times previously, over 20% of the Wilkes County population lacked health insurance in 2013, a large proportion of potential access problems. While poverty (which in Wilkes County currently stands at 22%) can also be a predictor, there exist safety net mechanisms (for example Medicaid and Health Choice) to help the poor overcome economic barriers to access. Unfortunately, these safety nets do not always work where providers limit the number of Medicaid (and sometimes Medicare) or Health Choice assignments they will accept, or where services and providers are out of reach of potential patients due to geographical and transportation barriers. Approximately 21% of respondents to the 2015 Wilkes County Community Health Survey reported having a problem accessing health care recently; among them the most frequently cited barriers were cost (i.e., deductible or co-pay) or a total lack of insurance. Up to 6% of respondents cited the provider's not accepting insurance (including Medicaid) as a barrier to care.

Participants in the 2015 Wilkes County CHA Stakeholder Interviews cited "poverty", "lack of transportation", "lack of insurance", "shortages of some services", "stigma of seeking and accepting services" and "lack of information" as among their clients' barriers to accessing care. The community stakeholders repeatedly cited one infrastructure problem or barrier affecting their clients' ability to access needed services: "inadequate inter-agency communication and coordination of services".

As cited previously, respondents to the 2015 Wilkes County Community Health Survey ranked "low income/poverty", "lack of jobs", "lack of high-income jobs", and "affordable health care" at numbers two, three, four and five, respectively, and ranked "lack of health insurance" eighth on the list of community issues most affecting quality of life in Wilkes County, indicating that economic issues were of significant interest to most respondents. Respondents also ranked "affordable health services" second among the local services most in need of improvement.

Specific Populations at Risk

The poor and uninsured. Limited access to healthcare is specifically related to poverty and lack of insurance, as readily noted by community stakeholders who were interviewed as part of the 2015 Wilkes County CHA/CHNA project: they see these barriers in action in their agencies.

Rural populations. However, according to these stakeholders, in Wilkes County even persons not in poverty or who may have health insurance can have access problems, especially rural populations whose dependence on a limited system of public transportation to reach central and/or multiple service points may be a barrier.

Medicaid clients. As noted previously, Medicaid clients may find that there are limited providers who accept their insurance, and working people, especially those who work multiple jobs or exclusively day-time shifts, or have no weekday time off may find limited providers who offer appointments at hours they can seek services.

Immigrant populations. Wilkes County is home to a significant number of foreign workers, especially Hispanics and Burmese, for whom the lack of culturally-appropriate services in their native language presents a significant access barrier.

Tobacco and Smoking

The association of smoking with health consequences is now firmly established and is accepted by most of the public. As a result, tobacco-quitting behaviors have increased in recent years. For example, 21% of the respondents to the 2015 Wilkes County Community Health Survey reported that they once smoked but had quit, and another 4% said they are actively trying to quit (54). Nevertheless, smoking remains prevalent in Wilkes County, where over 8% of survey respondents say they currently smoke and do *not* identify themselves as “trying to quit”. While data available for this project cannot prove cause-and-effect, it is likely that prevalence and mortality for some chronic diseases in Wilkes County, including CLRD/COPD and lung cancer, are influenced by the past and present smoking behaviors of the public. Some of the specific health consequences of smoking were discussed above, in the Obesity and Chronic Disease section.

Specific Populations at Risk

Pregnant Women. Alarming high percentages of pregnant women in the county smoke during their pregnancies. As reported previously, in 2013 almost 19% of Wilkes County pregnancies involved women who smoked while pregnant, a figure 50% higher than the comparable average statewide. These women, some of whom may believe the adage that smoking during pregnancy prevents excess weight gain, are at risk for adverse health outcomes for themselves and/or their babies.

Males. Analysis of gender-stratified 2015 Wilkes County Community Health Survey results shows that a far greater proportion of males than females report being “current smokers”: 6% of females compared to 16% of males. A higher proportion of females than males reported that they “never used tobacco” (71% vs. 53%). On the other hand, a higher proportion of males than females reported that they had quit using tobacco (26% vs. 19%), perhaps because a higher proportion of males than females were smokers in the first place (54). There were too few African Americans and Hispanics in the survey respondent pool to yield reliable stratified results regarding smoking.

Youth. Although there is no current YRBS data available for Wilkes County, data from other counties shows that young people begin to smoke at ever younger ages. This fact is further complicated by the advent of electronic nicotine-delivery systems, which are advertised to appeal to youth.

