



# *2008 Graham County Community Health Assessment*



Submitted to the North Carolina  
Department of Health and Human Services,  
Division of Public Health,  
Office of Healthy Carolinians  
By the Graham County Department of Public Health  
And Healthy Carolinians of Graham County

## **Introduction**

Every four years the State of North Carolina Department of Health and Human Services Branch requires each county public health department to complete a comprehensive community health assessment (CHA). This cycle is administered by the Healthy Carolinians/Education Branch/CDI Section. The Graham County Department of Public Health conducted the 2008 community health assessment in collaboration with the Graham County Healthy Carolinians. The community health assessment is a diagnosis system to determine the greatest indicators pertaining to the health of the community and what mechanisms and resources are available to improve on the identified health disparities. The assessment also serves as a guide for the needs of innovative new programs that will enhance the health of the population in Graham County.

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## **Community Health Team**

The Graham County Department of Public Health initiated the process of the community health assessment in September of 2007. The first step in the process was to form an organized assessment team that would represent all aspects of the population including work force, businesses, schools, government, nationalities, faith base, and civic groups. Healthy Carolinians of Graham County (HCGC) received certification on September 7, 2007 and was awarded a certificate on October 12. The community health assessment team was comprised of staff from the Graham County Department of Public Health and committee members from the Healthy Carolinians of Graham County (See Appendix A). The public health department contracted with an individual to administer surveys and input data into Epi Info for analysis.

The Health Director and Health Promotions Coordinator for the public health department presented the requirements and oriented the Graham County Board of Health and the Graham County Manager on the health assessment. This included explaining to the Board and manager the function of the health assessment, how the community will be involved, how the results will benefit the health of the county and the requirements of the health department and Healthy Carolinians. The Board of Health approved the design of the process and surveys.

The Assessment Team met every two months, and at times more frequently, to establish a time line for the assessment (See Appendix B) and to develop the goals and objectives for the process. The Team also worked together to make determinations and compile lists of needed resources in the county. Listening sessions were conducted to gather information as to what the population

thought to be the most important issues and concerns. Based on findings from the listening sessions and key leadership interviews the team developed a survey tool for data collection.

Listening session and survey trends were reviewed by the Health Director and Healthy Carolinians Coordinator. The data was then analyzed and reported in the following document. Listening session groups were chosen to try to represent all income brackets, education levels, and races/ethnic groups. A Snowbird Community listening group was planned, but not completed and no Hispanic listening session was performed. Native Americans were present in other listening sessions, but racial bias may be a factor in the data because no Hispanics participated in those. Survey data did not need to be weighted because the demographics of the surveys so closely matched the demographics of the county. The bias in the survey data is the use of convenience sampling instead of random sampling. Data entry was performed by more than one person, and answers were entered differently by each. The surveys were not fully completed by all individuals, resulting in missing data on various questions.

## Collecting Data

This report was created using both primary and secondary data collection. Qualitative data was gathered using listening sessions and key leadership interviews. The listening sessions were conducted using the same set of questions for each group (See Appendix C). The facilitation and presentation of the questions changed as the team realized problems and possible ways to improve on getting better and more qualitative responses from the groups. Listening sessions were conducted on ten different groups in the community.

### Listening Session Groups

1. Community Health Assessment Team
  - this included the Healthy Carolinians Committee members
2. Graham Revitalization Economic Action Team-
  - this was at their annual meeting
3. Graham County Government Department Head Meeting
4. Graham County Board of Health
5. Graham County Department of Public Health Staff Meeting
6. Graham County Elementary, Middle and High School Faculty
  - this was based on a volunteer group
7. High School Honor Students
  - this group was chosen by faculty at the school
8. Stanley Furniture Employees
  - group was chosen by nurse at the facility
9. Beta Sigma Phi civic group
10. Appalachian Regional Commission (Mental Health) Staff

The first session was completed by handing the assessment team the questions and asking for a response. The facilitators for this session were the Healthy Carolinians Coordinator and Director. The session allowed for the team to see how the questions will be presented and make comments or recommendations for change to the questions and presentation style. The next session was with the Graham Revitalization Economic Action Team (GREAT). The mission for this group is: A partnership of citizens that meets the health, social economic, educational and

recreation needs of Graham County residents, while preserving our cultural heritage, natural resources, and instilling pride in our community and place. During their annual membership meeting the Director and Coordinator for Graham Healthy Carolinians presented the process of a community health assessment and how the report can help all agencies and individuals within the county. They then distributed a list of the questions and requested each member and guest to respond by writing their thoughts and comments to the questions on the questionnaire. Although, this group provided excellent insight to the questions, the team found that verbalization offered a better understanding and a more qualitative response from the group.

The next session was with a local civic group during one of their regular scheduled meetings. During this session one facilitator presented the information by reading the questions and then writing the responses on post-it pads on the wall. After this meeting the team changed the presentation style to utilize two facilitators and a power point presentation with the questions on each slide. With the power point presentation the questions did not have possible probes below them, but encouraged individual thought processes in the answers. As the facilitator presented each question and encouraged responses, the other team member typed answers and specific quotes into the power point for everyone to view. This type of facilitation for the listening sessions seemed to be the best for ensuring responses were accurately recorded and was used for the remaining sessions.

The second type of qualitative data collection was with key leadership interviews. These interviews used the same questions as the listening sessions. The key leadership interviews were conducted on seven individuals.

### Key Leadership Interviews

1. Graham County Transportation Director
2. Graham County Commissioner
3. Graham County Manager
4. Graham County Schools Superintendent
5. Graham County Agricultural Extension Director
6. Emergency Management Coordinator
7. Tri-County Community College Teacher

A survey using a convenience sampling method provided the quantitative primary data for the report. The assessment team and a local consultant distributed the surveys to several locations within the community. A list of where the surveys were given is provided in Appendix D. Over 1,500 surveys were given out with a return of 538 to provide for data analysis. The local consultant did the input for the survey data into Epi Info (See Appendix M for survey).

Convenience Surveys were distributed to the following locations:

1. Day Care Employees and Parents
2. Annual Graham County Rescue Squad Ramp Festival and Kids Fest
3. Graham County Meals on Wheels
4. Cedar Cliff Baptist Church
5. Snowbird Senior Center
6. Graham County Senior Center
7. Public Health Clients (including Hispanic with interpreters)
8. Appalachian Counseling Clients and Staff
9. Graham County Employees
10. Tri-County Community College Students and Faculty
11. Stecoah Valley Center and Community
12. Snowbird Health Services
13. Tallulah Valley Health Center Employees and Clients
14. Head Start Program
15. Individual Houses in Snowbird Community
16. Mt. Nebo Church
17. Stanley Furniture Employees
18. Snowbird Logging Employees
19. Dr. Patrick Kelley's Dental Office Employees
20. Britthaven of Graham Nursing Home for Staff, Patients, and Families

## **Graham County History**

Graham County was formed from the eastern part of Cherokee County in 1872 to make enforcement of the law and access to the courts more uniform and accessible for the families who settled in the mountains of WNC. It was named for William A. Graham, a senator who helped with the passage of the act to form the county.

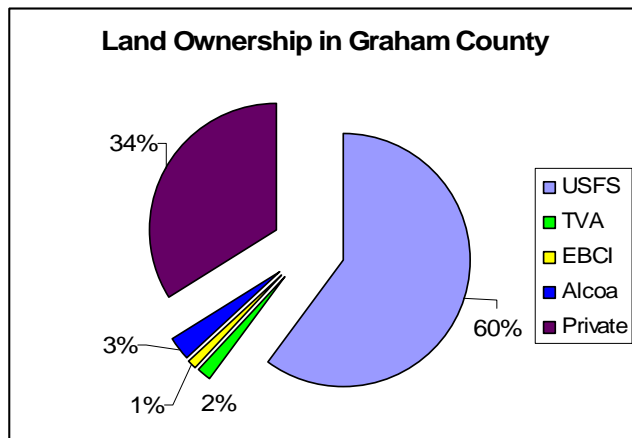
Early history finds only three white families living in Graham County - the Crisps, the Hydes, and the Rowans. Long before European settlers were given responsibility of governing themselves, the area that would become Graham County was home to a large group of Cherokee Indians. Part of the original Trail of Tears still exists in Graham County on a six-mile section of road called Tatham Gap, which connects Graham and Cherokee counties. Graham County's most famous Native American, Chief Junaluska, saved the life of President (then General) Andrew Jackson at Horseshoe Bend. He was awarded 337 acres of land, made a citizen of North Carolina, and given \$100 in recognition of his bravery.

## **Graham County Geography**

Graham County is known for its tranquility, isolation and rugged mountain lands. Nestled in the Great Smoky Mountains, Graham County offers the beauty and comfort that draw tourist and new residents to the area. With elevations of the county ranging from 1,177 at the lowest point to 5,560 feet at the highest point, the topography and slopes can change rapidly in a short distance (Graham County, 2007). Over 80% of the land has a slope of 9% or greater. Graham County is located in the western part of North Carolina bordering Tennessee, and is surrounded by mountains with the Unicoi Mountains to the West; the Snowbird Mountains to the South; and the North and East crossed by the Cheoah Range and the Yellow Creek Mountains. The Cheoah

River flows into the Little Tennessee River in the western section of the county (Welcome to Graham County, 2008). Appendix E shows a map of the county.

The rugged mountains and limited privately-owned land restrict the opportunity for residential building and developmental business growth. Sixty-three percent of the land in the county is nontaxable, presenting a small tax base and revenue for county government operations. The graph below shows the total land ownership percentages for the county.



The County has a total of 186,965 acres of land. The United States Forest Service owns 111,618; Tennessee Valley Authority owns 3,522; Eastern Band of The Cherokee Indians owns 2,249; Alcoa Aluminum Company owns 5,995; and Private landholders own 63,581.

Graph 1 Data Provided by the Graham County Mapping Department

The net assessed personal and real estate property tax in Graham County for 2005 to 2008 increased by a value of 81,977,288. Table 1 illustrates the changes for each year.

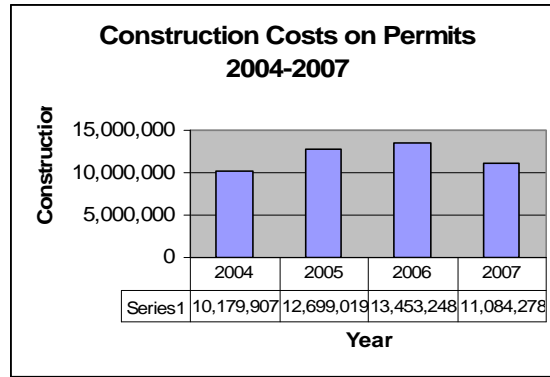
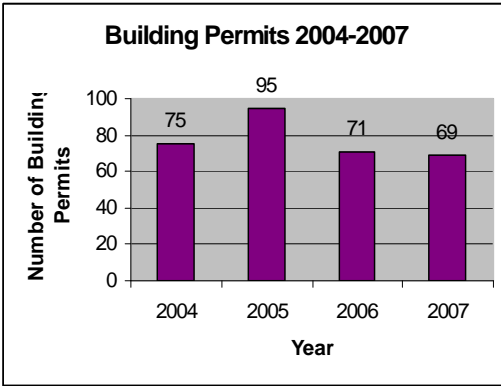
Year	Net Assessed Personal and Real Estate Property
2005	683,601,936
2006	716,660,051
2007	746,858,599
2008	765,579,224

Table 1

Data Provided by the Graham County Tax Department

The small tax base has mixed opinions and views by residents and tourists as to its negative and positive effects to residential and business growth. A protected wilderness encompassing most

of the county allows for increased resources for tourisms and outdoor activities. Others see this limitation as a negative, prohibiting increase in growth and development for the county. The graph below demonstrates the building permits and value of development from 2004 to 2007.



Graph 2

Data from US Census

Graph 2a

## Graham County Demographics

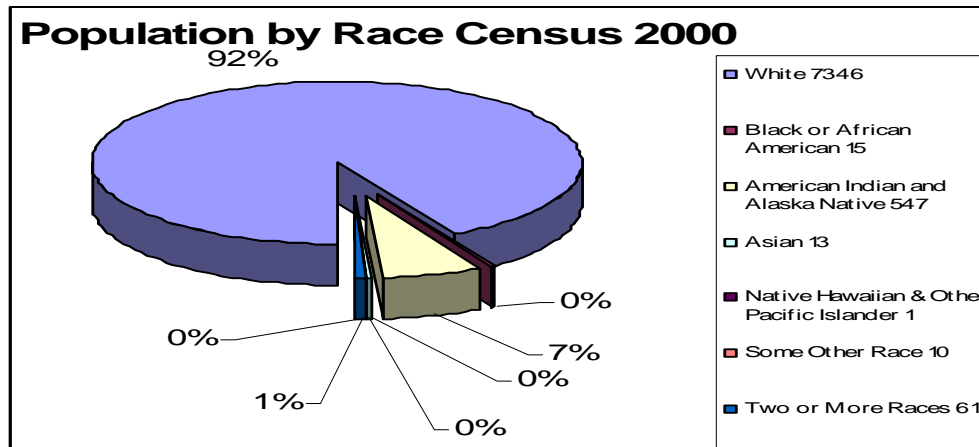
Graham County is a small rural county with a population of 7,993, according to the 2000 U.S. Census. This increase demonstrates an eleven percent population growth from 1990 to 2000. The growth rate is expected to be even smaller as indicated by the 2012 estimated population rates.

Table 2

Year	Population Estimates/ Census	Median Age of Population	Annual Growth Rate
1990	7,196	N/A	
2000	7,993	42	
2006	8,106	43	
2007	8,275	44	0.5%
2012	8,466	45	0.5%

Information from the US Census and North Carolina Economic Development Intelligence Systems.

The majority of the population is white (91.9%) and American Indian (6.8%). Fifty-one percent of the population is female and forty-nine percent is male. The median age is 41.5 with most of the population ranging from 25-54 (U.S. Census Bureau, 2000).



Graph 3

2000 U.S. Census

### Male to Female Ratio by Age

Age	2004		2005		2006		2007	
	Male	Female	Male	Female	Male	Female	Male	Female
0-4	245	221	237	213	245	219	246	226
5-9	255	240	262	243	258	239	266	238
10-14	248	255	247	248	249	255	248	251
15-19	248	215	236	224	232	227	230	239
20-34	621	616	606	596	600	593	597	590
35-54	1101	1116	1095	1112	1098	1107	1112	1096
55-64	562	582	577	595	584	606	580	618
65-84	584	752	591	757	603	766	614	779
84+	54	130	58	133	66	141	68	146
Total	3918	4127	3909	4121	3935	4153	3961	4183
<b>Total Year</b>	<b>8045</b>		<b>8030</b>		<b>8088</b>		<b>8144</b>	
Percent	49	51	49	51	49	51	49	51

Table 3

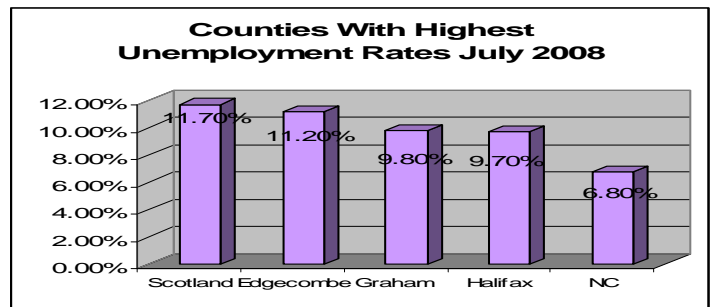
<http://data.osbm.state.nc.us>

Graham County is seeing a trend of an increase in the Hispanic or Latino (of any race) population. The population growth increased from 29 individuals in the 1990 U.S. Census to 60 in the 2000 Census and was estimated to be 72 or 0.9% in 2006 (US Census Bureau, Quick Facts). Although these numbers are small, the growing Latino population impacts local health

department services due to need for translation and increases in un-reimbursed costs when Latinos are undocumented.

## Socioeconomics

Graham County is designated by the North Carolina Department of Commerce as Tier 1 (*Most Economically Distressed*) and At Risk (*At-Risk counties are those at risk of becoming economically distressed. They rank between the worst 10 percent and 25 percent of the nation's counties*) by the Appalachian Regional Commission.



NC Employment Security Commission

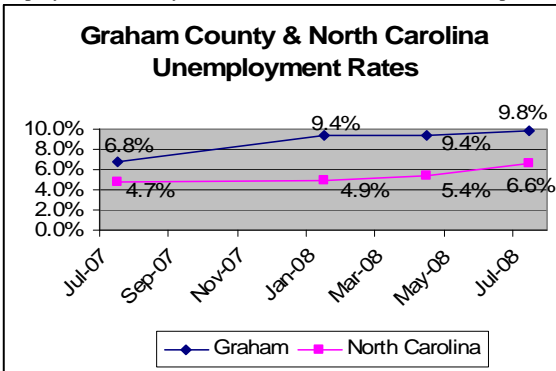
Graph 4

Reports for July 2008 showed Graham County ranked third in North Carolina for the highest unemployment rate. High unemployment rankings have plagued Graham County for years. This was the second largest concern of survey respondents with 74.7% seeing this as a major problem and 16.3% as somewhat of a problem. In the past twelve months the trend has held true with a continuous increase. The July 2007 rate was reported at 6.8% and showed the year-to-date unemployment insurance benefits paid in Graham County to be \$1,912,033. As of September 2008, the total labor force for the county was 5,319 with 520 unemployed and a 9.8% unemployment rate (The Employment Security Commission of North Carolina, 2008).

