

Union County Community Health Assessment 2008



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EXECUTIVE SUMMARY & CONCLUSIONS

The Community Health Assessment or CHA was an opportunity to study the health of the county, both from an individual perspective and from an overall community perspective. The CHA has two mandated data components; internal data and external data. Each community must collect internal data directly from residents. This is done to develop a framework of understanding regarding the specific health concerns, disparities, behaviors and environmental factors that are impacting the health of residents and the community at large. The secondary data or external data collected through agencies such as the State Center for Health Statistics, included in the assessment, are the key health indicators of a community such as infant mortality, communicable disease, STDs and leading causes of death. Secondary data must be collected by an entity outside of the Health Department. In order to gain an accurate assessment, both internal and external data components are needed and used in priority setting.

The Community Health Assessment is a requirement of the North Carolina Division of Public Health for departmental accreditation. The health assessments are done every 48 months by the local county health department.

Once the data was collected and compiled, the results were presented to the community for priority setting and strategic planning. The overall goal was to establish a collaborative network with a focused, planned approach for addressing the identified priority issues.

The assessment was conducted countywide, with respondents answering surveys targeted to their specific age group; adult, senior or teen. Spanish surveys were provided for residents that do not speak English. Focus Groups were held in Spanish and English, and service provider interviews were done. Statistics were included from numerous external sources and reports at both the state and local levels.

Assessment results and statistics highlighted below were determined to be problematic or of concern for County residents in achieving positive health outcomes:

Adult

Lack of Exercise / Poor Eating
Alcohol Abuse
Obesity

Senior

Concerns over Long Term Care
Prescription Drug Costs
Medical Problems / Indigent Issues
Lack of Adult Daycare

Teen

Teen Pregnancy
Sex Education
Peer Pressure, Self-image
Soft Drink Consumption

Chronic Diseases

Cancer
Heart Disease
Alzheimer's
Diabetes

Environmental Health

Restaurant Safe Food Handling
Drinking Water Access / Quality
Outdoor Air Quality
Smoke Free Restaurants

General Concerns

Affordable Healthcare
Stress related to Money
Mental Health Services

At the conclusion of the community assessment the results illustrated the fact that common threads exist across gender, race, ethnicity and generation regarding specific impacts on our health and well being as a community. The commonalities include **cost of medical services, local access to services, behavior modification and education**, as well as **emphasis on preventative measures, both personal and environmental. The main environmental concerns were water access and quality, and outdoor air quality.** The named chronic diseases that participants expressed concern about are among the top ten leading causes of death in Union County.

Personal Health

Cost & Access

Statistics show that foregoing doctor and dental appointments reduces chances for early diagnosis of health issues and chronic diseases. The residents all share concern for the cost of medical care regardless of what income level they fall into. Cost, as it pertains to accessing care, was illustrated in survey answers; with 65% of adult respondents, 47% of senior respondents and 35% of teen respondents, listed money as the main reason they did not see a doctor when they needed to. The response percentages for not obtaining needed dental services due to money were 50% and higher for all groups.

Cost was also the main reason that respondents gave for why they did not fill a needed prescription. Although the county does have two programs that provide prescription medications at a drastically reduced rate and on an emergency basis, the survey responses indicated that the majority of residents are not aware that these programs exist. Further complicating access to these programs is the fact that a prescription is needed for Healthquest medicine, and many clients cannot afford a doctor's appointment to get the prescription written. Being uninsured or underinsured, and having no primary care physician or medical home, forces people into going without medications that could save lives, or improve quality of life and long term prognosis. These people often seek care in an emergency room with an advanced condition that could have been treated and controlled if they were prescribed appropriate medications at an earlier point in their condition. Funding and marketing efforts for programs involving reduced cost prescription services and emergency prescription services needs to be expanded to have a broader impact.

According to the survey responses, 21% of adults and 20% of teens stated that they are uninsured, with 54% of senior respondents reporting that they have Medicare / Medicaid. A recent Needs Assessment conducted by the United Way had similar outcomes, showing 661 Union County Households or 30% of survey participants stating that a healthcare need had not been met due to cost. Another 20% went without preventative care and 12% opted out of medical services totally. The monetary decision to forego medical care greatly reduces the chance for early diagnosis or prevention of a health problem that would typically be discovered at a routine doctor visit or with general screening practices.

Survey respondents expressed a preference for staying within the county to access medical care. Senior survey respondents were most likely to seek medical care from a doctor in Union County at 63%, while 49% of adult respondents see a doctor in the county. However, residents stated that most often for serious medical problems, surgeries, or specialized care they were referred outside Union County, typically into Charlotte.

Union County presently only has one hospital although the county has seen an increase in emergency service facilities, with several new urgent care offices opening in the past few years. Union County is not an exception, but more a part of the common situation that exists in many communities, in that the number of medical professionals has not kept pace with the population growth. In 2006, (per 10,000 population), the county has the following medical professional availability: 2.1 Dentists, 7.8 Physicians, 4.8 Primary Care Physicians, 6.1 Pharmacists, 43.1 Registered Nurses, 0.9 Nurse Practitioners, 0.6 Nurse Midwives and 1.3 Physician Assistants.

The statistics above represent a nominal growth pattern in comparison to overall county population growth over the same period. This medical service professional gap will likely widen further as the trend continues.

Union County does not have an indigent health clinic for adult care. Uninsured residents either forego care, or seek care in the emergency room (ER). The concept of using the emergency room for primary care has far reaching implications, translating into cost to patients, the hospital and the community. As a

result, the county's indigent population is seeking care in neighboring counties where available. Notwithstanding, an Affordable Healthcare Committee comprised of Health Department, local hospital and community representation has been working to develop a model for free and reduced cost clinics. Two examples that have been discussed as viable options are as follows:

- "Free clinics" operated as a private community-based health care clinic for the indigent, uninsured, underinsured, and families of the working poor or elderly. Funding would come through donations, and patients contribute when able. It would be centrally functioning, run by a small working staff, but accomplished through an active working board of directors and a pool of volunteers that service all aspects of the operation. The NC Association of Free Clinics is the only organization specifically designed to support and protect the efforts of these local programs on a national level.
- The second strategy for serving this population was using a Physician Reach Out or PRO model. The Physician Referral Program is a coordinated system for helping uninsured residents obtain the care they need in the most cost efficient, and cost effective way possible. It is designed to aid physicians who want to volunteer their time and services to individuals who do not have access to quality healthcare because of financial barriers. With this model, local physicians would make an annual commitment as to how many patients they would see in their office at no cost.

The group predicts that these facility models will impact the unmet healthcare needs of the low-income, uninsured residents of Union County, and says that unless a healthcare solution is implemented, local hospital emergency rooms, the health department and a single sliding-fee scale clinic, operated by the local hospital will continue to overflow with the low-income, uninsured.

Mental Health / Substance Abuse Services

Residents, service providers and law enforcement all shared a concern over the insufficient availability of mental health services. They expressed frustration with the lengthy, complex system required to obtain mental health services, even in crisis situations. The hospital ER, and local law enforcement simply do not have the appropriate space and or personnel required to wait out the commitment process.

Stress issues pertaining to money and family members were the top two sources of stress for adult survey respondents. Stress and peer pressure were dominant topics in the teen focus group. Regardless of age, stress is a part of the world we live in, how we manage that stress is critical to our well-being. Stress issues can lead to more serious physical and mental health concerns if they are not managed and treated. Union County does have counseling agencies such as Daymark and United Family Services that offer a vast array of counseling services. These agencies are seeing continual increases in demand for services.

In March 2007, Daymark added Mobile Crisis Management to their existing menu of mental health services. The Mobile Crisis program is a short-term crisis prevention or intervention service. It is made available to Union County residents who do not have the means to get themselves to outpatient services or emergency services. The primary goal of the service is prevention based, meant to prevent clients from ending up in a psychiatric hospital, prison or emergency room. The secondary program goal is assessment focused, with a referral component. This is an important component in strengthening local mental health services, and reaching people that otherwise may not receive any services or assistance. However, even with this important new mobile service, mental health needs are still going unmet. Bilingual Counselors are needed according to service providers that participated in the focus groups.

Adult Concerns

Alcohol abuse was the number one unhealthy behavior on both the adult and senior surveys and was the second unhealthy behavior for the teen surveys. Drug use was the number one unhealthy behavior response for teens, it was the second unhealthy behavior response for adults and the fourth unhealthy behavior response for seniors. There was a consensus that drug and alcohol use is negatively impacting lives in Union County regardless of age.

Substance abuse services are limited in Union County. Acceptance in state run programs often requires being placed on a waiting list for weeks, which is not a viable option for someone reaching out for substance abuse help. Some county residents decide to forego treatment rather than having to travel out of county to receive the help they need.

Senior Concerns

Senior residents top concerns are inter-related; concerns over long term care, lack of adult daycare, medical problems and costs, and prescription drug cost and understanding. Union County has a relatively small senior population (only 8% are 65 and over). However, Union County does have an Alzheimer's rate that is nearly double the state rate. Alzheimer's disease is the fourth leading cause of death in the county. The county only has two secured memory care units dedicated to residents with Alzheimer's and Dementia.

According to local agencies and seniors that participated in the senior focus group, seniors are often unable to understand the costs associated with long term care and how to appropriately plan for that time in their life. Many seniors only method of a plan for paying for long term care is their monthly social security check. Many seniors simply have no plan at all until they are already in a desperate situation due to illness, death of a spouse, or other unforeseen life events. Local Nursing Homes and Assisted Living Facilities stated that all too often people purchase plans to "cover" long term care expenses but do not read the fine print which can be very exclusionary. Being unprepared and discovering the fine print at the time a family member is trying to gain residency in a nursing care facility, is too late to make corrections. Seniors need more education on long term care options, costs, insurance, pitfalls and availability of care within the county. With a greater understanding, seniors could enter their later years better equipped to deal with securing long term care, rather than having to be reactionary while dealing with a life event or crisis that pre-empts residency in a nursing facility.

Senior respondents overwhelmingly felt that there is an insufficient amount of adult daycare in the county. As an alternative to placement in a long term care facility, adult daycares allow seniors to stay in a residential home setting with their family, by providing care and supervision during working hours, so family members can continue employment while their loved one remains safe and supervised. Without this option many seniors would end up in nursing homes much sooner. Union County has two Adult Daycares, one in Monroe and one in Waxhaw.

Teen Concerns

Teen assessment results had two areas of focus that came to the surface; peer pressure pertaining to self-image and sexual activity. The top four teen concerns in order were; teen pregnancy, HIV / AIDS, sexual assault / rape and sexually transmitted diseases. Teens that participated in the focus group discussed the need for a more broad based sex education program. Presently, the Union County Public Schools abide by an abstinence only policy. The students felt that they should also be offered information on birth control and sexually transmitted diseases. They felt that the abstinence only policy was not successful. The students stated that many teens are having unprotected sex with numerous partners and are unaware of the health risks.

Evidence also supports a teen pregnancy problem in Union County. Although the county's overall teen pregnancy rate is still below the state rate, the minority teen pregnancy rate is well above. The Union

County minority pregnancy rate (girls 15 to 19) is 101.5 vs the state rate of 82.1 per 1,000. The Union County teen minority abortion rate (girls 15 to 19) is 21.6 slightly over the state rate of 21.3 per 1,000. Teen pregnancies have been on the rise in Union County, while state rates have been on decline. This is a trend that Union County must address. (Pregnancy rates listed were from 2006).

To combat the rate of pregnancy, the county Health Department has created a new position in Health Education with the intention of collaborating with the school systems "Best Start" program (under the umbrella of Union County Smart Start). This program was developed to assist teen mothers to access information about health, child development, and parenting.

The overwhelming majority of people in Union County living in poverty, reside in a household with a female listed as head of that household. Numerous issues are directly connected to teen pregnancy such as; low self-esteem, being raised in lower income single parent family, or in the case of Hispanic families, being a teen mom is part of an accepted cultural norm. Left unaddressed, the teen pregnancy issue will most likely add to our households living in poverty.

In interviews with people that see and work with teens, particularly pregnant teens, it was revealed that teens have unrealistic expectations about what the county and state provide in free services, as well as not being fully aware of the responsibilities that are required to parent a child. It was also discovered that a large majority of teen moms expect their own mother to raise the baby. The large majority of teen dads are not accepting any responsibility at all. Without attention this issue will continue to spiral out of control, with many tentacles of additional related problems, such as; increased case loads for the local WIC Program, DSS case loads increase, poverty numbers increase, drop out rates increase, etc.

Although abstinence is the only guaranteed method for STD prevention and 0% pregnancy, many people believe sex education, birth control and related issues should be discussed and worked out within a family setting, this is not typically the reality of the home situation for many teens that end up pregnant.

The last major teen health concern, evident in the survey results, was nutritional in nature, i.e., the number of soft drinks and or high sugar content drinks that teens consumed in a day. The results indicated that many teens drink 5 or more soft drinks per day. Drinks of this nature have zero nutritional value, and can lead to kidney stones, osteoporosis, poor dental health and obesity. This is an area in which education is needed and behavior modification is a must.

Chronic Disease / Lifestyle Questions

The chronic diseases that County residents are most concerned about, are also diseases that are among the most deadly in Union County; cancer, heart disease, Alzheimer's and diabetes. Healthy lifestyles that include a healthy well balanced diet, exercise and access to medical care can help prevent the onset of chronic disease.

In responding to healthy lifestyle questions, Union County adult residents credited themselves largely as non-smokers (77%), more than 50% stated that they exercise at least 2 to 3 days per week and 43% stated that they eat 2 servings of fruits and vegetables daily. However, the same survey respondents also tallied up high percentages overall for lack of exercise and poor eating habits as unhealthy behaviors that are causing poor health in the county. These answers are contradictory.

Exercise results for teens were higher than that of adults, with 30% of teens claiming they exercise 5 or more days each week. Teen eating habits show 43% eating just 2 servings a day of fruits and vegetables, and eating fast food 1 to 2 times per week. The recommended number of servings of fruits and vegetables daily has varied over the years from the famous five a day, and more recently even a higher daily consumption recommendation for fruits and veggies. These nutrition and exercise driven statistics are behavior modification issues. People must continue to be educated on the importance,

necessity and life long implications of good nutrition and eating habits, accompanied with regular physical activity.

Union County residents had strong opinions to support that they feel Union County is not pedestrian friendly and is lacking in affordable fitness and recreation opportunities. Sidewalks, bike paths and fitness centers were at the top of requests and most of the discussions. The Monroe Aquatics Center received high praise. However, the affordability factor entered into the discussion. Participants were emphatic about wanting affordable fitness and recreation options dispersed across the county, with opportunities for youth through seniors to exercise safely. Passive recreation opportunities were very important to the seniors, who felt that the parks being constructed are more geared to youth sports. Seniors were equally as concerned that recreation facilities were safe places to go. CHA participants stressed that if they had more options for fitness and recreation closer to their homes, that were free (such as sidewalks or bike paths), or affordable gyms and fitness centers, they would exercise more frequently.

With obesity reaching epidemic proportions in the United States and children having shorter lifespan expectations than their parents, the fitness, nutrition and behavior modification message cannot be repeated or emphasized enough. CHA adult and senior participants expressed the idea that healthy lifestyle habits are started at a young age, and therefore the schools should be emphasizing healthy eating and exercise. It was suggested by participants that the schools should increase the amount of required physical activity for students. Obesity was on the radar of every age group that participated in the assessment.

At-Risk Populations

Several specific groups could be labeled at-risk; pregnant teens and their babies, teens having unprotected sex, uninsured and underinsured residents, and seniors unaware of how to plan for long term care. With the decline of the economy and the rising costs of all consumer goods, more and more residents will have to make choices between food, utilities, gas, or medical expenses. Each time choices are made that do not include medical necessities whether it is services or prescriptions, health outcomes are negatively impacted and more people are at risk and fall into the uninsured categories.

Environmental Health

Food, Lodging, Institutions

The participants answered questions and held discussions regarding environmental health impacts affecting the community. Restaurant safe food handling was the largest concern from a programmatic perspective. The facilitator emphasized to each group that Union County has a Food, Lodging and Institution Program housed in the Environmental Health Division of the Health Department. They are charged with inspection of all food handling businesses and restaurants, school cafeterias, etc.

Air Quality

Air quality was largely viewed as beyond the control of the county and viewed as a regional issue. Charlotte shouldered a large amount of blame for Union County air quality issues. In August of 2007, Union County experienced one code purple ozone day according to Department of Environment and Natural Resources. A code purple day is both very unusual and very unhealthy contributing to the aggravation of many with lung conditions.

Respiratory Disease is Union County's fifth leading cause of death. One common form of respiratory disease is Asthma. Asthma can affect people of all ages, but is increasingly becoming common in children. Exposure to pollutants and allergens are among the risk factors for Asthma. Union County has seen an increase in the lung, trachea and bronchus cancer rate. Union County's Age Adjusted Lung Cancer Death Rate for the time period 2002-2006 of 62.8 (per 10,000 population) exceeds the state rate of 59.8 for the same period. Many focus group participants blamed the county's growth, specifically the

tree removal, loss of vegetation and increased number of vehicles on the road for the decreasing air quality. Participants felt the county was “taking from both sides of the air quality equation”. Union County remains in non-attainment status with the state from an economic development perspective. Union County cannot recruit any new industries that will put new or additional pollutants into the air. The county (as part of the Charlotte Region) is expected to be taken out of non-attainment status in 2010.

During the mayoral focus group, it was emphasized by the elected officials that they have the greatest opportunity to impact environmental matters at the local level. The statement was made that this could be accomplished through development, adoption, implementation and enforcement of environmental ordinances that have real teeth in them, with real consequences for violators. One example cited by this group was the enacting of local Tree Ordinances, which are often in place in some municipalities, but are not always enforced.

With large urban populations such as that of the Charlotte region, air quality challenges are inevitable. The regional air quality issues that are directly impacting Union County’s air quality will be a factor for years to come.

Indoor air quality was also addressed in the surveys. ALL age groups, races, and genders expressed a desire to have more smoke free restaurants in Union County. Presently the county does have a Smoke Free Union task force working on this issue.

Water Access & Quality

WATER, WATER, WATER, was a repetitive theme, at times verging on a battle cry. Participants expressed their concern and opinions over both access to water and water quality. After a year that included a continuation of the drought, additional water restrictions, and new well legislation, water remains on the forefront of residents minds. The sentiment that was expressed loudly and repeatedly was that access to county and city water was not sufficient and county well water was of poor quality.

At differing levels, arsenic is a fact of life in Union County well water. The county (as does a large part of the Charlotte region) sits directly on top of a slate belt, which naturally produces arsenic in the groundwater. Water tests can be done to determine arsenic presence and levels in well water and filtration systems can be installed to bring the water into acceptable levels for safe consumption. However, participants felt that the costs associated with the filtration systems made them cost prohibitive for most residents.

In August 2008 the state put into effect new well legislation that greatly increased the requirements, and steps involved in permitting and drilling drinking water wells. The legislation also greatly increases the required steps for the Union County Environmental Health Staff in the well permitting, drilling and inspection. An increase from \$35 to \$275, for a well permit will include a much more thorough process. The end result should be safer drinking water from new drinking water wells. Union County Environmental Health implemented the new rules in 2007 rather than waiting for the state to make them official. In 2008, the Union County Board of Health took the rules a step further in an additional effort to safeguard the groundwater which directly impacts well water. The 2008 state well legislation pertained only to drinking water wells. The Board of Health saw the increase in irrigation well permits being requested in the county as a result of the drought. Irrigation wells pull from the same water table as drinking water wells, yet they were not held to the same standards or permitting requirements. The drafting and adoption of the local Irrigation Well Rule will act as a regulatory measure for the wells themselves and provide additional water table protection by establishing more control at the local level.

Union County’s lack of a natural water source, and the naturally occurring arsenic are all realities that need attention and solutions. These are not man made problems, but certainly play a role in the health and well being of residents. Water and water related issues will be a permanent part of the infrastructure equation for Union County to deal with for years to come.

Growth Impacts on Health and Wellness

Union County has a growing young population with a median age of 35, and the majority of households consisting of married couple families. However, the growth has been overwhelmingly residential (87% residential vs. 13% commercial / industrial).

Union County has infrastructure issues resulting from non-linear infrastructure costs absorbing the lion's share of monetary resources. Linear capital investments are the investments that are essential to support economic development and a healthy living environment for citizens. These linear infrastructure elements include things such as; streets, roads, sewer systems, drainage systems, water supply systems and solid waste disposal facilities. Although Union County has these elements, they were unable to keep pace with the residential influx that has occurred. The non-linear capital investments which are defined as facilities and services whose presence and availability are extremely desirable, but their immediate necessity can be debatable would include such things as; parks, schools, libraries, mass transit, etc. In Union County the public school system consumes the majority of the county budget. In FY '07 / '08, Health and Human Services was allotted just 10% of the county tax dollars, or 18% of the overall county budget. Those dollars were further divided between inter-governmental health and human service agencies. Agencies and services can be hamstrung by limited funding resources and escalating demand for services and programs.

The topic of infrastructure, both linear (sewer capacity, water access, water sources, solid waste facilities, roads) and non-linear infrastructure (schools, parks, transportation, medical facilities) were an integral part of the surveys, and focus group discussions in the assessment process. The development and provision of infrastructure is a primary function of government. It has a direct influence on the community as a whole and impacts individual residents at differing levels.

The healthcare dilemma can be a vicious cycle, the key step needed to interrupt the cycle is to educate residents on how to better care for themselves and family members to improve their quality of life. Health Education is a pre-emptive measure to prevent or delay the onset of escalating medical problems or chronic disease. The costs associated with being healthy are far less than the escalating costs related to illness or injury. Preventative programs cost money to develop and implement, but can save money for both the community and individual residents in the long term.

Access to care is also a key element in health status. Union County will need to continue to build upon the medical resources that it presently has, with the escalating residential numbers, comes escalating demand for services. In an unstable and declining economy, uninsured numbers will climb, as will residents stress levels and mental health issues. An indigent clinic and additional mental health services are needs that will be more and more evident moving forward.

Although Union County is still regarded as a healthy place to raise a family, the issues impacting health and wellness of county residents are growing.

INTRODUCTION

In July 2007, the Union County Health Department in conjunction with the Union County Healthy Carolinians Office began work on the community health assessment. The kick off meeting for the community health assessment was combined with the kick off for the new Healthy Carolinians effort in Union County. The meeting was attended by 40 people from various agencies and backgrounds across Union County. This group had worked on the development, review and final approval of the community health assessment survey tools. Immediately following the July 2007 meeting the Healthy Carolinians Coordinator began working directly in the community and also partnering with the Healthy Carolinian members to canvas the community with the surveys.

The objective of the assessment was to gain an understanding of health issues impacting county residents, determine what programs, services and facilities are available, and what is needed, or needs improvements. The overall goal was to identify needs, and communicate findings back to the community. With the final result being a broad collaborative grassroots plan to prioritize identified needs and begin working toward solutions.

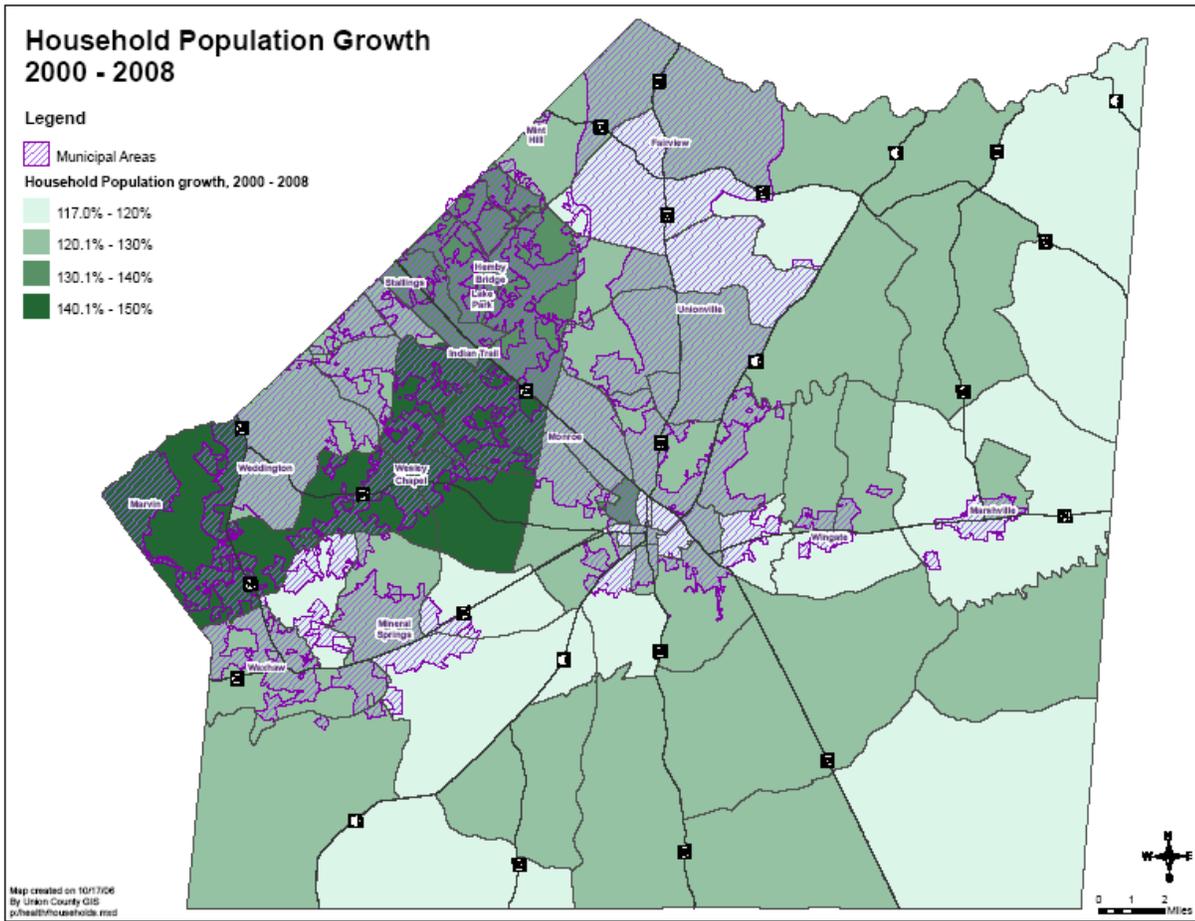
The assessment was planned in phases, with the largest portion being a paper survey campaign. The surveys were divided into three age specific categories, adult surveys for 19 to 54 years of age, senior surveys for 55 and older and teen surveys for 13 to 18 years of age. Two data collection methods were used, random and convenience sampling. The random respondents came from the County jury pool participants. This was set up as a collaborative effort with the County Clerk of Court's office, when new jury pools were called in, they were asked to complete the survey while waiting. The convenience sampling was done at county events and in collaboration with numerous county and municipal agencies. Thousands of surveys were completed, which could not have occurred without tremendous community collaboration and cooperation, see Appendix I and II.

The second phase of the assessment was focus group driven. Specific niche groups were identified to participate in the focus groups. All groups, (except teens) were asked the same questions, with the premise that overlap in responses should occur regardless of the group within areas that are truly problems for the county. The niche groups were selected due to their specific demographic group, occupation or elected position in the county. The intent was also to drill down into specific areas that are having an impact on the health and wellness of residents, while also gaining insight and input from the people that are in the most optimal positions to affect positive change, or belonged to a group within the community that could potentially be considered an at-risk population based on known statistics.

Once all survey responses were entered into the database, numerous reports were run based upon specific demographic groupings, geographic groupings and topic groupings. Results were converted into visual graphs or pie charts for reporting purposes. Narratives were written.

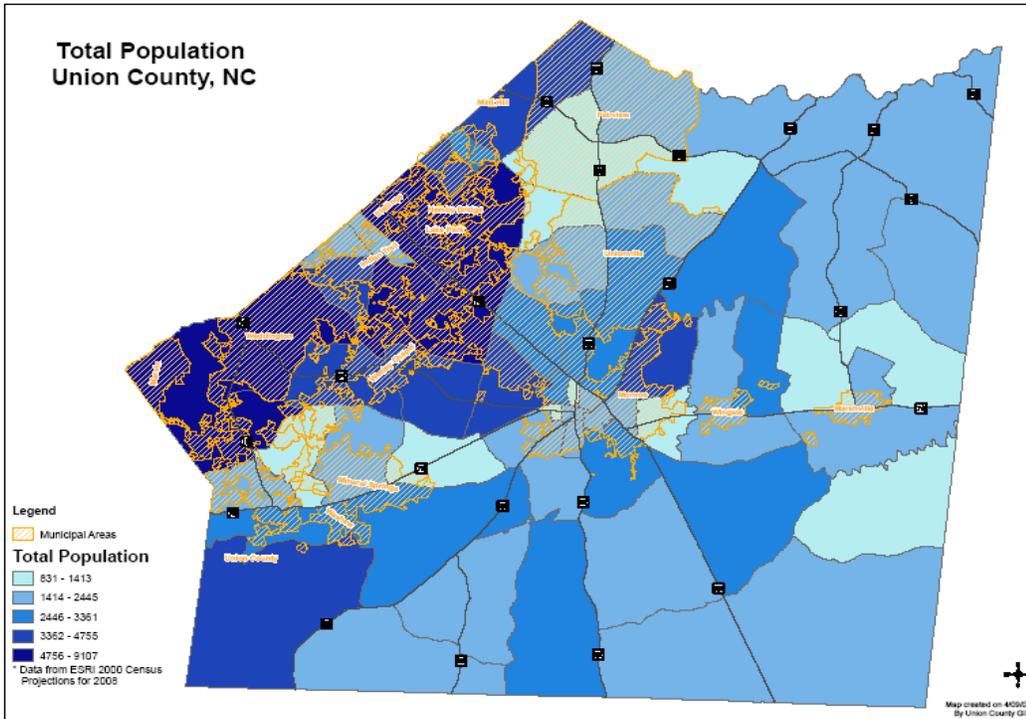
The third and final phase of the assessment was a community meeting that included key service providers, county officials and Healthy Carolinian members to discuss the results. It was up to the attendees of this meeting to select options from the assessment results to use as community health priorities going forward. The areas selected as options were converted onto a scanner answer sheet so that meeting attendees could fill in their preferences for prioritizing health issues by category. The answer sheets were fed through the scanner, reports were run and priorities were set based upon the preponderance of responses. These priorities will become the basis for the Healthy Carolinian action plans and will be used by the county Health Department in strategic planning.

UNION COUNTY NC PROFILE



Union County 2007

- 643 Square Miles, 14 Municipalities
- Estimated Population 175, 272
- County growth, 41.6 % since 2000 Census
- Fastest growing County in the Carolinas
- 7th fastest growing County in the nation.
- Median Age 35
- Median Income \$64,184
- Average Weekly Wage \$652
- Civilian Labor Force 91, 692
- Unemployment Rate 5.6 (June '08)
- \$17.3 billion dollar total tax base
(88% residential / 12% commercial)



Union County North Carolina was established in 1842 and is located southeast of Charlotte within the Charlotte Metropolitan Statistical Area. The County is 643 square miles and has 14 municipalities. The County seat is the City of Monroe, located in the center of the county. The estimated population for 2007 is 175,272.

The county is governed by a Board of Commissioner / Manager form of government. The five commissioners are elected countywide with an appointed county manager.

Union County has been experiencing tremendous residential growth for years. Since the 2000 Census the growth in Union County has been outpacing the growth of the state. Union County has grown 41.6% versus the state growth of 10.1%.

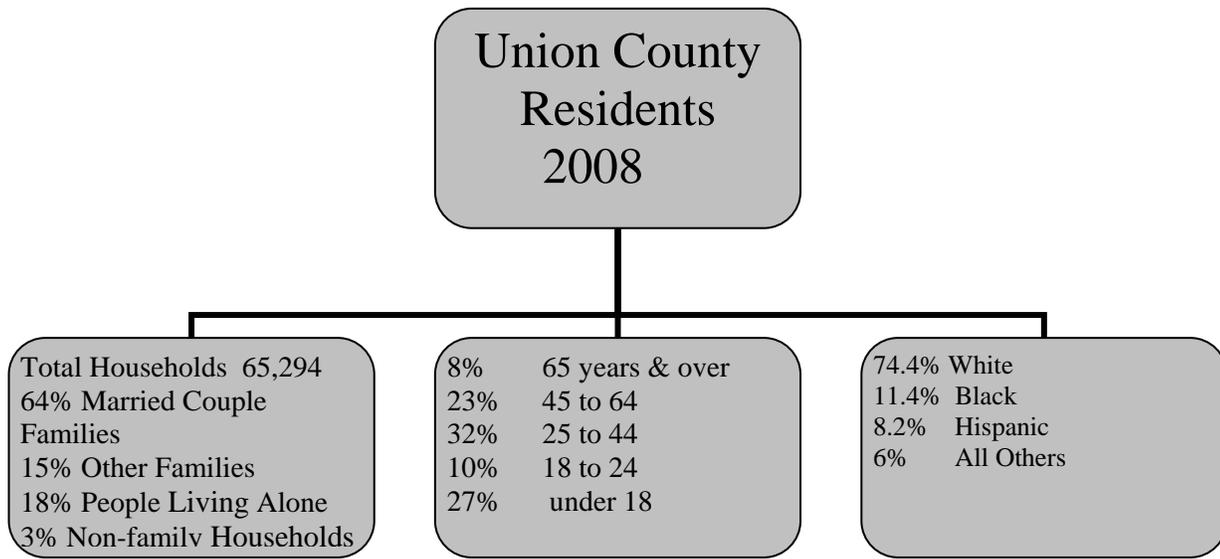
With the continued influx of residents, the county faces infrastructure challenges that present themselves as fiscal and physical growing pains for local government. The county's tax base is overwhelmingly residential, with minimal industrial and commercial to offset service costs.