CHAPTER NINE: DETERMINING HEALTH PRIORITIES

PRIORITY SELECTION PROCESS

After receiving primary and secondary data from the Public Health Consultant, the Advisory Team was involved in a series of meetings to determine the community's health priorities. The importance of broad community involvement was emphasized and encouraged. The Advisory Team decided that the best way to select our priorities was through a Stakeholder Prioritization Meeting. The intent of the meetings was that the secondary and primary data could be shared, which would then help guide the stakeholders in determining which health priorities they felt like the community should focus on. The Public Health Consultant met with the Advisory Team prior to the meeting to discuss the data findings that she would be presenting at the prioritization meeting. The Consultant informed the group that the only local data that would be presented during the meeting would be from the hospital. The Consultant mentioned that this was due to the local data still being processed and cleaned up. The Consultant did not believe that this would create any gaps in the data, or lead stakeholders to choose one issue over another.

The Advisory Team and the Consultant discussed several options on how to collect stakeholder and community member's priority selections. The Advisory Team decided to move forward with a condensed version of the "Hanlon Method" referenced in the Community Health Assessment Guide Book. When creating the Prioritization Ballot for the meeting the instructions made it clear that stakeholders should consider the following criteria (based on the Community Health Assessment Guide Book):

1. Magnitude: How many persons does the issue/problem affect, either actual or potential?
2. Seriousness of consequences: What degree of disability or premature death occurs because of the issue/problem? What are the potential burdens to the community such as economic or social burdens, if the issue/problem is *not* addressed?
3. Capacity for correcting or preventing: Is the issue/problem amenable to the intervention? What resources of equipment, expertise, personnel or money are necessary to effect change? Are those necessary resources available in Wilkes County, or can they reasonably be acquired?
4. Social and/or political will: Is there likely to be sufficient local community and political support to address the issue or problem? Will the solution to the issue/problem require partnerships? Do these partnerships already exist in Wilkes County, or must they first be developed?

Based on these criteria, the group decided to let participants at the meeting select up to ten issues or problems that they would like to see addressed over the next three years. The Advisory Team decided not to force participants to rank them in order from 1 to 10. The group felt strongly that we would have enough representation that only a few issues or problems would rise to the top. The team also decided to let the stakeholders have the ballot at the beginning of the Prioritization Meeting. Providing the ballot at the beginning of the meeting would allow stakeholders to list or take notes on issues or problems as the data was being presented.

On November 17, 2015 the Advisory Team hosted the CHA/CHNA Prioritization Meeting, with 48 stakeholders and community members present. During this meeting participants were provided with primary and secondary data collected throughout the CHA/CHNA process. Following the data presentation participants were able to discuss the data with others and consult any of the Advisory Team members, or the Public Health Consultant for further

clarification. Before leaving the meeting each participant was asked to return their ballot to an Advisory Team Member.

Following the meeting, the presentation and ballot were sent to stakeholders who were not able to be present at the meeting. These stakeholders were given a chance to review the data, consult with the Wilkes County Health Department Health Promotion Coordinator, and send in their ballot if compelled to do so. The Health Department received five ballots back from stakeholders who were not present.

The Health Promotion Coordinator also presented a condensed version of the data presentation to the Board of Health in December 2015. The presentation allowed for Board of Health members to hear the presentation and also provide feedback on issues or problems. The Board of Health members were given a week to return their ballots into the Health Promotion Coordinator; all 11 Board of Health members returned their ballots.

After collecting all the prioritization ballots, the health department began analyzing the results. Results from the ballots were entered into an Excel spreadsheet to allow for easier calculation of priorities. Each issue or problem that was listed on the ballot received a vote. The selected priorities or issues were grouped together to reflect specific topics. An example of this would be "Chronic Disease/Obesity", some of the selections read obesity, childhood obesity rates, COPD, diabetes, or cancer. After tabulating all the responses, the selection process received 427 votes.

Upon tabulation, five overall issues rose to the top of the preliminary priority selections. The following factors were considered when making final priority selections from the preliminary five:

- How do these issues fit in with Healthy North Carolina 2020 objectives?
- Does this issue/problem align with our primary and secondary data?
- What is the county's capacity to address the issue/problem?
- Do we have the personnel to address this?
- Do we have the expertise available to help us address this issue/problem?
- Do we have partner commitment to address this issue/problem?
- Do we have the time to address this issue/problem?
- Do we have the community support to address this issue/problem?