High unemployment rates lead to health problems due to higher rates of uninsured in the un- and under-employed. Those who are un/underinsured are less likely to seek medical care, especially

preventive care. The chronic stress of not being able to care for loved ones can also lead to serious health conditions, such as diabetes, heart disease, and stroke. Those who are underemployed often feel as though they cannot miss work when they are sick, or cannot leave work for doctor visits. This leads to worsening of illness and spread of illness.

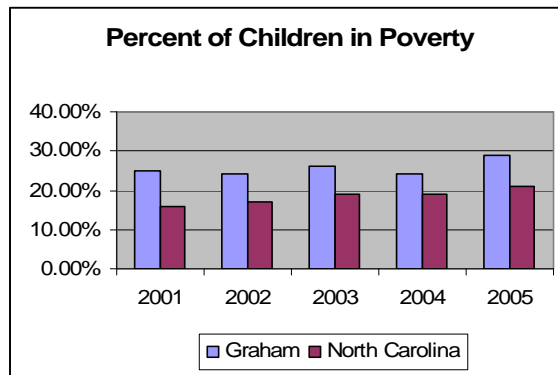
Employment Security Commission Graph 5



The top three non-seasonal employers for Graham County are Stanley Furniture with 324 employees, Graham County Schools with 224 full time employees, 10 hourly and 60 substitute positions, and Graham County Government with 117

employees. Fontana Village Resort ranks in the top with their seasonal employment for July at 153, but with a full time employment dropping to 50.

The median household income for the county ranked 96<sup>th</sup> out of 100 counties in North Carolina at \$28,695 in 2005 (NC Department of Commerce, 2007). In 2000, the per capita personal income was at \$19,587, ranking 91<sup>st</sup> in North Carolina. In 2005, the income was \$23,763 with a ranking of 79<sup>th</sup>. In 2005, North Carolina reflected that 14.9 percent of the population was in poverty, while Graham County had a 20.2 percent poverty level (NC Department of Commerce, 2007). In 2003, the county had 25.5% of its children living in poverty as compared to the 19.1% in North Carolina. In 2005, Graham County Schools reported 52.3% children in the schools were enrolled in Free/Reduced Price School Meals. This compared to North Carolina with 47.7% (North Carolina Action for Children, 2007).



The Annie E. Casey Foundation

Graph 6

Of those surveyed, 69.2% felt that food assistance was either a major problem or somewhat of a problem. Also, assistance with paying utilities was a major concern of 44.9% of respondents and somewhat of a problem for 29.3%. These are both issues that one would expect to see in a poverty-stricken area, such as Graham County. Graham County Department of Social Services, the Church Mouse thrift store, Graham Help and Manna Food Bank are all working to combat these issues.

Another concern expressed in the community was housing. Both Community Health Opinion Surveys and listening sessions identified availability and use of land as concerns. Affordable houses and land are not available for those in the median and lower household income ranges. Rental properties for those not receiving HUD are also difficult to find. Seasonal residents have bought properties at much higher prices than most local residents can afford. In turn, appraised values of neighboring properties to those seasonal homes have increased, creating hardships on locals for establishing home ownership. The table below shows a median owner-occupied home value of \$97,893. This lower value is likely due to the high number of mobile homes in the area.

<b>Housing</b>	<b>Total</b>
2007 Total Housing	5,483
2007 Median Value of Owner Occupied Housing	\$97,893
2007 Owner Occupied Housing	3,011
2007 Renter Occupied Housing	605
2007 Total Households	3,616

Table 4

Economic Development Intelligence Systems

## **Education**

### **Day Cares and Preschools**

Ten licensed Child Care Facilities exist within the county, offering 382 slots (North Carolina EDIS). In 2001, 160 Graham County children 0-12 were enrolled in regulated child care and in 2005, the enrollment increased to 209 (The Annie E. Casey Foundation). At this point there is greater childcare capacity than is currently being used. These open slots are found in day care centers. All pre-schools and after-school programs have waiting lists. Forty-one percent of survey respondents feel that there is no problem with care for preschool children in Graham County. The following is a list of licensed Child Care Facilities:

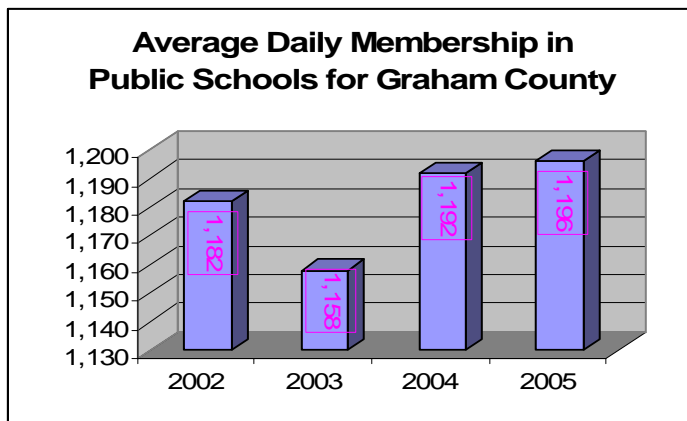
- A Kid's Castle
- A Kid's Place
- Amy's Ark Home (Home Day Care)
- Backyard Preschool
- Eagle Knob
- Four Square 1
- Four Square 3
- The Haven (Home Day Care)
- RHS Child Care
- Snowbird Child Care

### **Public and Private K-12 Schools**

Graham County has great confidence in its schools. Surveys show that 39% of respondents feel there is no problem with schooling for Kindergarten through high school. Listening sessions also show great belief in the schools of Graham County, that children are well taken care of and prepared for college entrance. One teacher expressed his appreciation for Graham County schools' investment in preparing students for both college and vocational trades.

Mt. Nebo Christian Academy is the only private school in Graham County. The school opened in 2005 and serves grades K-12 and has an enrollment of 59 students. In 2009, the school will present the first graduate. The school is operated by Mt. Nebo Church; pastor Gary Crisp; located at 343 Dick Branch Road, Robbinsville, North Carolina.

Graham County Schools rank 113 out of 115 for average daily membership. This is one of the smallest schools in the state. This is logical because Graham is also one of the smallest counties



in the state. The average daily membership for the schools for 2005 was 1,196 (The Annie E. Casey Foundation).

Graph 7

The Annie E. Casey Foundation

A 75.5% Cohort Graduation Rate in 2006 placed the Graham County Schools in 15<sup>th</sup> place and was higher than the North Carolina rate of 68.1% (The Annie E. Casey Foundation). Graham County ranked 115 (last) in local per pupil expenditures for 2005 at \$602, as compared to the state average of \$1,636 (The Annie E. Casey Foundation). It is striking that Graham spends a lot less per pupil than the state average, yet has higher graduation rates. This is an asset. The Average SAT Scores for 2005 were 1002, a ranking of 48 in the state and just below the state average of 1010 (The Annie E. Casey Foundation). The drop-out rate for any reason was 24 in 2004-2005 and increased to 30 in 2006-2007 in the school. Twenty-four of the 30 that dropped out in 2006-2007 were due to attendance issues (Beyond 20/20, 2007). The school district has

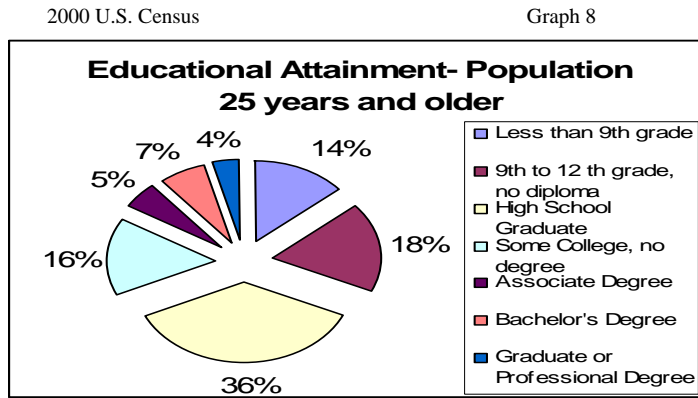
7.8% single-parent households, which is lower than the 13.1% for North Carolina (School Matters, 2006). Classroom enrollment in 2006, including Pre-K, was 1,266, and 49.2% of the enrolled were classified as economically disadvantaged. Ethnicity of the students was: White 87.4%; Black 1.3%; Hispanic 0.6%; and American Indian/Alaskan Native 10.7% (School Matters, 2006). The school nurse to student ratio was 1.5 to 1,266 including Pre-K. This ratio is almost at recommended level of one nurse to 750 students.

### **Colleges**

Tri-County Community College is an accredited college operating under the North Carolina Community College System. The College is dedicated to serving residents in Cherokee, Clay and Graham County. A satellite campus is offered in Graham County, providing numerous resources to the community for residents to obtain a two-year degree, certificate or diploma in a program of study. Programs of Study include twenty-nine different options. Program examples are nursing, accounting, welding, electrical, and computer information. Distance Learning programs are also offered to assist individuals who are unable to travel to other Tri-County campuses for classes or attend day classes due to work schedule conflicts. Individuals may also receive continuing education classes, GED and high speed video-conference at the site. To learn more about the college visit their website at <http://www.tricountycc.edu/index.php>.

Tri-County Community College has provided the opportunity for Graham County residents to expand their education beyond a high school diploma. Even with this additional resource the average education attainment levels in the 2000 U.S. Census were low for populations in the county on residents 25 or older. In 2006, education levels had increased to 73% for individuals

with at least a High School Diploma and had increased to 12.3 for adults with at least a Bachelor's Degree. The percent is still low compared to North Carolina with 82.2% High School and 25.5% with at least a Bachelor's Degree (School Matters, 2006).



## Environment

The natural environment of Graham County offers an abundance of activities for the naturalist and for recreationists. The majority (60%) of the land in the county is controlled by the United States Forest Service (USFS) and is located within the Nantahala National Forest. This allows residents and tourists the opportunity to enjoy some of the most pristine forestland in the south.

The Town of Robbinsville (County Seat) provides the county with sewer and public water services. Sewer services are limited to a narrow margin around the perimeters of the town; in 2007 Graham County had 5,483 total housing units (EDIS). The Town of Robbinsville sewer services around 606 customers, both commercial and residential. The remainder of the housing units and businesses, with exception of Fontana Village Resort and Tapoco Lodge Resort, are serviced by individual subsurface wastewater systems. Fontana Village Resort and Tapoco Lodge Resort each have a sewer plant. The dangers of this are that nearly 90% of sewage isn't

treated, but disposed of underground, which leads to higher probability of endangering drinking water supply. Water quality, however, was not viewed as a major problem by survey respondents.

For the past two years, Graham County residents have been experiencing problems with their water supplies due to the drought conditions in Western North Carolina. Several residents are still continuing to utilize natural spring water as their source for drinking water. These springs are experiencing low water levels and water quality issues due to the drought. Private wells and even the Town of Robbinsville water systems are not immune to drought issues. The Town has had to place restrictions on water usage during the past two summers, and as of September 2008 had a moratorium on new connections to the system. The Environmental Health office is seeing an increase of approximately 50% in new well permit applications from private owners due to the drought. Much of this is due to springs and wells going dry or returning non potable water testing results.

In an effort to enhance the protection of water supplies in the county, the Graham County Department of Public Health contracted with the Wastewater Discharge Elimination Program (WaDE) in 2003 to survey the Tallulah/Sweetwater Water Shed area to identify failing or straight piping wastewater systems. The WaDE survey teams have been working the area since that time and have surveyed a total of 861 residents, finding 111 straight pipe sewer lines and failing systems. The Environmental Health staff of the county has followed the findings, and to date a total of 88 have been repaired with 23 pending. In 2008, the Clean Water Management Trust Fund (CWMTF) awarded Graham County a \$560,000 grant to continue with the survey

work. The Grant provides funding assistance to homeowners to repair existing wastewater systems in an effort to eliminate straight piping in the water shed area of Graham County and to expand this program to other areas of the county.

Graham County, in 2002, screened 121, or 62.1% of children ages 1 and 2 for lead. Zero cases of lead poisoning were confirmed in Graham County. State average is 36.2% of children screened (NC Childhood Lead Screening, 2002).

Air quality in Graham County was within normal limits on ozone violations for 2005-2007. In 2008, the US Environmental Protection Agency lowered the acceptable threshold for ozone standard from 0.085ppm to 0.076ppm. In 2008, Graham County's average 8-hour ozone readings were 0.078ppm (NC Dept of Environment and Natural Resources, Division of Air Quality, 2008). The primary manufacturing plant contributing to this air pollution in Graham County is Stanley Furniture, according to scorecard.com, a website maintained by the US Environmental Defense Fund. This is disturbing news due to the fact that Stanley Furniture is the largest employer in Graham County. Toxins released from Stanley Furniture Plant include Toluene, N-Butyl Alcohol, Xylene, and Lead. Both toluene and lead have been recognized as being hazardous to human development. Lead is also recognized as a carcinogen and a cause of reproductive health problems. Other systems suspected to be affected by exposure to toluene, n-butyl alcohol, xylene, and lead include cardiovascular, blood, gastrointestinal, liver, immune, kidney, neurological, respiratory, skin/sensory, and endocrine. Although Graham County is located close to Tennessee Valley Authority's coal-fired plants, TVA is not recognized as a significant contributor to air pollution in Graham County (Scorecard, 2008).

A September, 2008 news release from the North Carolina Department of Health and Human Services announced that routine sampling of fish from lakes across the state has found high mercury levels in Walleye fish in Santeetlah and Fontana lakes. Mercury is naturally-occurring in the environment and is also released into the air and water through industrial pollution. The cause of the high mercury levels in Santeetlah and Fontana lakes has yet to be determined.

## **Resources**

### **Natural Beauty and Recreation**

The most pristine resource available in Graham County is the natural beauty and serenity of the mountains that encompasses it. Mountain culture is another one of the greatest resources.

Mountain culture flows through the people that make up the county, igniting a tight community of individuals who are willing to help others with any issue or circumstance.

Recreational activities are available in abundance for the naturalist. Graham County is home to three dams and four lakes: Calderwood, Cheoah, Fontana, and Santeetlah. Fontana Dam is the highest dam in the Eastern United States and the fourth highest in the United States. The classification of the dam brings several tourists to the area each year. The top of the dam is also a cross section of the Appalachian Trail. The Cheoah River, located at the base of Santeetlah Dam, offers one of the best whitewater trips in the southeastern United States. Varying flows on the Cheoah River mean Class I, II and II rapids may be enjoyed by the whole family on some days, and the Class IV/IV+ rapids require a high level of skill to negotiate on others. The river is

open to rafts, canoes, and kayaks 19 days within the year. Negotiations are under way to expand the river for recreation all year.

### **Opportunities for Physical Activity**

The natural beauty and abundance of forest lands offer miles of streams for fishing and several walking trails. The walking trails provide opportunity for most all physical fitness levels. They range from a 30 minute hike to the ruggedness of the Appalachian Trail. The trails include exposures to wooded areas, meandering of streams and lakes and the openness of a panoramic view from the top of a mountain (See Appendix H). For a list and classification of the trails visit the Graham County Website at <http://www.main.nc.us/graham/hiking/hiking/html>. Most of the trails are located on USFS land. Another opportunity for walking includes a one mile walking trail located at the Graham County Middle/High School campus and a walking trail at the Stecoah Valley Center. The school campus also provides a track for public use. The public health department offers a free exercise room to anyone 18 and older.

The Graham County Recreational Department and the Snowbird Recreational Department also provide organized sporting activities for children and adults. These include swimming, basketball, baseball, softball, tee ball, football, and tennis. Weaknesses within the recreation of the county include no organized public playgrounds or parks and limited indoor activities. This was the number one concern heard in listening sessions and a major concern among survey responses.

## **Health Services**

Without funds to provide for a full time rescue squad and fire department, individuals volunteer their time in these roles to protect the citizens of the county. Two established rescue squad departments exist; one in Robbinsville and the other in Stecoah. Fire Departments are Robbinsville and Stecoah. Robbinsville Fire Department has three stations located at Snowbird, Robbinsville, and Santeetlah.

Graham County lacks sufficient health care providers and a hospital. The county is designated a health care provider shortage area by the US Department of Health and Human Services.

Graham County has one health clinic, Tallulah Health Center, which is staffed by three physicians, one family nurse practitioner (FNP), two physician assistants and two physical therapists. This is a ratio of 1 to 2,705 individuals for licensed Medical Doctors compared to North Carolina at 1 to 1,056. The clinic is open Monday through Friday from 8:00 to 5:00 (closed one hour for lunch), with the exception of Wednesday when it closes at 12:00 pm.

The Graham County Department of Public Health has one FNP. The FNP works four days a week as the provider for the School Based Health Center located at the Robbinsville Middle/High School campus and one day a week providing services for the health department. The public health department offers mostly mandated services to the public. The clinical services include child health, adult health, family planning, Health Check, STD clinic, communicable disease, and breast and cervical cancer control program. Additional Public health services are child service coordination, maternal care coordination, newborn/postpartum home visits, breastfeeding support, Smart Start, car seat safety, community preparedness, health

promotions, environmental health, children's special health services, WIC program, immunizations, school health, and general public health needs (See Appendix I for brochure). Access to childhood immunization services was not viewed as a problem on surveys. The public health department also provides the service of the Robbinsville School Based Health Center. The center is a clinical service providing comprehensive medical treatment for middle and high school students and the faculty of the Graham County Schools.

The Snowbird Indians are served by a FNP located in the Snowbird Indian Health Clinic on the Snowbird Reservation. Additional services for the Cherokee Indian Nation include a hospital located on the reservation in Cherokee, North Carolina which is about an hour drive from most of the reservation in the county.