The industries that the county does have are very diverse. The diversity affords a wide variety of employment opportunities for a range of skill sets and educational backgrounds. The county has industry clusters in aerospace, automotive, construction materials, plastics and poultry processing.

The county has 48 public schools. County schools continue to perform despite strains and pressures from growth. Union County students excel academically scoring higher than both state and national averages for SAT scores. The Union County average SAT score was 1023, higher than the North Carolina score of 1004 and higher than the national score of 1017. For the 2007 school year, the county graduated 1,920 students a rate of 77.3%. A high rate of the graduates had college in their future, 85% planned to attend college, 49% at a four year college and 36% at a two year college. The graduates were awarded \$22.3 million dollars in scholarships. The county drop out rate for grades 7 through 12 for the 2006 school year was 2.76%.

Union County continues to earn its reputation as a great place to live and work.

ACES IN THE CROWD



Union County is adding new faces all the time. In 2008 the county became the seventh fastest growing county in the nation.

Union County has a median age of 35 and has 65,294 households, an increase from 43,390 in 2000. The average family size in Union County is 3.2, with the majority of households being married couple families, which equates to 64% or 38,846 households. The age range from 25 to 44 years captures 32% of the county population.

The county is predominantly white, but continues to see growth in the Hispanic population numbers.

The youth population in the county makes up the second largest group, children 18 and under account for 27% of the population. The continued influx of young families with children is reflected in the tremendous growth being experienced in the county school system, which now has an overall enrollment of 37,110 students. The school system demographic breakdown is as follows; 69.61% white / 25,833 students, 14.46% black / 5,365 students, 11.68% Hispanic / 4,333 students, 2.58% multi racial / 959 students, 1.41% Asian / 522 students and .26% American Indian or 98 students.

The senior citizen population numbers are relatively low, with only 8% of the total county population consisting of seniors 65 and older.

The county is evenly split across gender.

The educational levels of the residents are as follows; 20% have less than a high school degree, 31% are high school graduates, 21% have some college, 7% have an Associates degree, 15% have a Bachelor's degree and 6% have a Master's degree.

SOCIOECONOMIC CONTRASTS

In examining Union County from a socioeconomic perspective it could be divided into three distinct areas; the rural east, the county seat and largest city Monroe and the growing residential west. The three areas are very different in population density, median income and growth trends.

The eastern side of Union County includes the towns of Wingate and Marshville, and the large, rural unincorporated area surrounding the Union Elementary School community. This area of the county is still agricultural and has maintained a rural feel. There are a few industries located there; a large poultry processing plant, a feed mill and a plastics facility. The residential growth has not occurred with any significance on the eastern end of the county.

The city of Monroe in the middle of the county serves as the county seat and has the largest population base. The majority of the county industry is located in the Monroe Corporate Center and in Camp Sutton. The industries and employment opportunities are broad; ranging from poultry, to aerospace and defense, plastics and metals. The county has a local workforce of 89,852 with an average weekly wage of \$652 and an unemployment rate of 5.6% (June 2008) which is consistently one of the lowest unemployment rates in the region. Although the county has had industries leave over the years, the diversity of the corporate community was able to off set losses and absorb displaced workers. In 2007 the economic development efforts resulted in seven companies making investments that totaled in excess of \$7 million. Four of the companies were new to Monroe and three were existing industry expansions. The investments also netted 622 new high wage jobs for the county.

If you look at the percentages of children within the school system that are on free and reduced lunch, the schools with the highest numbers of children that qualify for this program are all in Monroe and east of Monroe. Three of these schools have over 88% and higher numbers of students enrolled in the free and reduced lunch program.

The western portion of Union County has been the source of the greatest residential growth. The municipalities of Marvin, Weddington, Waxhaw, and Wesley Chapel have all seen continual growth for many years. The result for the county has meant infrastructure needs being pushed to capacity and beyond, and the need for new schools, and school redistricting to address capacity issues. With minimal zoning allowing for non-residential development and the proximity to Mecklenburg County, this end of Union County has become a bedroom community for Charlotte. Most western Union County residents commute into Charlotte for work, and have higher median household incomes than eastern Union County residents.

County vs. State Medicaid Data	Union County	State
% of population less than 100% of Poverty	9.70	13.80
Medicaid Eligibility as % of Population	10	15
% of Eligible dually enrolled in Medicaid & Medicare in Union County	12.10	16.70

Distribution of Wealth	
Household Incomes (2006 inflation adjusted dollars)	Number of Households
Less than \$10k	2,937
\$10k to 14,999	1,968
\$15k to 24,999	5,546
\$25k to 34,999	5,717
\$35k to 49,999	8,922
\$50k to 74,999	14,269
\$75k to 99,999	9,391
\$100k to \$149,999	7,890
\$150k to \$199,999	1,887
\$200,000 & up	2,241

Union County is comprised of 17 census tracts. The white segment of the population is spread across the entire county, and is most prevalent on the more affluent western end and in the northern area of the county. The city of Monroe is in the middle and is the county seat. The city itself and all census tracts to the east have higher populations of African Americans, Hispanics and all others; this would include census tracts; 020402, 020500, 020600 in Monroe, and tracts 020700, 020800 in Wingate and Marshville on the far eastern end of the county.

The Federal Poverty Level for a three person household, at twice the level (200%) comes out to an annual household income of \$34,340. Based on this criteria, the statistics from GIS data indicate that poverty levels exist in all of Union County's 17 census tracts, ranging from 6% on the western side to 35% on the eastern side of the county.

Union County has a small overall number of residents living in poverty, at 8%. However, out of the estimated 184,365 residents, 112,294 are between the ages of 18 and 64, equating to 60.9% of the population. Within this age group, the estimated number of uninsured individuals is projected to climb to 20,532 in 2008 due to economic factors. That number is expected to increase further to 27,227 by the year 2018.

Poverty in Union County	
Poverty by Household	% Impacted
All Families	5.0 %
Married Couples	1.90 %
Female Head of Household	25.60 %
Under 18	8.80 %
65 Years and over	6.80 %
All People	8 %

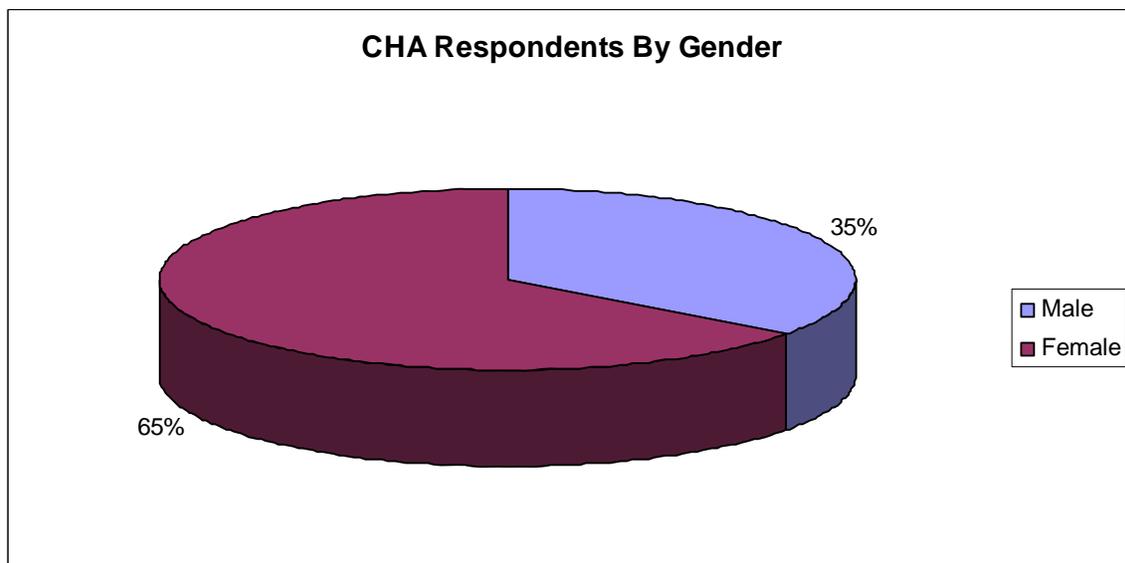
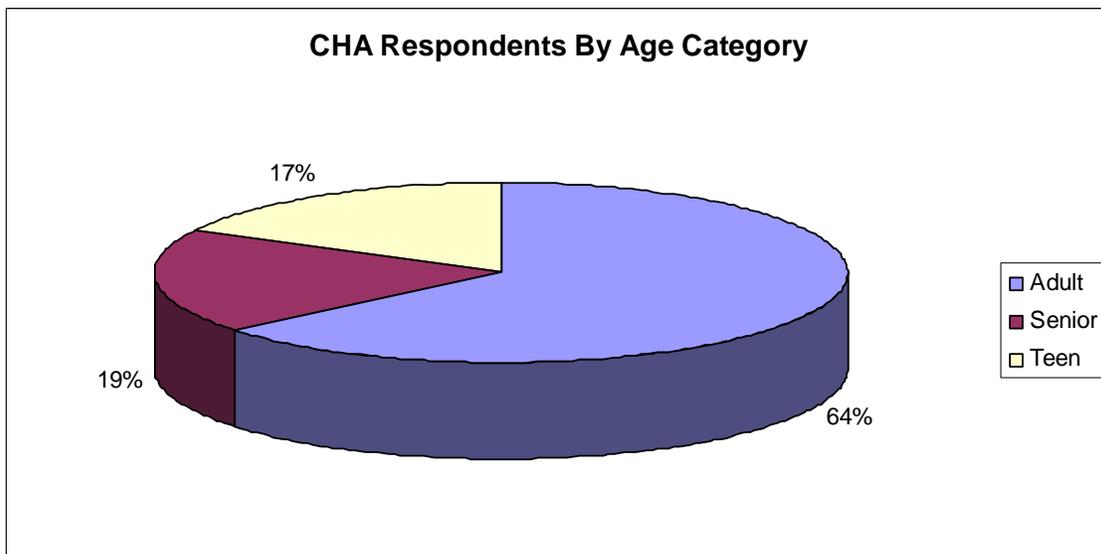
SOURCE: NC Medicaid Paid Claims Data, County Snapshots

Community Assessment Survey Results

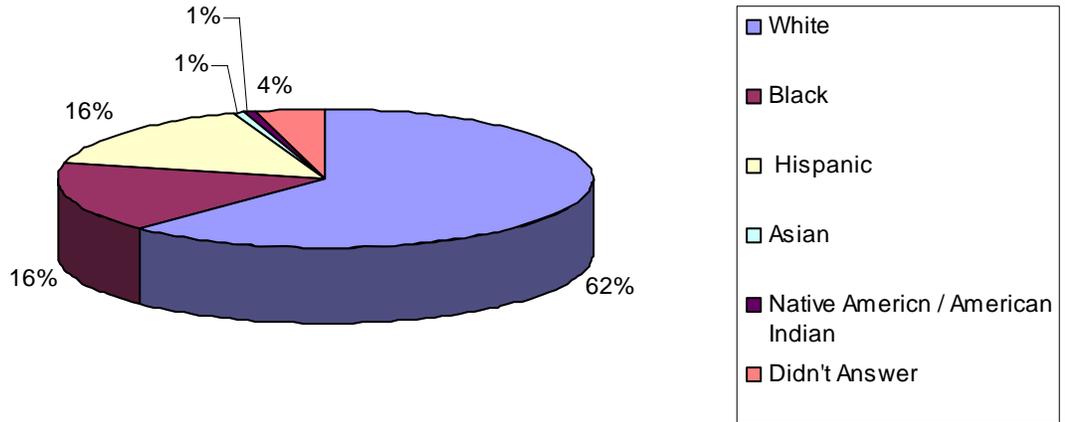
The Union County Health Assessment survey campaign was divided into three age categories; adult, senior and teen. Surveys were comprised of age appropriate questions that could impact health outcomes. Questions ranged from environmental issues, access to care, barriers to care, unhealthy behaviors, stress, nutrition and exercise, etc. Demographic information was collected on each group of respondents. The survey responses documented below will illustrate captured data by the entire age group. Data was further broken out by race.

ALL Community Health Assessment Survey Respondents by Demographics

2,710 Completed Surveys



CHA Respondents By Race / Ethnicity



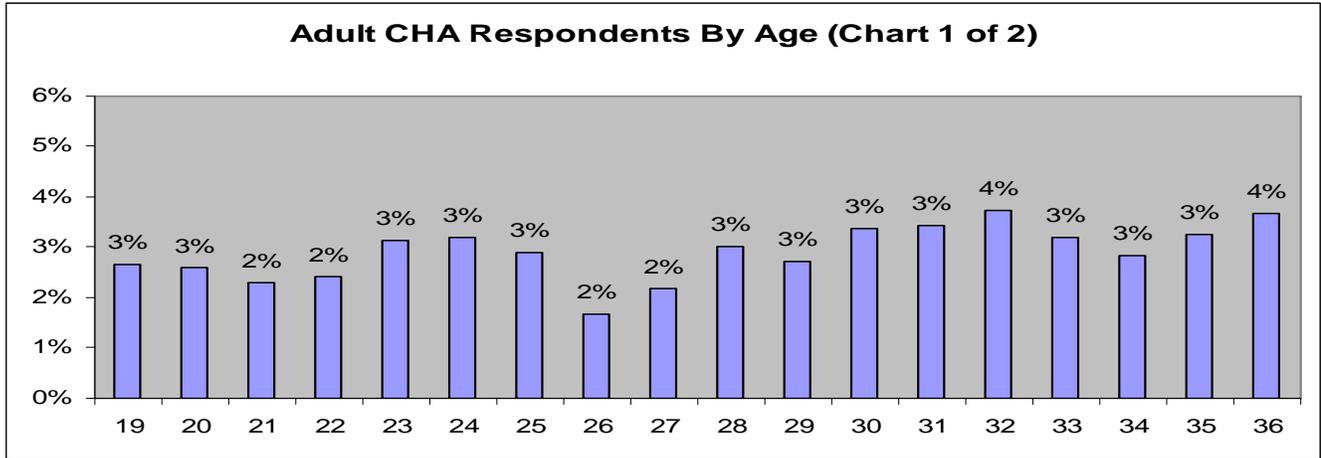
Adult Survey Respondents by Demographic Breakdown (Ages 19 to 54 years old)

2,710 Total Survey Respondents

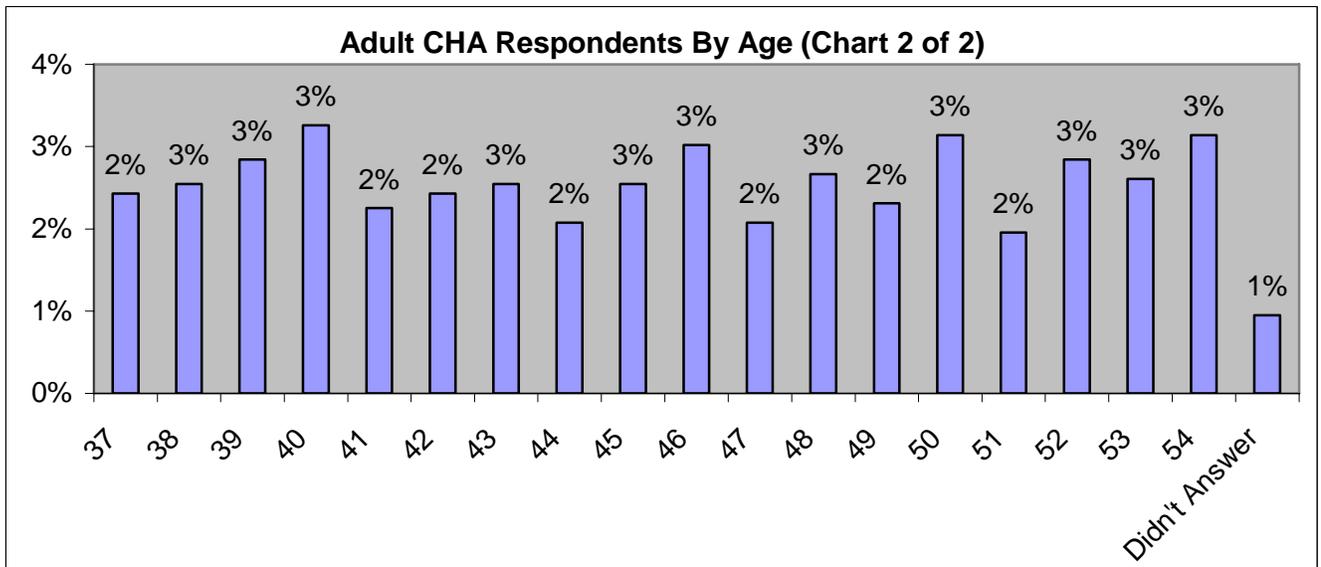
1,688 Adult Survey Respondents

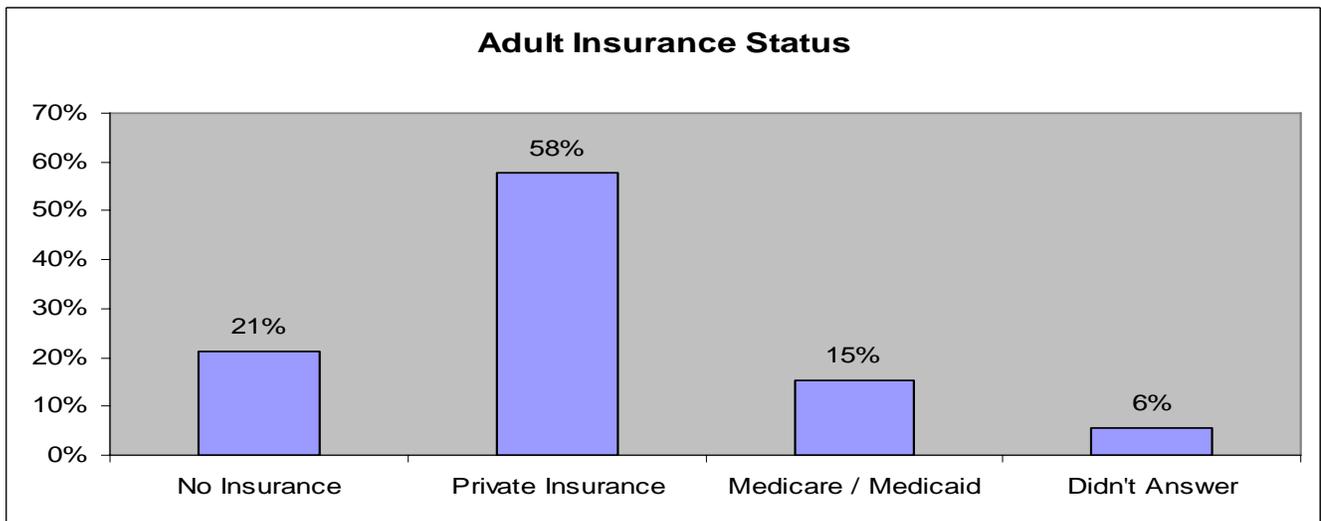
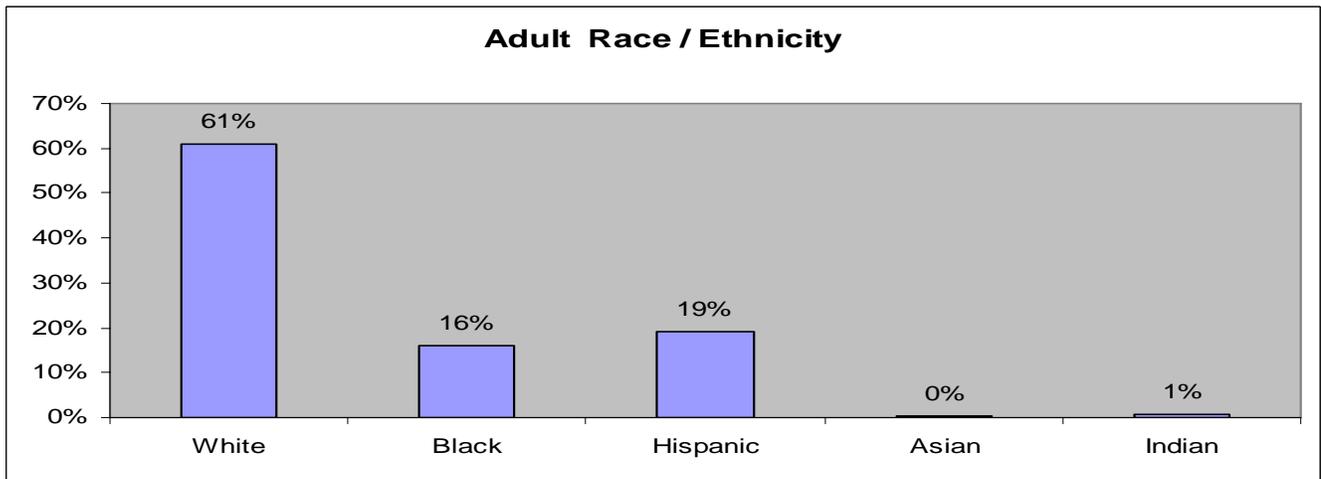
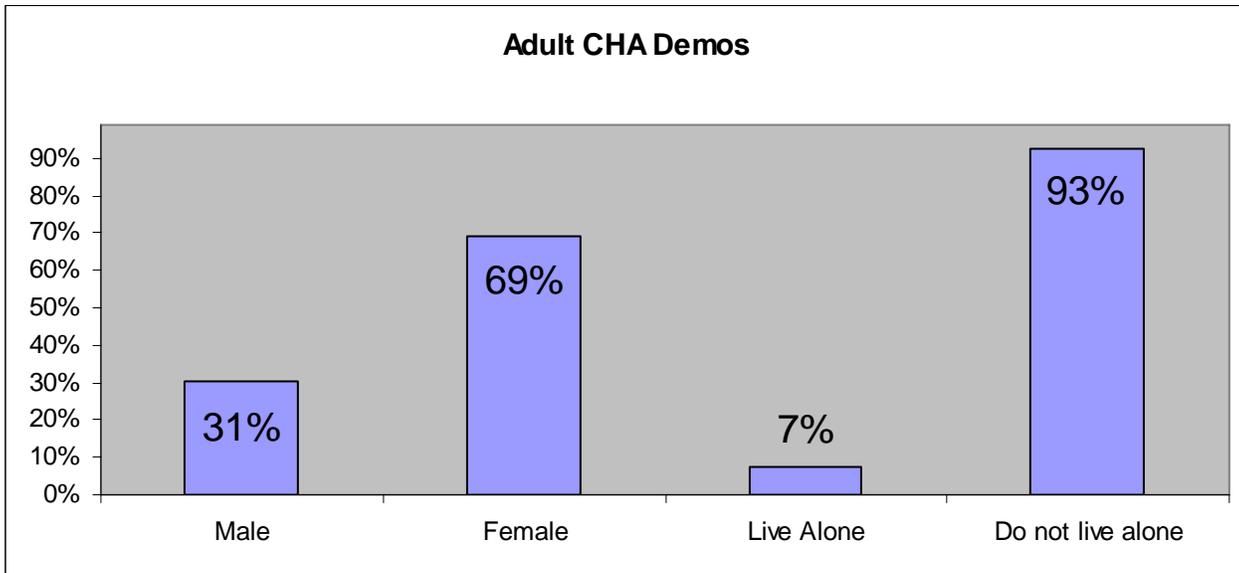
64% of the Surveys were completed by Adults

Adult CHA Respondents By Age (Chart 1 of 2)

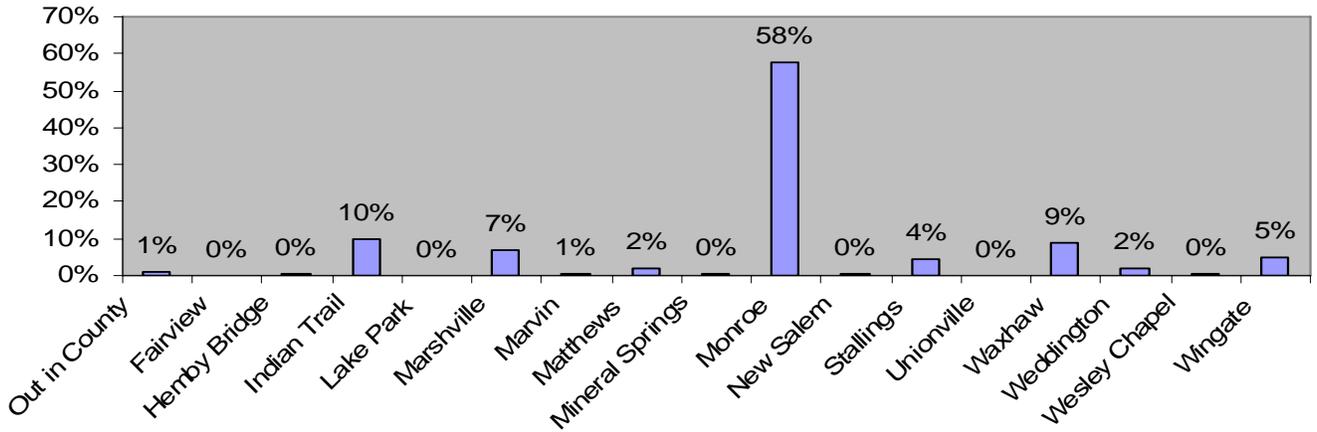


Adult CHA Respondents By Age (Chart 2 of 2)

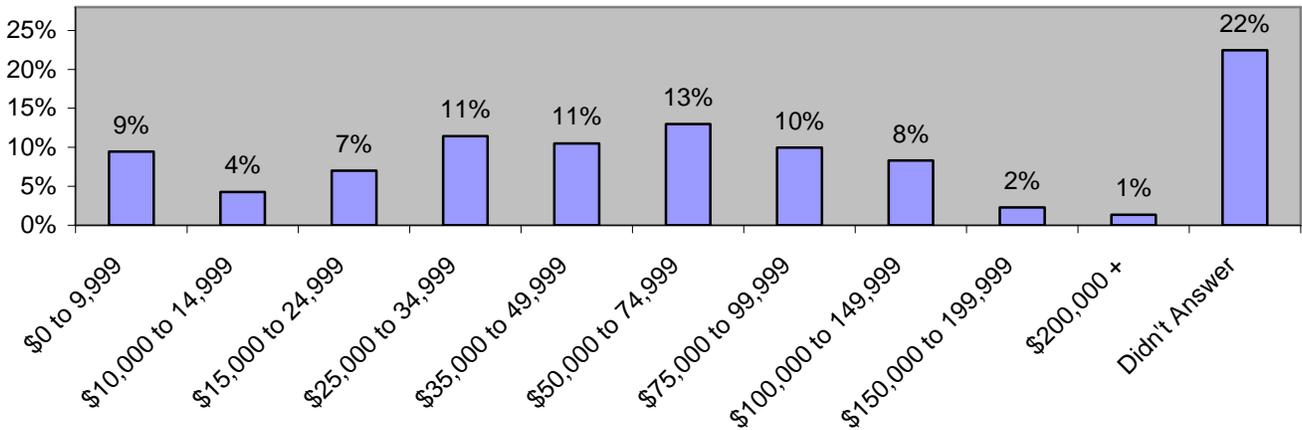




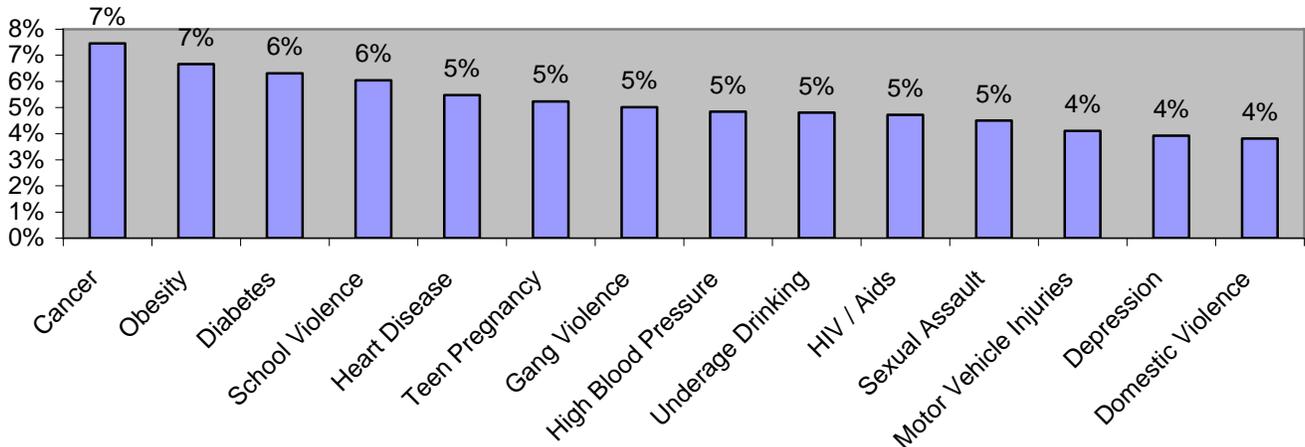
Adult CHA Community Of Residence



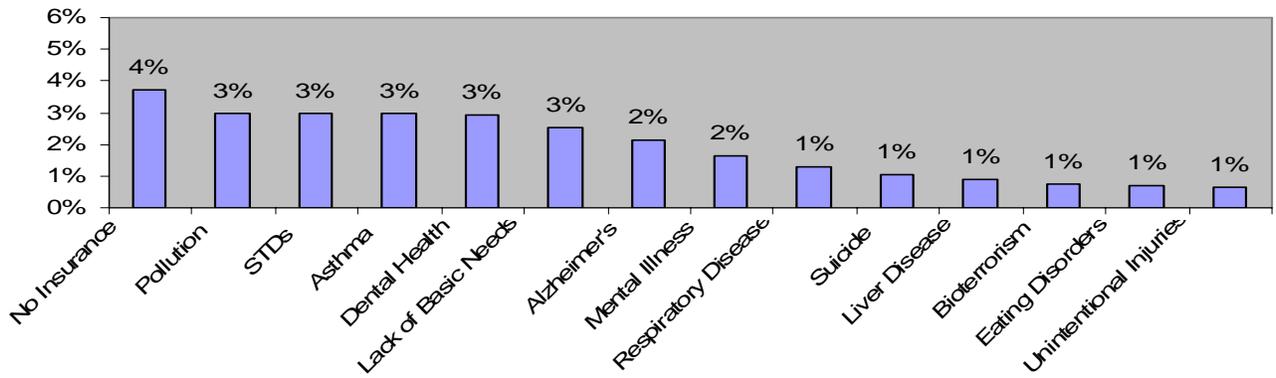
Adult CHA Respondents by Income Level



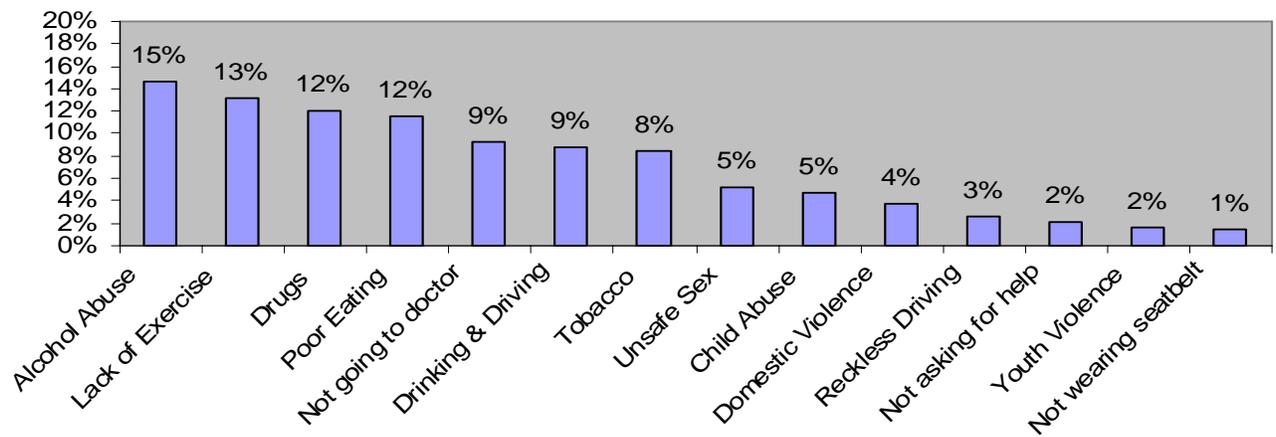
Adult CHA Health Concerns (Chart 1 of 2)