PRIORITIES

Wilkes Regional's focus for the next three years will be on **three** main priorities.

The following were established as Wilkes County's health priorities for the next three years (2016-2019):

- Impact Cerebrovascular Disease and Stroke
- Impact COPD (Chronic Obstructive Pulmonary Disease)
- Impact Diabetes

REFERENCES

- 1 US Department of Veteran Affairs, Locations, North Carolina, Veterans Health Administration; <http://www.va.gov/directory/guide/state.asp?dnum=ALL&STATE=NC>.
- 2 Personal communication from Rachel Willard, Health Promotion Coordinator, Wilkes County Health Department to Sheila Pfaender, Public Health Consultant; August 14, 2015.
- 3 Wilkes County Sheriff's Department. <http://wilkescountysheriff.net>.
- 4 Wilkesboro Police Department. <http://www.wilkesboronorthcarolina.com/police-overview>.
- 5 North Wilkesboro Police Department. <http://www.northwilkesboropd.com/about/>.
- 6 Article 3J County Tier Designations (2015). NC Department of Commerce, Research and Publications, Incentive Reports; <http://www.nccommerce.com/research-publications/incentive-reports/county-tier-designations>.
- 7 Wilkes Transportation Authority (WTA). <http://www.wta1.org/>.
- 8 NC Department of Commerce, Labor and Economic Analysis Division (LEAD), D4 - Demand Driven Data Delivery System. Local Area Unemployment Statistics (LAUS) - Unemployment Rate. <http://esesc23.esc.state.nc.us/d4/>.
- 9 County Profiles: Wilkes and Surry Counties, and North Carolina. NC Rural Economic Development Center website: Rural Data Bank; http://www.ncruralcenter.org/index.php?option=com_wrapper&view=wrapper&Itemid=121.
- 10 US Department of Housing and Urban Development, Contact HUD, North Carolina. http://portal.hud.gov/hudportal/HUD?src=/states/north_carolina/offices.
- 11 US Department of Housing and Urban Development, PHA Contact Information, North Carolina. http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/pha/contacts/nc_zip.
- 12 HUD Homes. US Department of Housing and Urban Development, Public and Indian Housing website: <http://www.hudhomestore.com/Home/Index.aspx>.
- 13 Low-rent Apartment Search. US Department of Housing and Urban Development, Public and Indian Housing website: <http://www.hud.gov/apps/section8/>.
- 14 Multi-family Housing Rentals. US Department of Agriculture, Rural Development Multi-Family Housing Rentals website; http://rdmfhrentals.sc.egov.usda.gov/RDMFHRentals/select_state.jsp.
- 15 NC Housing Coalition, County Resource Guides; http://www.nchousing.org/need_help/housing_location/county-resource-guides/atct_topic_view?b_start:int=20&-C=.
- 16 NC Coalition to End Homelessness, NC Point-In-Time County Data, Data by Year, NC Balance of State by County, 2015; <http://www.ncceh.org/PITdata/>.
- 17 NC Division of Child Development, Parents, Overview; http://ncchildcare.dhhs.state.nc.us/parents/pr_sn2_ov_lr.asp.
- 18 Wilkes Community College. <http://www.wilkescc.edu/default.aspx>.
- 19 NC Public Schools, Office of Charter Schools. Schools: Map and list of charter schools by county. <http://www.ncpublicschools.org/charterschools/schools/by-county>.
- 20 NC Division of Non-Public Education, Private Schools, North Carolina Directory of Non-Public Schools 2014-2015; <http://www.ncdnpe.org/documents/14-15-CS-Directory.pdf>.
- 21 SAFE, Inc. of Wilkes County. <http://www.safewilkes.org/home>.
- 22 State Children's Health Insurance Program; http://en.wikipedia.org/wiki/State_Children's_Health_Insurance_Program.
- 23 What is Health Choice for Children? NC Department of Health and Human Services website; <http://www.ncdhhs.gov/dma/healthchoice/>.