Graham County is one of few counties in the state that does not have a hospital located within the county. With the limited hours of medical care available in the county, individuals are forced to drive out of the county to surrounding hospitals or urgent care centers to receive after hour care. This limitation increases the number of ambulance trips each year for Graham County Emergency Services. In 2007, they received 1,531 calls for ambulance requests. Other perils associated with no available after hour care is the postponement of care to individuals that are not able to travel or elect to wait until the next work day to seek care at a local provider instead of using an ambulance or emergency room. Distances to hospitals are:

- Swain County Hospital 40 minutes
- Harris Regional Hospital 50 minutes
- Murphy Medical Center 45 minutes

Specialty care is not available in Graham County. There are no eye doctors, ENTs, cardiologists, orthopedists, pediatricians, OB/GYNS, endocrinologists, etc. Graham County Transit makes it possible for many residents to be able to see out of town specialists. Transportation is provided free of charge to those receiving Medicaid or Medicare services. Adolescents 12 and older may utilize the transportation service without adult accompaniment. Although this service is available, it is under-utilized by the residents. More than half of survey respondents say public transportation is a major problem or somewhat of a problem. The real problem seems to be lack of knowledge of the service in the community or an exhibition of “mountain pride” in not using public services.

A shortage of dental providers in the county also exists. Dr. Patrick Kelley, DDS is the only private dental provider in the county. Since October 2007, the Graham County Department of Public Health also offers a dental program for children and adults with North Carolina Medicaid, Health Choice, and insurance. This service is available based on Medicaid rates for individuals with no insurance. As with all public health programs no individual is denied services for lack of payment. The public health dental program is currently recruiting a dentist for their services. They are using the local dentist two days a month and a contracted dentist once per week. Services need to be increased to four days a week to meet the needs of the community. With the current supply of dentists, the ratio for dentist to the population of Graham County is 1.14 to 8,115 compared to 1 to 2,302 for North Carolina.

Mental health and substance abuse services are provided by Appalachian Counseling in Graham County. Substance abuse services were unavailable in Graham County until 2008, when

Appalachian hired a substance abuse counselor to work in Graham 2 days per week. The counselor's caseload continues to increase, suggesting the need for additional days of service in Graham County. Previously, clients must travel to Cherokee County to receive substance abuse counseling. There continue to be no inpatient rehabilitation or detoxification programs in the county. Clients must either be admitted to an area hospital, as listed above for detoxification, or travel to Haywood County for rehabilitation.

Pharmacy services were not seen as a problem on the survey. However, since the surveys were completed, one of the two county pharmacies has closed. The one pharmacy that is left is small, and takes much longer to process prescriptions now.

### **Opportunities for Service**

The faith community is comprised of 46 churches (See Appendix F). The denominations include Baptist, Methodist, Catholic, Lutheran, Episcopal and Church of God (Faith Guide, 2007). The community areas of Graham County include: Yellow Creek Community, Town of Santeetlah, Stecoah, Tuskegee, Snowbird, Tallulah, Town of Robbinsville, Fontana and the Snowbird Indian Reservation, which is home to the Snowbird group of the Eastern Band of the Cherokee Indians.

Other resources for activities and memberships include organized civic groups or organizations and sporting activities (For civic groups or organizations see Appendix G). Two senior citizens centers, one located in Robbinsville and the other in the Massey Branch/Snowbird Area, provide meals and activities to qualifying citizens during the week.

## **Arts**

The Stecoah Valley Center has expanded to be one of the richest resources in the county for cultural and artisan information and events. Within the center are a Cultural Arts Center and a culinary kitchen area. The Artisans Gallery showcases the work of the 50-plus members of the Stecoah Artisans Guild. The center offers weaving classes and culinary workshops to the public. The culinary workshops teach participants how to use the customs associated with the heritage of the Appalachian area to cook using natural herbs, seasonal organic vegetables, and meats. This includes grinding corn, canning foods, making herbal dressings and oils and many other educational and healthy ideas. The center also offers classes on jewelry making, quilting, weaving, gourd painting, and watercolor. The center sponsors *An Appalachian Evening* beginning on the last Saturday in June through the Labor Day weekend. The evenings start with a traditional Appalachian dinner and then a concert hosting groups presenting bluegrass, gospel and other cultural music performers. “The series has been selected by The Southeast Tourism Society as one of its “Top 20 Events” in the region” (Stecoah Valley Cultural Arts Center, 2008).

## **Tourism**

Tourism is a major contributor to the economy of Graham County. Graham County is currently known among motorcyclists for the beginning of an 11-mile highway section called “The Dragon’s Tail.” This 11-mile stretch is home to 318 curves. The Dragon’s Tail is the number one motorcycle and sports car road in America.

The Cherohala Skyway was completed in 1996. It is North Carolina's most expensive highway. The skyway winds up and over 5,400 foot mountains for 15 miles in North Carolina and

continues into Tellico Plains, Tennessee to complete the 60 mile scenic drive. The Skyway is becoming well known and is drawing in motorcycling and sports car enthusiasts.

Other tourist attractions include national and state forest land, some of the highest and most remote mountains east of the Mississippi River, Fontana Dam, fall foliage, and the Chief Junaluska Memorial.

## **Data Analysis**

### **Demographic Comparison**

Demographics of respondents to the Community Health Opinion Survey are comparable to those of the County Data Book. Therefore, survey results and County Data Book information may be compared and contrasted without being weighted.

### **Insurance**

One of the growing healthcare crises in North Carolina and in the United States is directly reflective on the number of individuals that do not have adequate health insurance. Data collected on Community Health Opinion Surveys (surveys) is reflective of this. Surveys show families with lower incomes in Graham County do not have adequate health insurance. The lack of health insurance is usually associated with low-incomes or employment with small companies that do not provide health insurance to their employees. This is a concern not only to the uninsured individuals and their families, but also to all of societal factors including employers, government, schools and medical providers. When an individual does not have adequate health insurance they are not as likely to seek preventive medical care as those with insurance. The

lack of insurance impacts work productivity, negatively affects the health of children and their ability to learn, and has unfavorable financial implications for healthcare providers (NC IOM, 2005). Graham County is facing the same issue for a large percent of their population. North Carolina has seen the greatest increase since 2000 in high uninsured rates, and Graham County has faced the hardship for years. Table 5 provides data on the number and percent of the population (0-64 years) without health insurance from 1999-2005, with a comparison to North Carolina averages. The rank is based on the 100 counties in North Carolina.

Table 5 Health Policy Analysis Unit; Cecil G. Sheps Center for Health Services Research

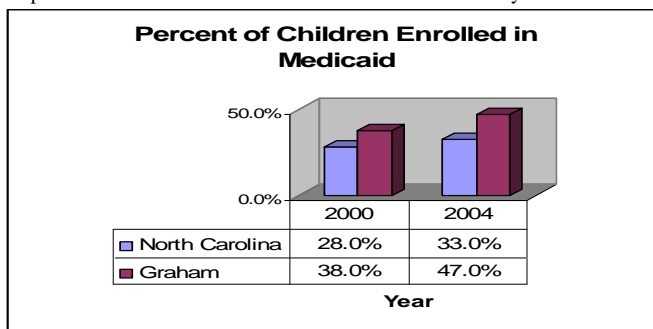
	Ages 0-17		Total Population 0-64		Rank
	Number	Percent	Number	Percent	
1999 Graham	209	13.08	1370	22.04	85
1999 NC	210,617	11.38	1,170,451	17.54	
2000 Graham	183	10.41	1,241	18.93	78
2000 NC	172,741	9.33	1,100,857	15.55	
2001 Graham	210	12.02	1,383	21.06	78
2001 NC	206,033	11.13	1,275,150	17.70	
2002 Graham	227	12.7	1,435	22	79
2002 NC	260,569	12.3	1,362,044	19	
2003 Graham	212	12.5	1,615	24.1	95
2005 Graham	205	11.8	1,375	20.8	80
2005 NC	241,763	11.3	1,314,238	17.2	

The Graham County Department of Public Health and the School Based Health Center are part of the Statewide Healthcare Safety Net Task Force dedicated to providing care to patients regardless of their ability to pay (NC IOM). A total of 1,057 or 60% of children in Graham County in 2004 used public health services. The usage increased to 1,117 or 63% in 2006. (The Annie E. Casey Foundation)

Of those who have private insurance, 58% of those surveyed said premiums were paid by employers or a combination of employer/employee. Graham County also has a high percentage of individuals enrolled in Medicaid and North Carolina Health Choice. In 2000, 11% of Graham County children were enrolled in NC Health Choice as compared to 4% for North Carolina. This number increased to 15% in 2004 as compared to North Carolina 6% (The Annie E. Casey Foundation). The graph below demonstrates the comparison for Graham County to North Carolina on children enrolled in Medicaid.

Graph 9

Annie E. Casey Foundation



In the 2004-2005 state fiscal year, Graham County had 27% of the total population enrolled in Medicaid. In addition to that, 20.8% are uninsured, and 15% are enrolled in N.C. Health Choice. In 2002, an

estimated 1,707 individuals aged and disabled in Graham County were enrolled in Medicare Hospital and/or Supplemental Medical Insurance (J. Murrey Atkins Library, 2005).

### Leading Causes of Death

The leading causes of death for Graham County are comparable to the North Carolina indicators.

The following table gives a list of the leading causes of death from 2001-2005 for Graham County and North Carolina and the rate per 100,000. Graham County rate per 100,000 for all causes had a similar comparison to the rate for North Carolina. The statistics show that 96% of deaths were white and 4% minority. This is not a surprise due to the fact that 91.9% of the

population is white. The female percent of deaths is 47% and the male is 53%. The population trend shows 51% female and a 49% male for the county.

Table 6 NC DHHS State Center for Health Statistics

Leading Causes	White Male	White Female	Minority Male	Minority Female	Total	Rate per 100,000	
						Graham	NC
Disease of Heart	75	68	2	0	145	252.2	226.8
Cerebrovascular Disease	10	18	1	0	29	50.1	64.7
Cancer	58	38	1	0	97	168.4	197.7
Diabetes Mellitus	5	6	2	3	16	26.9	27.6
Pneumonia/Influenza	1	9	0	0	10	17.0	23.3
Chronic Lower Resp. Disease	15	19	0	0	34	57.1	46.9
Chronic Liver Disease and Cirrhosis	3	1	1	0	5	10.2	8.8
Septicemia	4	6	0	1	11	18.9	14.5
Nephritis, Nephrotic Syndrome, & Nephrosis	2	3	1	0	6	10.5	17.9
Unintentional Motor Vehicle Injuries	7	1	1	0	9	24.9	19.3
All Other Unintentional Injuries	10	4	1	0	15	35.2	26.0
Suicide	1	2	1	0	4	11.5	11.6
Homicide	2	0	0	0	2	6.1	7.2
Alzheimer's Disease	2	9	0	1	12	20.5	27.1
Acquired Immune Deficiency Syndrome	0	0	0	0	0	0	5.2
All Causes	247	223	13	7	490	892.9	895.5

In 2006, the leading causes of death in Graham County stayed consistent with the causes from 2001-2005. The following is a list of the leading causes of death for Graham County and North Carolina for 2006.

### Leading Causes of Death 2006

#### Graham County

1. Heart Disease-30
2. Cancer-19
3. Cerebrovascular Disease-9
4. Alzheimer's Disease-4
5. Homicide-4
6. Nephritis, Nephrotic Syndrome, & Nephrosis-3
7. Diabetes Mellitus-3
8. Chronic Lower Respiratory Disease-3

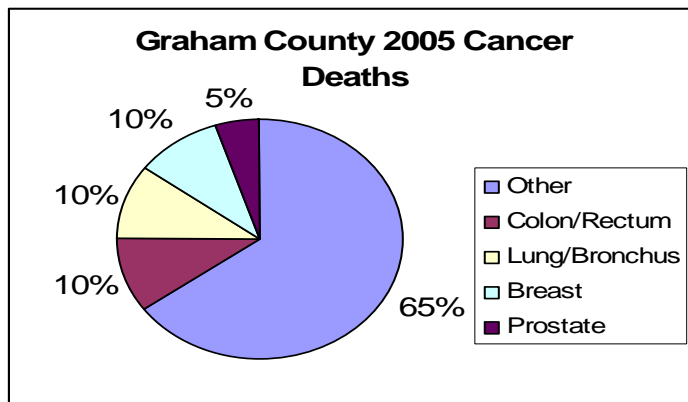
#### North Carolina

1. Cancer-17,267
2. Heart Disease-17,189
3. Cerebrovascular Disease-4,551
4. Chronic Lower Respiratory Disease-4,004
5. All other Unintentional Injuries-2,425
6. Alzheimer's Disease-2,258
7. Diabetes Mellitus-2,230
8. Pneumonia and Influenza-1,699

Cancer is the second leading cause of death in Graham County. Cancer has touched every life in the County at some point. The American Cancer Society Relay for Life event in Graham County is a great success each year. In 2008, Graham County raised \$78,000+ ranking the event among

the highest per capita contribution of any Relay for Life event in the state. This is an amazing amount for a small county with low incomes, but with the personal relationships to cancer victims, the community comes together to do their part. The cancer profile for Graham County in August 2007 projected cancer cases to be around 55 and North Carolina to be around 44,860. This is an increase from the 38 cancer cases reported in 2004 and is expected to continue to increase as the population ages. In general 60 percent of all cancers are associated to personal lifestyles or environmental factors. With the increase in obesity in the county, the aging population and the continuation of smoking by individuals the rates will continue to increase (North Carolina Central Cancer Registry, 2005). Another factor that contributes to the high death rate for cancer is the high percent of uninsured in the county. Cancers that are diagnosed at an earlier stage have a higher survivor rate than those later detected. Prevention is the key to any type of disease control. Individuals without insurance and with lower-income levels are less likely to receive preventative care and have a higher percent of a late diagnosis, thus a lower chance of survival. The Graph 11 shows data for cancer deaths in Graham County in 2005.

Graph 11 North Carolina Central Cancer Registry (CCR)



From 2002-2006, Graham County had two deaths in children under the age of 17. One cause of death was SIDS and the other was due to an illness.

Of those surveyed, 47.2% of adults have not seen or talked to a doctor or other health professional in the past 6 months about their own health. Sixty-five percent had not seen a dentist in the past six months. More than half of respondents had not seen a dentist in more than a year. Surveys also revealed that 25.6% had not taken their child/children to a doctor, and 28.2% had not taken their child/children to the dentist in over 5 years. With heart disease, cancer, and cerebrovascular disease being the leading causes of death in Graham County, serious implications of the above data are obvious. With high usage of tobacco, even among youth, lack of dental care means oral and throat cancer could remain undetected for long periods of time. Sixty-seven percent of survey respondents viewed tobacco use among adults as a major problem, and 60.7% felt that tobacco use among people under 18 years old is a problem.

Routine medical care such as pap tests, prostate and breast exams, is necessary for the detection of cancer in early, more treatable stages. Cholesterol and other routine tests are also vital in the prevention and early detection of diabetes, heart disease and cerebrovascular disease.

Heart disease, diabetes, and cerebrovascular disease can often be treated or prevented with physical activity and nutrition. Lack of recreation facilities in the county is a probable contributor to the high rates of these diseases. When asked if an issue was no problem, somewhat of a problem, or a major problem, 53% of survey respondents expressed that lack of recreation facilities was a major problem; 58.9% responded that lack of physical activity or

exercise was a major problem; poor eating habits/lack of nutrition was expressed as a major problem by 59.6% of those surveyed.

## **Hospitalizations**

Cardiovascular and circulatory diseases are also the leading cause of hospitalization for residents in Graham County. These diseases are mostly preventable. However, low levels of education, and lack of access to health care means people often do not know how to control their health problems, resulting in hospitalization due to poor home care.

Respiratory disease is another primary cause of hospitalization. Poor home care is often the cause of respiratory disease exacerbations that require hospitalization. A costly hospitalization is then required for a problem that could have been prevented with home management. Prevention of hospitalization may be unattainable one does not have insurance, cannot afford to purchase medication, nor does not have the education to know how to care for one's disease. Even with the high hospitalization rate of respiratory disease, the death rate is low. This speaks to the excellent care provided at local hospitals.

The 2007 North Carolina Community Data Book for Graham has the following chart for inpatient hospital utilization and charges by principal diagnosis.