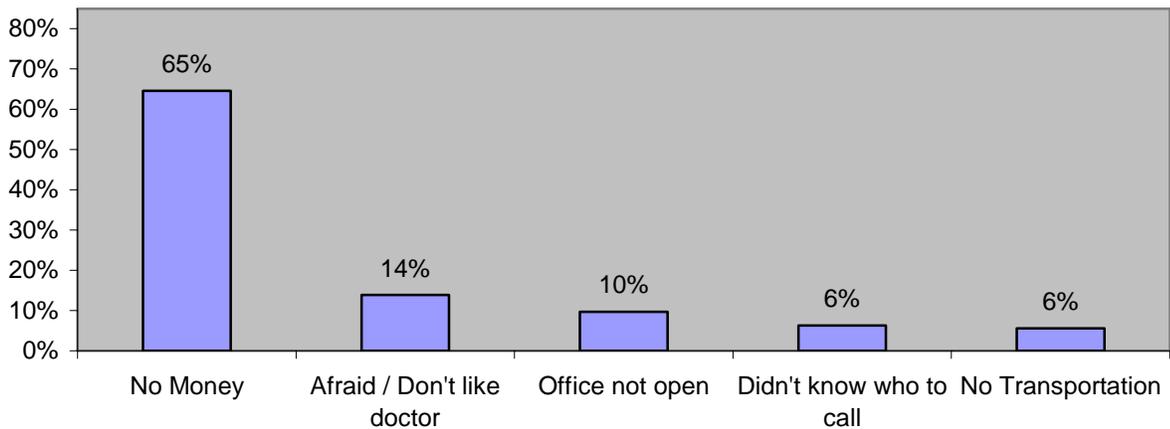
Adult CHA Health Concerns (Chart 2 of 2)



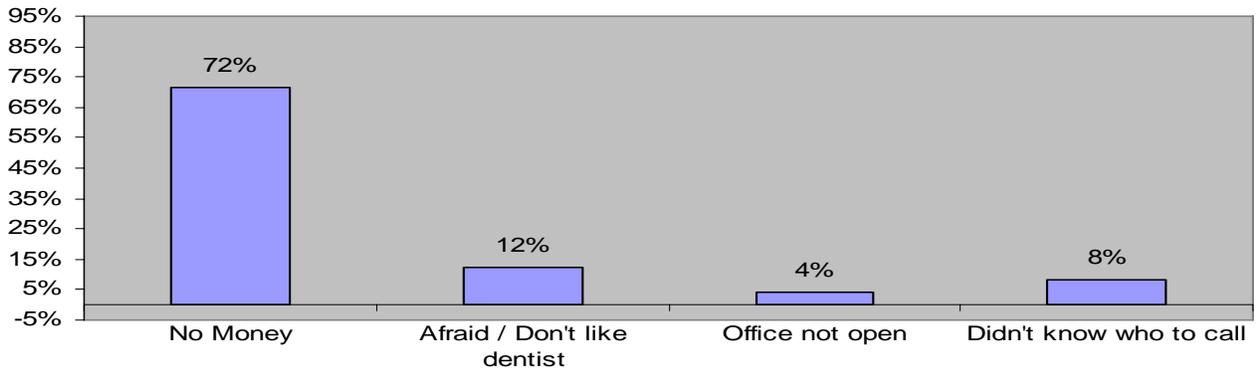
Adult CHA Unhealthy Behaviors



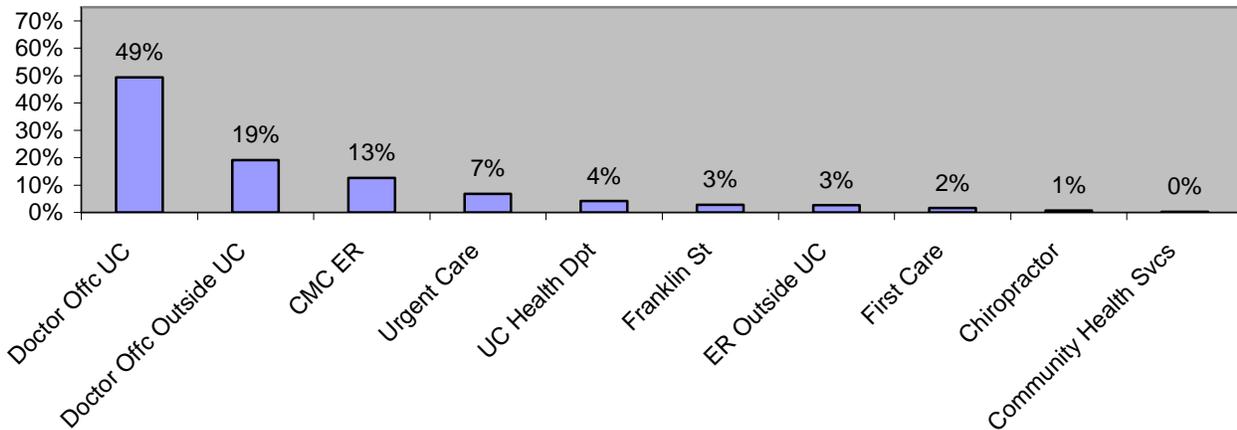
Adult CHA Reason For Not Seeing A Doctor



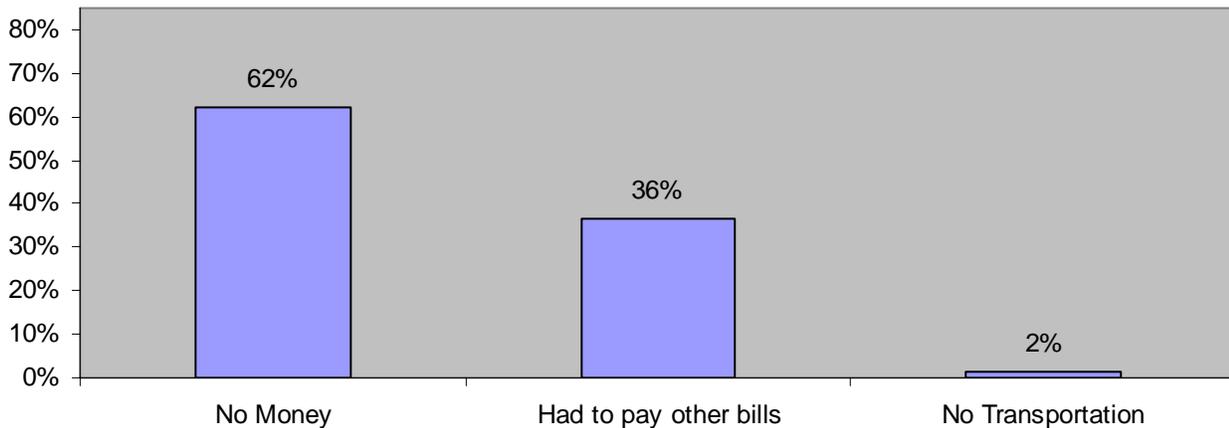
Adult CHA Reasons For Not Seeing A Dentist



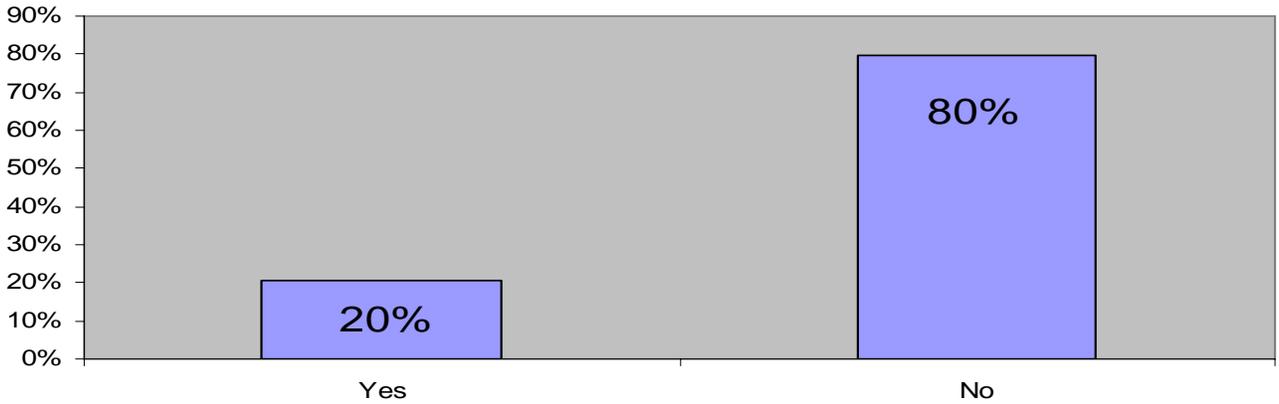
Adult CHA Go Most Often When Sick



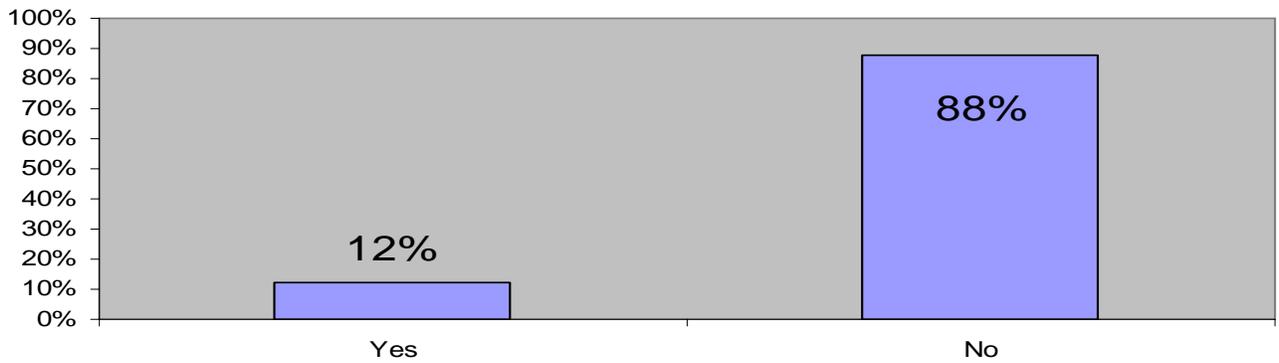
Adult CHA Reasons For Not Filling Prescriptions



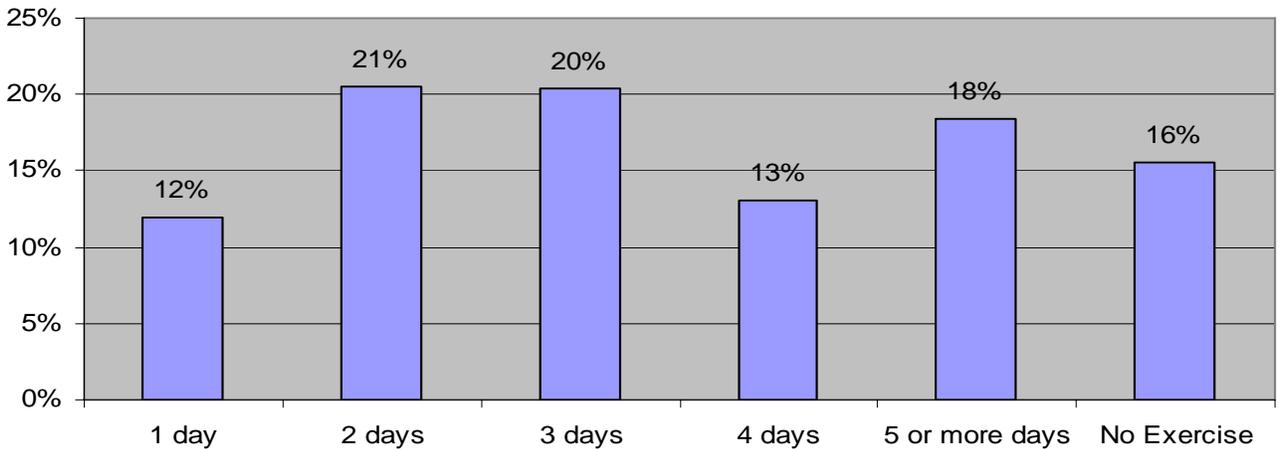
Are Adult CHA Familiar With Healthquest?



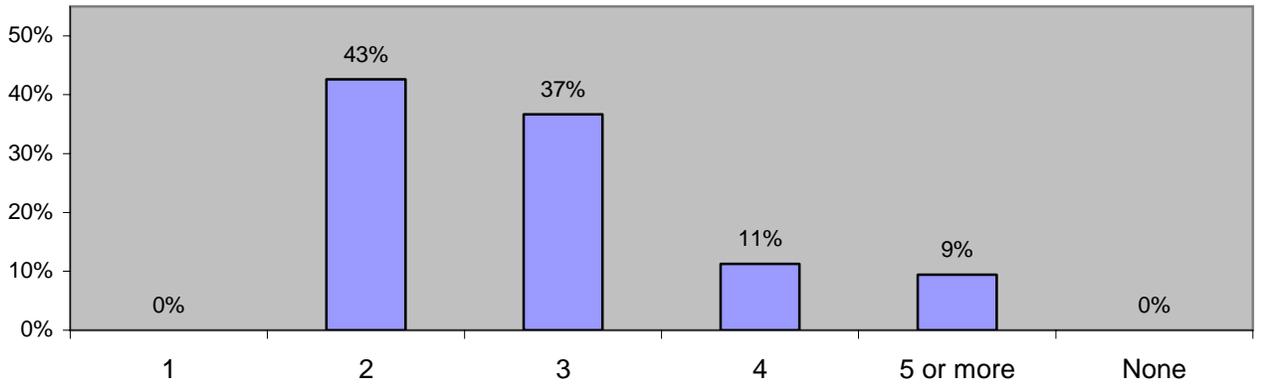
Are Adult CHA Familiar With Community Health Services Emergency Prescriptions?



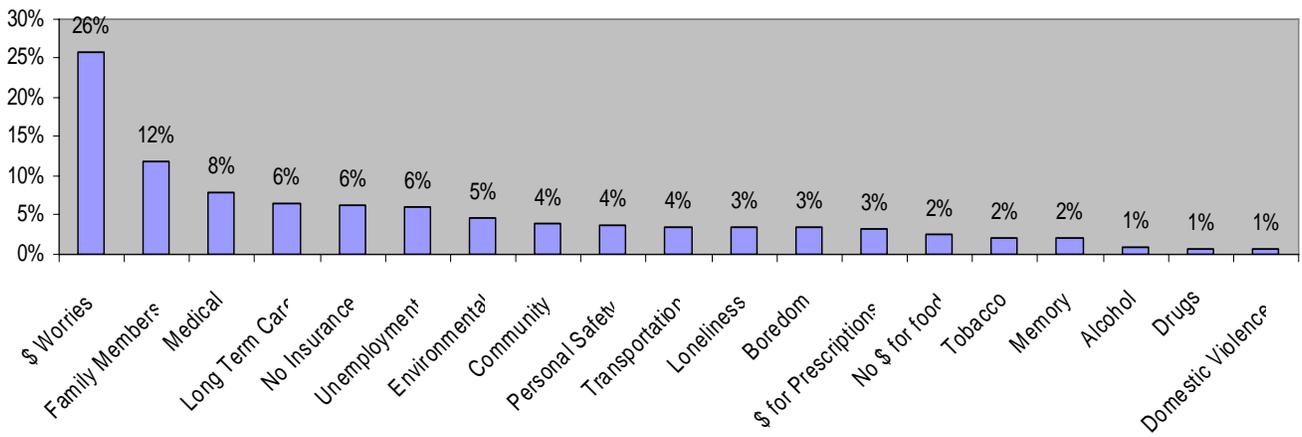
Adult CHA Weekly Exercise



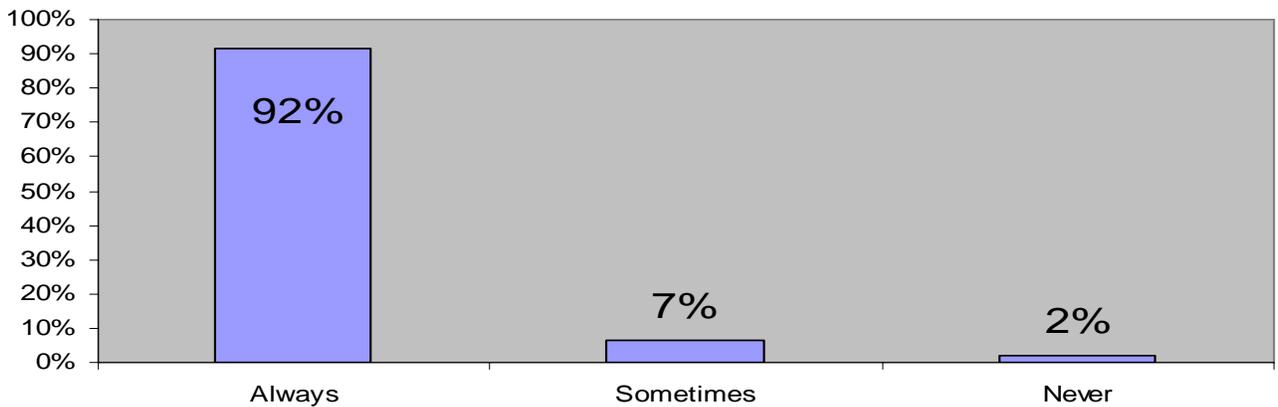
Adult CHA Daily Servings Of Fruits and Veggies



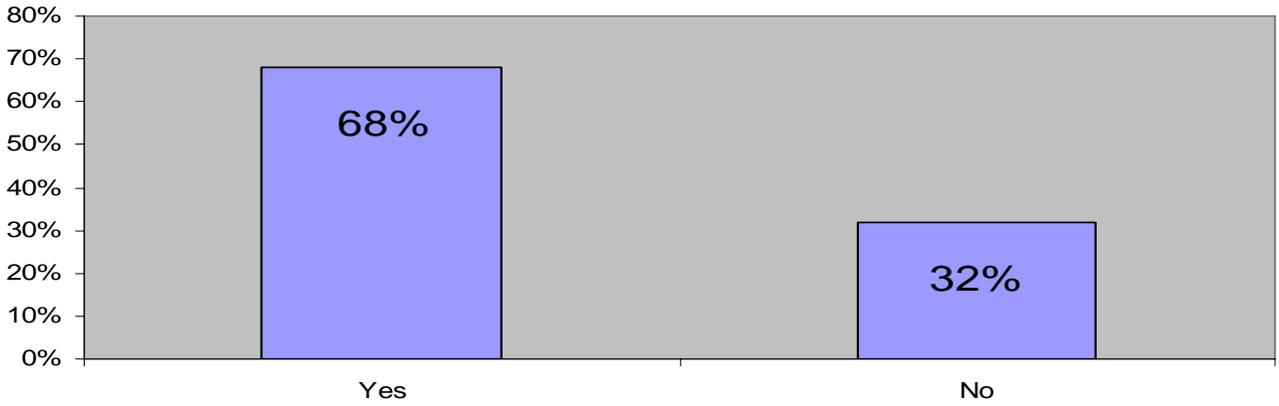
Adult CHA Stress



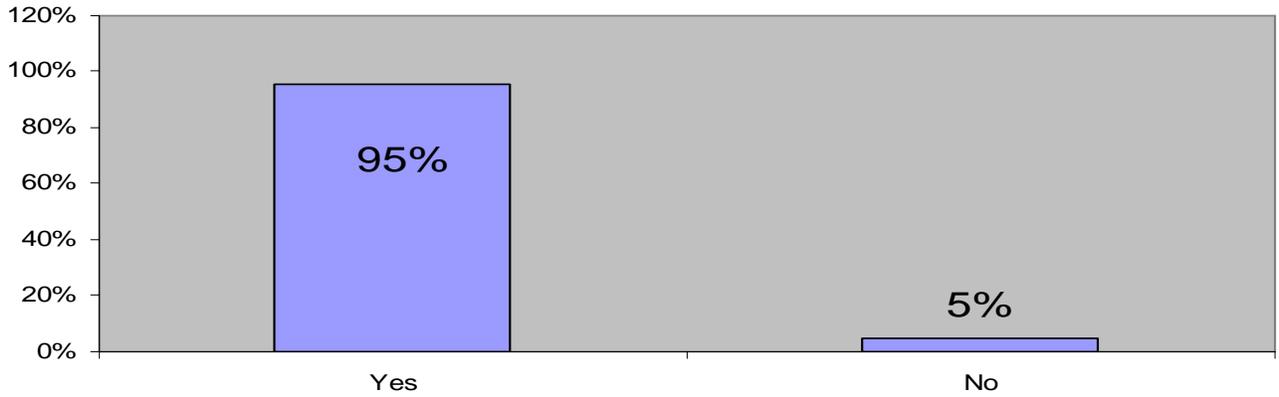
Adult CHA Seatbelt Use



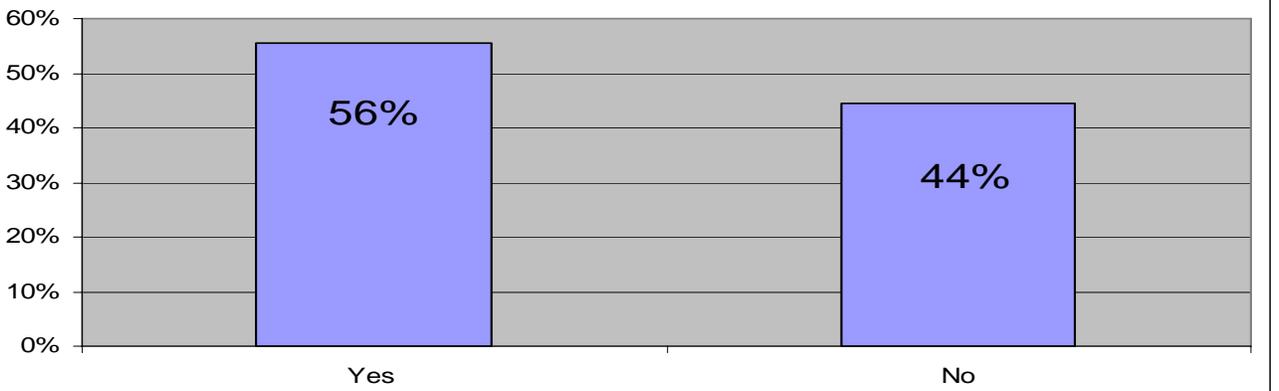
Do Adult CHA Lock-Up Their Guns and Ammo?



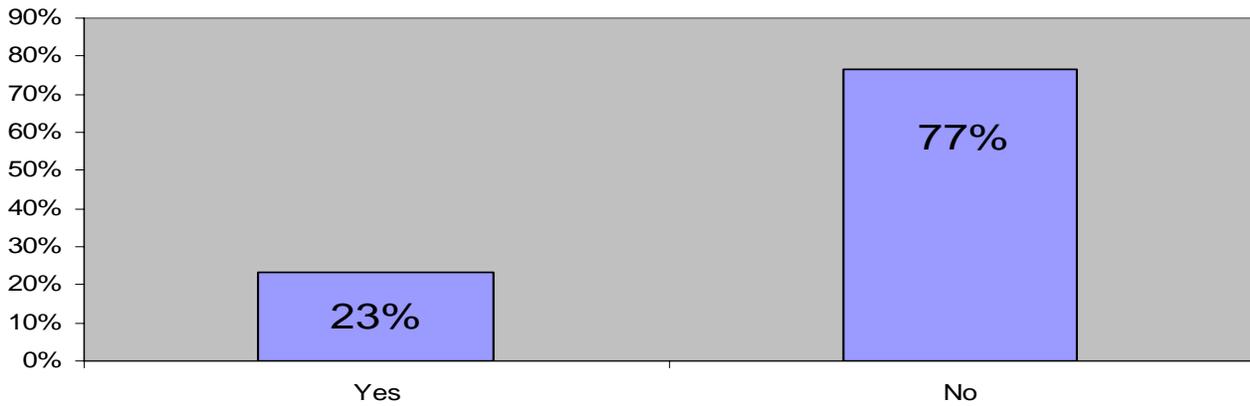
Do Adult CHA Have A Smoke Detector?



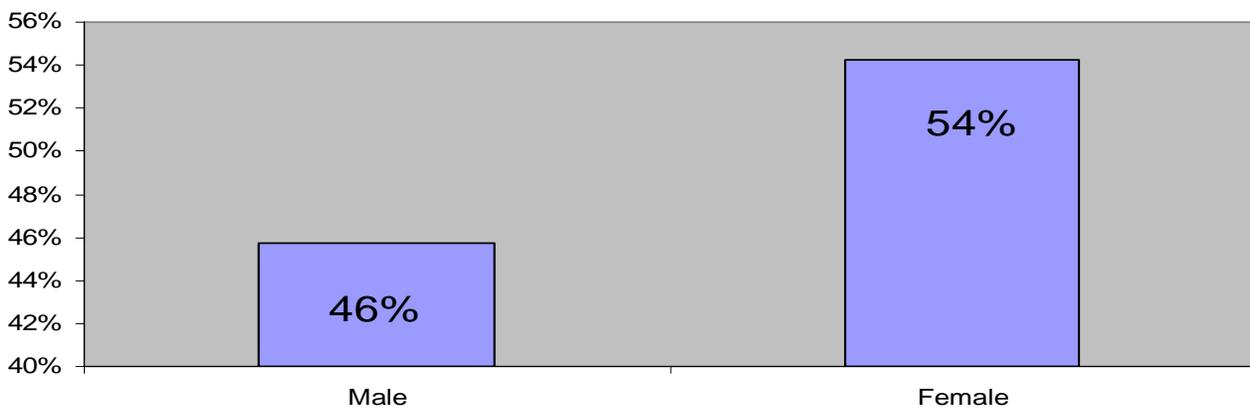
Do Adult CHA Have Carbon Monoxide Detectors?



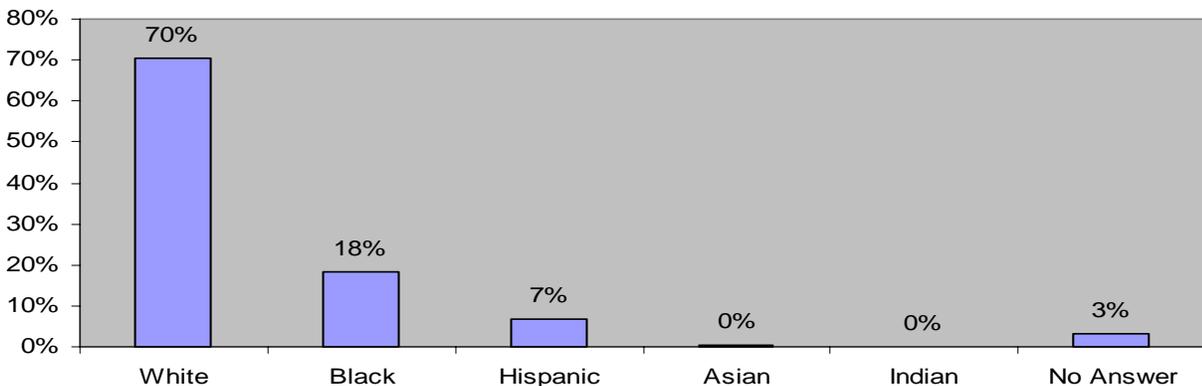
Do Adult CHA Smoke Or Use Smokeless Tobacco?



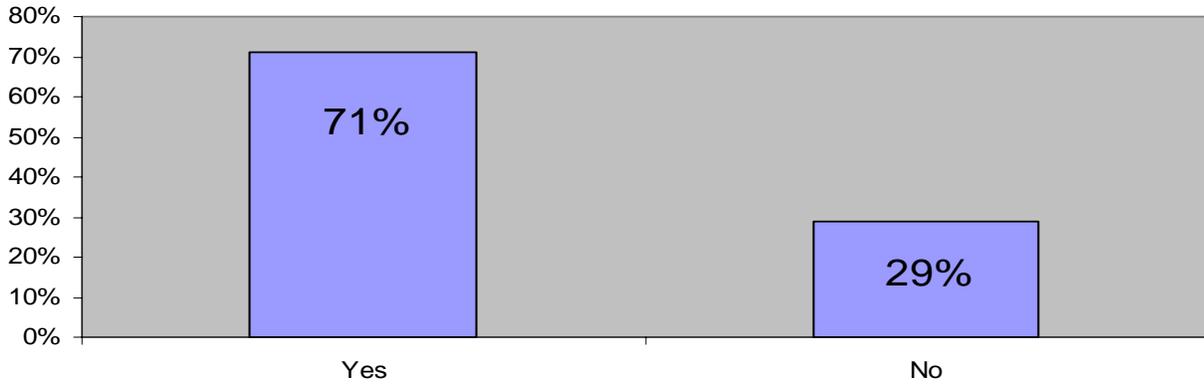
Adult CHA Smokers by Gender



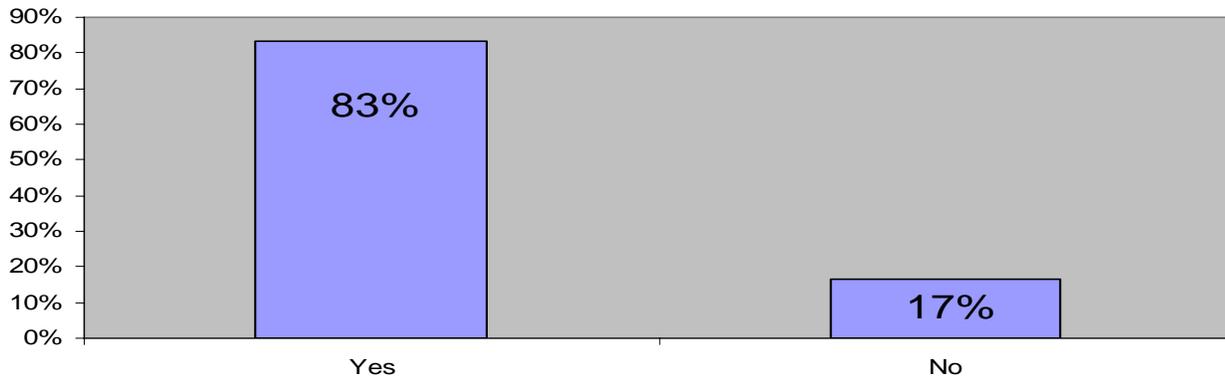
Adult CHA Smokers By Race / Ethnicity



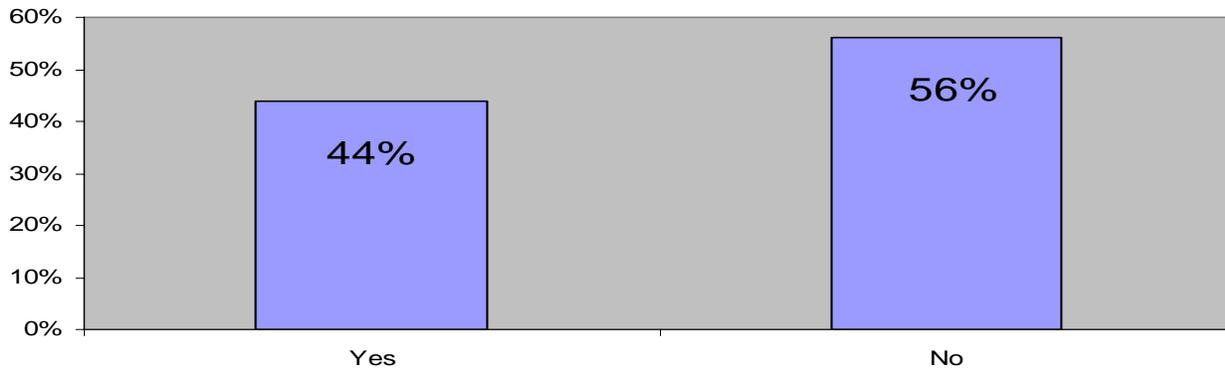
Would You As An Adult CHA Like To Quit Smoking / Chewing Tobacco?



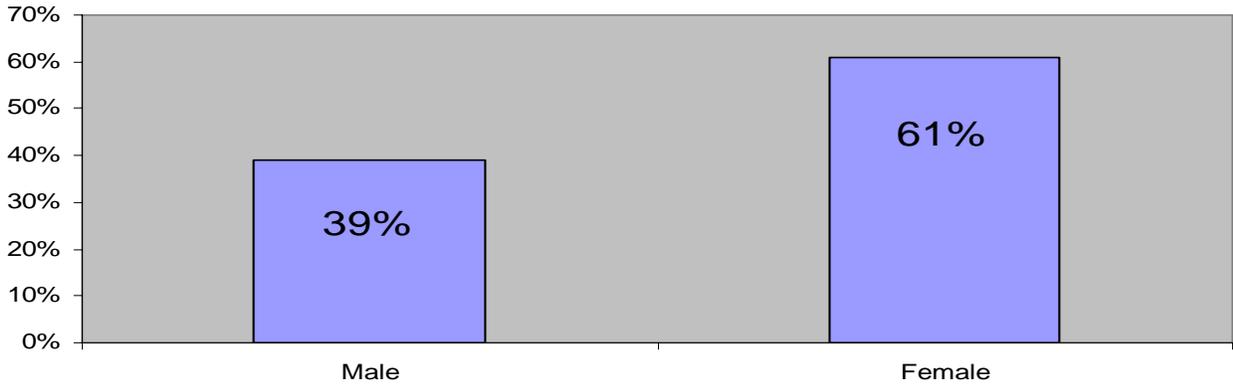
Would Adult CHA Like To See More Smoke Free Restaurants?