-
- 24 Health Check and EPSDT. NC Department of Health and Human Services, Division of Medical Assistance website; <http://www.dhhs.state.nc.us/dma/medicaid/healthcheck.htm>.
 - 25 Wilkes Regional Medical Center; <http://wilkesregional.com/home.aspx>.
 - 26 Wilkes County Health Department; <http://wilkeshealth.com/>.
 - 27 Wilkes Public Health Dental Clinic. <http://www.wilkespublicdentalclinic.com/>.
 - 28 US Health Resources and Services Administration (HRSA) Data Warehouse: Find a Health Center (Search by State or County). <http://findahealthcenter.hrsa.gov/>.
 - 29 Wilkes County Emergency Medical Services. <http://www.wilkesems.com/>.
 - 30 Wilkes County Schools, Student Services, School Nurses.
<http://www.wilkescountyschools.org/resources/student-services/student-services-staff>.
 - 31 NC Department of Health and Human Services, DPH, Women's and Children's Health, Facts & Figures, Data Reports & Publications. Annual School Health Services Reports, End-of-Year-Reports. <http://www.ncdhhs.gov/dph/wch/stats/>.
 - 32 Nursing Homes. NC Department of Health and Human Services, Division of Aging and Adult Services website; <http://www.ncdhhs.gov/aging/nhome.htm>.
 - 33 Adult Care Homes. NC Department of Health and Human Services, Division of Aging and Adult Services website; <http://www.ncdhhs.gov/aging/agh.htm>.
 - 34 NC Division of Health Service Regulation, Adult Care Licensure Section, Star Rating Program; <http://www.ncdhhs.gov/dhsr/acls/star/index.html>.
 - 35 Adult Day Services/Adult Day Health Services. NC Department of Health and Human Services, Division of Aging and Adult Services website;
<http://www.ncdhhs.gov/assistance/adult-services/adult-day-services>.
 - 36 The Ruby Pardue Blackburn Adult Day Health Care Center: A Day Program for Adults.
<http://www.wilkesadultdaycare.org/>.
 - 37 Local Contacts: LME/MCO Directory. NC Department of Health and Human Services, Division of Mental Health, Developmental Disabilities and Substance Abuse Services website; <http://www.ncdhhs.gov/mhddsas/lmeonbluebyname.htm>.
 - 38 Smoky Mountain LME/MCO; <http://www.smokymountaincenter.com/>
 - 39 Smoky Mountain LME/MCO 2014-2015 Provider Network Directory.
http://www.smokymountaincenter.com/documents/Smoky_2014-2015_Provider_Directory_2015-11.pdf.
 - 40 Smoking during pregnancy. March of Dimes, Pregnancy, Alcohol and Drugs;
http://www.marchofdimes.com/pregnancy/alcohol_smoking.html.
 - 41 Low birthweight. March of Dimes, Pregnancy, Your Premature Baby;
http://www.marchofdimes.com/baby/premature_lowbirthweight.html.
 - 42 Cancer. National Institutes of Health, National Cancer Institute, Dictionary of Cancer Terms website; <http://www.cancer.gov/dictionary?Cdrid=45333>.
 - 43 Inpatient Hospital Utilization and Charges by Principal Diagnosis, and County of Residence, North Carolina, 2013, NC State Center for Health Statistics website, County Health Data Book (2015); <http://www.schs.state.nc.us/schs/data/databook/>.
 - 44 Heart disease. National Institutes of Health, US National Library of Medicine, MedLine Plus Medical Dictionary website; <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.
 - 45 West Virginia Health Statistics Center. Chronic lower respiratory disease, a national burden (2006). West Virginia Department of Health and Human Resources, Bureau of Public Health website; <http://www.wvdhhr.org/bph/hsc/pubs/other/clrd/national.htm>.
 - 46 Cerebrovascular disease. National Institutes of Health, US National Library of Medicine, MedLine Plus Medical Dictionary website;
<http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.