Table 5

North Carolina County Health Data Book-2007

**INPATIENT HOSPITAL UTILIZATION AND CHARGES BY PRINCIPAL  
DIAGNOSIS, AND COUNTY OF RESIDENCE, NORTH CAROLINA, 2005  
(EXCLUDING NEWBORNS & DISCHARGES FROM OUT OF STATE HOSPITALS)**

RESIDENCE=GRAHAM

DIAGNOSTIC CATEGORY	TOTAL CASES	DISCHARGE RATE (PER 1,000 POP)	AVERAGE DAYS STAY	DAYS STAY RATE (PER 1,000 POP)	TOTAL CHARGES	AVERAGE CHARGE PER DAY	AVERAGE CHARGE PER CASE
<b>INFECTIOUS &amp; PARASITIC DISEASES</b>	28	3.4	4.9	16.9	\$362,273	\$2,644	\$12,938
-- Septicemia	20	2.5	5.6	13.7	\$306,138	\$2,758	\$15,307
<b>MALIGNANT NEOPLASMS</b>	39	4.8	6.1	29.2	\$805,406	\$3,398	\$20,651
-- Colon, Rectum, Anus	7	0.9	7.4	6.4	\$153,198	\$2,946	\$21,885
-- Trachea, Bronchus, Lung	3	0.4	8.3	3.1	\$77,989	\$3,120	\$25,996
-- Female Breast	3	0.4	3.0	1.1	\$21,896	\$2,433	\$7,299
-- Prostate	1	0.1	2.0	0.2	\$12,834	\$6,417	\$12,834
<b>BENIGN, UNCERTAIN &amp; OTHER NEOPLASMS</b>	18	2.2	5.9	13.1	\$329,303	\$3,107	\$18,295
<b>ENDOCRINE, METABOLIC &amp; NUTRIT. DISEASES</b>	34	4.2	2.6	11.1	\$159,645	\$1,774	\$4,695
-- Diabetes	14	1.7	3.0	5.2	\$65,164	\$1,552	\$4,655
<b>BLOOD &amp; HEMOPOETIC TISSUE DISEASES</b>	10	1.2	3.4	4.2	\$95,646	\$2,813	\$9,565
<b>NERVOUS SYSTEM &amp; SENSE ORGAN DISEASES</b>	9	1.1	13.7	15.1	\$314,539	\$2,557	\$34,949
<b>CARDIOVASCULAR &amp; CIRCULATORY DISEASES</b>	163	20.1	4.4	89.3	\$3,066,969	\$4,230	\$18,816
-- Heart Disease	124	15.3	4.0	60.6	\$2,418,467	\$4,916	\$19,504
-- Cerebrovascular Disease	25	3.1	7.4	22.8	\$387,150	\$2,093	\$15,486
<b>RESPIRATORY DISEASES</b>	138	17.0	4.7	79.7	\$1,557,662	\$2,408	\$11,287
-- Pneumonia/Influenza	65	8.0	4.3	34.4	\$676,601	\$2,425	\$10,409
-- Chronic Obstructive Pulmonary Disease	19	2.3	3.5	8.3	\$122,622	\$1,830	\$6,454
<b>DIGESTIVE SYSTEM DISEASES</b>	112	13.8	3.3	45.9	\$1,040,995	\$2,791	\$9,295
-- Chronic Liver Disease/Cirrhosis	2	0.2	1.5	0.4	\$14,406	\$4,802	\$7,203
<b>GENITOURINARY DISEASES</b>	44	5.4	3.0	16.1	\$391,920	\$2,992	\$8,907
-- Nephritis, Nephrosis, Nephrotic Synd.	8	1.0	4.8	4.7	\$98,735	\$2,598	\$12,342
<b>PREGNANCY &amp; CHILDBIRTH</b>	115	14.2	2.4	34.6	\$507,255	\$1,805	\$4,411
<b>SKIN &amp; SUBCUTANEOUS TISSUE DISEASES</b>	13	1.6	3.5	5.5	\$65,861	\$1,464	\$5,066
<b>MUSCULOSKELETAL SYSTEM DISEASES</b>	45	5.5	3.3	18.4	\$891,788	\$5,985	\$19,818
-- Arthropathies and Related Disorders	13	1.6	3.9	6.3	\$322,859	\$6,331	\$24,835
<b>CONGENITAL MALFORMATIONS</b>	1	0.1	8.0	1.0	\$38,505	\$4,813	\$38,505
<b>PERINATAL COMPLICATIONS</b>	3	0.4	2.0	0.7	\$5,847	\$974	\$1,949
<b>SYMPTOMS, SIGNS &amp; ILL-DEFINED CONDITIONS</b>	60	7.4	2.1	15.5	\$372,039	\$2,953	\$6,201
<b>INJURIES &amp; POISONING</b>	64	7.9	7.4	58.3	\$1,393,167	\$2,945	\$21,768
<b>OTHER DIAGNOSES (INCL. MENTAL DISORDERS)</b>	24	3.0	4.1	12.2	\$169,198	\$1,709	\$7,050
<b>ALL CONDITIONS</b>	920	113.3	4.1	466.8	\$11,568,019	\$3,052	\$12,574

\*\* NOTE: PROVISIONAL NORTH CAROLINA HOSPITAL DISCHARGE DATA.

DATA INCLUDES ONLY NC RESIDENTS SERVED IN NC HOSPITALS. NUMBERS AND RATES SHOWN  
HERE MAY BE SMALLER THAN THE ACTUAL HOSPITAL USE FOR COUNTIES THAT BORDER OTHER STATES.

Hospital services are not available in Graham County. This was expressed as somewhat of a problem or a major problem by 87.5% of those surveyed. Other than 911 Emergency services, after hours care is not available in Graham County. Because of this and lack of a hospital, people often delay medical treatment, resulting in longer, more rigorous, and ultimately more expensive hospital stays.

## **Trends**

The State Center for Health Statistics has developed graphs representing the trends of 22 indicators. The graphs include information comparing North Carolina trends and the trends for Graham County for the years of 1992-1996; 1997-2001; and 2002-2006. (See Appendix J for all trend graphs)

### List of Indicators in the graphs

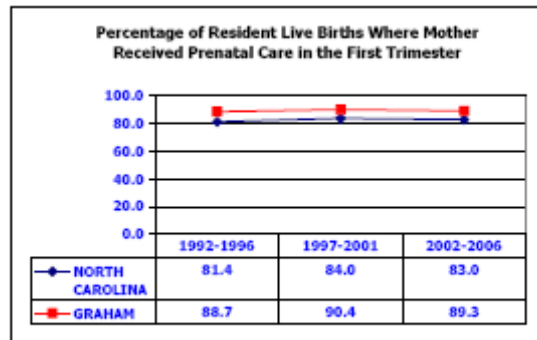
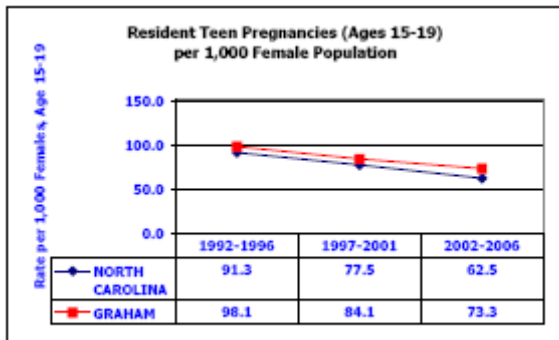
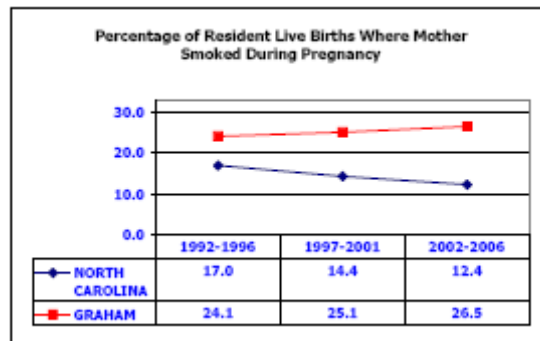
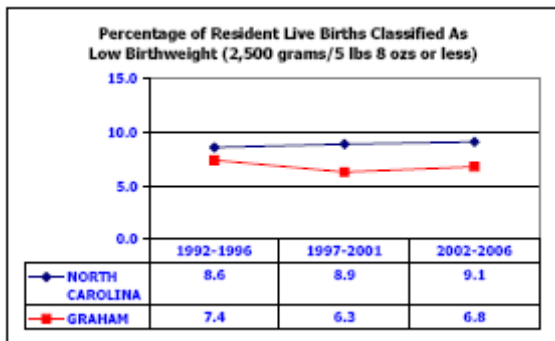
1. Percentage of Resident Live Births Classified as Low Birth weight
2. Percentage of Resident Live Births Where Mother Smoked During Pregnancy
3. Resident Teen Pregnancies per 1,000 Female Population
4. Percentage of Resident Live Births Where Mother Received Prenatal Care in the First Trimester
5. Age-Adjusted Heart Disease Death Rates
6. Age-Adjusted Cancer Death Rates
7. Age-Adjusted Diabetes Death Rates
8. Number of Primary Care Physicians per 10,000 Population
9. Youth Death Rates (Ages 0-17)
10. Number of Dentists per 10,000 Population
11. Age-Adjusted Breast Cancer Incidence Rates
12. Age-Adjusted Prostate Cancer Incidence Rates
13. Age-adjusted Colon Cancer Death Rates
14. Age-Adjusted Lung Cancer Death Rates
15. Age-Adjusted Stroke Death Rates
16. Age-Adjusted Unintentional Motor Vehicle Death Rates
17. Age-Adjusted Other Unintentional Injury (excluding MVA) Injury Death Rates
18. Age-Adjusted Suicide Rates
19. Age-Adjusted Homicide Rates
20. Infant Mortality Rates
21. Prevalence of Overweight in Children Ages 2-4
22. Prevalence of Overweight in Children Ages 5-11

**Live Births and Teen Pregnancy Trends:** Graham County has a low prevalence of low birth weight births as compared to North Carolina. Of those surveyed, 67.6% stated that care for pregnant women was either somewhat of a problem or a major problem. Even though Graham County does not have an established prenatal care clinic, maternity care coordination (MCC) and WIC education and outreach play a vital role in encouraging early and continuing prenatal care. The MCC coordinator and WIC educator also strive to provide early intervention and support in agreement with Healthy Carolinian's 2010 health objective (2010 objective) to reduce incidence of low birth weight and increase proportion of women who receive prenatal care beginning in the first trimester of pregnancy. Their interventions include attempts to increase healthy behaviors, such as good nutrition, abstaining from substance abuse, and avoiding risks associated with early labor and low birth weight. Education efforts continue to attempt to decrease tobacco use.

Many restaurants and businesses within the county have signed with the public health "No Smoking" efforts for a smoke free facility. Additional efforts are set forward in the Graham County School System voting the school campus as tobacco free. This includes student campaigns at sporting events to encourage and educate the public on not using tobacco while on the school campus. However, Appalachian (mountain) culture prevails in health behavior trends associated with tobacco. The trend shows a need for increased efforts in reducing tobacco use in the community. The percent of live births that the mother reported smoking during pregnancy for Graham County were 26.5 from 2002-2006. (See Graph Below)

Although the pregnancy rate for ages 15-19 is high compared to North Carolina, the rate has decreased similar to North Carolina over the past fourteen years. This trend shows the progress

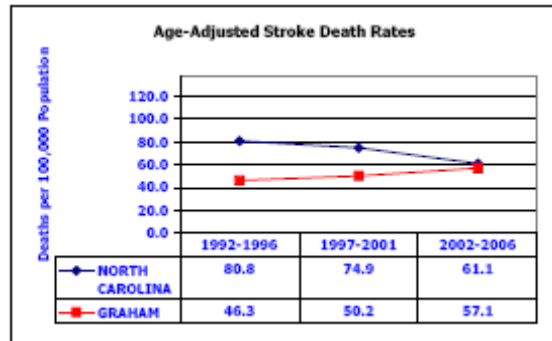
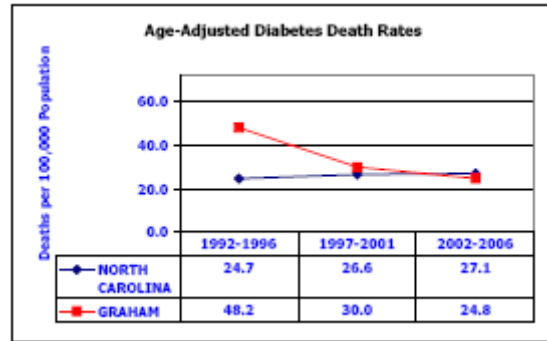
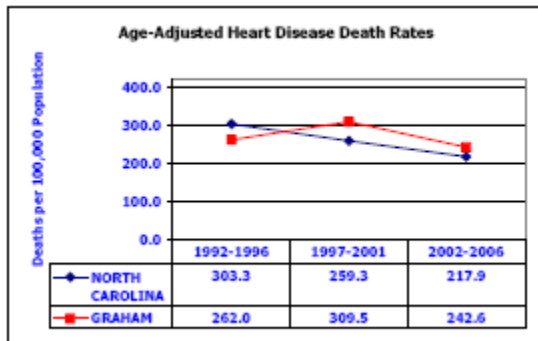
toward the 2010 objective to reduce the rate of unplanned pregnancy in adolescent females. The Graham County Schools in collaboration with the Graham County Public Health has initiated four programs to address this. These programs include: Draw the Line, Respect the Line for 6<sup>th</sup> and 7<sup>th</sup> graders; Baby Think It Over for High School Students; TOP-Teen Outreach for girls and Wise Guy-Male Accountability, both in the middle school; Pregnancy Support Group-To decrease dropouts and encourage graduation.



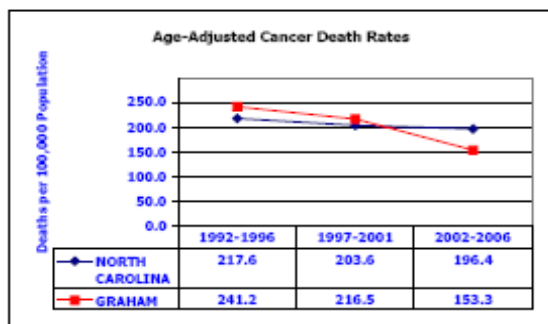
2006 Total Population: 8,109      Percentage Population Ages 65+: 19.5      Percentage Population Minority: 8.3

**Death Rate Trends:** Heart disease rates are higher in Graham County than in North Carolina, but both heart disease and diabetes rates have decreased since 1997. Stroke rates have increased, but still remain below state rates. Likely contributors to the high rate of heart disease and stroke include high rates of diabetes, especially among Native Americans; high rates of un/underinsured; low-income levels; low education attainment; high incidence of tobacco use;

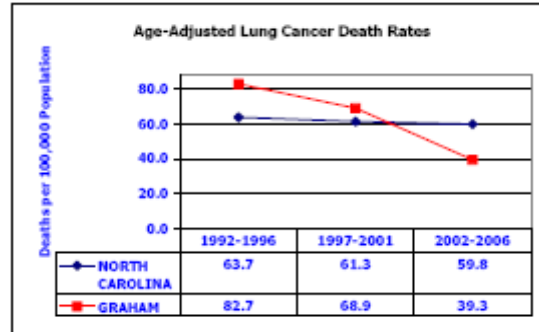
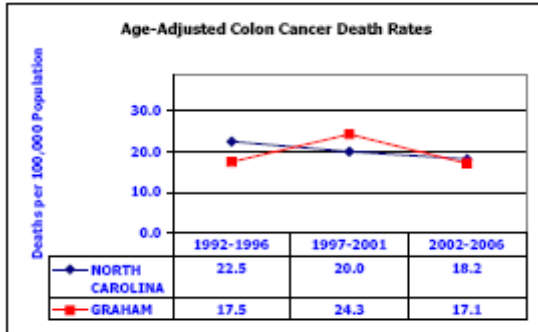
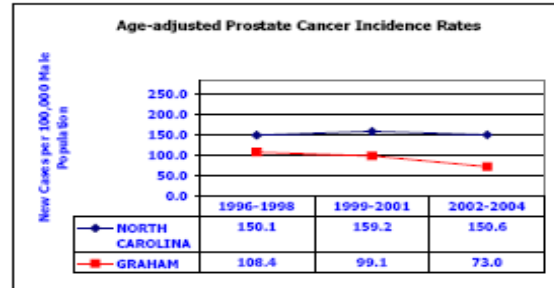
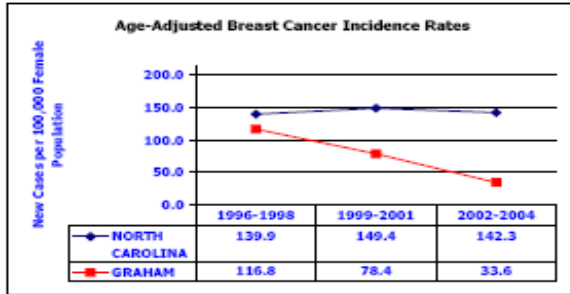
and lack of access to primary and specialty care for prevention/detection. Graham County is on track with the 2010 objective to reduce heart disease and diabetes death rates. Eastern Band of Cherokee Indians has established a diabetes center and now provides all diabetes supplies and education to enrolled members. Another contributor to the decrease is the community access to the Graham County Transit Services. This service provides transportation for needed individuals to dialysis centers or other medical services Monday through Saturday.



**Cancer Incidence Rates and Death Rates Trends:** Cancer rates continue to increase in Graham County, except for breast and prostate cancer incidence which has decreased since 1996.



Although overall cancer incidence has increased, cancer death rates have decreased. Graham County has exceeded the 2010 objective to reduce overall cancer death rates.

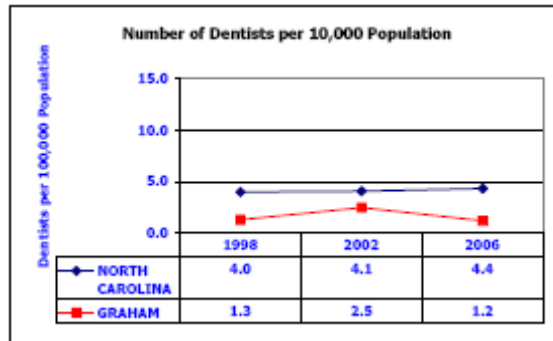
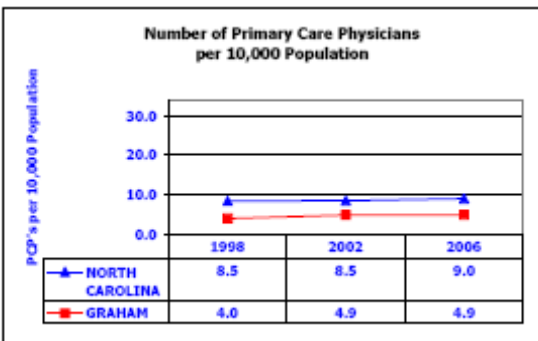


**Medical Provider to Population Ratio Trends:** The ratio of primary care physician to population is twice as high in Graham as the state. This leads to less preventive care, longer waits for routine appointments, and inability to receive treatment for illness in a timely manner. Economic effects of the shortage are evidenced by increased rate of absenteeism from school and work due to people traveling out of the county for doctor appointments.