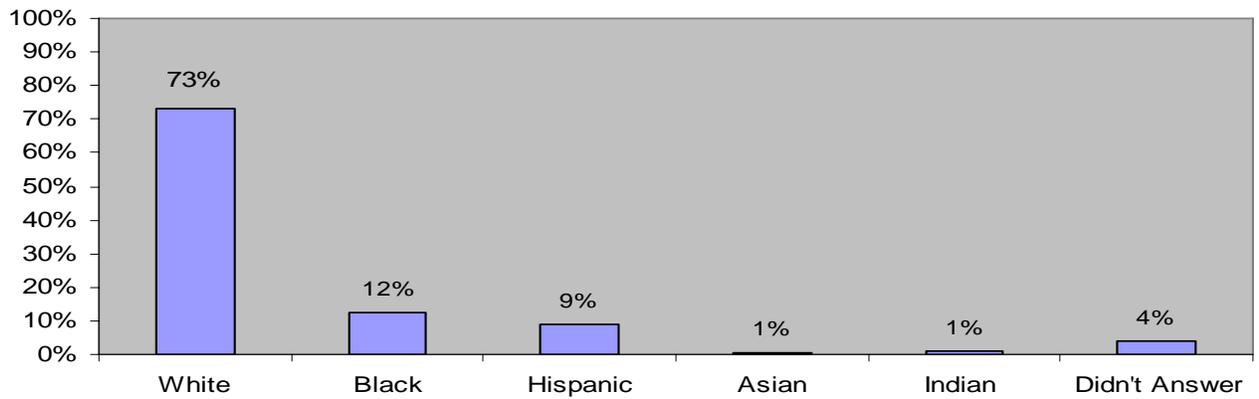
Adult CHA That Drink Alcohol



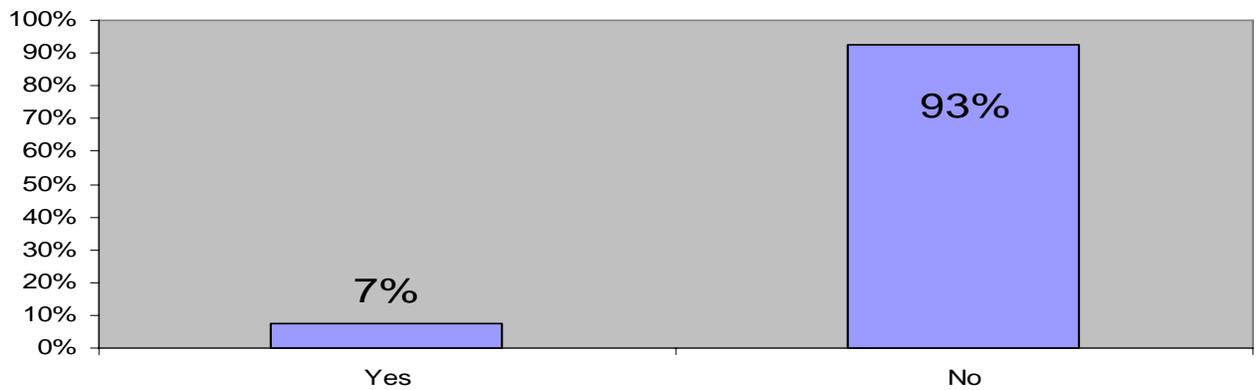
Adult CHA Drinkers By Gender



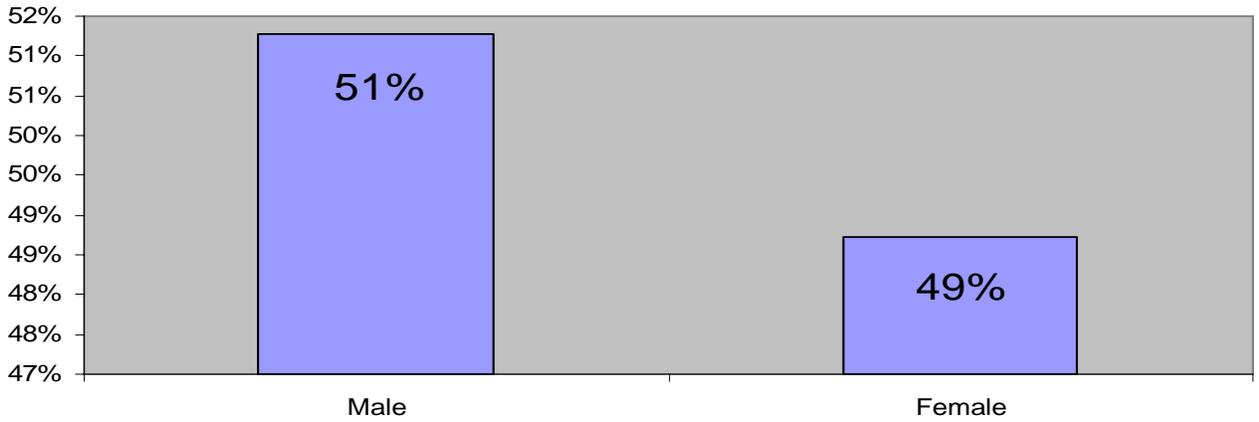
Adult CHA Drinkers By Race / Ethnicity



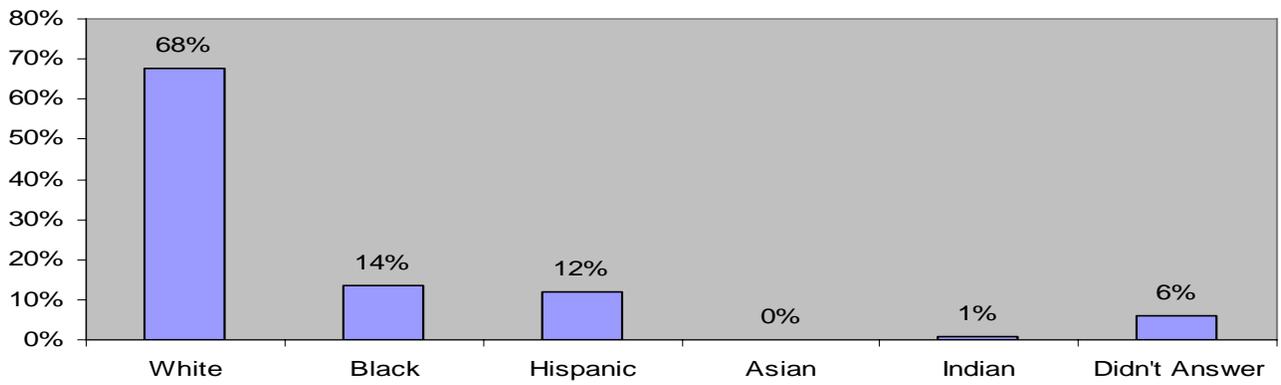
Adult CHA That Drink And Drive



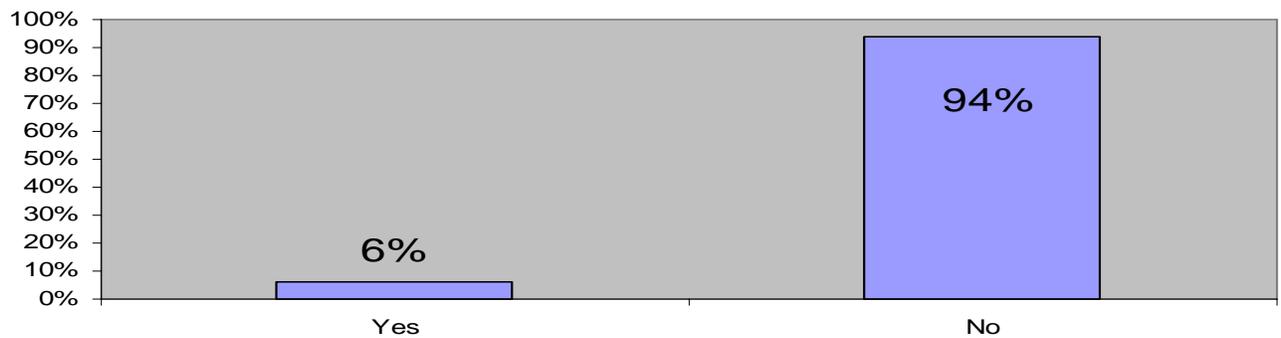
Adult CHA That Drink And Driver By Gender



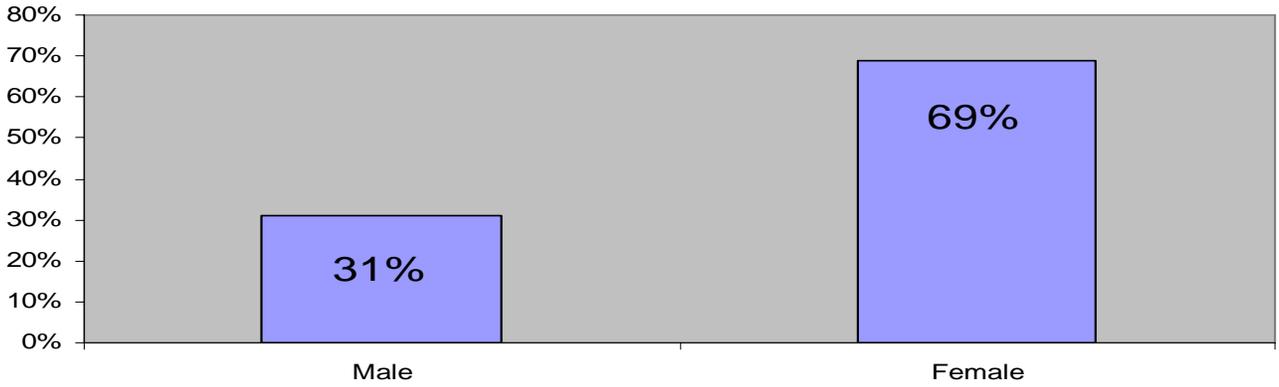
Adult CHA Drinkers and Drivers By Race / Ethnicity



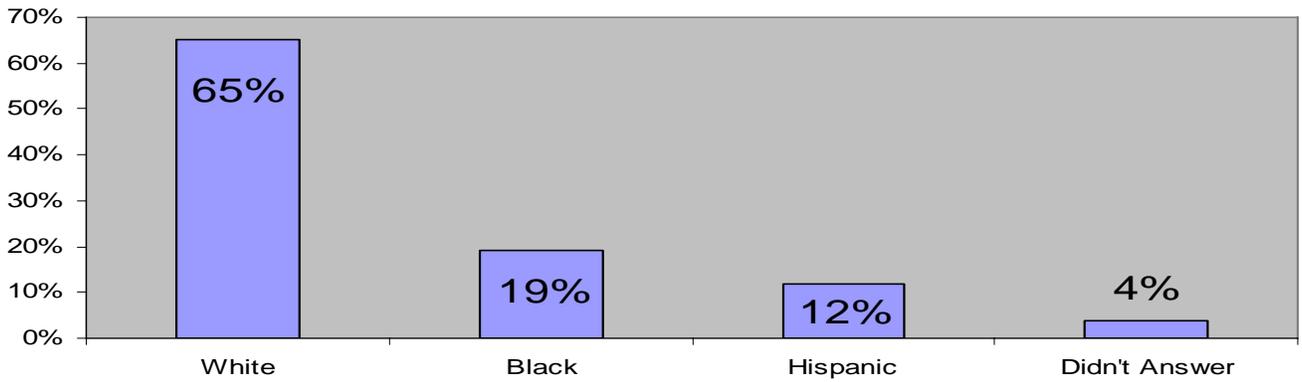
Adult CHA That Have Thought About or Planned To Commit Suicide



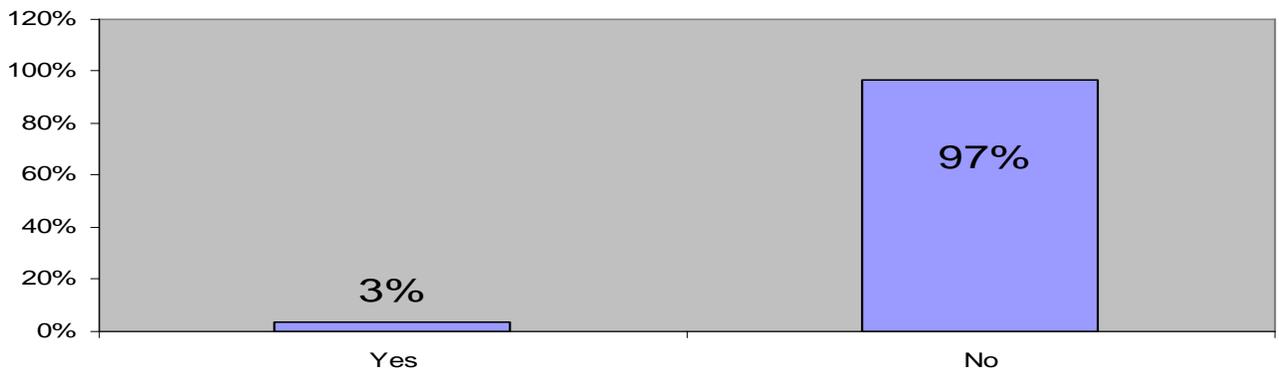
Adult CHA That Have Contemplated Suicide By Gender



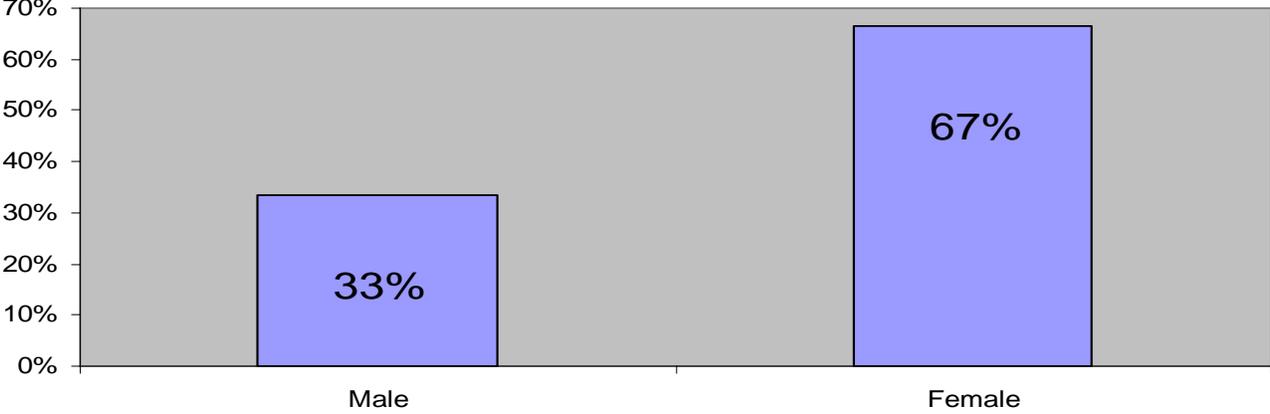
Adult CHA That Have Contemplated Suicide By Race / Ethnicity



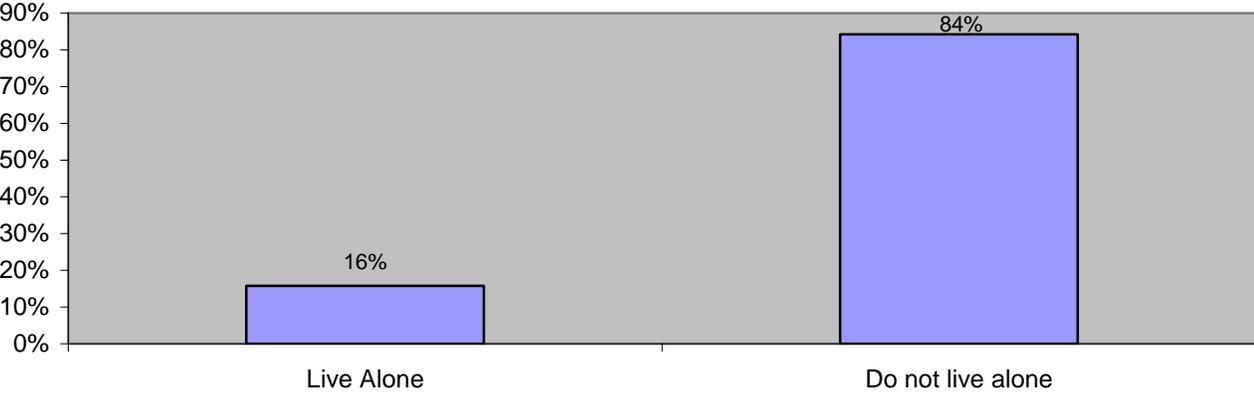
Adult CHA That Have Attempted Suicide



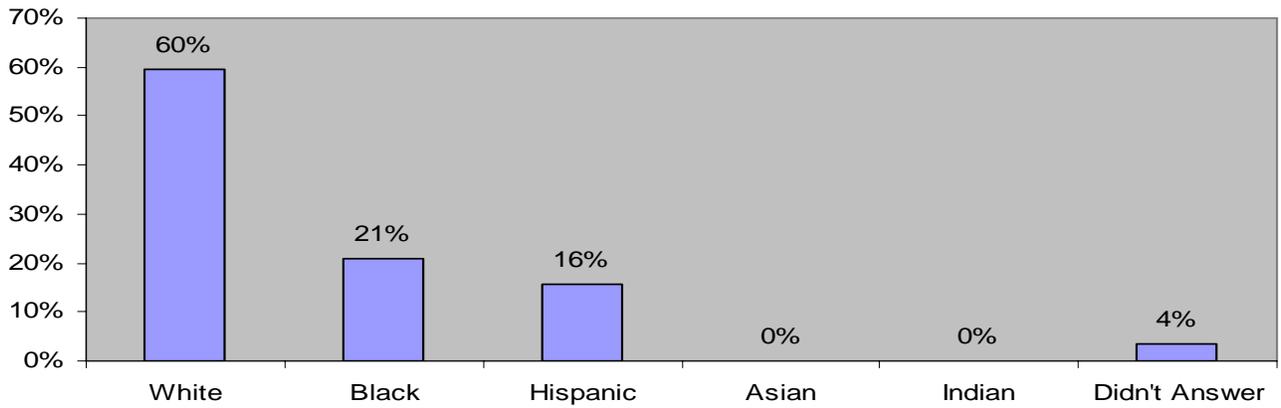
Adult CHA That Have Attempted Suicide By Gender



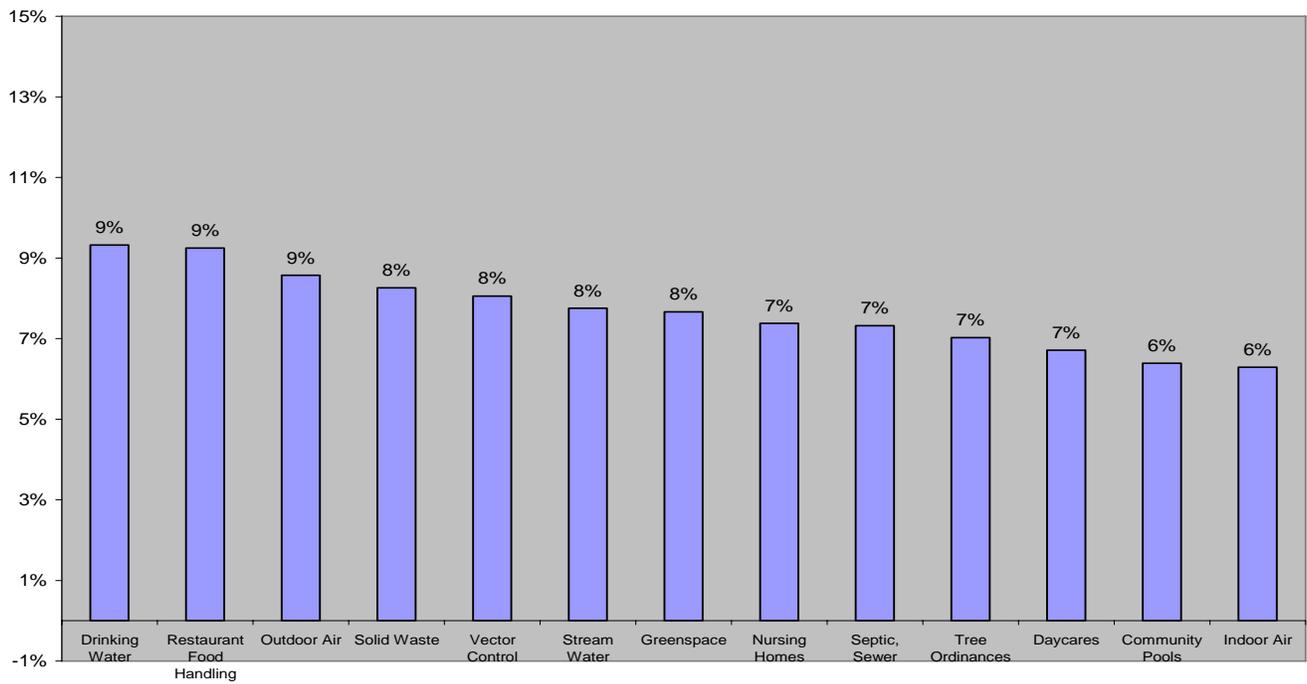
**Adult CHA That Have Attempted Suicide that
Either Live Alone Or Not**



Adult CHA That Have Attempted Suicide By Race / Ethnicity

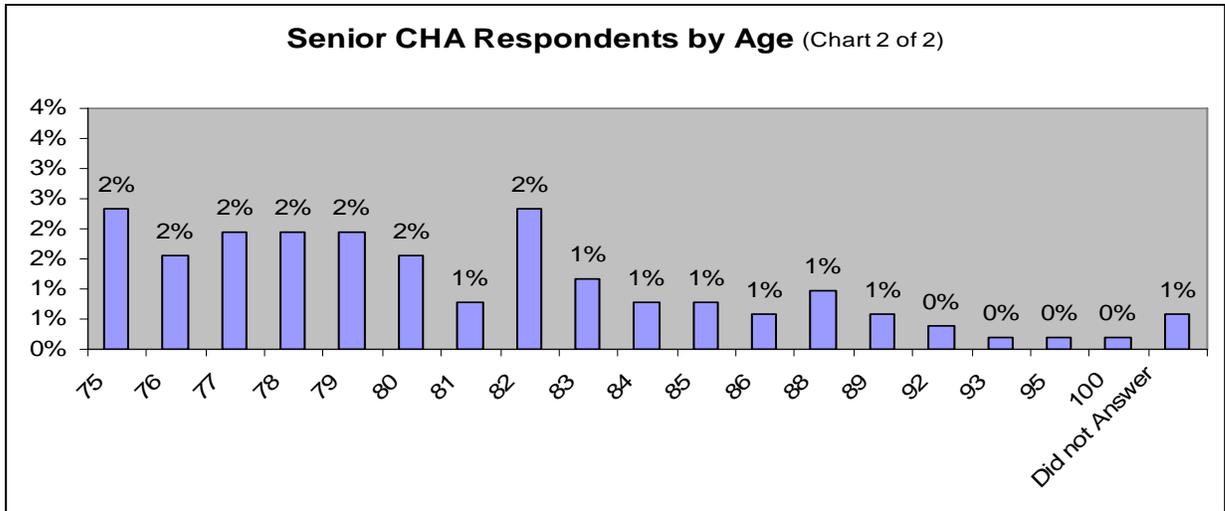
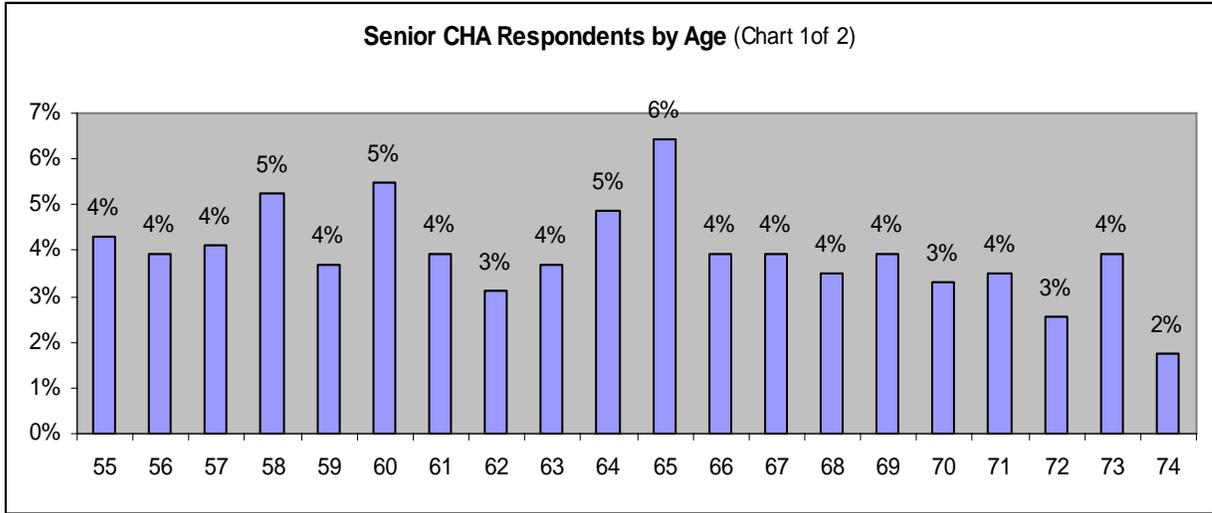


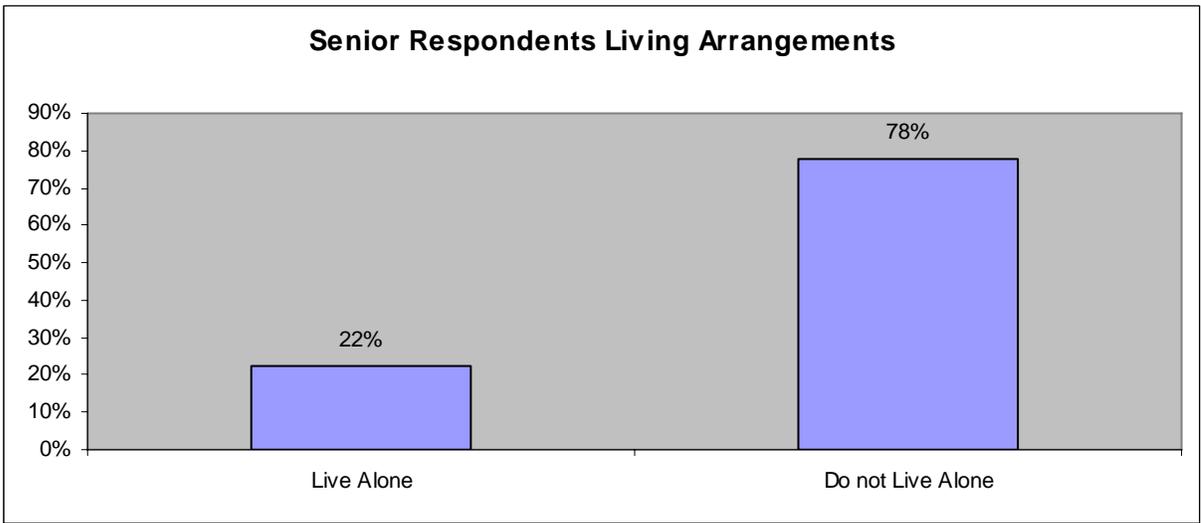
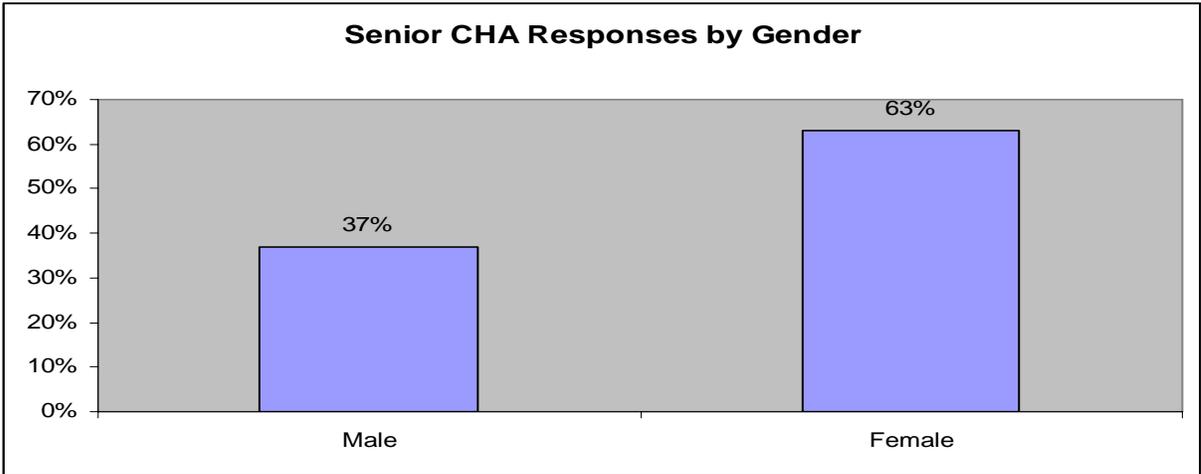
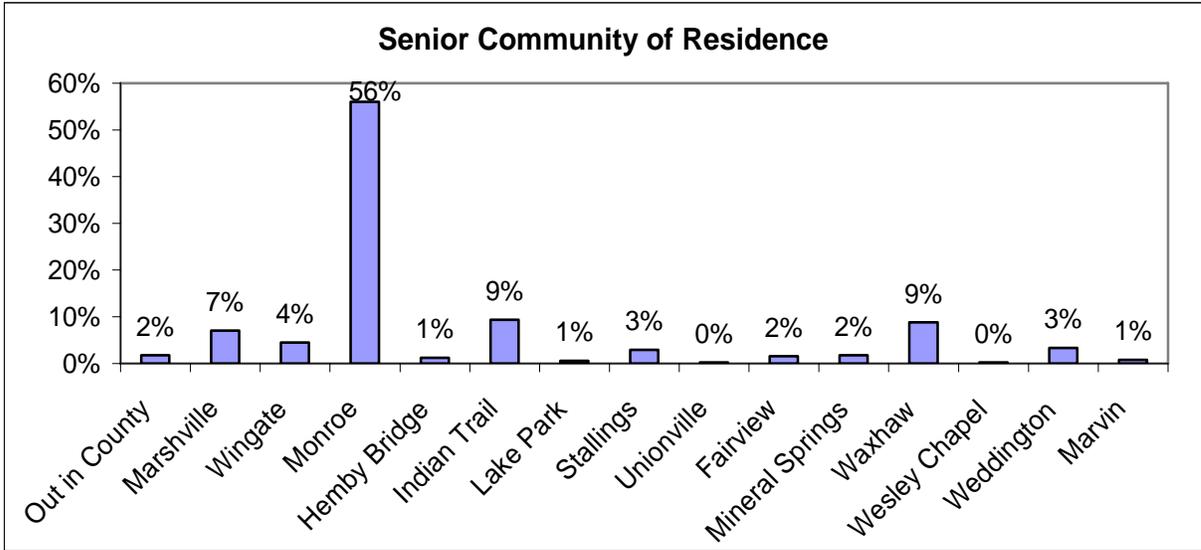
Adult CHA Environmental Concerns