-
- 47 Pneumonia and Influenza. National Institutes of Health, US National Library of Medicine, MedLine Plus Medical Dictionary website; <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.
- 48 Diabetes. National Institutes of Health, US National Library of Medicine, MedLine Plus Medical Dictionary website; <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.
- 49 Alzheimer's disease fact sheet (June 27, 2012). National Institutes of Health, National Institute on Aging, National Institutes of Health, Alzheimer's Disease Education and Referral Center website: <http://www.nia.nih.gov/alzheimers/publication/alzheimers-disease-fact-sheet>.
- 50 Sepsis. National Institutes of Health, US National Library of Medicine, MedLine Plus Medical Dictionary website; <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.
- 51 Definition of nephritis, definition of nephrosis. MedicineNet.com, MedTerms Dictionary website; <http://www.medterms.com/script/main/art.asp?articlekey=4534>.
- 52 Nephrotic syndrome. PubMed Health, A.D.A.M. Medical Encyclopedia website; <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001520/>. Accessed March 30, 2014.
- 53 Liver disease (hepatic disease). MedicineNet.com, Diseases and Conditions website; http://www.medicinenet.com/liver_disease/article.htm.
- 54 HIV/AIDS: the basics. National Institutes of Health, AIDS Info website; http://aidsinfo.nih.gov/contentfiles/HIVAIDS_theBasics.pdf.
- 55 AIDS Mortality Rate. NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2014), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.
- 56 Chlamydia. Centers for Disease Control and Prevention, CDC A-Z Index website; <http://www.cdc.gov/std/chlamydia/default.htm>.
- 57 Gonorrhea. Centers for Disease Control and Prevention, CDC A-Z Index website; <http://www.cdc.gov/std/Gonorrhea/>.
- 58 Wilkes County Health Department Annual Reports, 2010 through 2014.
- 59 Asthma: basic information. Centers for Disease Control and Prevention website; <http://www.cdc.gov/asthma/faqs.htm>.
- 60 Your guide to diabetes: Type 1 and Type 2 (2012). National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, National Diabetes Information Clearinghouse; http://www.diabetes.niddk.nih.gov/dm/pubs/type1and2/YourGuide2Diabetes_508.pdf.
- 61 NC nutrition and physical activity surveillance system (NC-NPASS). NC Department of Health and Human Services, Nutrition Services Branch website: <http://www.nutritionnc.com/nutrsurv.htm>.
- 62 NC County Level Oral Health Assessments Data by Year, 2008-2009. NC DHHS, Division of Oral Health, References and Statistics, Measuring Oral Health website: <http://www.ncdhhs.gov/dph/oralhealth/stats/MeasuringOralHealth.htm>.
- 63 Gray, Allison. Reforming mental health reform: the history of mental health reform in North Carolina. North Carolina Insight Special Report, March 2009; <http://www.nccppr.org/drupal/content/insightissue/88/the-history-of-mental-health-reform>.
- 64 Mental Health Reform in North Carolina. Wikipedia: http://en.wikipedia.org/wiki/Mental_health_reform_in_North_Carolina.
- 65 "State Managed Care Organizations to Consolidate". North Carolina Health News, December 12, 2013; <http://www.northcarolinahealthnews.org/2013/12/20/state-managed-care-organizations-to-consolidate/>.
- 66 Psychiatric hospital admission criteria. NC Division of State Operated Healthcare Facilities website: <http://www.ncdhhs.gov/dsohf/professionals/admissioncriteria-psychospital.htm>.

-
- 67 Definition of developmental disability. NC Department of Health and Human Services, Division of Mental Health, Developmental Disabilities and Substance Abuse Services, Developmental Disabilities website: <http://www.ncdhhs.gov/mhddsas/services/developmentaldisabilities/divdefinitionofDD.htm>.
 - 68 Air Quality Index Reports, 2013. US EPA Air Data website: http://www.epa.gov/airdata/ad_rep_aqi.html.
 - 69 Toxics release inventory (TRI) fact sheet. US Environmental Protection Agency, Toxics Release Inventory (TRI) Program website: http://www.epa.gov/tri/triprogram/TRI_Factsheet_Jan_2012.pdf.
 - 70 TRI Release Reports: Geography State Report, 2014. US EPA TRI Explorer, Release Reports, Chemical Reports website: http://iaspub.epa.gov/triexplorer/tri_release.chemical.
 - 71 US EPA TRI Explorer, Releases: Trends Report, North Carolina, Davidson County. http://iaspub.epa.gov/triexplorer/tri_release.trends.
 - 72 SDWIS. US Environmental Protection Agency Envirofacts website: <http://www.epa.gov/enviro/facts/sdwis/search.html>.
 - 73 National Pollution Discharge Elimination System: <http://cfpub.epa.gov/npdes/>.
 - 74 Wilkes County Landfill and Solid Waste Department. <http://wilkescounty.net/landfill-services-and-prices/>.
 - 75 Town of North Wilkesboro, Recycling. <http://www.north-wilkesboro.com/residential/recycling/>.
 - 76 Town of North Wilkesboro, Leaf Collection. <http://www.north-wilkesboro.com/residential/government/?id=leaf>.
 - 77 Town of Wilkesboro, Sanitation Department. <http://www.wilkesboronorthcarolina.com/sanitation-overview>.
 - 78 Centers for Diseases Control and Prevention, Division of Nutrition, Physical Activity and Obesity; Adult Obesity Facts. <http://www.cdc.gov/obesity/data/adult.html>.