Access to a primary care provider forms the foundation for personal health care needs to be met. When these needs are not met other problems exist, such as increased severity of illness due to not getting medical attention. Healthy Carolinians of Graham County's access to care sub-committee is working toward the 2010 objective to increase the number of primary health care physicians by working with funding foundations on the best approach to improve this ratio. More than 50% of those surveyed reported that access to medical care was a major problem. If

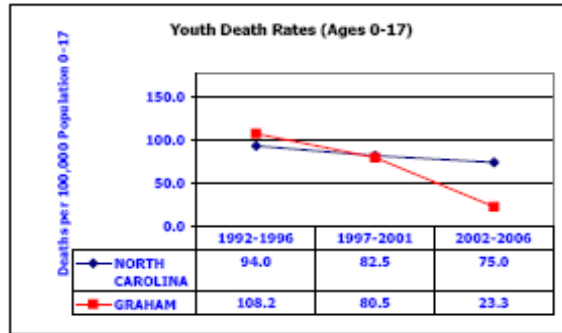
another provider was available in Graham County, 56.5% of those surveys said they would use the service. Another 39.9% said they may use the service if available.

The rate of dentist per population reached an all time low in 2006. Graham County is fortunate to be in the 16% of counties who have a dentist that accepts Medicaid. The dentist to population ratio improved with the opening of the public health dental facility in 2007. The public health dental facility currently operates on a part time basis and will be increasing to a full time schedule to address the 2010 objective of increasing the number of dentist who accepts Medicaid payment. More than half of survey respondents had not seen a dentists in more than a year. Surveys also revealed that 28.2% had not taken their child/children to the dentist in over 5 years.



**Youth Death Rate Trends:** The high youth death rates seen in the 1992-1996 and 1997-2001 data collection were likely due to the lack of accessible mental health services available to the youth. During this time there was an unusually high number of suicides among adolescents. In 1998, the Robbinsville School Based Health Center was established on the Robbinsville Middle/High School campus. The center offered mental health counseling to middle and high school students suffering from anxiety, depression, substance abuse, and other mental health

conditions. A drastic decrease in youth death rates was evident in the 2002-2006 data. The access to care sub-committee of HCGC is working to increase licensed clinical social work in the school to include Pre-K to 12<sup>th</sup> grades. This initiative will assist in moving forward with the 2010 objective to increase the proportion of children and adolescents with serious emotional disturbances who receive treatment.

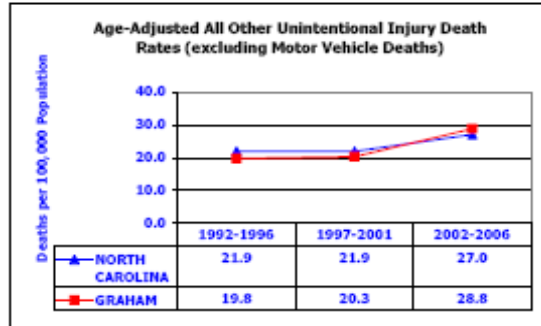
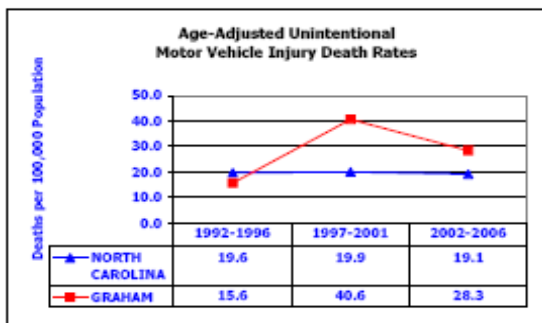


**Unintentional Injury and Motor Vehicle Death Rates Trends:** Graham County has one of the highest unintentional motor vehicle injury death rates in the state. With only 4.9 miles of four lane road in Graham County, most of the roads are still rural and extremely curvy due to mountain terrain. Of those surveyed, 68.3% believe that safe roads are somewhat of a problem or a major problem in Graham County. These conditions increase the appeal to adventurous motorcyclists. These individuals often exceed speed limits and cross yellow lines. Due to increased motor vehicle accidents death rates the state highway patrol has provided Graham County with three additional patrolmen and three patrol motorcycles during the peak tourism season. This intervention, along with the Department of Motor Vehicles plans to construct additional four lane roads, is aimed at the 2010 objective to reduce deaths caused by motor vehicle crashes.

Additional efforts are provided through a car seat safety class offered monthly by the public health department and Snowbird Community Health Center. The program educates and trains

individuals on proper use of a car safety seat and on the laws associated with them. This will work to address the concern of the 80% of survey respondents who see driving or riding in a car without seatbelts as a major problem in Graham County.

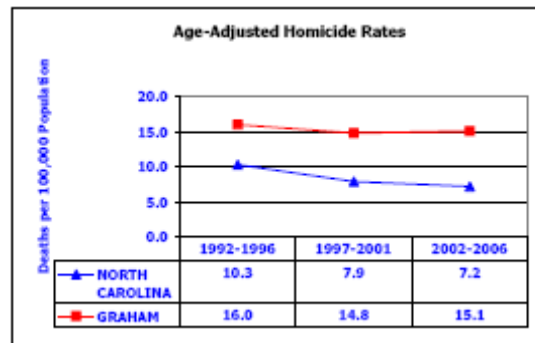
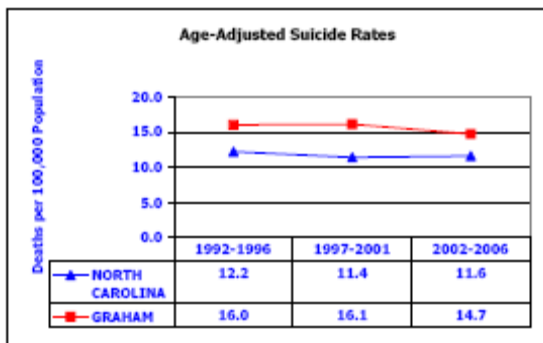
Surveys reveal that 61.5% see drinking and driving in Graham County a major problem. The Graham County Schools encourage teens to abstain from drinking while driving. This emphasis is highlighted during a “Prom Promise” campaign in which students sign a contract not to drink and drive on their prom night.



**Suicide and Homicide Rates Trends:** Homicide and suicide are directly related to poverty, lack of education, unemployment, low employment opportunities, and drugs and alcohol. Graham County is a poverty stricken area and ranks third in the state for unemployment. Thirty-two percent of residents 25 and older have less than a high school education. For those with less than a high school education there are few employment opportunities within the county.

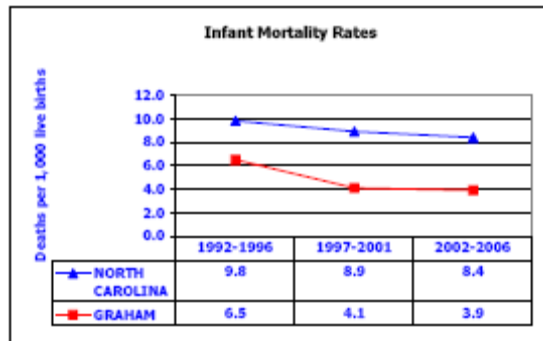
As with all areas within the state, the county is seeing an increase in illegal drug use. Substance abuse was ranked the number one concern by Community Health Opinion Survey respondents. Seventy-six percent view this as a major problem, and 13.5% view it as somewhat of a problem.

Alcohol abuse is ranked third among concerns on the Community Health Opinion Survey with 62.9% saying it is a major problem and 22.9% saying it is somewhat of a problem. In 2006, a Pride Survey was conducted on grades 7-12 in the Graham County Middle/High School. The results showed that out of 198 students surveyed 5.7% had used marijuana within the last 30 days and 11.3 had used alcohol. The average age for first use was 14 for marijuana and 13.4 for alcohol. Twenty percent of the students reported using illicit drugs within the past year and 8.2% had monthly use (See Appendix K for survey results on use). The 2010 objective is to reduce the homicide and suicide rates. Resources to assist in achieving this goal includes Robbinsville School Based Health Center Licensed Clinical Social Worker services, Smoky Mountain Mental Health, Appalachian Counseling, Juvenile Crime Prevention Counseling, GREAT, and the Drug Free School Coalition.



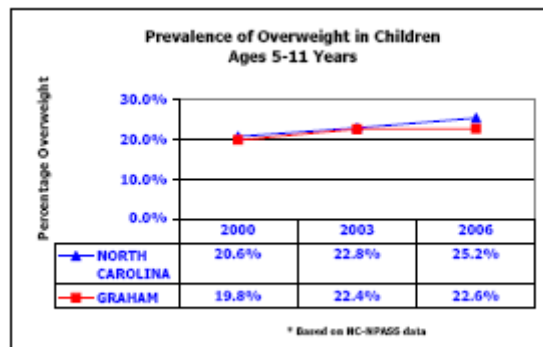
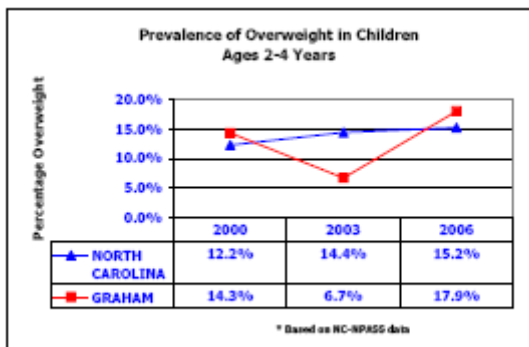
**Infant Mortality Rates Trends:** Graham County has an average of 95-100 live births each year. Graham County Public Health encourages folic acid use for women of child bearing age, resulting in healthier pregnancies and healthier babies. Public health in cooperation with the local pediatric providers, has a strong “Back to Sleep” campaign emphasizing the importance of safe sleep positioning. This, along with the efforts provided by the MCC and WIC Coordinators

to educate on safe and nutritious health behaviors for infants, target the 2010 objective to reduce infant mortality within the first year of life.

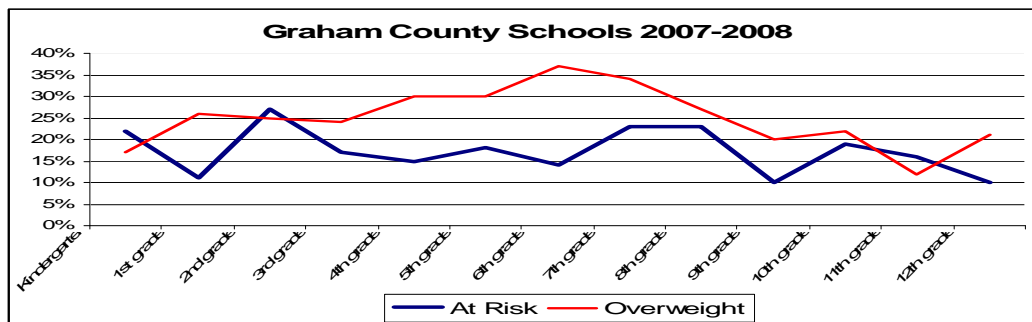


**Overweight Rates in Children Ages 2-11 Trends:** The National epidemic of obesity in children is evident in Graham County. Risk factors for obesity include inactivity, sedentary lifestyle, eating away from home, and eating fast foods or foods high in sugar, fats and salts. The establishment of good nutrition and dietary habits in childhood is essential to reducing the prevalence of overweight and obesity. Direct medical costs associated with unhealthy lifestyles are over \$15,000 annually for youth in Graham County (Be Active NC, 2008). The current group of inactive and overweight children could potentially cost Graham County over 174 million dollars by the time they retire in medical care and lost productivity. For the first time ever the life expectancy for children is less than that of their parents. This is also linked to current unhealthy lifestyle habits which put this generation at high risk for heart disease, high blood pressure, diabetes, high cholesterol and depression. Healthy Carolinians of Graham County set family fitness as a priority focus area in 2006 to address the 2010 objective to reduce overweight and obesity. Over the past two years, many efforts have been made to address this issue in the families of the county. A one mile paved walking trail with 20 fitness stations was built on the school campus. Numerous “Biggest Losers” competitions have been held, yielding

hundreds of pounds of weight loss. A “Breakfast” campaign was launched at Graham County Elementary School to encourage nutritious breakfasts. the School Based Health Center is currently seeking funding to expand their nutrition counseling services into the elementary school campus. School health policy mandates that every child will have a minimum of 30-90 minutes of exercise at least 3-5 days a week through 9<sup>th</sup> grade. Elementary teachers have shown increased awareness of the effects of nutrition on the ability to learn. Because of this, many of them now offer healthy snacks throughout the day and allow water bottles in the classroom at all times. All soft drink machines have been removed from the school campuses. The most recent initiative is the “Walk to Bethlehem”, a 12 week challenge to walk 6,348 miles (the distance from Robbinsville to Bethlehem). This program will run from September to Christmas 2008.



Graham County Schools conduct annual Health Fairs. BMI and percentiles are evaluated on all students during the fairs. The 2007-2008 results show a trend of high overweight problems peaking during the 6<sup>th</sup> and 7<sup>th</sup> grades. The following graph demonstrates the trend.



Graph 12

Graham County Schools Health Fair Results 2007-2008

## **Listening Sessions and Key Informant Interviews**

To gain an understanding of the views of the community the Team facilitated ten listening sessions among industry workers, high school students, GREAT committee, school staff, board of health, county department heads, Healthy Carolinians committee, health department employees local mental health staff, and a civic group. During the listening sessions, information was also gathered from key informants to gain insight on the resources and needs from those that work in leadership roles within the county government, local workforce, and a diverse selection of social groups. The sessions gave the team insight into the strengths, weaknesses, needed and available resources, and health care concerns from the groups. To review the list of questions for each session see Appendix C.

### **Strengths**

*What do you like about living or working in Graham County?*

Sense of Community was listed in 9 out of 10 sessions as the primary strength within the county. Each of the nine groups presented the loving care of being a part of a community and binding closeness within the community as their number one strength. In contrast, the one group that represented the industry workers did not reference the community as a strength, but indicated that the community needs to get together on pressing issues.

The number two strength was shown in 8 out of 10 sessions to be the natural beauty and resources of the mountains. The natural beauty gives a sense of clean mountain air and draws many of the tourists to the area. The clean surroundings were mentioned in both the strengths and weaknesses from the groups.

Public services and a small county were third as the strongest strengths within the county. The small county references back the sense of community as the strongest strength. With a small community residents are able to have a closer bond with others. Public services within the county were seen as a strength as to the services available to the public. This related to the public health department, transportation, School Based Health Center, volunteer rescue squads and fire departments and ambulance service.

In 5 out of the 10 sessions the county people, faith, family and the education/school systems were listed as the next strongest points of the county. In the past three years the SAT scores for high school students have been continuing to increase and the schools offer a supportive and highly qualified staff for learning advancement. Many churches exist within the county and each has open doors for individuals. Again with the sense of community as the strongest leads to the strengths of the people and family within the county as a strong point.

Other strengths included no traffic, not commercialized, affordable recreation programs, dual enrollment with the high school and Tri-County Community College, safe to live, Stanley Furniture, housing for the elderly, mountain culture, No zoning, pharmacy, and Tallulah Health Center. With each of the sessions the groups show strong emphasis on wanting to be a part of a small community with people that are willing to understand and appreciate their ways and to help when needed in crises issues.

## **Weaknesses**

All of the listening groups and key informants chose the need for more recreation activities as the number one weakness in the county. Each of the groups referenced the topic by different views. Seven of the groups enforced the great need for our youth and children to have recreational activities available. The staff at Appalachian Counseling related the need to alter the early exposure to drug and alcohol use by children. Another group also emphasized that adults and seniors need additional activities available. Each of the groups made reference to an organized and monitored recreation center that would be open on nights and weekends as the answer to better recreation and activities. Other concerns are that the school system and the county recreation departments communication levels need improvement to collaborate on organized recreation. Several of the groups suggested that the county consider providing a cover for the new pool to allow for year around use.

The next most pressing weaknesses within the groups focused on the need for after hour care and better access to medical providers. Although not spoken of as clearly by the younger generation, they too referenced the need for the elderly in the county to have better services for medical care. The issue surfaced as a pressing need from comments concerning increased ambulance use to the lack of individuals receiving medical care when needed due to no 24 hour services. Another issue associated with the need for additional medical care related to the need for affordable care. With the high population in the county un/underinsured this need continues to grow.

Next on the list of weaknesses in 7 out of 10 groups was the concern for unemployment and the rate of salaries on existing jobs. This also related to the lack of professional jobs for individuals

that receive a higher level of education. The groups indicated that with the high rate of unemployment and low paying jobs that the poverty rate is continuing to increase.

The increasing concern of drug use and addiction was raised in 5 out of the 10 groups as a weakness. Other related concerns to the drug use issue were the rise of the drug methamphetamine, the court system's weakness in catch and release, Department of Social Services, the need for a new jail, domestic violence, and sexual abuse. One reference was also made that the sheriff department should have deputies that are older and not from Graham County to reduce bias.

The county government was also mentioned as a weakness due to the need for improvement in leadership reactions and actions on issues. The groups made reference to the need for a chamber of commerce, better infrastructure for technology, high taxes, no natural gas, flood plain mapping, litter, and lack of recycling.