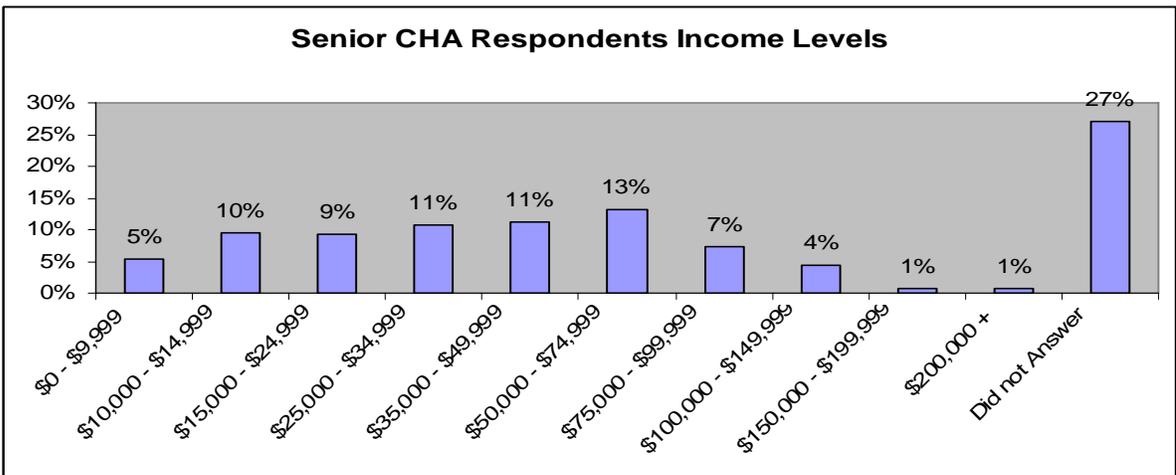
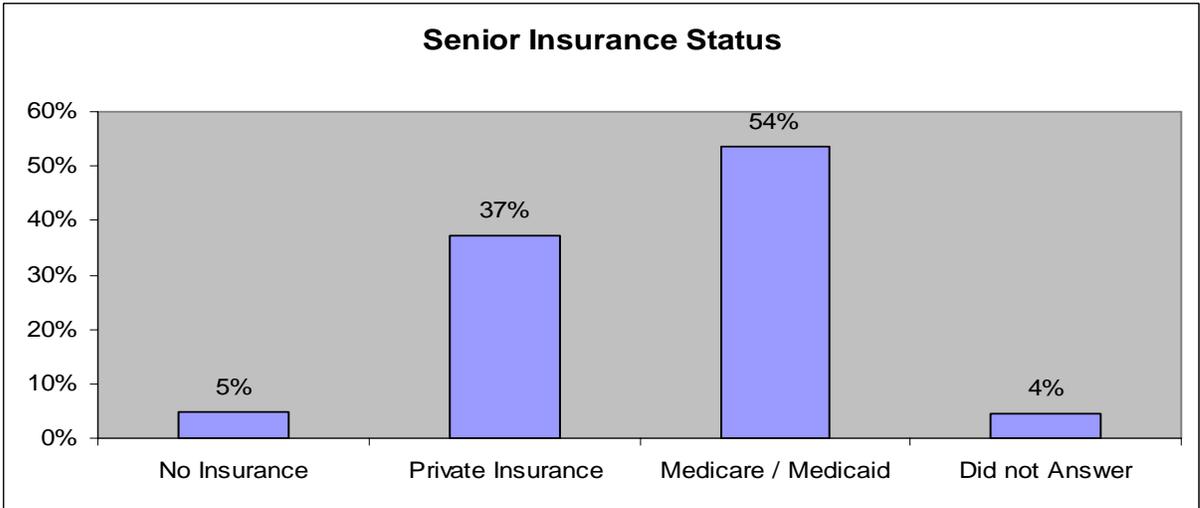
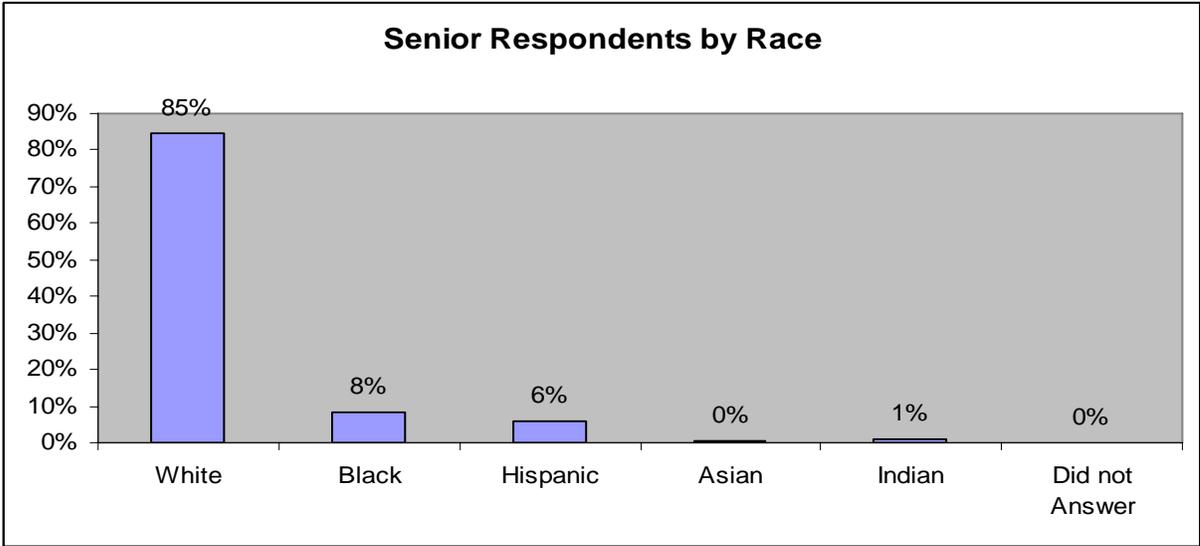


Senior Survey Respondents by Demographic Breakdown (Ages 55 and Older)
 2,710 Total Survey Respondents 512 Survey Respondents

18 % of the Surveys were completed by Seniors

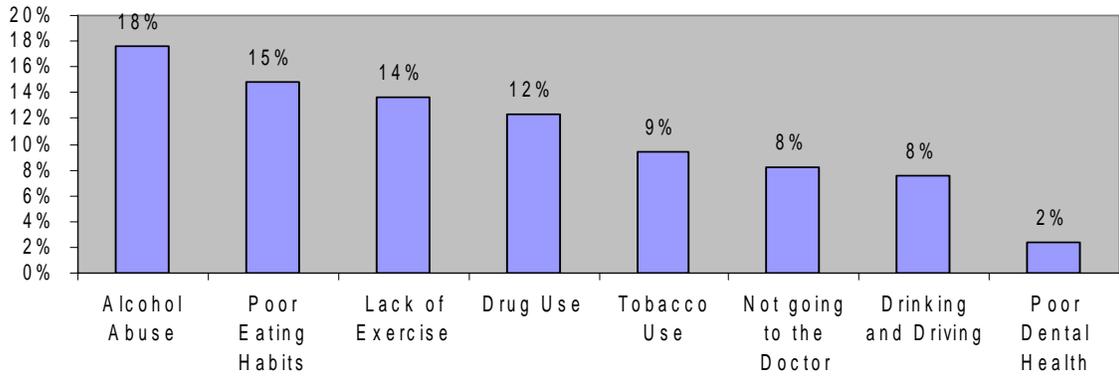






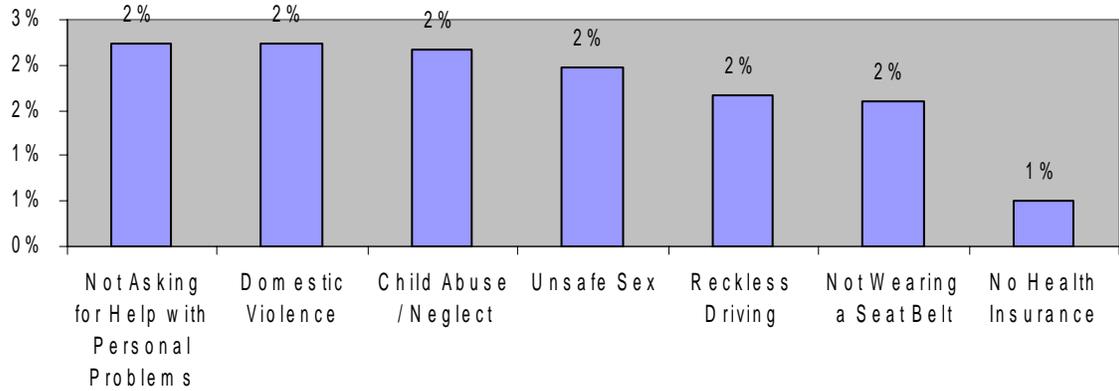
Unhealthy Behaviors Seniors Believe Cause Poor Health

(Chart 1 of 2)

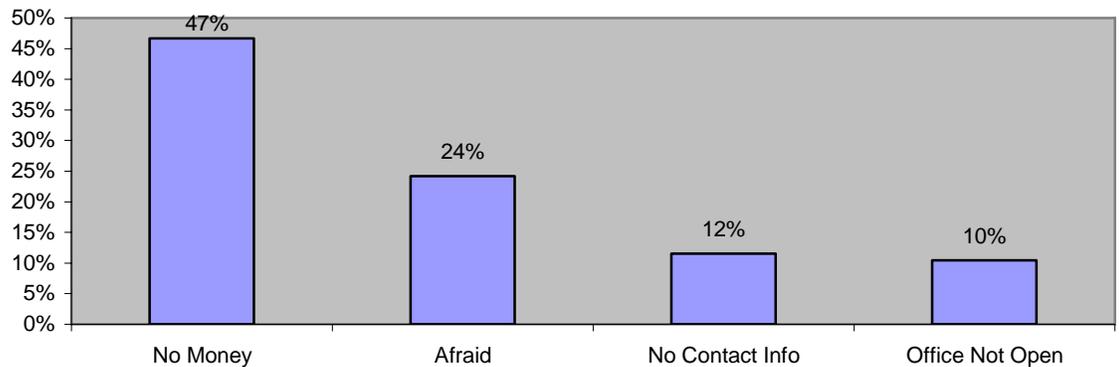


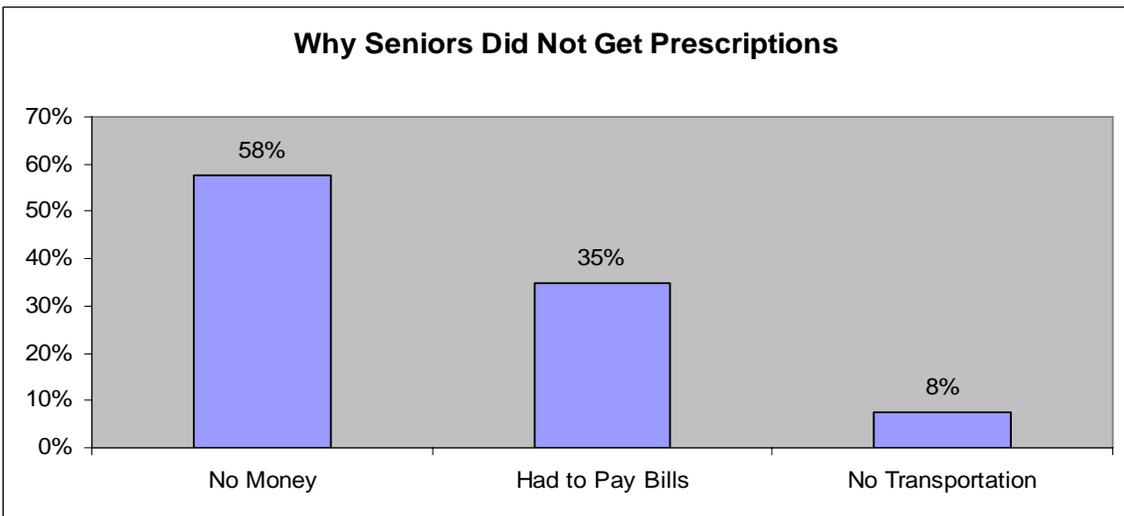
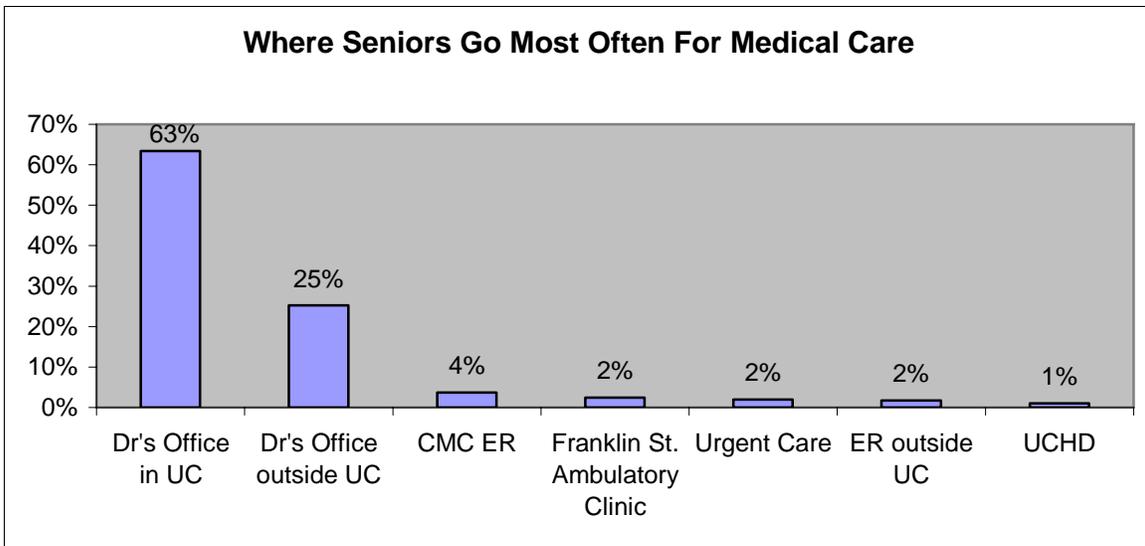
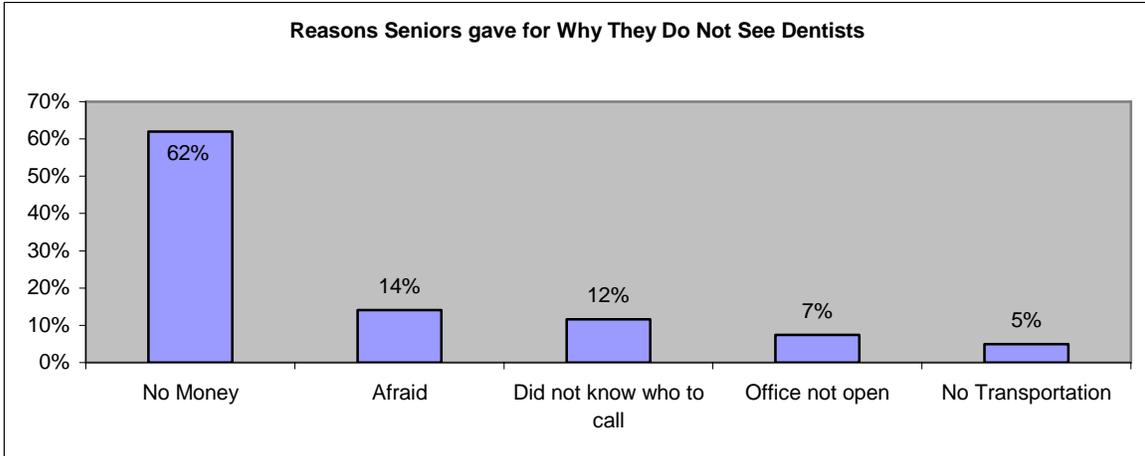
Unhealthy Behaviors Seniors Believe Cause Poor Health

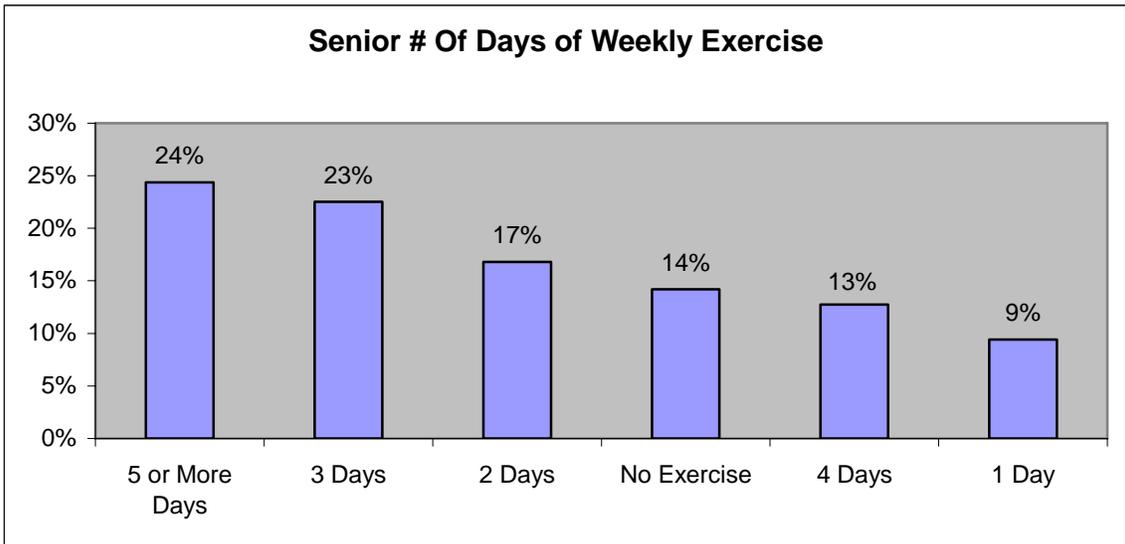
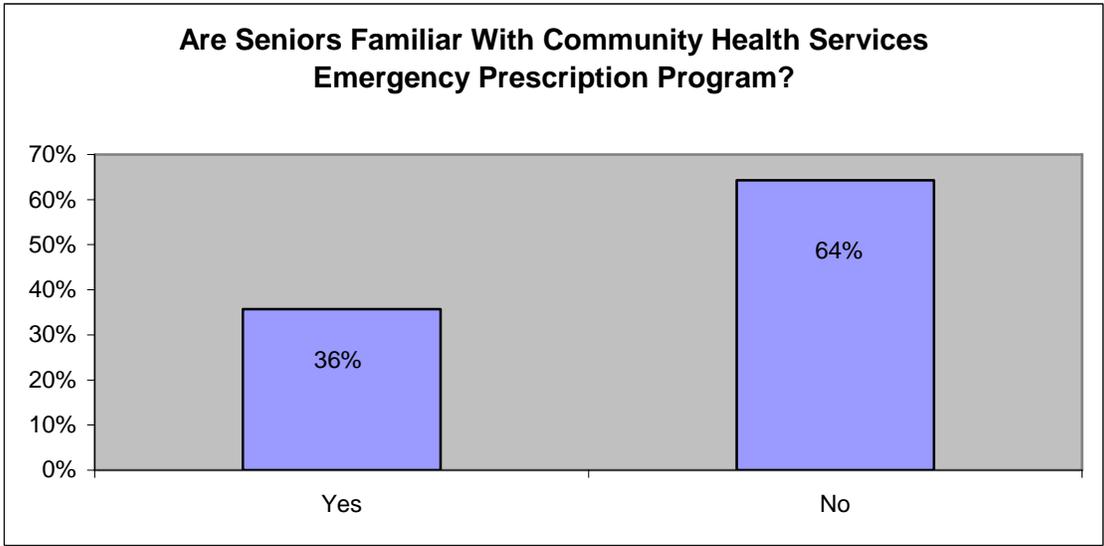
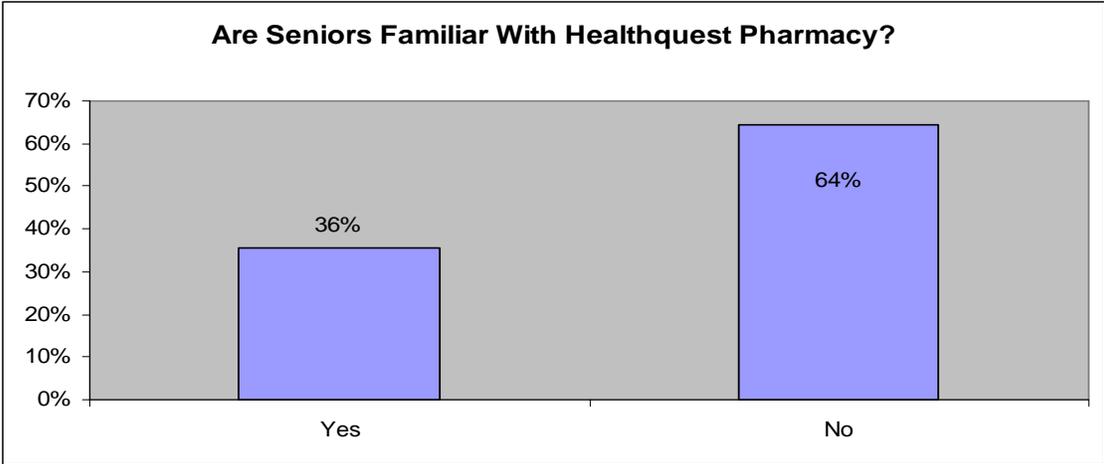
(Chart 2 of 2)



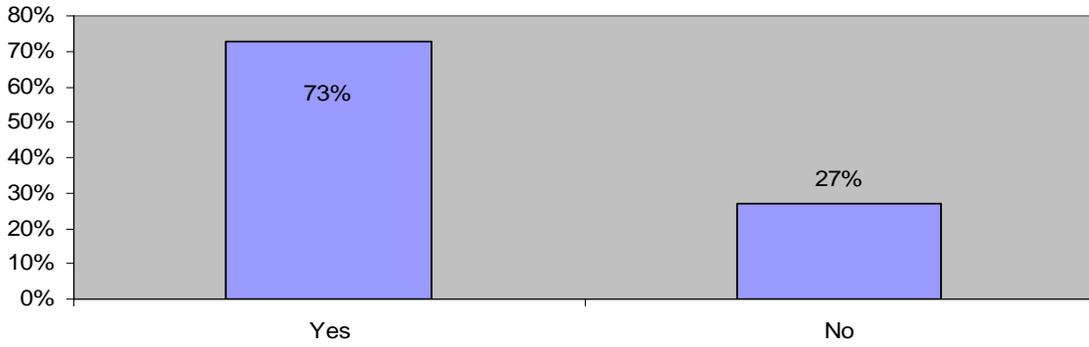
Senior Reasons For Not Seeing A Doctor



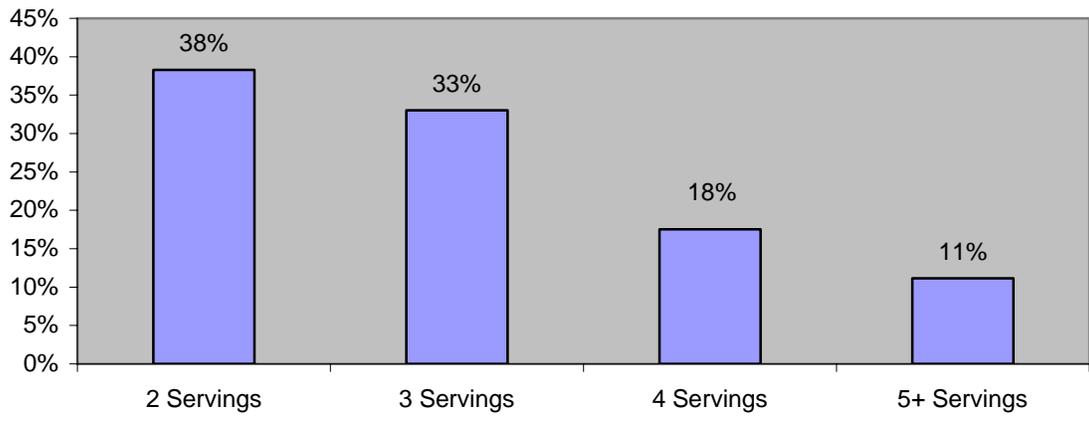




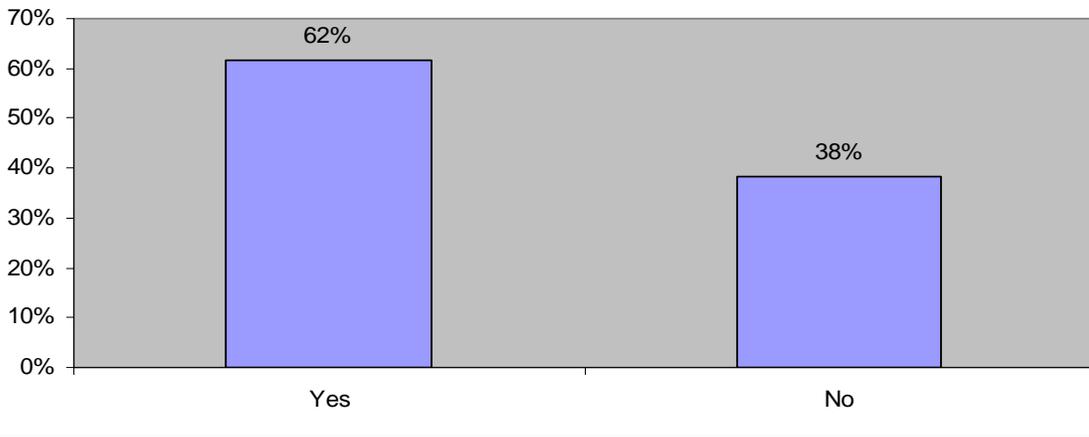
Do Seniors Feel There Are Enough Opportunities for Physical Activities Near Their Home?

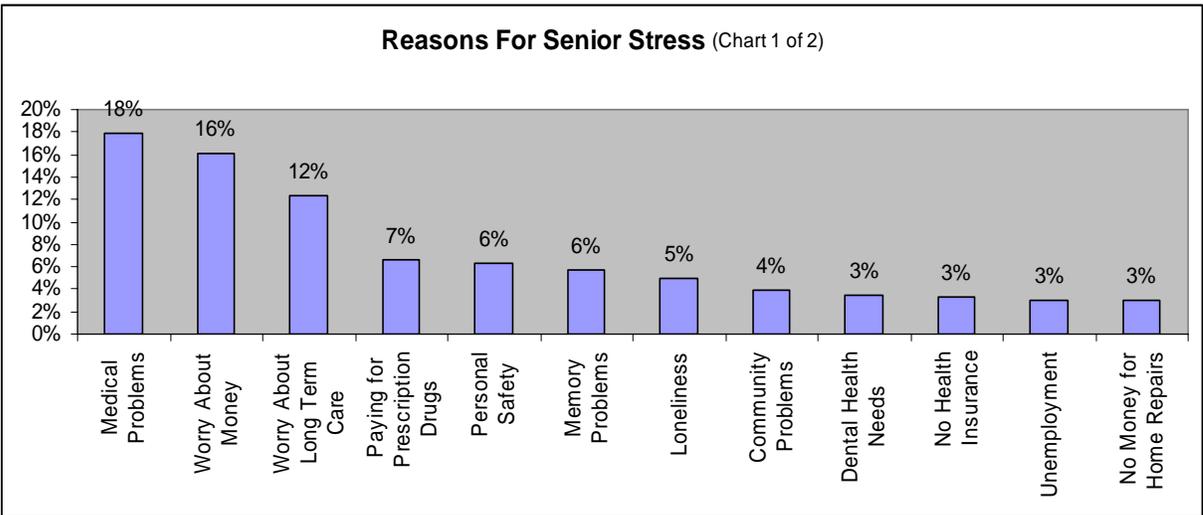
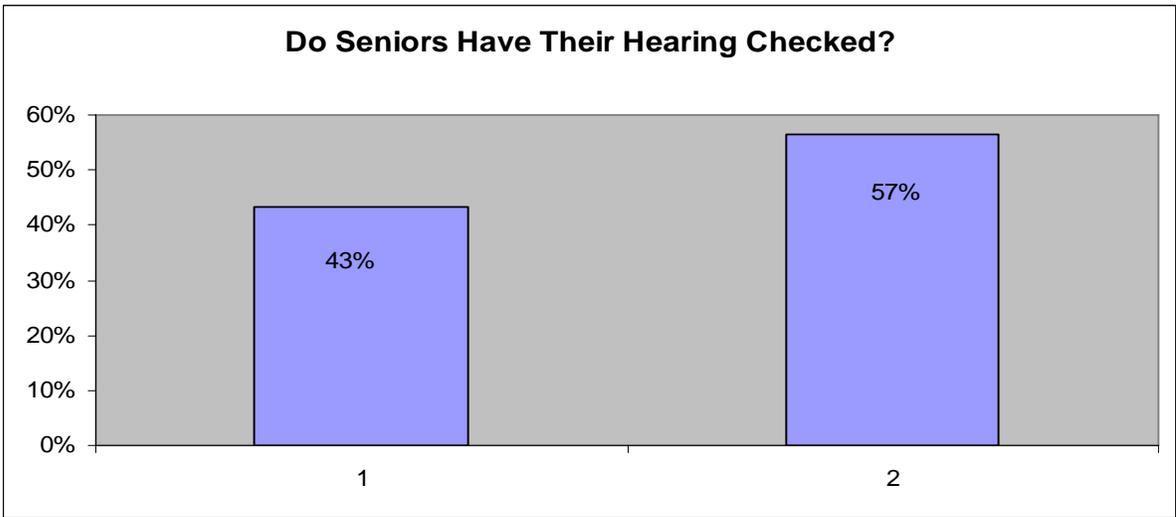
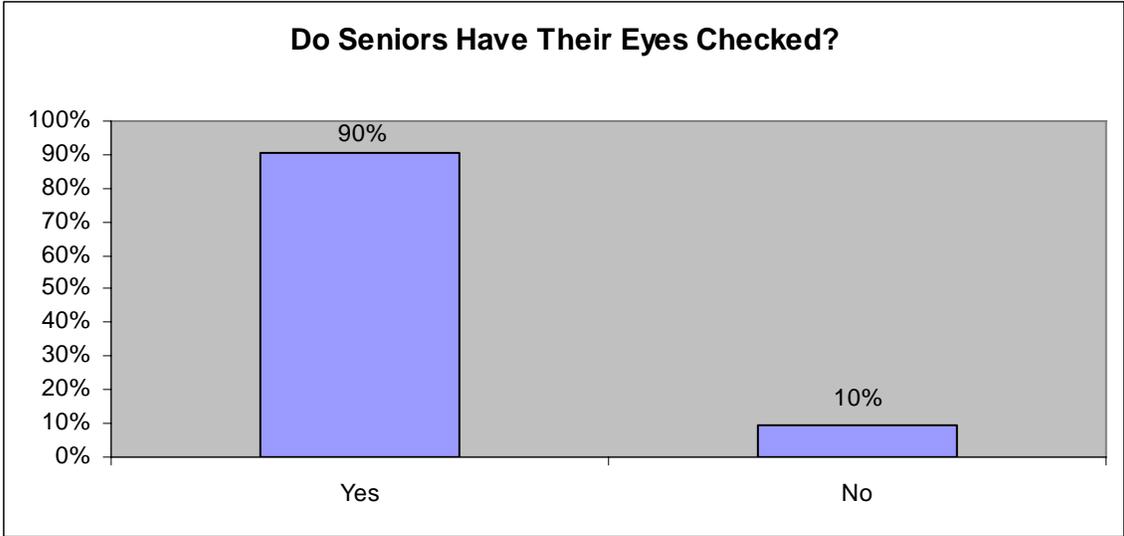


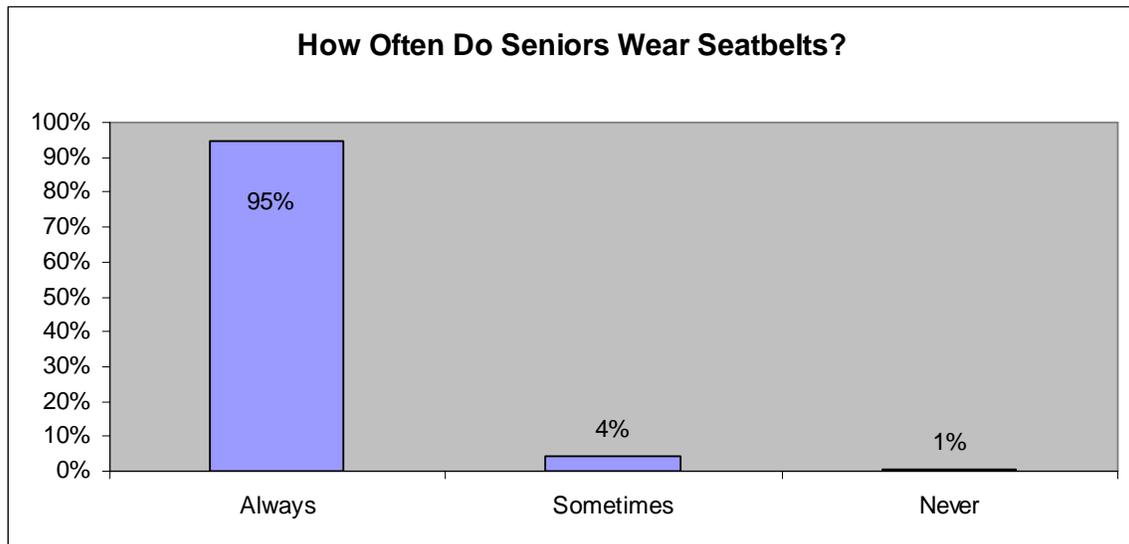
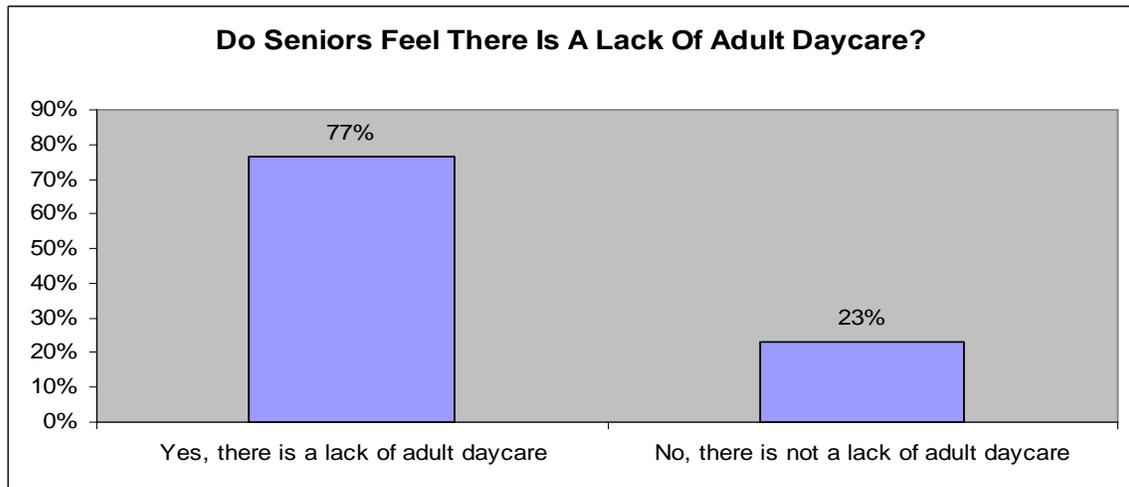
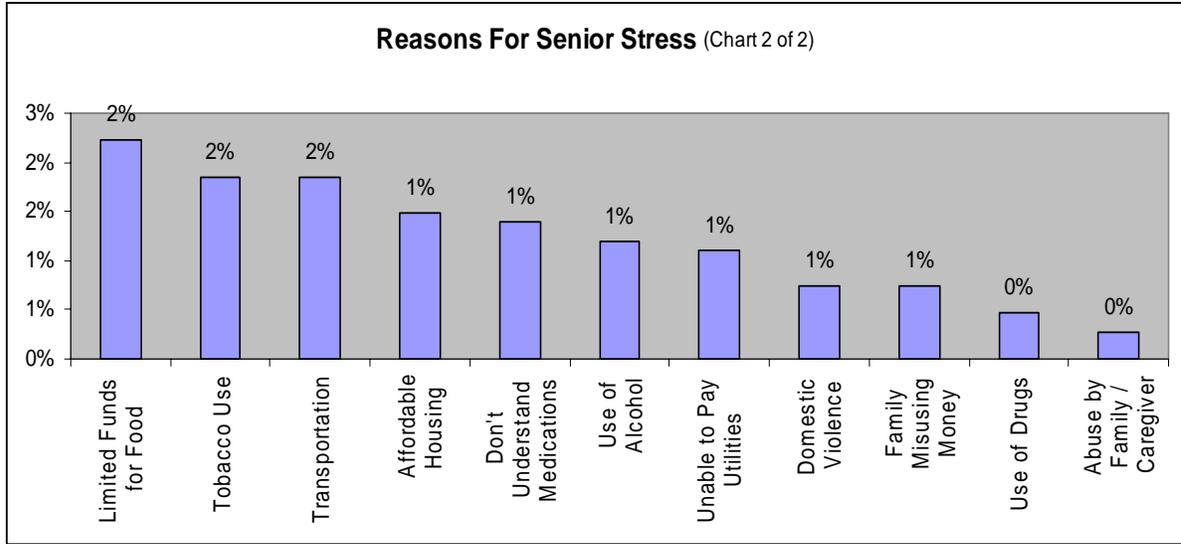
Senior Daily Servings Of Fruits And Veggies