**Other concerns that arose included:**

- The lack of competition for grocery stores. The groups showed the concern with high grocery prices and trying to purchase healthy foods.
- The availability and use of land.
- Rental properties and affordable housings are not available.
- Many private roads are dangerous and impassable for emergency vehicles to access residents.
- Drug testing at the school.
- The last concerns were associated with air quality, water supplies, water conservation, and water quality in the lakes.

➤ In addition to the above weaknesses, the groups made reference to problems with obesity in the community, depression, lack of higher education, the need for additional foster families, services for the seniors, adult day care, and transportation.

## **Health**

*What's happening in Graham County that influences the health of you and your neighbors/family/friends? What keeps your neighbors/family/friends from being healthy? What are the main things that affect the health of people in your community?*

Each of the groups expressed a growing concern for the health of the community. With the life expectancy starting to decline instead of increasing, the groups referenced problems within the county that enhances the health issues for the residents. As with the weakness they stated the lack of affordable health care as the number one concern. This is also in relation to the high number of un/underinsured within the county. Lack of affordable health care was related to limited health care services in the sessions. Individuals have to travel to access available primary care visits, specialty care, dialysis, hospital care and other medical needs that are not available in the county. They stated that Tallulah Health Center is a good resource, but is not able to provide for the amount of medical needs within the county.

Next on the list of health concerns were the continuation of tobacco use by residents. This “mountain way” continues to be a poor health behavior by many of the population. Another concern of half of the groups was the increasing use of drugs and alcohol. Other related issues were depression, domestic violence, stress and that people have to work even when sick, thus infecting their co-workers in a chain event. One group expressed concerns with the lack of use and access to mental health care by needed residents. A group indicated a need for sex education to be taught in the school system and a need for higher education and fewer drop-outs from high

school. This concern relates to the topic mentioned by two of the groups with increasing STD in teens.

Cancer was only mentioned in four out of the ten groups as a concern for health. The obesity problems were higher with 6 out of the 10 relating it to poor health issues. The groups related back to the weaknesses of the county in that individuals cannot afford healthy foods and that with the low tax base fewer services are available for recreational activities. One group said that the main problem is that people are just lazy and need to exercise more. Pollution and water quality were the other concerns for health that were referenced in one out of ten groups.

*What do people you know do when they have a health problem?*

*Do they seek care?*

*Where do they go?*

*If they do not seek care, why?*

When asked these questions individuals that had health insurance stated that they received medical care. They referenced local providers, health department and other providers whether within an hour drive or even traveling as far as Atlanta, Georgia (2.5 hours from Robbinsville), Knoxville, Tennessee (2 hours from Robbinsville), Duke University (5 hours from Robbinsville), or Asheville, North Carolina (1.75 hours from Robbinsville). All the groups had individuals that could relate to the lack of health insurance or funding for travel. Individuals stated repeatedly that for those with no insurance they relied more on family and others for care than actually going to a provider. Each group had the same responses of concerns for health care to be no insurance, lack of care, cannot afford care, so just tough it out. Three of the ten groups made reference to the awesome resource of a prayer chain in the local churches for help. The school

students and faculty also stated that they are able to receive care through the School Based Health Center.

### **Needed Resources/Activities**

*What resources or activities would you like to see in Graham County that is not here yet?*

This question was easy for each of the groups they instantly referenced back to the weaknesses of the county with the number one concern relating to more available recreation activities. For resources relating to recreation, they stated a public recreation center, movie theater, golf course, campgrounds on the lake, more classes on culture, indoor and outdoor pool, laser tag, tour guides for natural surroundings, playground, skate park, and a bowling alley. Also on the list for resources was the need to open shops in the county, additional grocery stores, and a Weight Watchers club.

Resources continued to go back to the weakness of available, affordable medical care. The groups expressed opening affordable medical provider's offices with specialty care, a hospital and urgent care. They also suggested 24 hour 7 days a week of transportation. They indicated that this would reduce the number of individuals that use the ambulance service and increase the number of people who seek care when they need it instead of waiting. Another resource stated in 4 out of the 10 groups was the growing need to provide assistance for seniors. This included funding for power bills, groceries, medicines, housing and other basic needs.

Additional resources and activities stated as a need within the groups were for better government management, allowing the inmates to work, help for drug users, affordable housing, reverse 911, infrastructure, high speed internet, and main street revitalization.

## **Communications**

*One concern for service agencies is how best to get information to people.  
-What do you see as the best ways to get information to people in Graham County?*

*If there were a community emergency, such as what happened with Hurricane Katrina in New Orleans, what do you think would be the best way to get information to people?*

The following is a list in order of highest ranking of communication routes:

1. Scanners/Emergency Management Communication
2. Local Radio
3. Connect ED through the School System
4. Newspaper
5. Cell Phones
6. School
7. Internet
8. People
9. Text Messages
10. CB Radios/HSM
11. Prayer Chains
12. TV/WLOS in Asheville
13. Reverse 911 if available
14. Siren
15. Mailers
16. Cooperative Extension

## **Most Important Issues**

*What else do you think we should know about Graham County?*

*Of all the issues we have talked about which one do you think is the most important for Graham County to address?*

A Recreation Center with increase in activities was the most important to all the groups. The second most important was better access to health care, both primary and urgent care. Third on the list was the need to stop the drug problem within the county. The following items that were mentioned in at least 1 out of the 10 groups as most important.

1. Food Pantry
2. Increased Education
3. Increase job opportunities
4. Improve Work Ethics
5. Tourism and Economy
6. Lack of Health Insurance
7. Housing

As a wrap up to the listening sessions the groups emphasized how wonderful Graham County is. They stated that the sense of community is heart-warming and that the natural beauty makes this one of the best places in the south. They reflected on the pressing needs of increasing activities and recreation resources and on the need for affordable and available health care. The groups showed a concern as to “how far behind” our county government and infrastructure is to other counties within the state. Each of the issues relates to the high poverty levels, low tax base, Tier I county ranking, high levels of un/underinsured, low education levels, and high unemployment levels.

## **Selecting Health Priorities**

Once data was analyzed and compiled, a meeting of the full community health assessment team was conducted. Data was presented to the team by the health director and the Healthy Carolinians Coordinator. The disparities, community concerns, and emerging issues were identified by the health director and Healthy Carolinians Coordinator and a list of those was distributed to the community health assessment team for review. The Team was then encouraged to consider the available resources, community support and the feasibility of developing a plan to make a difference. The Team then voted in person, by phone, and by e-mail their top two priorities. The top two highest votes were chosen as the identified priorities for the assessment.

### **Identified Disparities**

Because Graham County is 92% white, racial disparities are difficult to identify. Diabetes mortality rate among American Indians is the racial disparity that is most obvious. Of 16 diabetes deaths in Graham County, 5 of those (31%) were non-white. Survey responses also show that 11.4% of Native Americans feel they are in poor health, compared to 6.6% of Caucasians. A disparity is present for the increasing Latino population due to high rates of uninsured, limited availability of translation services, and fear of seeking health care due to being undocumented. This all leads to high rates of Emergency Room and public health use for health care resulting in little case management and poorly controlled medical problems, including increased transmission of communicable diseases.

Socioeconomic disparities that exist in Graham County include issues, such as that the county ranks third in NC for unemployment, median household income is 96<sup>th</sup> of 100 counties, and 25.5% of the county's children are living in poverty.

Educational disparities include being ranked last in the state for per pupil expenditures in our public schools and the low percentage of adults with at least a bachelor's degree.

Health care disparities include not having a hospital, after-hours care being limited to emergency medical services, no specialty care, and having a shortage of medical, dental, and mental health providers. Graham County also has a high number of uninsured residents, being ranked 80<sup>th</sup> of 100 counties in 2005.

The relationship between education, socioeconomic status, and health care disparities may not seem clear to some. There is clearly a connection between living in poverty and not being able to afford to further one's education. Along the same line, there is a clear connection with not receiving a higher education and struggling to afford basic health care. Low education level and low income often lead to high levels of stress, which, in turn, result in higher incidence of drug use and other medical problems such as heart disease, diabetes and mental health problems. In Graham County, prevalence of each of these is major concerns. The increase of childhood obesity is leading to a generation of adults that will experience these devastating health problems at a much younger age than their parents.

## **Emerging Issues**

The increase in the Latino population of Graham County currently has unmeasured effects on the health of the community. With the influx of undocumented Latinos, the county has seen an increase in need for care at the public health department, need for translation services that are often not available, more people living in poverty, more children and adults without insurance, and an increase in transmission of communicable diseases.

Mercury levels in local lakes are an environmental health concern of the citizens. Many locals enjoy eating fish from the county's lakes. More research must be done to find the cause of this problem and identify strategies to correct it.

Childhood Obesity has reached epidemic status nationwide. Graham County is no different. As these children grow into adulthood, they will have shorter life-spans than that of their parents. This is the first time this has happened in history.

According to the Graham County Sheriff's Department, substance abuse is an ever-increasing problem in the county. Methamphetamine charges have increased dramatically in recent years. This issue affects all citizens due to higher crime rates, more medical problems, and increase in poverty.

## **Top Two Identified Priorities**

Priorities to be address by community action teams include:

- 1) Family Fitness/Recreation
- 2) Access to Care

Substance abuse was identified as a priority by the Community Health Assessment Team in the 2004 Community Health Assessment. The disparity has proven to be a continued concern among the citizens and leaders of the county. Even though substance abuse was once again one of the top disparities within the 2008 Community Health Assessment, the scope of need to address this issue proved to extend beyond the available resources and capacity of a Community Health Action Team. The Graham County Public Health Department has expressed a great concern for this issue and their willingness to support all efforts in addressing the problem through collaboration with other local agencies.

Economic development was expressed by the team as the greatest concern. However, GREAT (Graham Revitalization Economic Action Team) has an excellent multidisciplinary team working on this issue. The group has been in place for five years, but is just beginning to be well-known in the community, so some of the community health assessment team members were unaware of this group and their work. GREAT leadership was notified of this concern and the Healthy Carolinians coordinator presented CHA findings at the November GREAT meeting.

## **Conclusion**

It is understood that community health assessment is an ongoing process. Much information has been gathered and revelations have been made. The Graham County Department of Public Health and Healthy Carolinians of Graham County will use this information to continue to work to improve and promote the health of Graham Countians. The Community Health Assessment will be used as the foundation for concerned citizens and community leaders to strengthen the capacity for moving forward to change both individual and community health outcomes.

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## Appendix A

### Community Assessment Team

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## **Appendix B**

### **Community Health Assessment Timeline 2/21/08**

February 20, 2008 – Healthy Carolinians CHA Team Meeting to design survey

February 28, 2008 – Hire someone for CHA data collection/entry

March 1, 2008 – Begin collection of secondary data

March 7, 2008 – Install survey into epi-info

March 13, 2008 – Present CHA plan to BOH for approval

March 14, 2008 – Begin conducting focus groups/listening sessions (see attached)

March 19, 2008 – Healthy Carolinians CHA Team Meeting

April 21, 2008 – Have focus groups/listening sessions completed

April 27, 2008 – Begin survey data collection at Family Fun Fest/Ramp Festival

May 21, 2008 – Have focus group data entered into spreadsheet to identify trends, etc.

July 11, 2008 – Have 500 surveys completed and entered into epi-info

August 1, 2008 – Begin analysis of primary and secondary data.

October 2, 2008 – Analysis of Community Health Assessment Primary Data

October 10, 2008 – Have CHA data analysis completed and written in CHA format.

November 6, 2008 – Present results of CHA data to community and HC Partnership. Set priorities based on community, HCP input.

November 17, 2008 – Finish CHA document and send to Raleigh.

## Appendix C

### Listening Questions 2008 Community Health Assessment

#### Assessment of strengths and weaknesses:

- What do you like about living or working in Graham County?
  
- What are your concerns about Graham County?
  - housing
  - recreation activities/facilities
  - transportation
  - employment
  - schools
  - community services
  - access to resources
  - air pollution
  - water quality/supply

#### Health

- What's happening in Graham County that influences the health of you and your neighbors/family/friends? What keeps your neighbors/family/friends from being healthy?
  
- What are the main things that affect the health of people in your community?
  - What do people you know do when they have a health problem?
  - Do they seek care?
  - Where do they go?
  - If they do not seek care, why?

#### Resources/Activities

- What resources or activities would you like to see in Graham County that is not here yet?
  - housing
  - recreation
  - transportation
  - employment
  - schools
  - community services
  - access to care

### **Communications**

- One concern for service agencies is how best to get information to people.
  - What do you see as the best ways to get information to people in Graham County?
  
- If there were a community emergency, such as what happened with Hurricane Katrina in New Orleans, what do you think would be the best way to get information to people?

### **Wrap Up**

- What else do you think we should know about Graham County?
  
- Of all the issues we have talked about which one do you think is the most important for Graham County to address?

## **Appendix D**

Convenient Surveys were distributed to the following locations:

1. Day Care Employees and Parents
2. Annual Graham County Rescue Squad Ramp Festival and Kids Fest
3. Graham County Meals on Wheels
4. Cedar Cliff Baptist Church
5. Snowbird Senior Center
6. Graham County Senior Center
7. Public Health Clients (including Hispanic with interpreters)
8. Appalachian Counseling Clients and Staff
9. Graham County Employees
10. Tri-County Community College Students and Faculty
11. Stecoah Valley Center and Community
12. Snowbird Health Services
13. Tallulah Valley Health Center Employees and Clients
14. Head Start Program
15. Individual Houses in Snowbird Community
16. Mt. Nebo Church
17. Stanley Furniture Employees
18. Snowbird Logging Employees
19. Dr. Patrick Kelley's Dental Office Employees
20. Britthaven of Graham Nursing Home for Staff, Patients, and Family



## Appendix F

**Churches in Graham County**  
**As per the Faith Guide 2007**  
**A special publication of**  
***The Graham Star***

<u>Church</u>	<u>Pastor</u>
1. Bear Creek Missionary Baptist	Wesley O'Dell
2. Atoah Free Will Baptist	
3. Bethel Baptist	Burlen Aldridge
4. Brooks Cove Baptist	Harold Beasley
5. Buffalo Independent	Phillip Ellington
6. Blessed Hope Baptist	Lennox Hedrick
7. Calvary Baptist	David Anderson
8. Camp Laurel Chapel	Richard Davis
9. Cedar Cliff Baptist	Daniel Stewart
10. Church of the Lamb	David Allen
11. Dry Creek Baptist	Teddy Silvers
12. Eternal Believers Missionary Baptist	Grant Burke
13. First Baptist	Noah Crowe
14. Grace Tabernacle	Jimmy Millsaps
15. Fontana Community	Ernest Stiles, Sr.
16. Grace Mountainside Lutheran and Episcopal	Rev. Steve Holcomb
17. Hosanna Baptist	Max Turpin
18. House of Prayer	Delmar Holder
19. Liberty Missionary	David Byrd
20. Little Snowbird Baptist	Paul Teasdale
21. Lone Oak Baptist	Scott Roper
22. Long Creek Baptist Church	Gary Moore
23. Midway Baptist	Jim Postell
24. Meadow Branch Primitive Baptist	Onley Williams
25. Mountain Creek Baptist	Tom Buchanan
26. Mt. Nebo Baptist	Gary Crisp
27. New Beginnings Baptist	Marvin Mullinax
28. New Hope Baptist	Sam Hayes
29. Old Mother Baptist	Walt Jenkins
30. Orr Branch Baptist	
31. Powell's Branch Baptist	Bijy Silvers
32. Panther Creek Baptist	Kelly Andrews
33. Prince of Peace Catholic	Fr. Michael Kottar
34. Robbinsville Church of God	Tim Walters
35. Robbinsville United Methodist	Tim Starbuck
36. Santeetlah Baptist	Jack Millsaps
37. Sawyer's Creek Baptist	Noah Williams
38. Sweetgum Baptist	Kenny Ball

**Churches in Graham County (cont.)**

<u>Church</u>	<u>Pastor</u>
39. Sweetwater Baptist	Jonathan McGuire
40. Tuskegee Baptist	Larry Grindstaff
41. Valley Missionary Baptist	Luther Crisp
42. Victory Baptist	Darrin Self
43. Welch Cove Baptist	Michael Boring
44. Yellow Creek Baptist	Dana Dockery
45. Zion Hill Baptist	
46. Stecoah Baptist	G.D. Phillips

## Appendix G

### Civic Groups or Organizations

(Not a complete lists)

1. Fire Departments-Robbinsville and Stecoah
2. Rescue Squads-Graham and Stecoah
3. Boy Scouts
4. Girl Scouts
5. 4-H
6. Lions Club
7. Woman's Club
8. Eastern Star
9. Two VFW Posts
10. Mason's
11. Shriners
12. Kiwanas Club
13. Methodist Men and Women Group
14. Graham Help
15. Arts Council
16. Heritage Association
17. Graham County Historical Association
18. Red Hat Club
19. Beta Sigma Phi
20. American Legion
21. Retired Teachers Association
22. Graham County Community Foundation
23. Graham County Youth Athletic Association
24. Snowbird Community Clubs
25. Stecoah Valley Center
26. Smokey Mountain Native Plants
27. Graham Association
28. Affordable Housing
29. Garden Club
30. The Hiking Club-Fontana
31. Friends of the Library
32. Friends of Animals
33. Arts Council
34. Auxiliary Club
35. Yellow Creek Botanical Gardens
36. Graham County Schools also offer several clubs and groups
37. Stecoah Artisans Guild

## Appendix H

### Hiking Trails in Graham County

1. Tsali Recreation Area
  - Mouse Branch Loop Trail # 153
  - Thompson Loop Trail # 152
2. Panther Creek Trail #68
3. Lookout Rock Trail # 40
4. Lewellyn Cove Nature Trail # 50
5. Cable Cove Recreation Area
6. Yellow Creek Mountain Trail # 48
7. Joyce Kilmer Memorial Trail # 43
8. Slickrock Creek Trail # 42
9. Naked Ground Trail # 55
10. Hangover Lead South Trail # 56
11. Deep Creek Trail # 46
12. Locust Ridge Trail # 401
13. Big Fat Branch Trail # 41
14. Windy Gap Trail # 400
15. Yellow Hammer Gap Trail # 49
16. The Santeetlah Creek Area
17. Cheoah Trail # 143
18. Massey Branch Fitness Trail
19. Snowbird Loop Nature Trail # 55
20. Big Snowbird Trail # 64
21. Snowbird Mountain Trail # 415
22. Sassafras Creek Trail # 65
23. Middle Falls Trail # 64A
24. Wachacha Bald Trail # 47
25. Bear Creek Trail # 62
26. Stecoah Gap to Cheoah Bald on the Appalachian Trail

## Appendix I

### Graham County Department of Public Health

#### Vision Statement

To be recognized leaders in Public Health, increasing equity and efficiency, to build a healthy future for all people.

#### Mission Statement

The mission of the Graham County Department of Public Health is to provide compassionate, individualized quality health care by a caring, professional staff, specifically trained to meet the needs of all our citizens and to continually monitor, anticipate and respond to community health problems, with emphasis on health promotion, disease prevention, and accessibility.

#### Business Hours:

Monday – Friday

7:45 am to 4:45 pm

*CLOSED FOR LUNCH 12PM TO 1 PM*

Lab: 8:15 am to 4:30 pm

#### CLINIC

**Child Health** Provides routine Well-child health check-ups for children~ birth to 21 years of age. Appointments are available each week. Medicaid and insurance are accepted.

**Adult Health** Clinic services for women and men 21 years and older for complete physical.

**Health Check** Provides help to children on Medicaid from birth to 21 years of age with health care needs. This includes Well-child check-ups, dental, eye, sick care, immunizations, medications, counseling, and specialists.

**Family Planning** Weekly appointments are available for men and women of reproductive age to obtain physical exams, family planning counseling, lab tests and birth control methods. Fees are based on family size and income without insurance, Medicaid, and Insurance accepted.

**STD Clinic Services** Testing for variety sexually transmitted diseases is available through the clinic. Educational counseling and future preventative measures are included. Treatment for certain STD's is provided at NO charge.

**Communicable Disease** Testing, counseling, case follow-up, and assistance in obtaining medical and/or support services. ***Free*** confidential HIV testing.

**Breast & Cervical Cancer Control Program (BCCCP)** This provides routine physical exams (paps and mammograms) for women 50 thru 64 years of age for income eligible.

**Health Promotions** Health education services are provided to promote healthy lifestyles. Individual counseling and wellness programs are available.

#### SERVICES

**Child Service Coordination** Our Child Service Coordinator will help families access services which will give each child the opportunity to reach their full developmental potential. All children birth to five years of age, with special needs are eligible.

**Maternal Care Coordination** A tracking program for prenatal woman eligible for Medicaid. An RN provides the case management to help identify and access medical, social and educational services. Extensive education is provided for prenatal and Postpartum care and related topics.

**Newborn/Postpartum Home Visitation** Home visits are made to new mothers 2-3 weeks from delivery. Includes physical assessment for mother and baby. Provides information and referral to needed services.

**Breastfeeding Support** This program provides women desiring to or currently breastfeeding with classes, books, video tapes, breast pumps, instruction and support.

**Smart Start** A comprehensive public- private initiative which accesses all available resources to prepare children to enter school healthy and ready to learn.

**Car Seat Safety** The Department has on staff two certified Child Passenger Safety Technicians who teach parents about proper installation for compliance with the NC Child Restraint and Seat Belt Laws.

**Community Preparedness (Bio-terrorism)** Working with the community for preparation of possible disaster in our geographical area.

**Children's Special Health Services(Referral Service)** This program provides comprehensive treatment services for persons under the age of 21 with specific conditions. Must be Medicaid eligible. Covers some services that Medicaid does not.

**School Based Health Center** A clinical service based at the Robbinsville Middle and High School campus. Services include comprehensive and sports physical exams, disease prevention, diagnostic testing, and focused exams for medical complaints, treatment of disease or injury and referrals to specialist when needed. Mental health counseling and risk assessment services, as well as nutrition counseling services are also provided. Call 479-9395 for more information.

**School Health** Provides screening and health –related education services to schools for immunizations, vision, scoliosis, and any other health topics.

**Environmental Health** Promotes and protects public health through routine inspection of: restaurants, motels, schools, swimming pools, daycare facilities, etc. Ensures proper design and inspection of sewage disposal systems; provides advice on proper protection of water supplies, water sampling; coordinates rabies clinic; and provides educational programs for the public.

**Dental Health** Provides dental care for children and adults with North Carolina Medicaid, and Health Choice. We also provide services to residents without insurance.

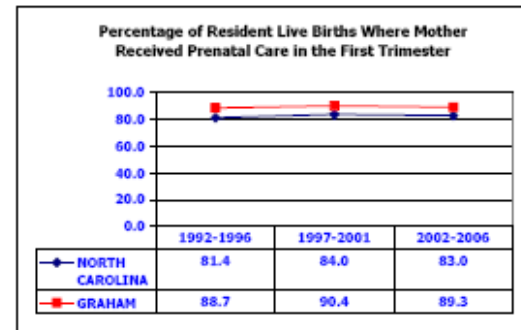
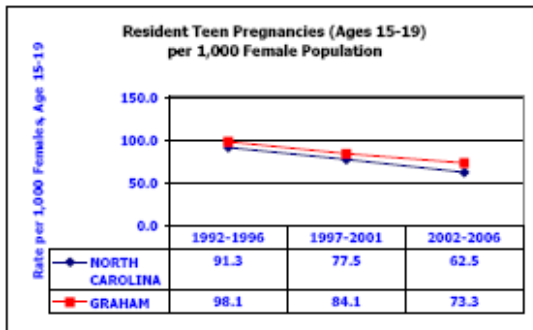
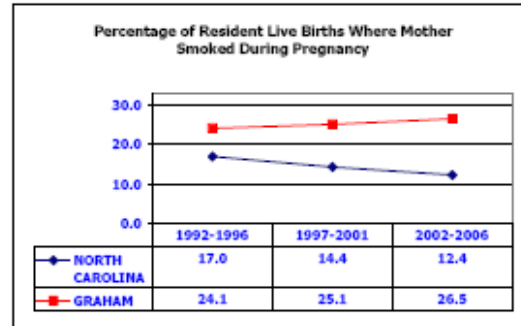
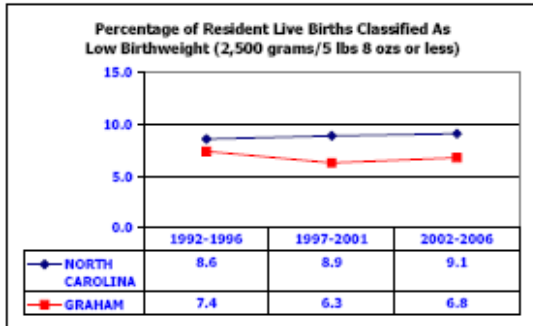
**WIC Program** A Supplemental food program for Women, Infants, and Children, eligibility: Children under the age of 5 years and pregnant or breastfeeding women, and income guidelines apply.

**Immunizations** are available for infants, children and adults.

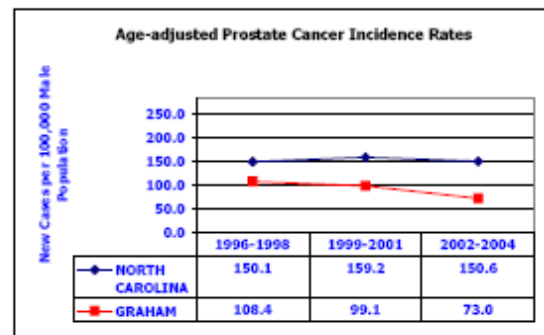
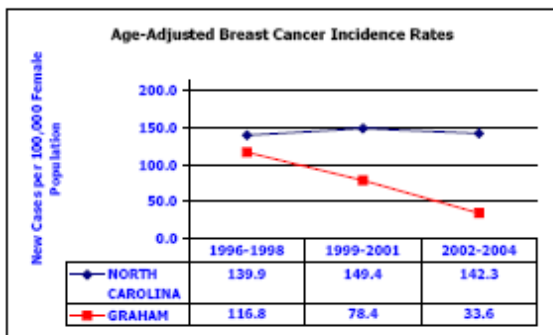
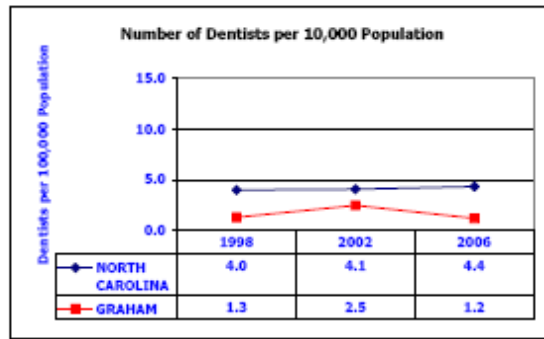
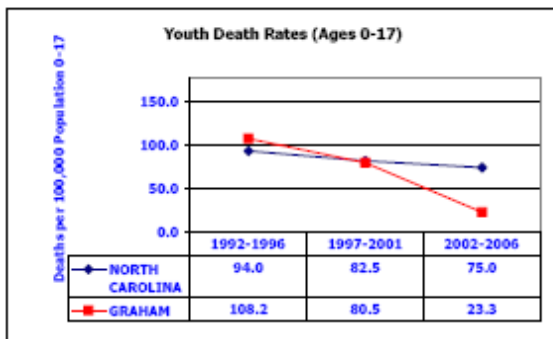
**General** Blood pressures checks, urinalysis, laboratory testing, blood sugar, blood lead and hemoglobin screening are available, along with wellness exams for adults.

# Appendix J

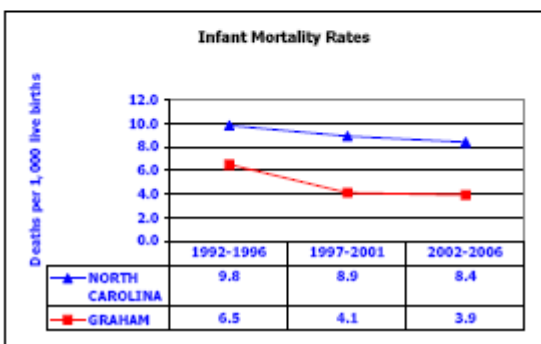
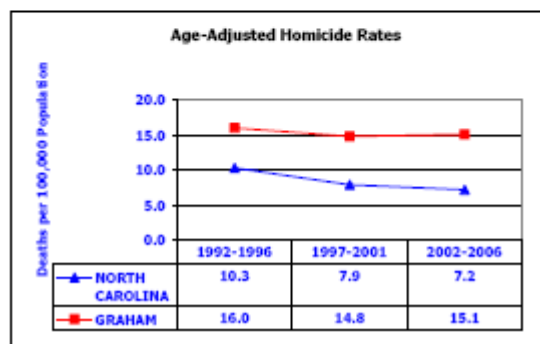
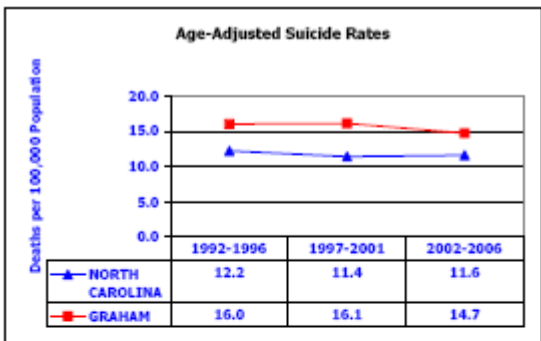
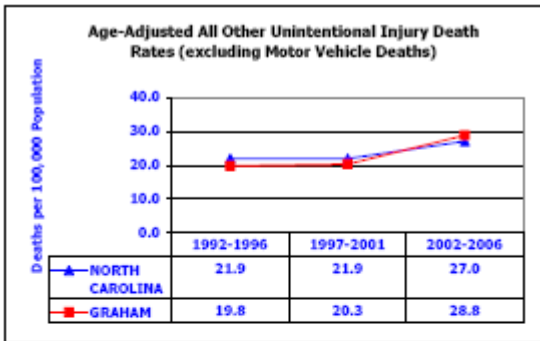
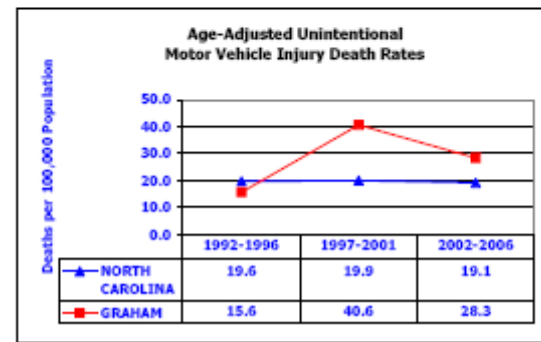
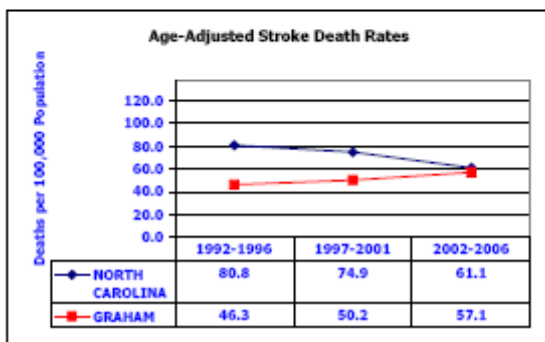
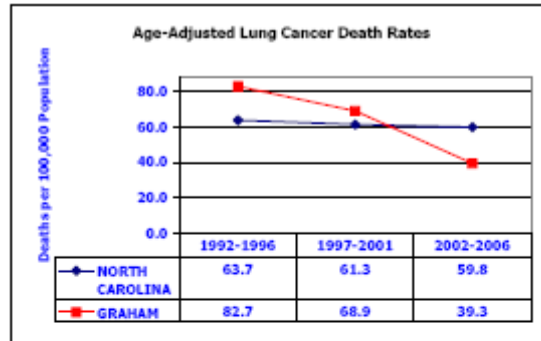
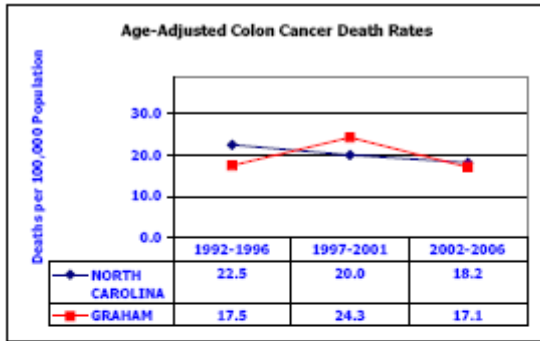
## NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: GRAHAM COUNTY



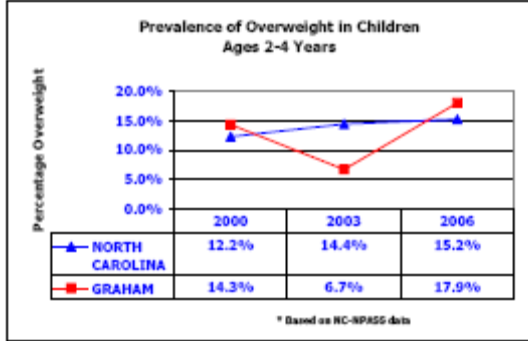
2006 Total Population: 8,109      Percentage Population Ages 65+: 19.5      Percentage Population Minority: 8.3



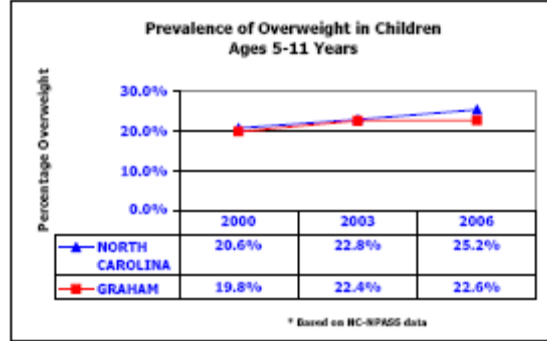
**NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS:  
GRAHAM COUNTY**



**NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS:  
GRAHAM COUNTY**



North Carolina County Trends Reports  
North Carolina Department of Health and Human Services



Division of Public Health  
State Center for Health Statistics

# Appendix K

## Pride Survey 2006

Table 1.1: Number of Students Surveyed

Grade	Grade Total	Male	Female
6	0	0	0
7	81	38	33
8	0	0	0
9	58	27	25
10	0	0	0
11	59	22	26
12	0	0	0
6-8	81	38	33
9-12	117	49	51
Total	198	87	84

We recommend that you share the findings of your survey with staff/faculty, administration, boards of education, elected officials, parents, community organizations and the news media.

While the findings are likely to show that certain problems exist within your student population, the overriding message will be that you are taking a fact-based approach to understand and solve these problems.