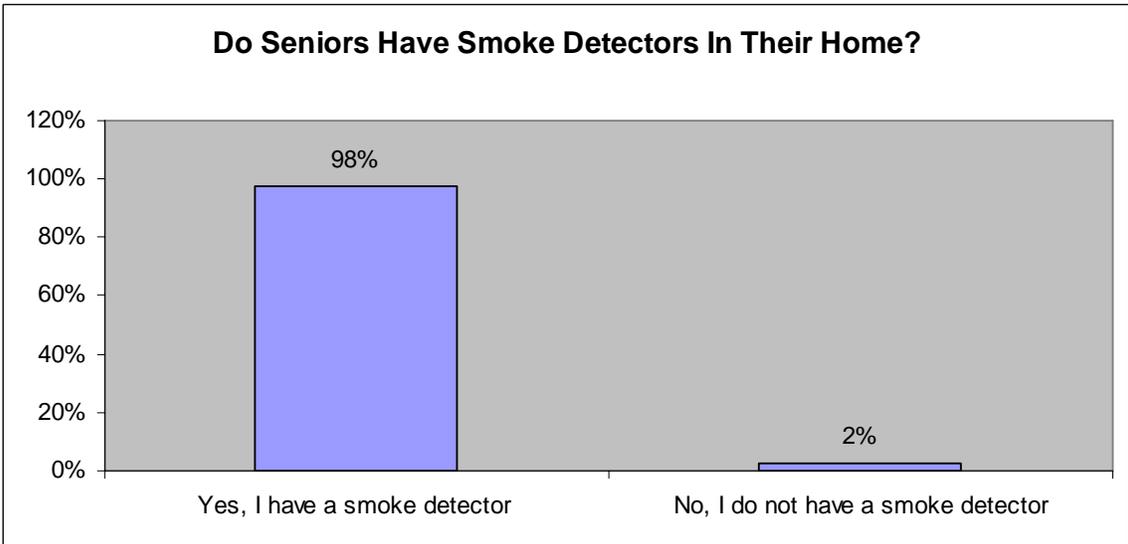
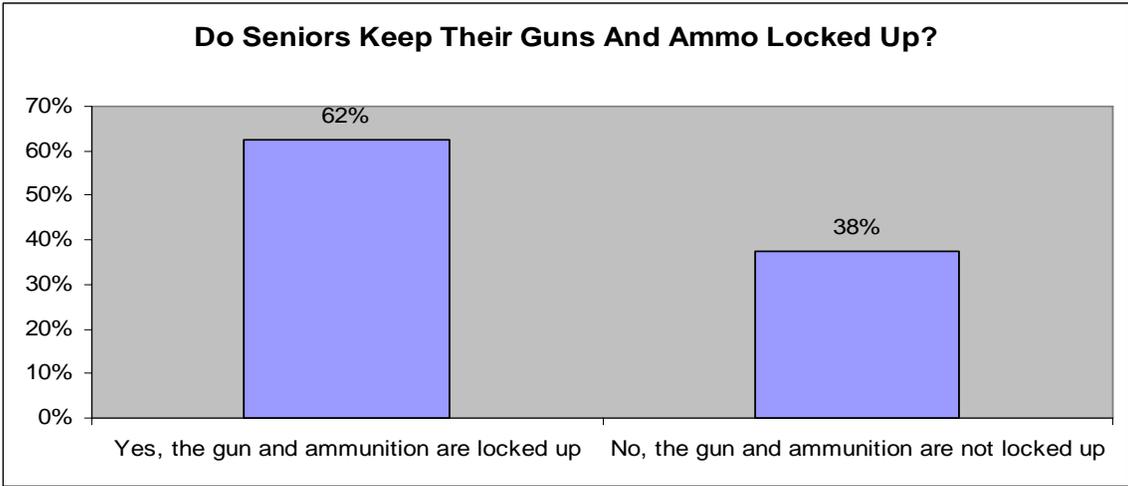
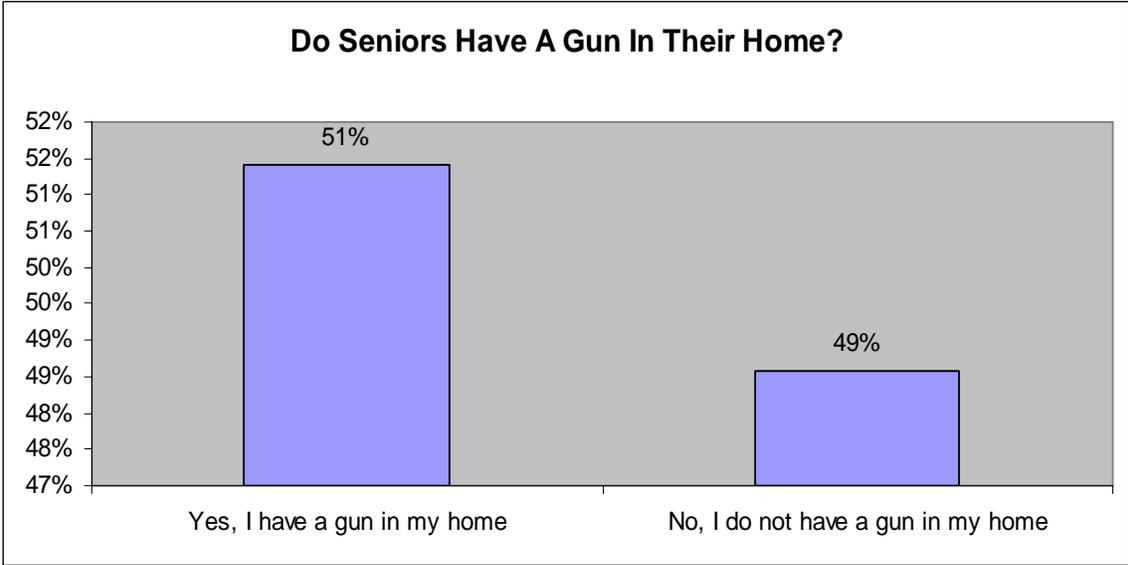


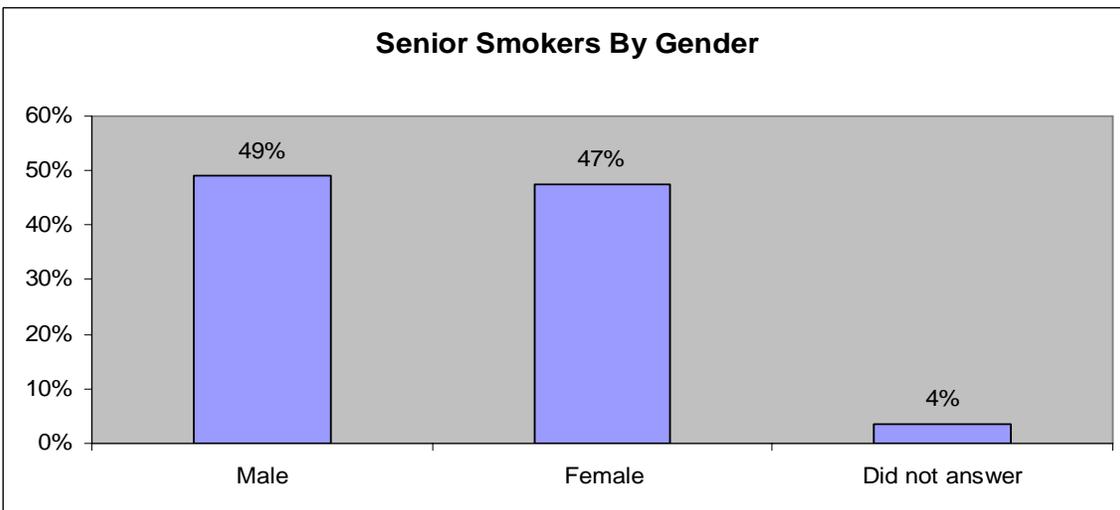
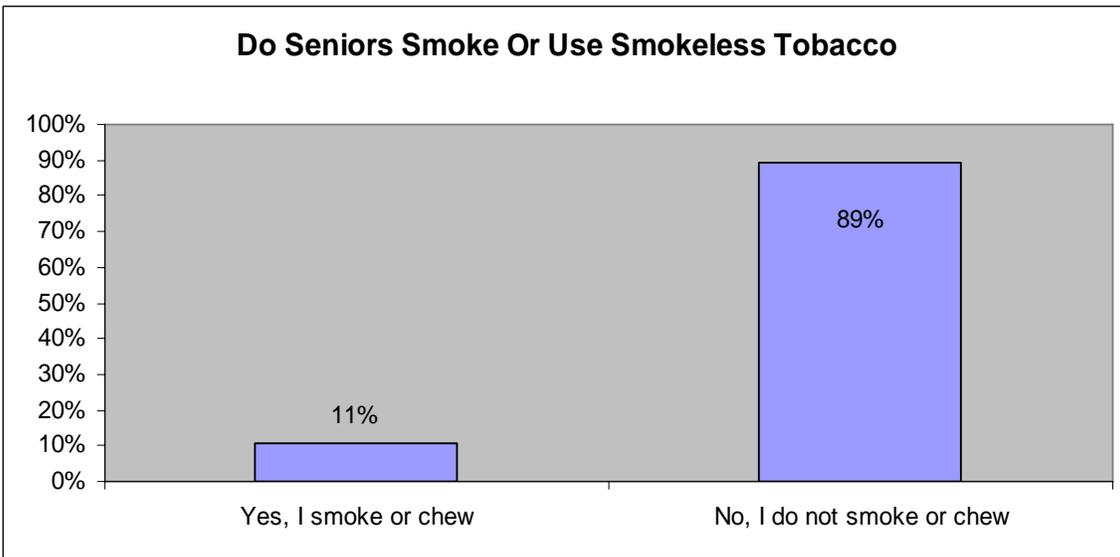
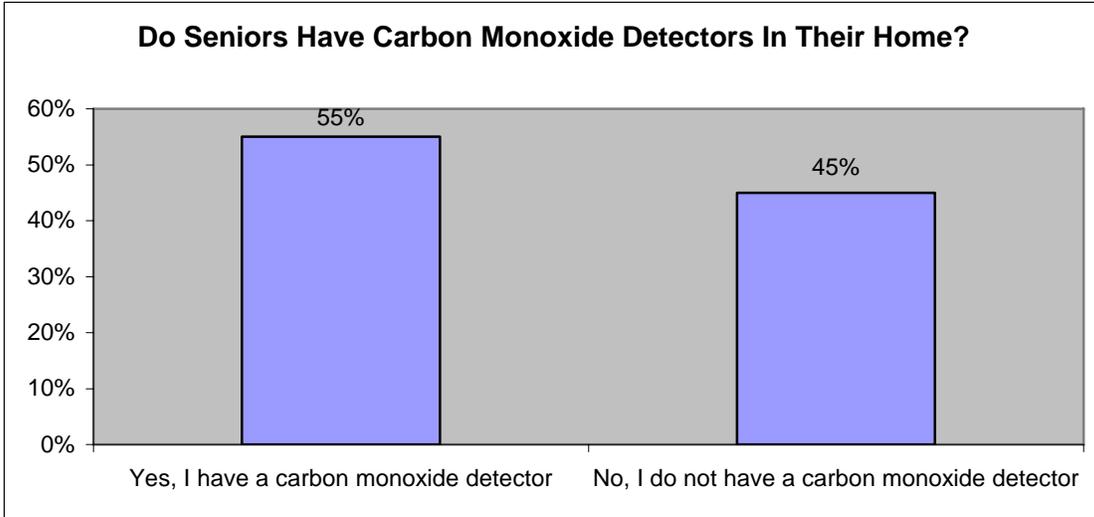
Would Seniors Eat at a Senior Nutrition Center?

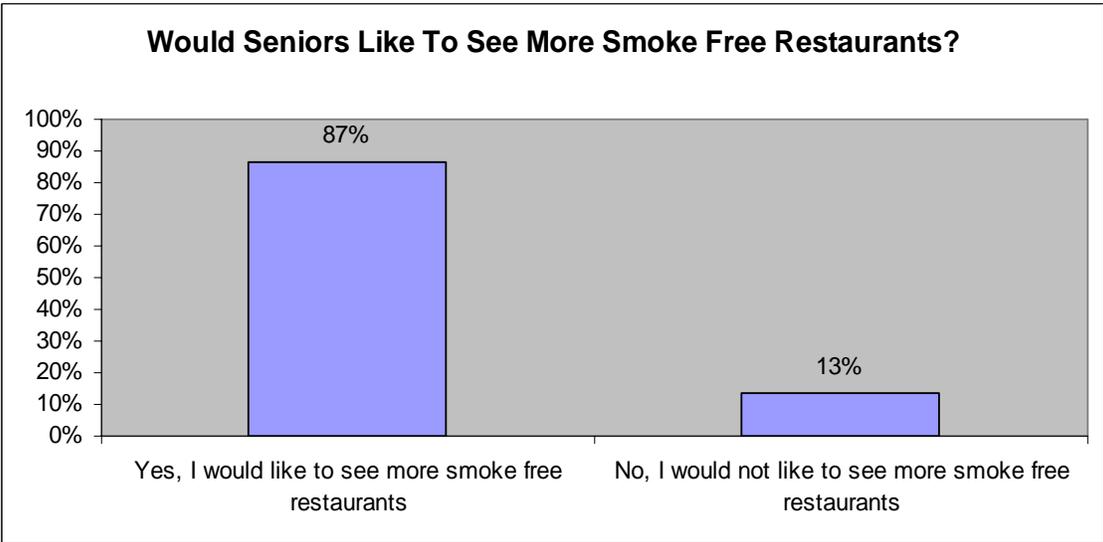
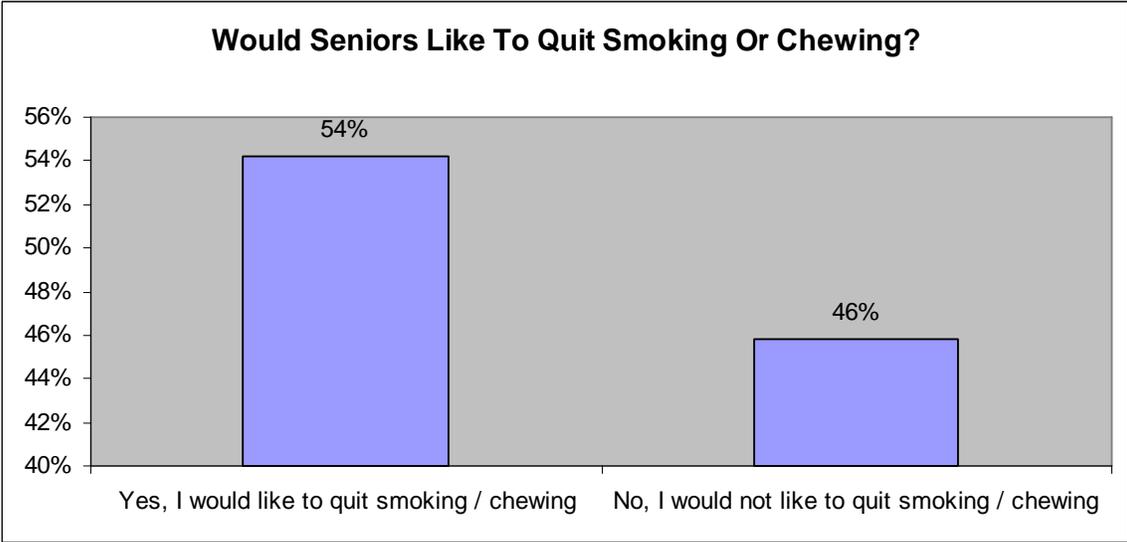
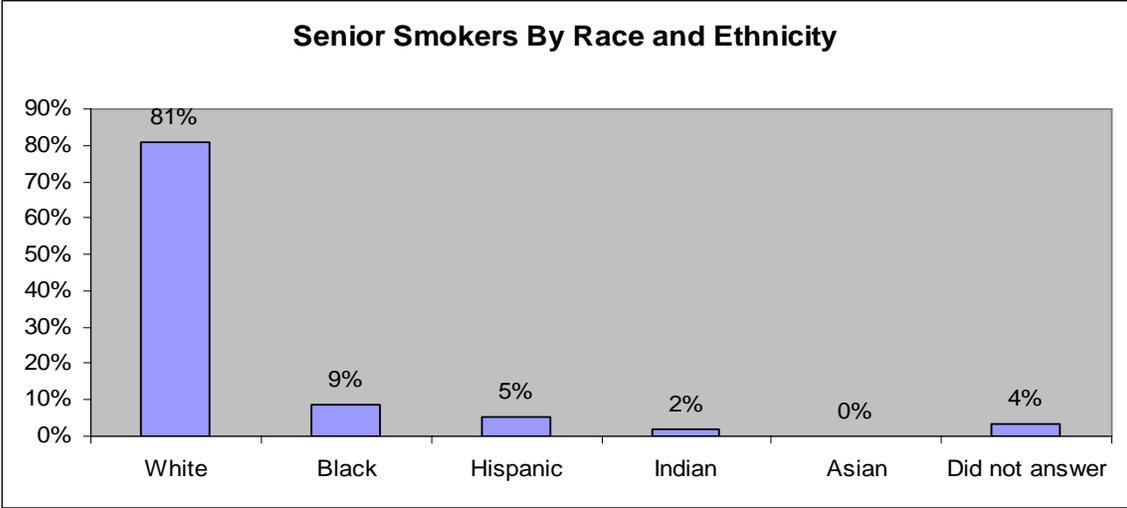


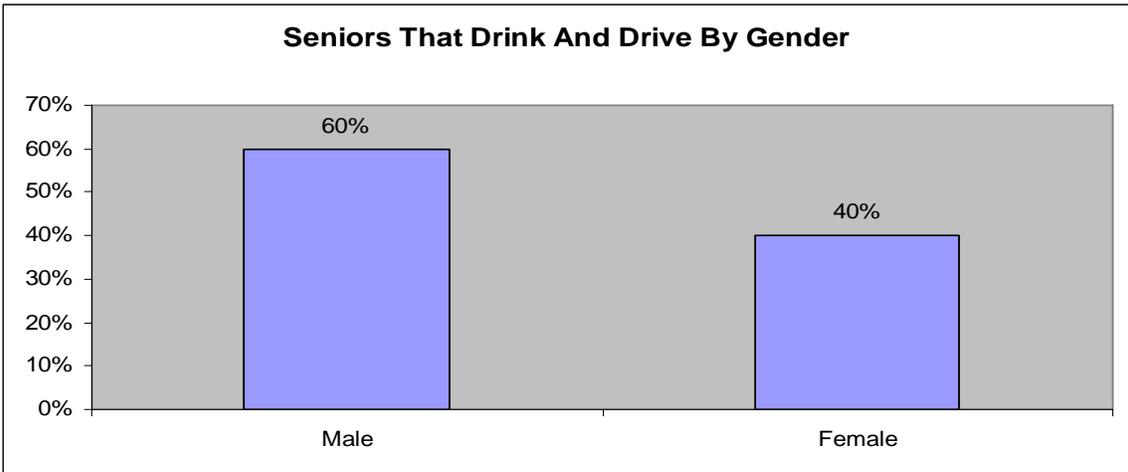
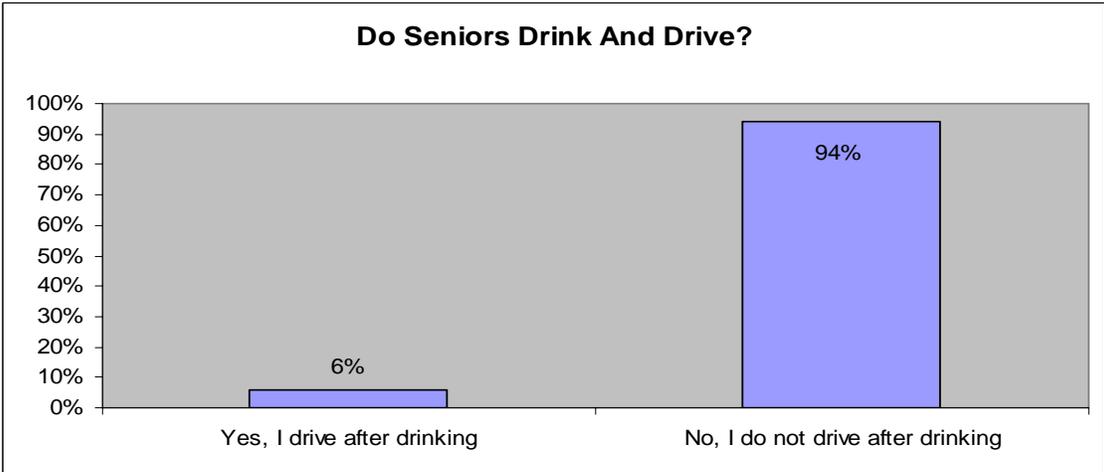
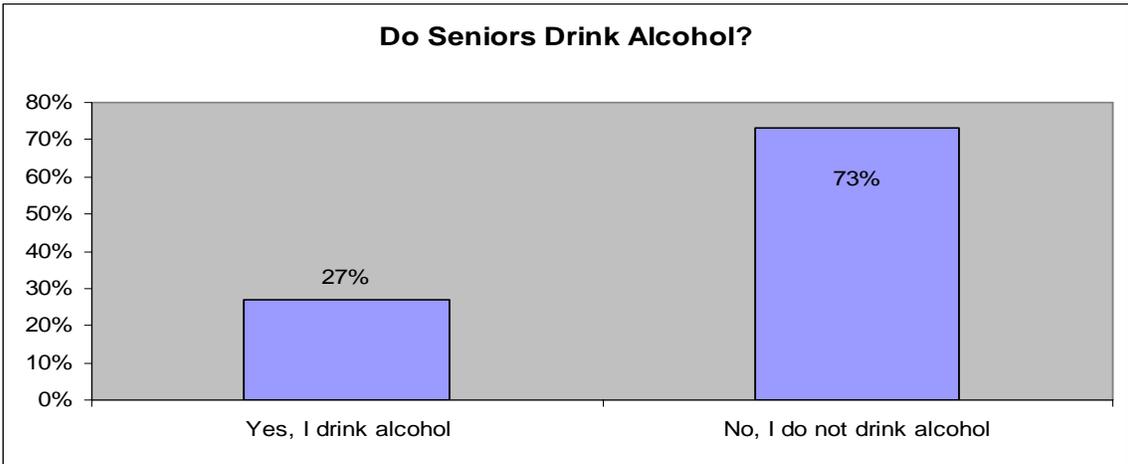


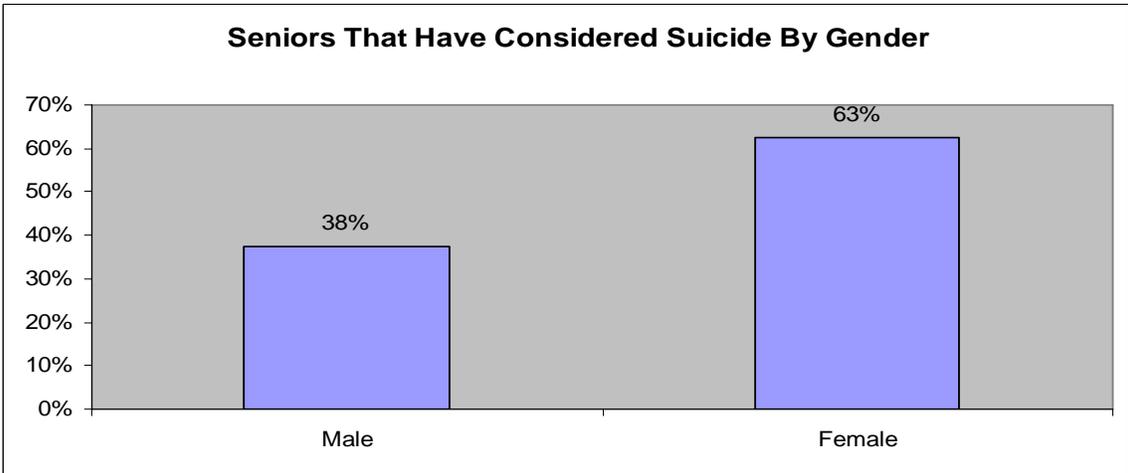
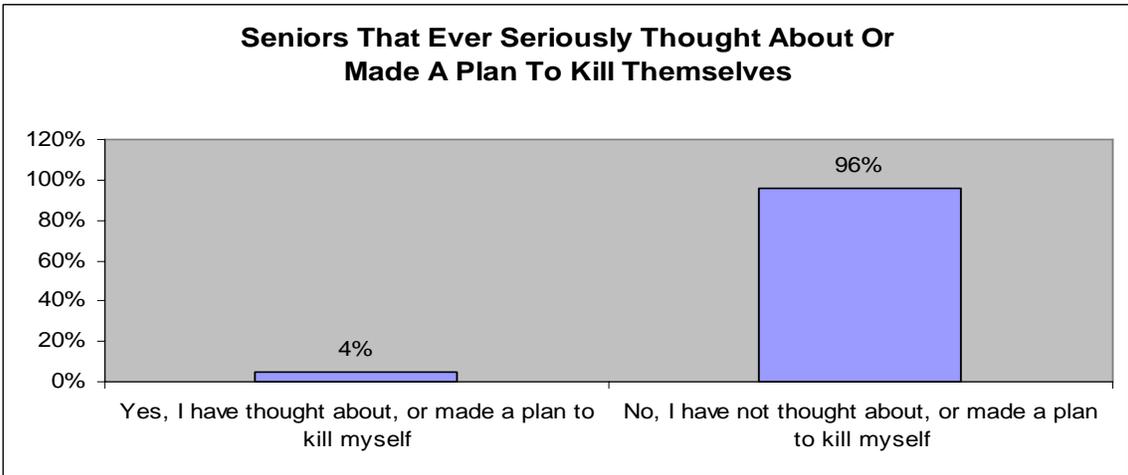
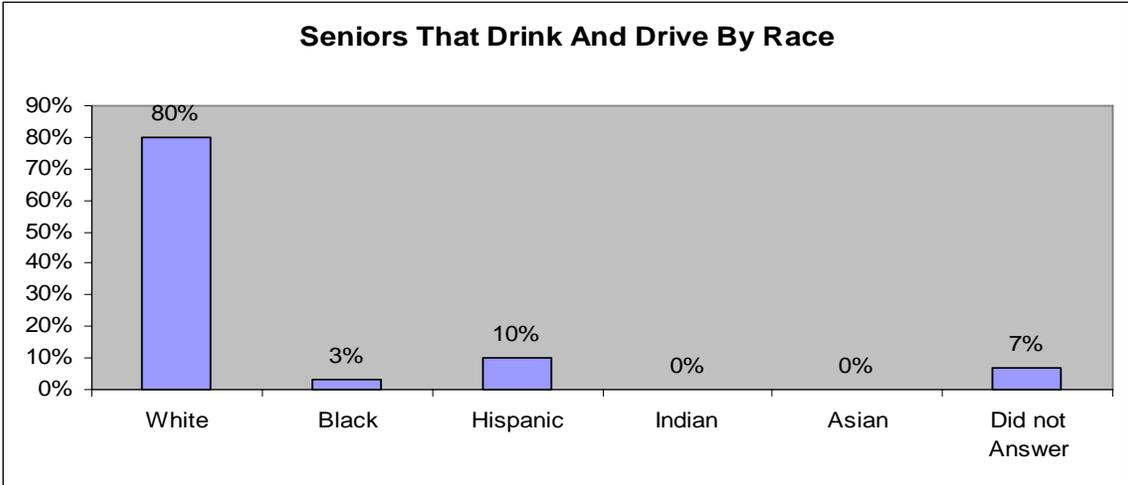


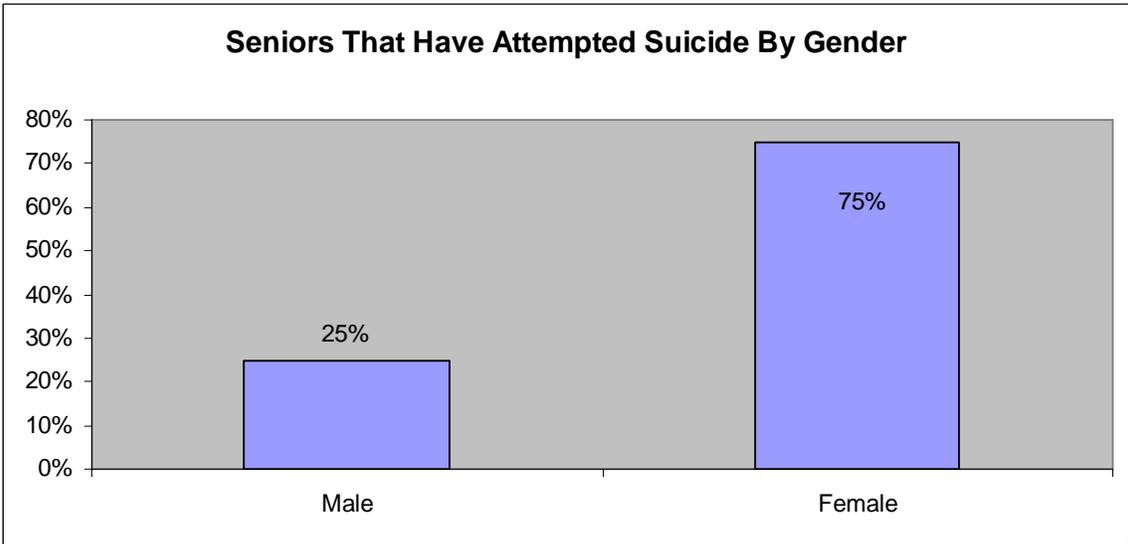
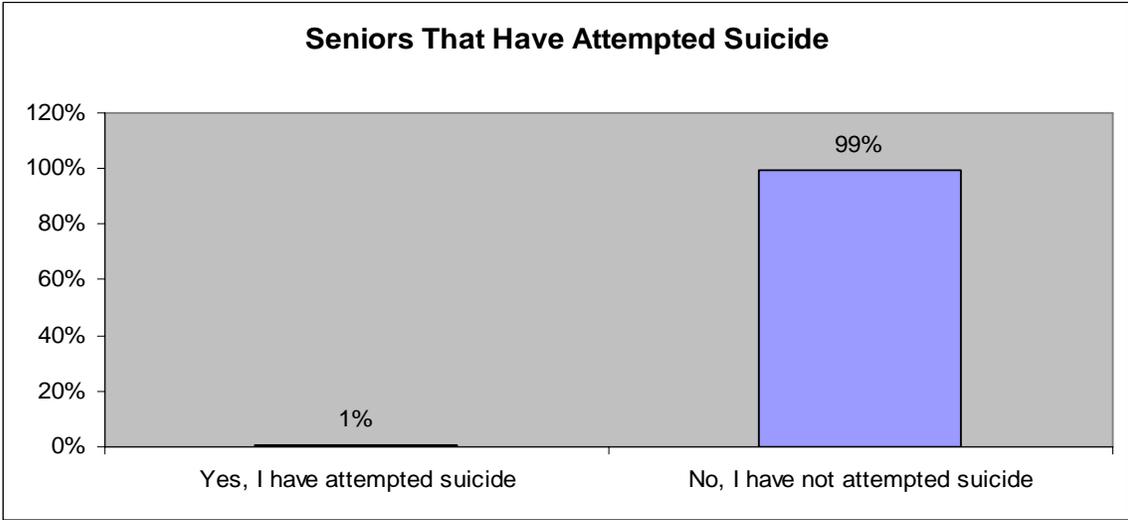
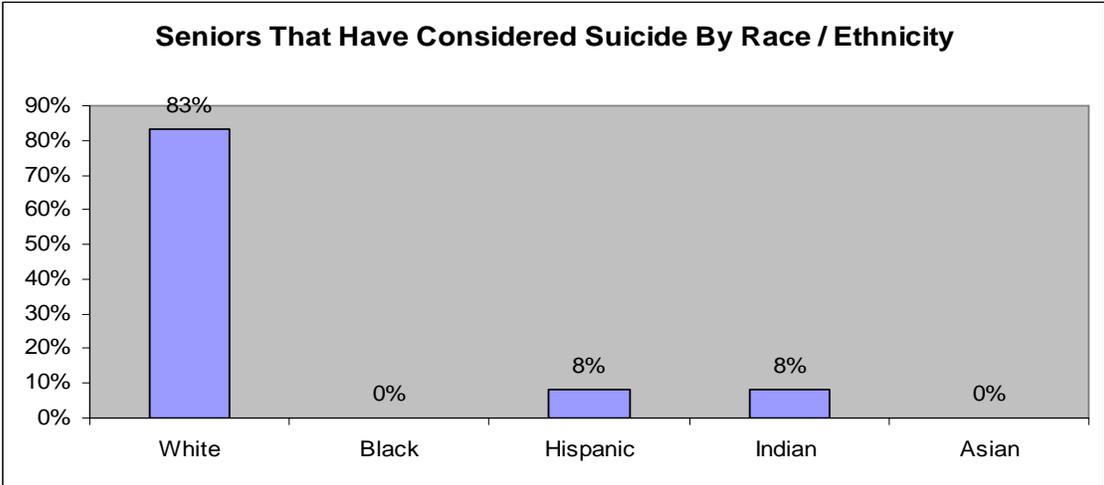