If you have questions about this report or if you wish to have information on other *Pride Surveys* services and products, please contact:

*Pride Surveys*  
 c/o Janie Pitcock  
 160 Vanderbilt Court  
 Bowling Green, KY 42103  
 1-800-279-6361  
 1-270-746-9596  
[janie.pitcock@pridesurveys.com](mailto:janie.pitcock@pridesurveys.com)

### Annual and Monthly Use

Table 2.2: Percentage of Students Who Report Using Drugs

DRUG	ANNUAL	MONTHLY
Any Tobacco	30.4	18.6
Cigarettes	23.3	13.0
Smokeless Tobacco	16.0	8.8
Cigars	10.5	3.1
Any Alcohol	28.9	11.3
Beer	22.8	9.3
Coolers, etc.	19.8	7.8
Liquor	20.8	7.8
Any Illicit Drug	20.0	8.2
Marijuana	13.5	5.7
Cocaine	1.5	0.5
Uppers	6.2	3.1
Downers	4.1	1.0
Inhalants	3.1	1.5
Hallucinogens	2.1	1.0
Heroin	2.1	0.5
Steroids	2.6	0.5
Ecstasy	3.6	0.5
OxyContin	3.6	1.6
Meth	2.6	0.5

### 2.3 Where Students Use

Table 2.3: Where Do Students Report Using

DRUG	AT HOME	AT SCHOOL	IN A CAR	FRIENDS' HOUSE	OTHER
Tobacco	14.1	4.0	7.6	12.6	9.1
Alcohol	8.1	1.5	5.1	12.1	13.1
Marijuana	3.5	2.5	4.0	7.1	6.6

### 2.4 When Students Use

Table 2.4: When Do Students Report Using

DRUG	BEFORE SCHOOL	DURING SCHOOL	AFTER SCHOOL	WEEK NIGHT	WEEK END
Tobacco	5.6	3.5	12.6	9.1	12.1
Alcohol	1.5	1.0	4.0	6.6	15.2
Marijuana	1.0	1.5	3.0	4.5	7.6

## 2.5 Risk Factors

Table 2.5: Percentage Of Students At Risk

FACTOR	PCT AT RISK
Guns NOT at School	11.8
Guns AT School	1.1
Gang Activity	3.1
Contemplate Suicide	3.1
Trouble With Police	14.7
Threaten A Student With a Gun, Knife or Club	2.2
Threaten To Hurt A Student By Hitting, Slapping or Kicking	23.9
Hurt A Student With A Gun, Knife or Club	0.5
Hurt A Student By Hitting, Slapping or Kicking	16.6
Been Threatened With a Gun, Knife or Club	4.3
Had A Student Threaten To Hit, Slap or Kick	26.9
Been Afraid A Student May Hurt You	17.8
Been Hurt By A Student With A Gun, Knife or Club	0.5
Been Hurt By A Student By Hitting, Slapping or Kicking	10.9

## 2.6 Protective Factors

Table 2.6: Percentage Of Students Protected

FACTOR	PCT PROTECTED
Make Good Grades	64.0
Attend Church or Synagogue	64.9
Take Part in Community Activities	15.5
Take Part in School Activities	26.8
Teachers Talk About the Dangers of Drugs	35.9
Parents Talk About the Dangers of Drugs	37.1

## Appendix L

The Economic Cost of Unhealthy Lifestyles in Graham County

### ADULTS

*The Bad News...*

The economic cost of unhealthy lifestyles\* among adults in Graham County is nearly **\$12 million annually**. This cost includes both direct medical expenses and indirect costs such as lost productivity, absenteeism and presenteeism.

If current trends continue and we do nothing to reverse them, we can expect to be spending nearly **\$17 million annually by 2010**.

*The Good News...*

If we can get just 3% of at-risk adults in Graham County to be more active, eat nutritiously, and achieve a healthy weight, we can save over **\$504,000 annually**. These wasted expenditures would be sufficient to fund about **23 new jobs** in our county (based on average salary figures).

### YOUTH

*The Bad News...*

The direct medical cost of unhealthy lifestyles\* among youth in Graham County is over **\$15,000 annually**.

If trends continue, the current group of inactive and overweight youth in our county will incur *medical care and lost productivity costs* of over **\$19 million** by the mid-point of their working years (mid-40s) and nearly **\$174 million** by the time they retire.

*The Good News...*

If we can get just 4% of at-risk youth in Graham County to be more active, eat nutritiously, and achieve a healthy weight, we can save about **\$863 annually** in direct medical costs.

\* “Unhealthy lifestyles” includes the risk factors of diabetes, depression, excess weight, physical inactivity, abnormal blood lipid level, low fruit & vegetable intake, and tobacco use.

Source: All data extrapolated from *Tipping the Scales: How fat has become a weighty problem for the North Carolina economy*. Be Active North Carolina, Inc., February, 2008.



## Appendix M



# COMMUNITY HEALTH OPINION SURVEY

## PLEASE READ ALL INSTRUCTIONS BEFORE YOU START!

This survey is part of the community health assessment currently in progress in Graham County. Community health assessment is the process of learning how healthy our community is. We want to use this information to develop community-based strategies to address health concerns. The following questionnaire has been developed to assess **YOUR OPINION** of local health assets, needs, and concerns. Please take approximately 10 minutes to fill out this survey.

### Part I: Information About You

Before you get started, we would like to know a little about you. These questions are of a personal nature, but are important and will be kept strictly **CONFIDENTIAL**. We do not ask your name on this survey.

- 1) Do you live in Graham County?
  - a) Yes
  - b) No
    - if yes, continue to #2.
    - if no, do not complete this survey.
  
- 2) How long have you lived in Graham County?
  - a) Less than 5 years
  - b) 5-10 years
  - c) 11-20 years
  - d) More than 20 years
  
- 3) What is your gender?
  - a) Male
  - b) Female
  
- 4) What is your race?
  - a) Black/African American
  - b) Native American/American Indian
  - c) Hispanic/Latino/Latina
  - d) White/Caucasian
  - e) Asian/Pacific Islander

- f) Other
- 5) What is your age?
- a) Under 25
  - b) 25-34
  - c) 35-44
  - d) 45-54
  - e) 55-64
  - f) 65-74
  - g) Over 74
- 6) Are there any children living in you home who are 18 years old or younger?
- a) Yes, how many \_\_\_\_\_
  - b) No
- 7) What is the highest level of schooling you have completed?
- a) 12<sup>th</sup> grade or less, no diploma or GED
  - b) High school graduate or GED
  - c) Some college, but no degree (includes vocational training)
  - d) Associate degree in college (AA, AS)
  - e) Bachelors degree in college (BA, BS)
  - f) Advanced degree in college (masters, doctorate)
- 8) What was your total household income last year (before taxes)?
- a) Less than \$20,000
  - b) \$20,000 to 49,999
  - c) \$50,000 to 79,999
  - d) \$75,000 or more
  - e) Don't Know
- 9) How many people does this support?
- \_\_\_\_\_
- 10) How is most of your health expenses paid?
- a) Medicare (includes supplemental policy)
  - b) Medicaid
  - c) Private Insurance (includes Blue Cross/Blue Shield)
  - d) Self Pay (you pay for all of your health care "out-of-pocket")
  - e) Other \_\_\_\_\_
- 11) If you have private insurance, who pays the premium cost?
- a) My employer pays the majority of the cost
  - b) I (or my family) pay the majority of the cost
  - c) Employer and I (or my family) each pay about half
  - d) Other \_\_\_\_\_

- 12) How long has it been since you last saw or talked to a doctor or other health professional about your own health?
- a) 6 months or less
  - b) 7 months to 1 year
  - c) 1-2 years
  - d) 3-5 years
  - e) More than 5 years
- 13) Do you see a doctor in Graham County or in another county?
- a) Graham County
  - b) Outside Graham County. Where? \_\_\_\_\_
  - c) Both
- 14) How long has it been since you last saw a dentist?
- a) 6 months or less
  - b) 7 months to 1 year
  - c) 1-2 years
  - d) 3-5 years
  - e) More than 5 years
- 15) Did you see a dentist in Graham County or another county?
- a) Graham County
  - b) Outside Graham County. Where? \_\_\_\_\_
- 16) How long has it been since you last took your child/children to the doctor?
- a) 6 months or less
  - b) 7 months to 1 year
  - c) 1-2 years
  - d) 3-5 years
  - e) More than 5 years
- 17) How long has it been since you last took you child/children to the dentist?
- a) 6 months or less
  - b) 7 months to 1 year
  - c) 1-2 years
  - d) 3-5 years
  - e) More than 5 years
- 18) How are you child's health expenses paid?
- a) Medicaid
  - b) Health Check/Health Choice
  - c) Private Insurance (includes Blue Cross/Blue Shield)
  - d) Self Pay

e) Other \_\_\_\_\_

19) Approximately how many physician visits have you and members of your household made during the past 12 months **inside** Graham County?  
\_\_\_\_\_

20) Approximately how many physician visits have you and members of your household made during the past 12 months **outside** Graham County? \_\_\_\_\_

21) If another health care provider was available in Graham County, would you use those services?

- a) Yes
- b) No
- c) Maybe

## **Part II: Health Opinion Survey**

In this next section, the survey asks **your opinion** about some conditions and services in your community. There is no right or wrong answers. We want to know **what you think**. We want to know if you see the item as a problem or not in your community.

22) How would you describe your general state of health?

- a) Excellent/Very Good
- b) Good
- c) Fair
- d) Poor

23) Compared to 12 months ago, would you say your health is...

- a) Better
- b) Worse
- c) About the Same

*Living in Our Community*

22) **In your opinion**, does your county have a problem with any of these issues?  
(Circle your answer).

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Schooling for pre-school children	0	1	2	n/a
Schooling for children kindergarten through high school				
Education & vocational training for adults	0	1	2	n/a
Job opportunities	0	1	2	n/a
Safe roads and bridges	0	1	2	n/a
Public transportation	0	1	2	n/a
Housing	0	1	2	n/a
Social services	0	1	2	n/a
Stores to buy things we need	0	1	2	n/a
Legal services	0	1	2	n/a
Water supply and quality	0	1	2	n/a
Injuries (car crashes, work-related, in the home)	0	1	2	n/a
Recreation facilities (parks, trails)	0	1	2	n/a
Sanitation (Garbage collection/removal)	0	1	2	n/a

*Health and Human Services*

23) **In your opinion**, do people in your county have a problem finding or using these services? (Circle your answer).

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Medical care	0	1	2	n/a
Dental care	0	1	2	n/a
Mental health care	0	1	2	n/a
Emergency medical care	0	1	2	n/a
Pharmacy/Drug Stores	0	1	2	n/a
Hospital services	0	1	2	n/a
Drug & alcohol treatment	0	1	2	n/a
Rehabilitation after surgery	0	1	2	n/a
Respite care (relief for caregivers)	0	1	2	n/a

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Health education programs	0	1	2	n/a
Transportation to health care	0	1	2	n/a
Private health insurance coverage	0	1	2	n/a
Enrolling in Medicare Medicaid	0	1	2	n/a
Food assistance (\$ for food)	0	1	2	n/a
Housing assistance (public housing or aid)	0	1	2	n/a
Utilities assistance (to pay electricity or fuel bill)	0	1	2	n/a
24 hour health care (urgent care or weekend services)	0	1	2	n/a
Other _____	0	1	2	n/a

*Health Services for Women, Infants, Children*

24) In your opinion, do people in your county have a problem finding or using these services? (Circle your answer).

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Care for pregnant women	0	1	2	n/a
Child health care	0	1	2	n/a
Childhood immunizations	0	1	2	n/a
Child care for infants and preschoolers	0	1	2	n/a
After school care	0	1	2	n/a
Assistance for families with children	0	1	2	n/a
Victims of abuse	0	1	2	n/a
Other _____	0	1	2	n/a

*Health Services for Older People*

25) In your opinion, do older people (65 and older) in your county have a problem finding or using these services? (Circle your answer).

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Medical care	0	1	2	n/a
Home health care	0	1	2	n/a

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Adult day care	0	1	2	n/a
Mental health care	0	1	2	n/a
Transportation (for any need)	0	1	2	n/a
Recreation programs	0	1	2	n/a
Medical equipment	0	1	2	n/a
Nutrition programs (like meals on wheels)	0	1	2	n/a
Social Programs	0	1	2	n/a
Other _____	0	1	2	n/a

*Unhealthy Behaviors*

26) In your opinion, do people in your county have a problem with any of the following behaviors? (Circle your answer).

	No Problem	Somewhat of a Problem	Major Problem	I Don't Know
Alcohol abuse	0	1	2	n/a
Illegal drug use/substance abuse	0	1	2	n/a
Cigarette smoking among adults	0	1	2	n/a
Cigarette smoking among people under 18	0	1	2	n/a
Drinking and driving	0	1	2	n/a
Driving or riding a care without seatbelts	0	1	2	n/a
Sexually transmitted diseases	0	1	2	n/a
Lack of physical activity or exercise	0	1	2	n/a
Poor eating habits/lack of nutrition	0	1	2	n/a
Other _____	0	1	2	n/a

*Thank you very much for you response!*

Survey Results will be tabulated and reported to the community!

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## References

- AMSA. (n.d.). *It takes More Than Medical School to Make a Physician, What are Health Disparities?* Retrieved September 21, 2008, from <http://www.amsa.org/disparities/whatis.cfm>
- Be Active North Carolina. (2008). Retrieved October 21, 2008, from [www.beactivenc.org](http://www.beactivenc.org)
- Beyond 20/20 Web Data Server. (2007). Retrieved September 21, 2008, from <http://149.168.35.67/WDS/ReportFolders/ReportFolders.aspx>
- Faith Guide 2007. (2007). *A chronicle of Graham County's places of worship*. A special publication of *The Graham Star*.
- Graham County Government Website. (2007). Retrieved September 21, 2008, from <http://www.grahamcounty.org>
- Healthy Carolinians. (2008). 2010 Health Objectives. Retrieved September 17, 2008, from <http://www.healthycarolinians.org/2010objs.htm>
- Holmes, Mark. (2003). County-level Estimates of the Number of Uninsured in North Carolina, 2003 Update, Health Policy Analysis Unit, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
- J. Murrey Atkins Library. (2005). Medicare County Enrollment-North Carolina 2002. Retrieved September 21, 2008, from <http://library.uncc.edu/display/>
- NC DHHS State Center For Health Statistics. (n.d.). 2001-2005 NC Resident Race and Sex-Specific Age-Adjusted Death Rates.
- NC IOM Healthcare Safety Net Task Force. (2005). Executive Summary, NC Healthcare Safety Net Report; 2005. Retrieved September 21, 2008, from <http://www.nciom.org/projects/SafetyNet/safetynetexecutivesummary.pdf>
- North Carolina Action For Children. (2007) County Data. 2006 County Data Cards. Retrieved September 21, 2008, from <http://www.ncchild.org/action/index.php/County>
- North Carolina Central Cancer Registry (CCR). (2005). Retrieved September 21, 2008, from <http://www.schs.state.nc.us/SCHS/CCR/cp2005/Graham2005Profiles.pdf>
- North Carolina Childhood Lead Screening Data by County. (2002). Retrieved October 14, 2008, from [http://www.google.com/hws/search?hl=en&client=dell&channel=us-  
psp&ibd=&q=NC+Childhood+Lead+Screening+data](http://www.google.com/hws/search?hl=en&client=dell&channel=us-<br/>psp&ibd=&q=NC+Childhood+Lead+Screening+data)

- North Carolina County Health Data Book – 2007. (2007). North Carolina Department of Health and Human Services. Retrieved September 21, 2008, from <http://www.schs.state.nc.us/SCHS/data/databook/2007/CD19%20allhosps.rtf>
- North Carolina Department of Commerce. (2008). *Economic Development Intelligence Systems*. Retrieved September 21, 2008, from <https://edis.commerce.state.nc.us/Portal/main.do>
- North Carolina Department of Commerce. (2008). 21<sup>st</sup> Century Communities – Graham County, Department of Commerce, Update on Activities and Assistance, Section 2, March 20, 2008.
- North Carolina Economic Development Intelligence System, EDIS. (n.d.). Retrieved September 8, 2008, from <https://edis.commerce.state.nc.us/SASPublicStoredProcess>
- North Carolina State Centers for Health Statistics. (n.d.). North Carolina Statewide and County Trends in Key Health Indicators. Retrieved September 16, 2008, from <http://www.schs.nc.us/SCHS/data/trends/pdf>
- School Matters. (2006). A Service of Standard & Poor's. Graham County Schools. Retrieved September 22, 2008, from <http://www.schoolmatters.com/>
- Scorecard. (2008). The Pollution Information Site. Retrieved October 14, 2008, from <http://www.scorecard.org>
- Stecoah Valley Cultural Arts Center. (2008). Retrieved September 12, 2008, from <http://www.visitsvcenter.com/index.html>
- Technology and Data Services-Office of State Budget and Management. (n.d.). Retrieved September 21, 2008, from <http://data.osbm.state.nc.us>
- The Annie E. Casey Foundation. (n.d.). Helping vulnerable kids & families succeed. CLIKS: Community-Level Information on Kids. Retrieved September 21, 2008, from <http://www.kidscount.org/cgi-bin/cliiks.cgi>
- The Employment Security Commission of North Carolina. (July 2008). Public and Media Information, Current ESC Workforce Information from Graham County and North Carolina. Retrieved September 21, 2008, from <http://www.ncesc.state.nc.us>
- U.S. Census Bureau. (2000). *U.S. Census 2000 Survey*. Retrieved September 21, 2008, from <http://www.census.gov>
- U.S. Census Bureau. (n.d.). State & County QuickFacts. Graham County, North Carolina. Retrieved September 8, 2008, from <http://quickfacts.census.gov/qfd/states/37/37075.html>
- Welcome to Graham County Website. (2008). Retrieved September 21, 2008, from <http://www.main.nc.us/graham>