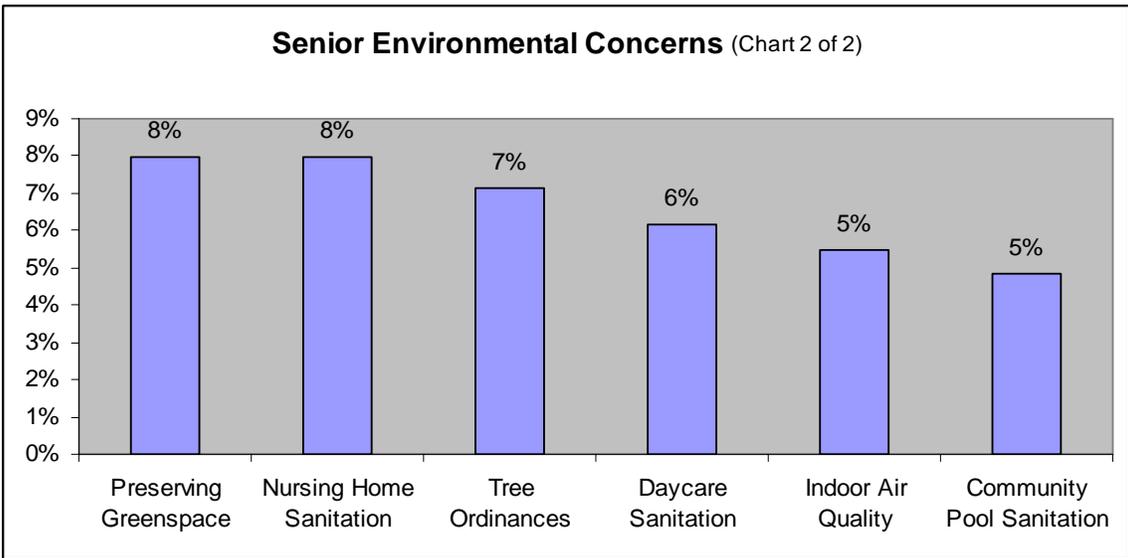
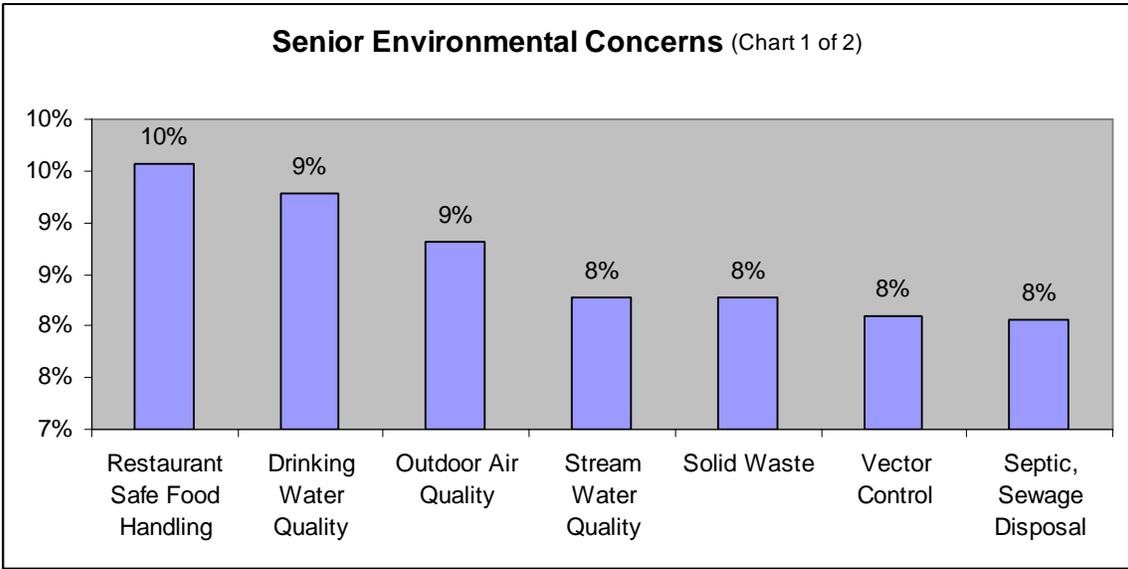
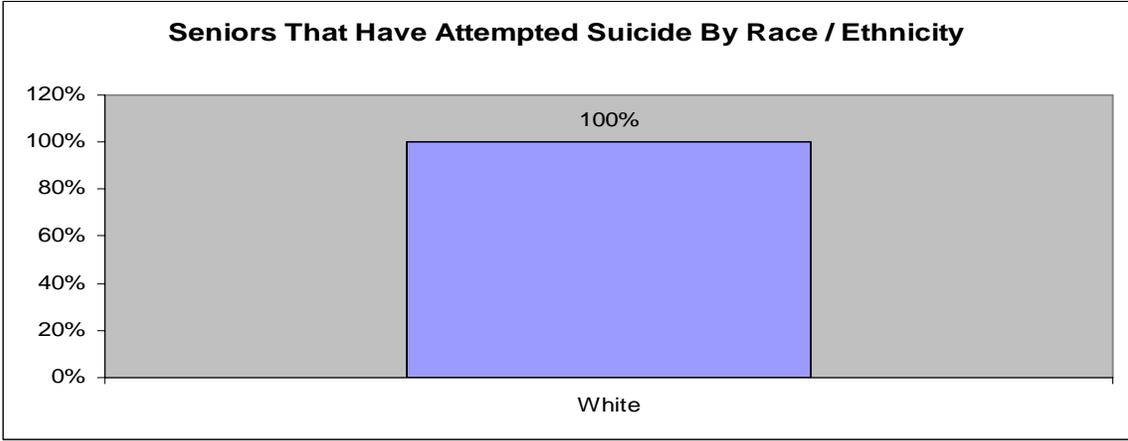




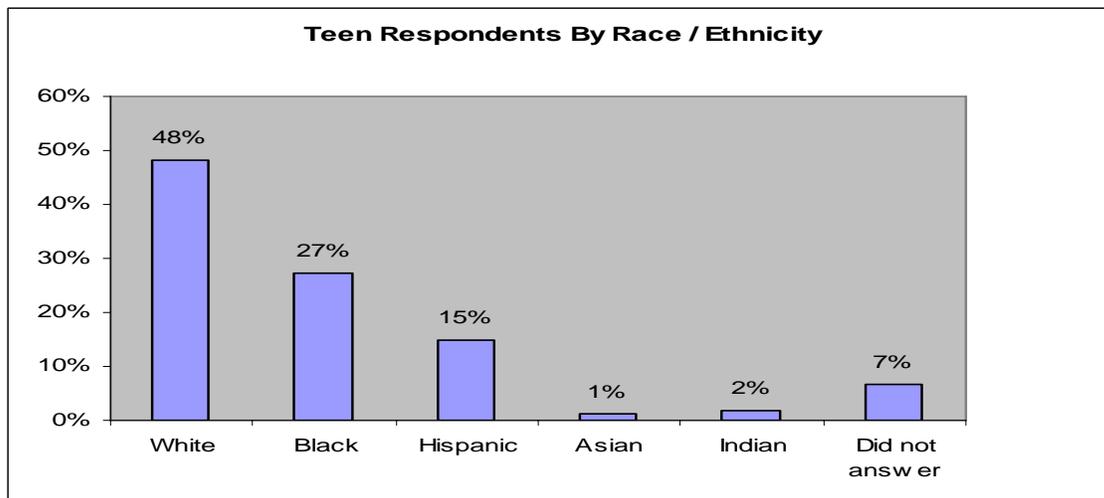
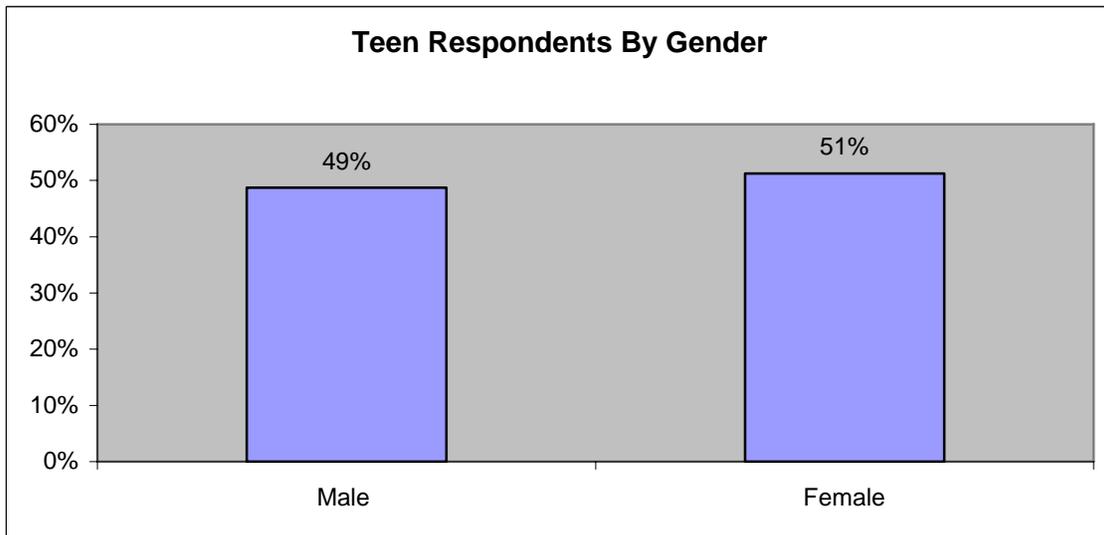
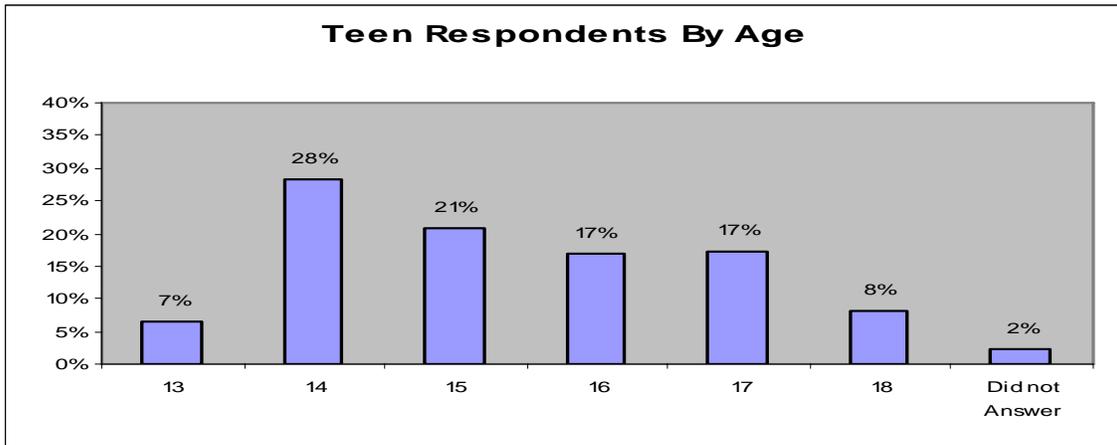




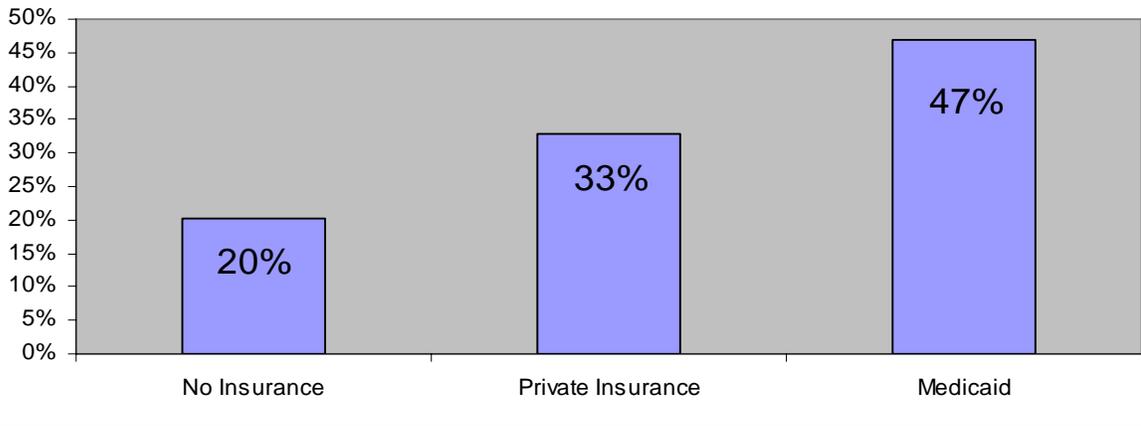




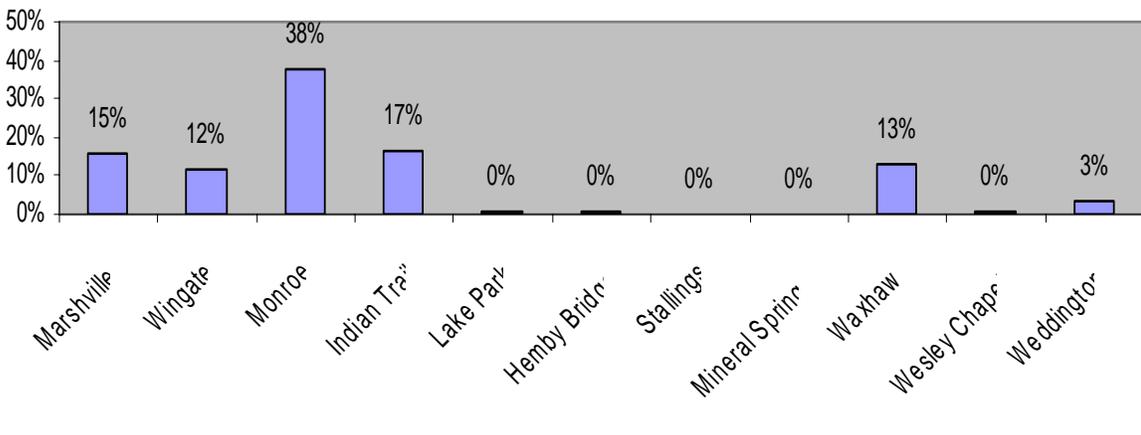
Teen Survey Respondents by Demographic Breakdown (Ages 13 to 18)
 468 Total Teen Survey Respondents 17% Teen Respondents Overall



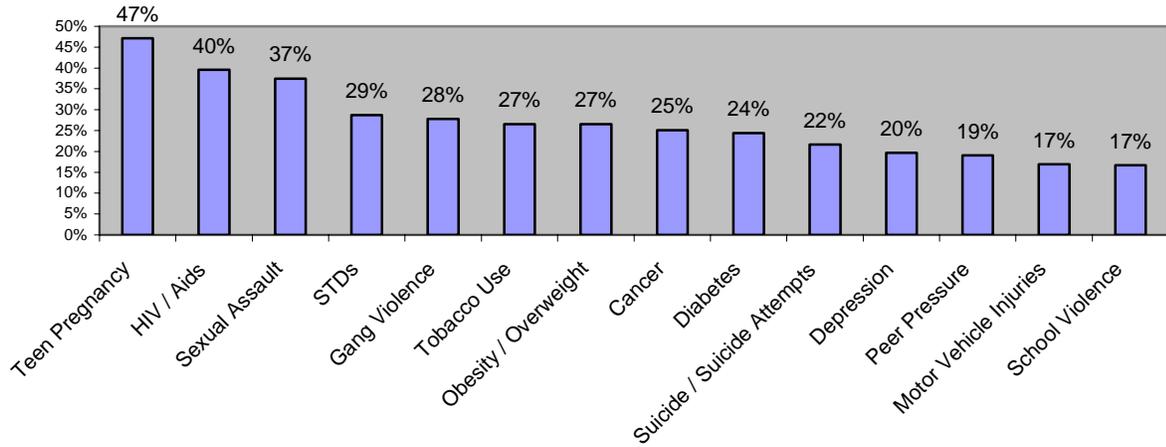
Teen Respondents By Insurance Status



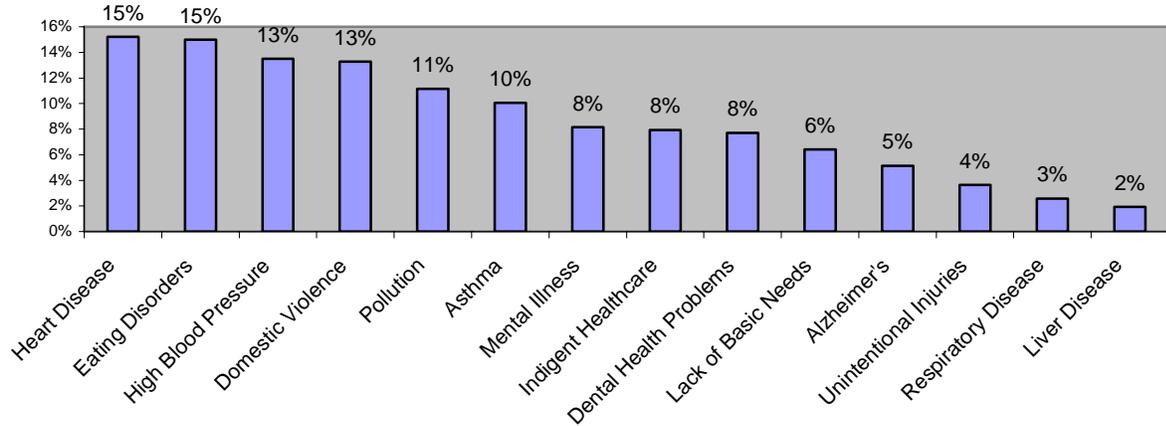
Teen Respondents By Residency



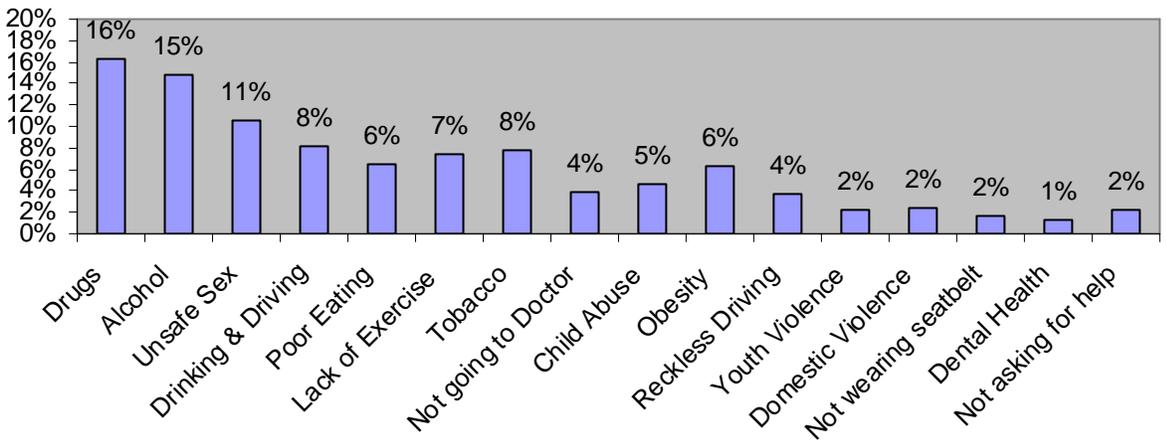
Teen Health Concerns (Chart 1 of 2)



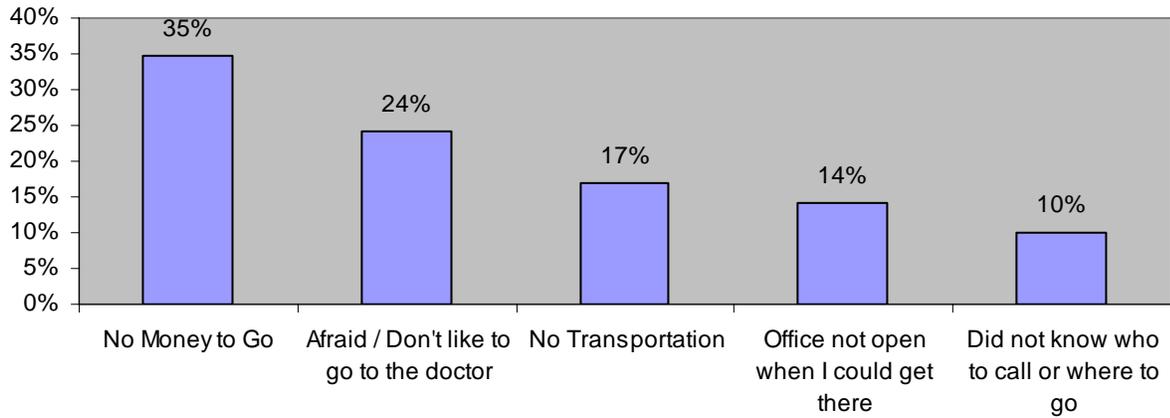
Teen Health Concerns (Chart 2 of 2)



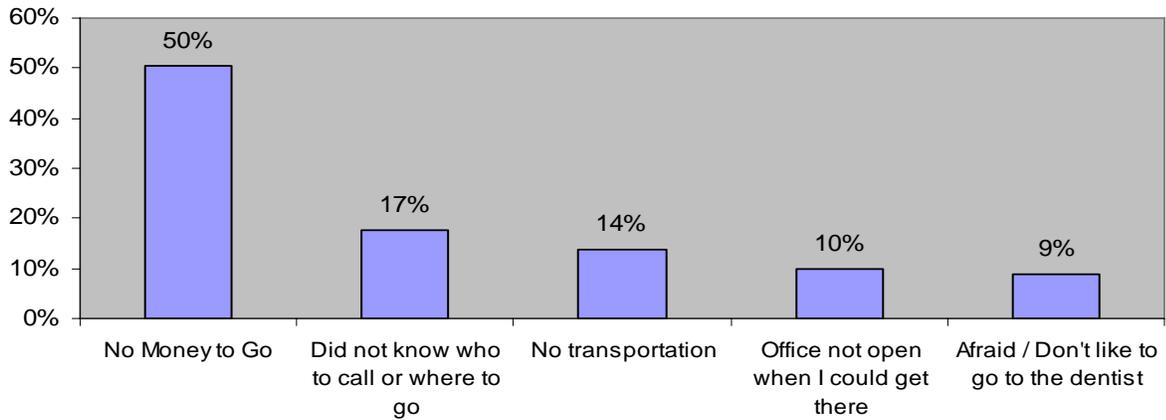
Unhealthy Behaviors Teens Feel Cause Poor Health



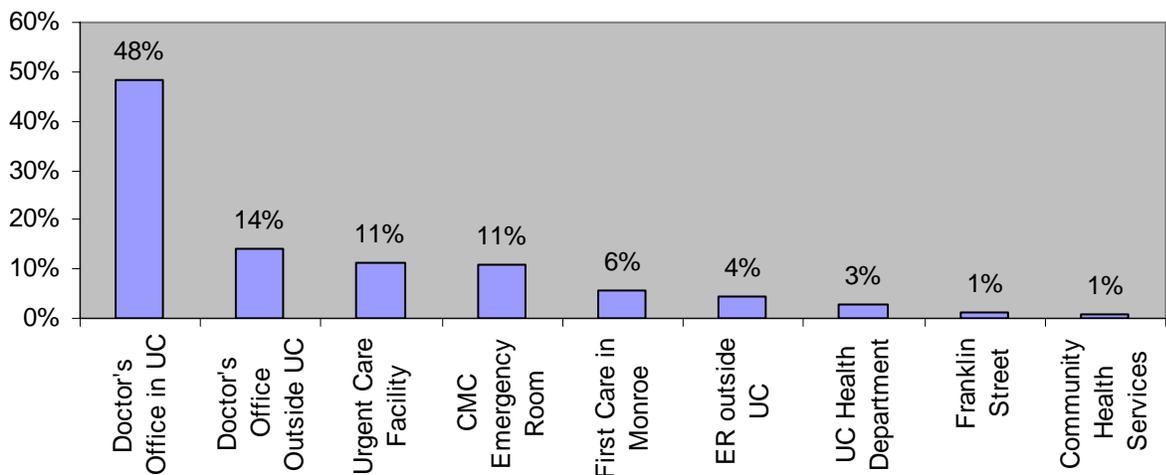
Reasons for Teens Not Seeing a Doctor



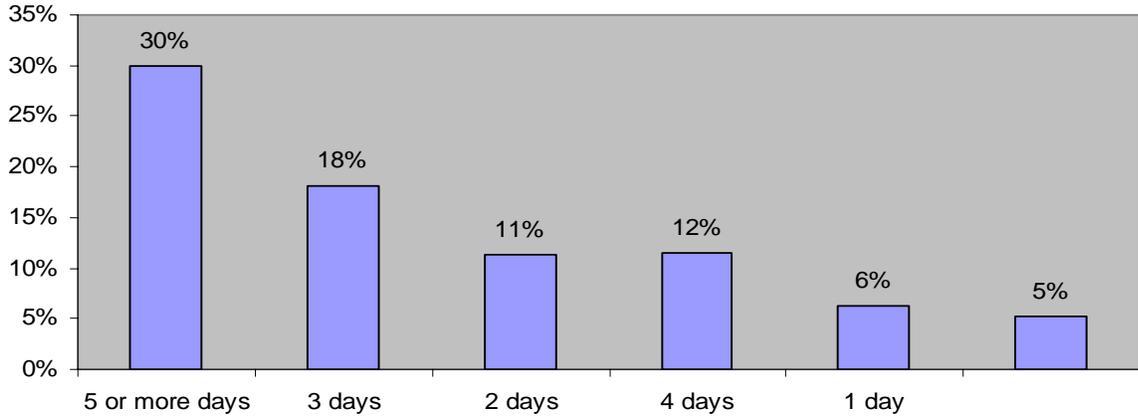
Reasons Why Teens Gave For Not Seeing A Dentist



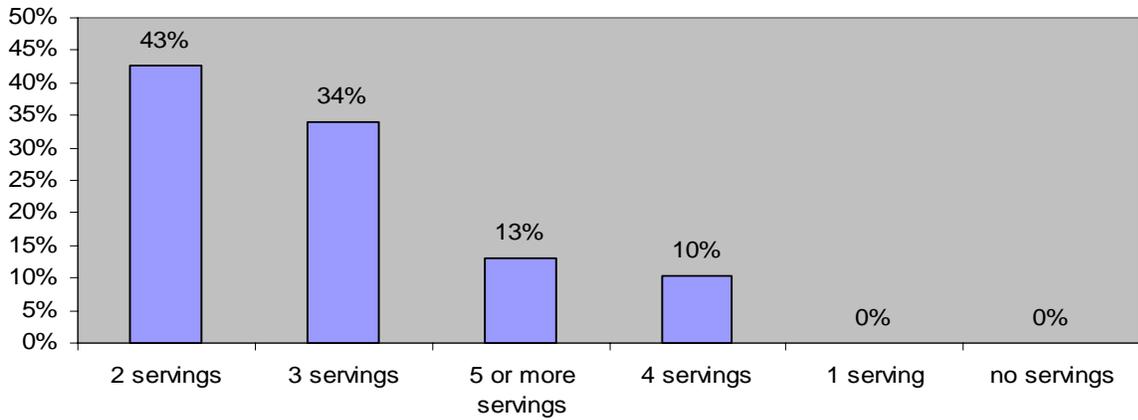
Where Teens Go Most Often When Sick



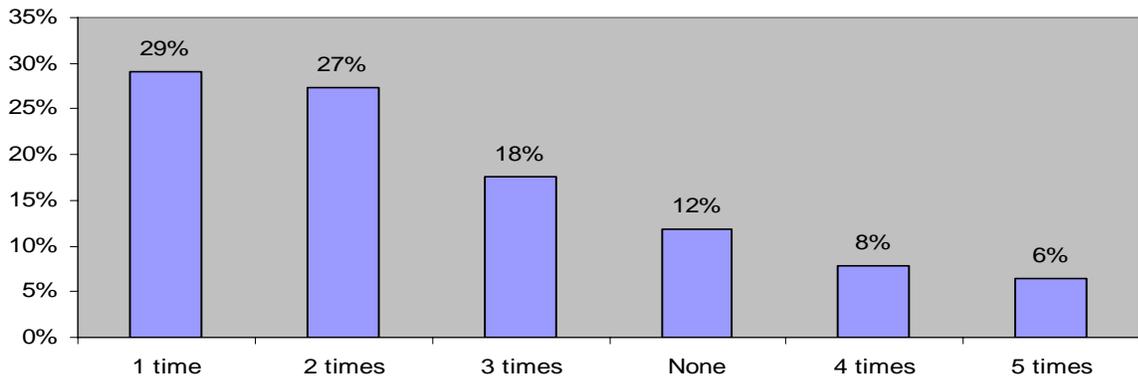
Weekly Exercise For Teens



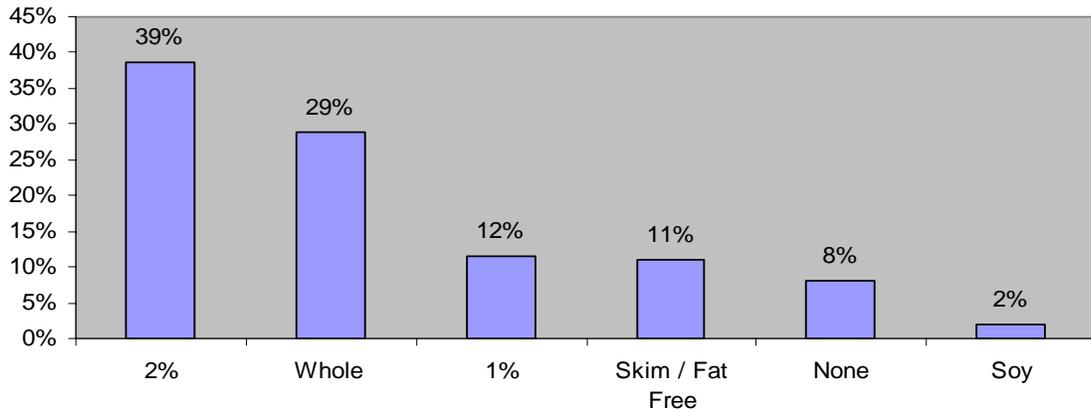
Daily Servings of Fruits and Veggies For Teens



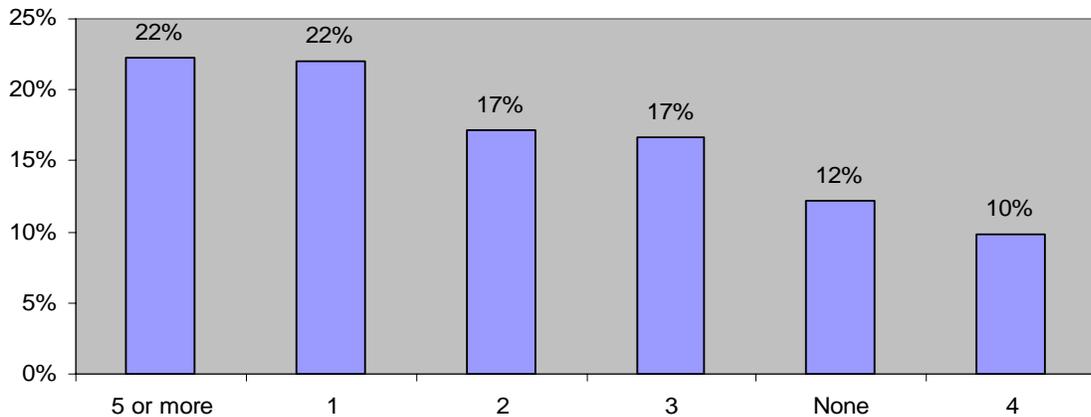
Number Of Times Per Week That Teens Eat Fast Food



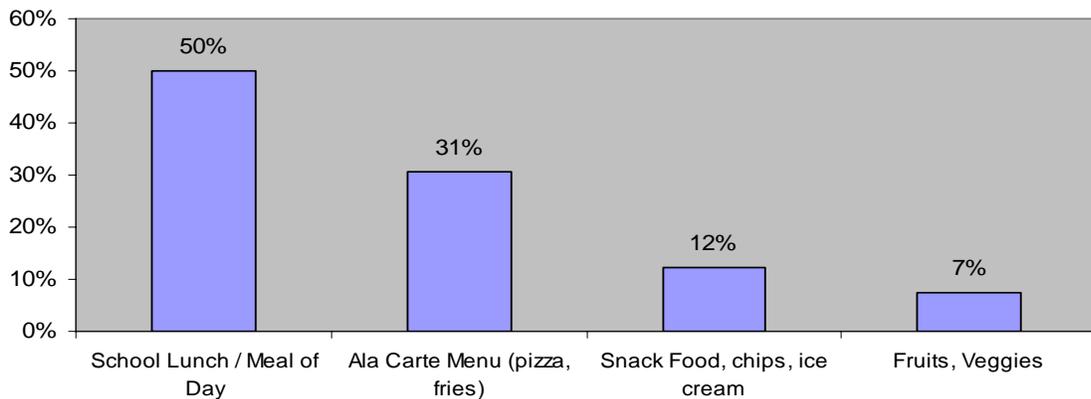
Type Of Milk That Teens Drink



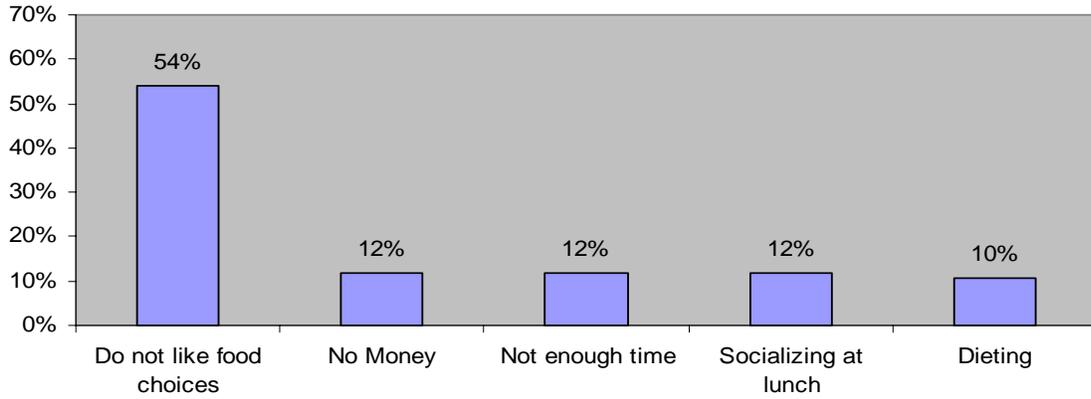
Number Of Soft Drinks Consumed Per Day By Teens



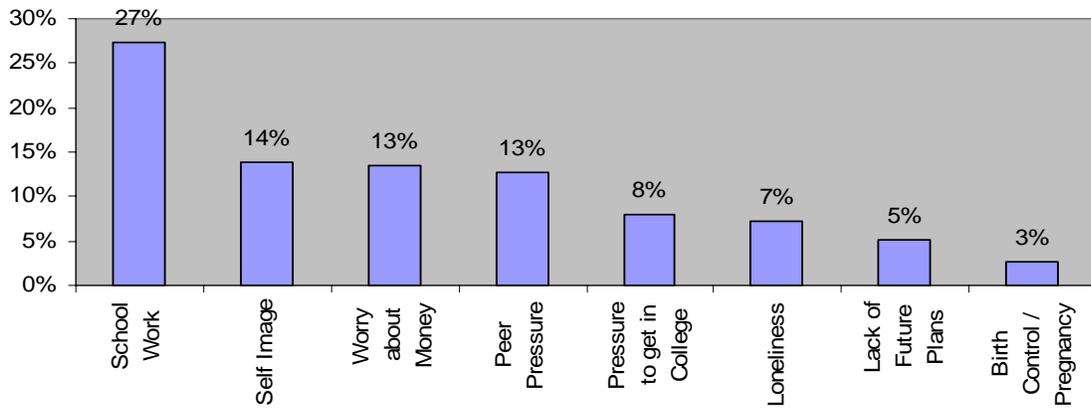
What do Teens That Buy Lunch Normally Eat?



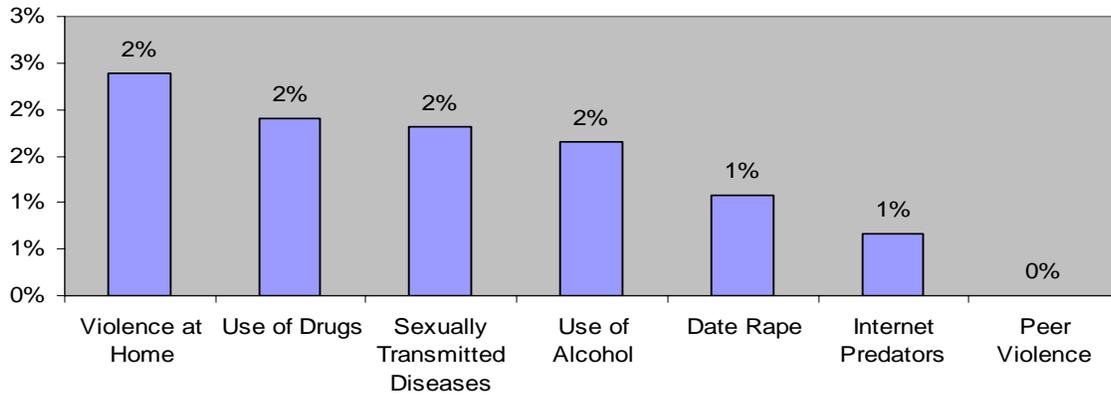
Reasons Why Teens Gave For Not Buying Lunch



Reasons For Teen Stress (Chart 1 of 2)

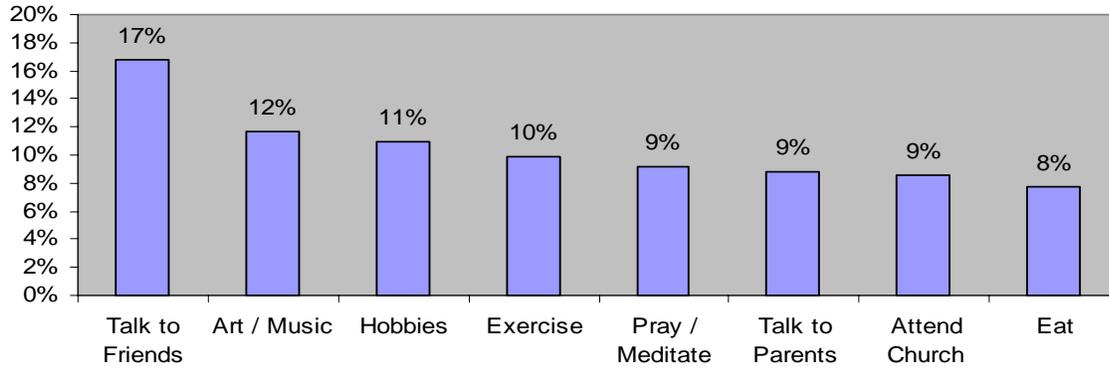


Reasons For Teen Stress (Chart 2 of 2)



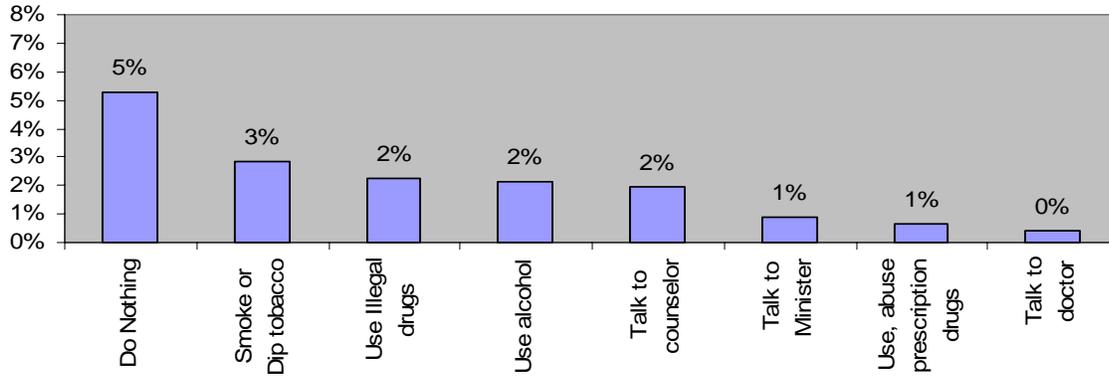
Teen Coping Mechanisms For Dealing With Stress

(Chart 1 of 2)

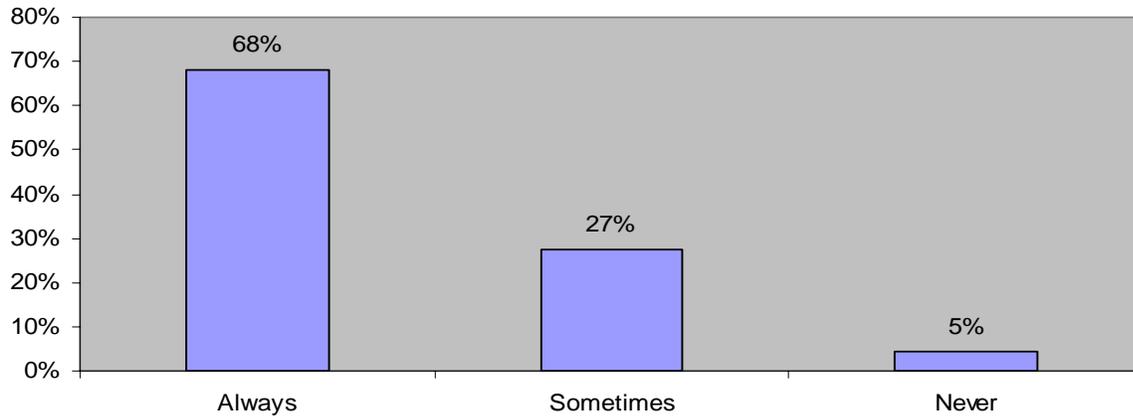


Teen Coping Mechanisms For Dealing With Stress

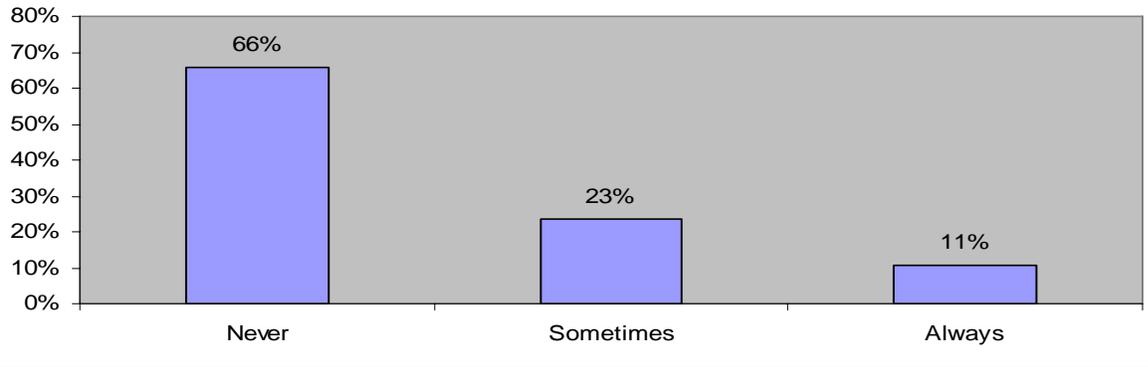
(Chart 2 of 2)



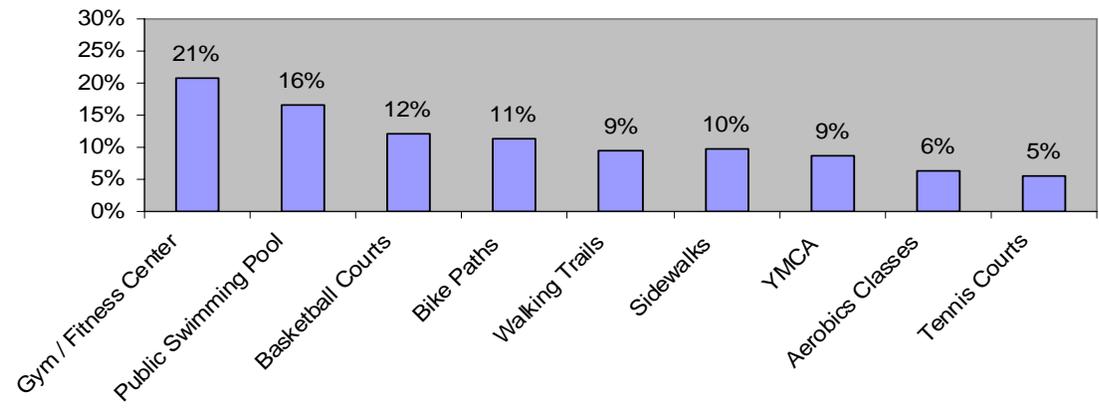
Teen Seatbelt Use



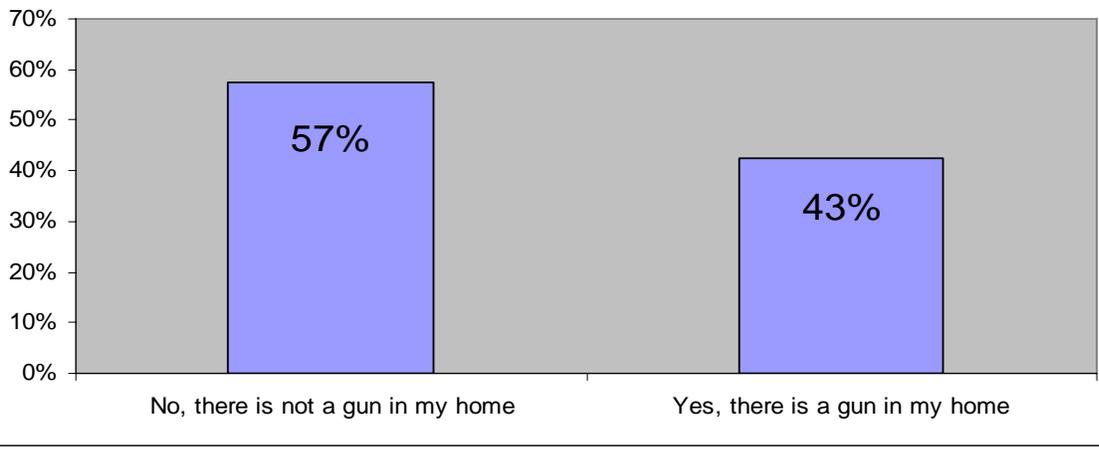
How Often Do Teens Wear A Helmet For Biking / Skateboarding?



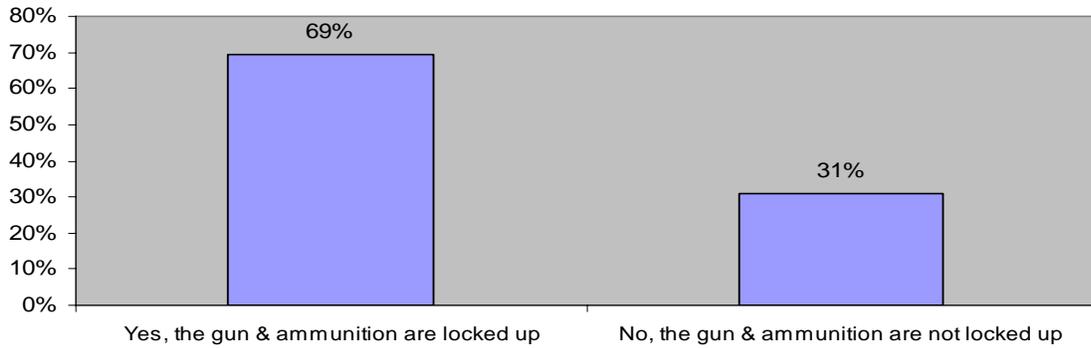
Teen Requested Recreation Opportunities



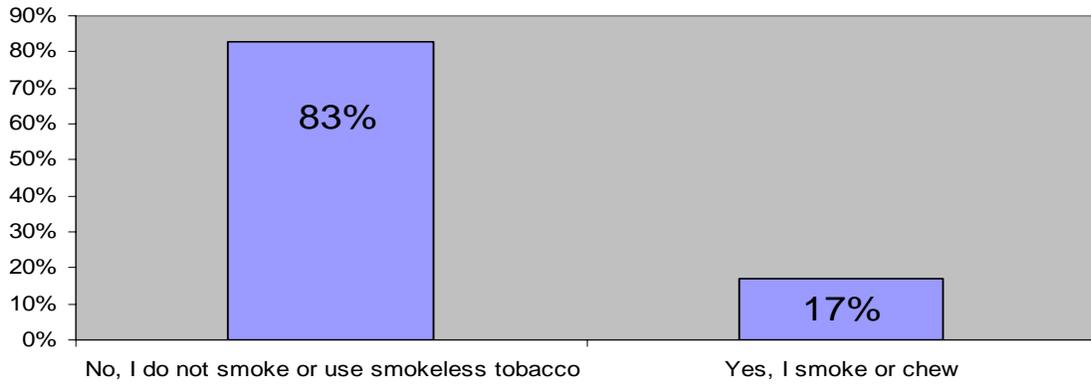
Do Teens Live in A Home Where There Is A Gun?



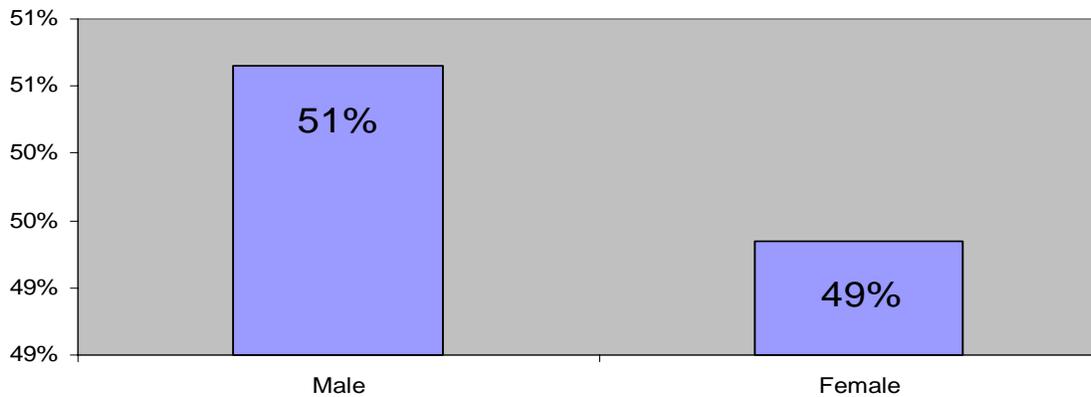
In Teen Homes With A Gun, Are The Gun and Ammunition Locked Up?



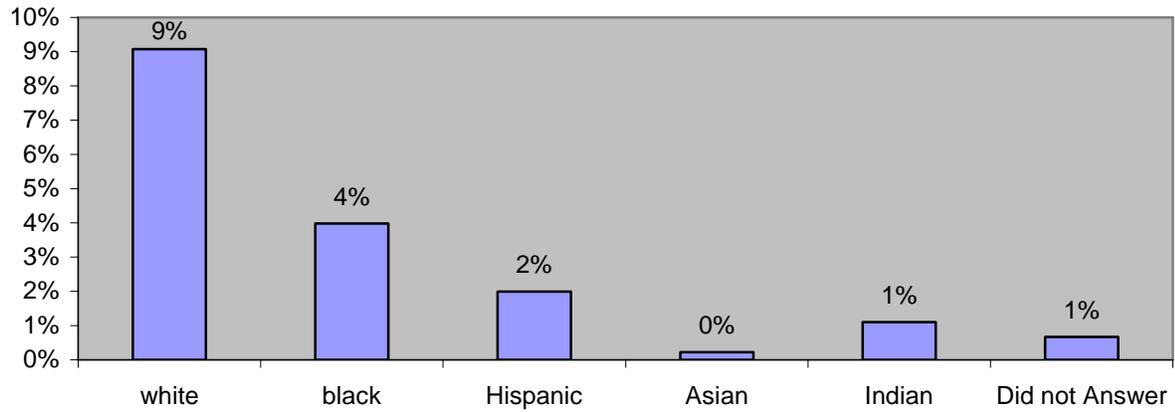
Teens That Smoke Or Use Smokeless Tobacco



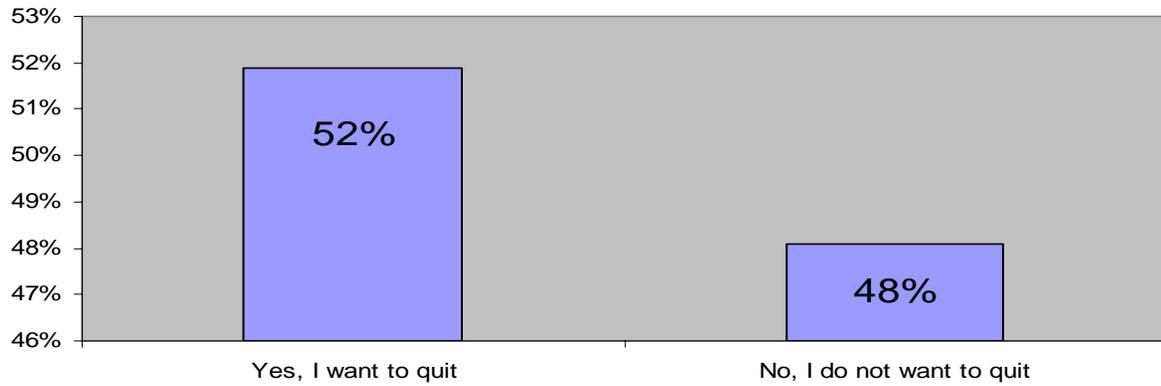
Teens That Smoke or Chew Tobacco By Gender



Teens That Smoke or Chew Tobacco by Race / Ethnicity

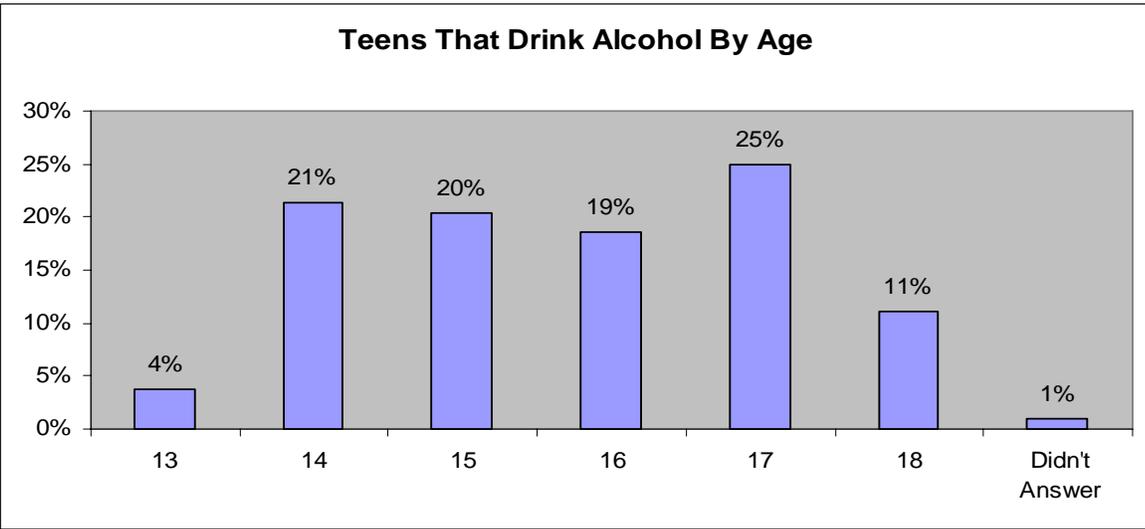
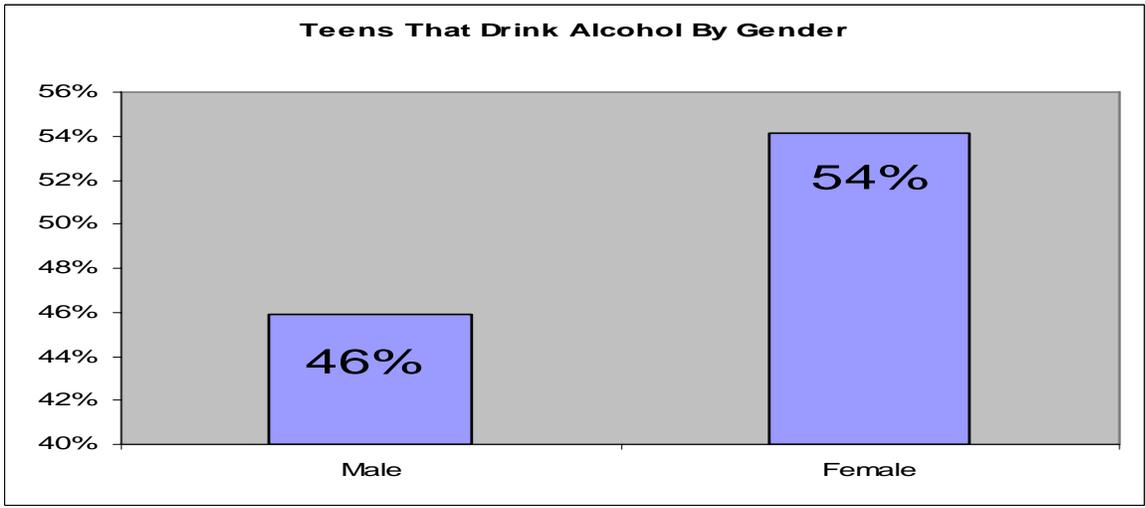
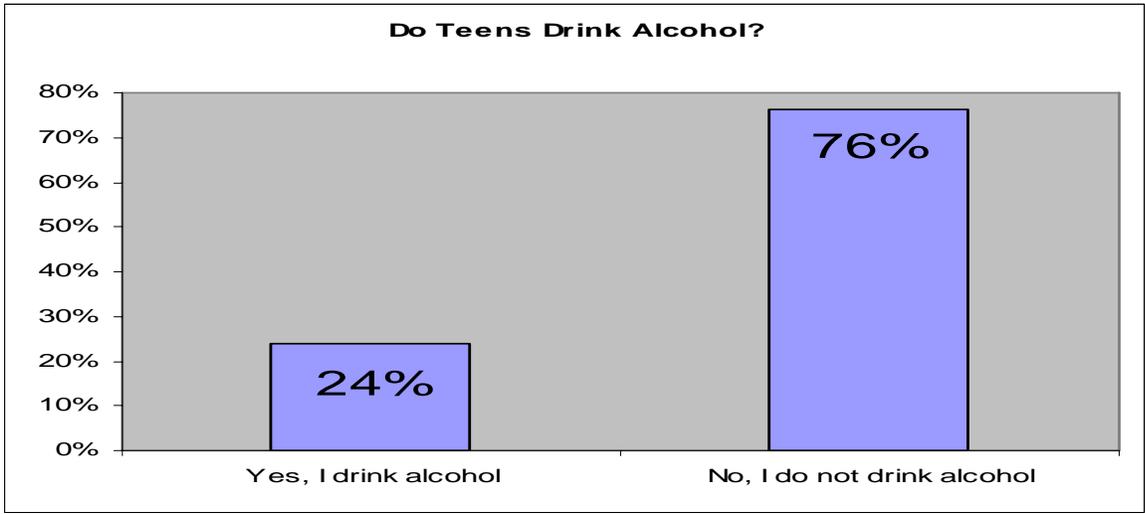


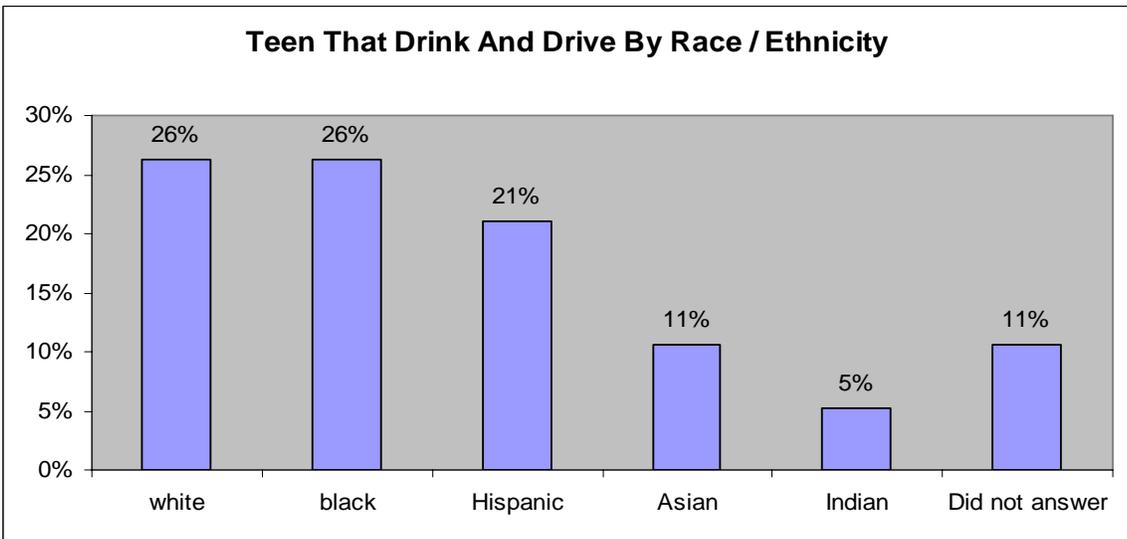
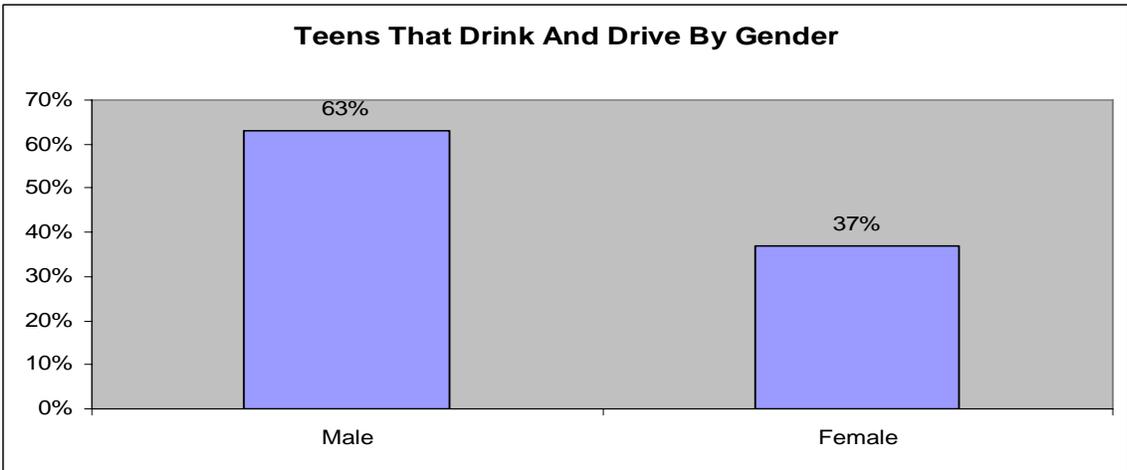
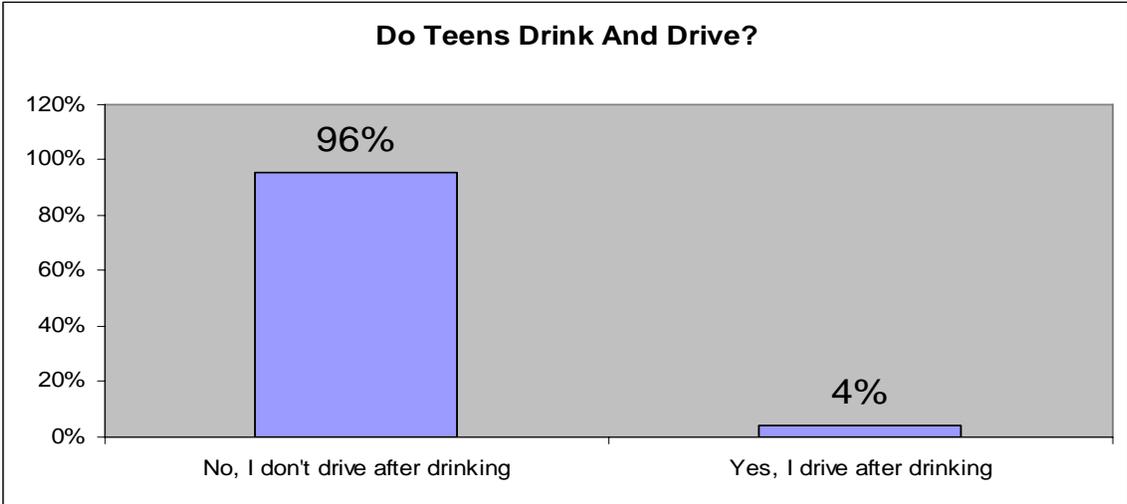
Would Teens That Smoke Or Chew Tobacco Like To Quit?



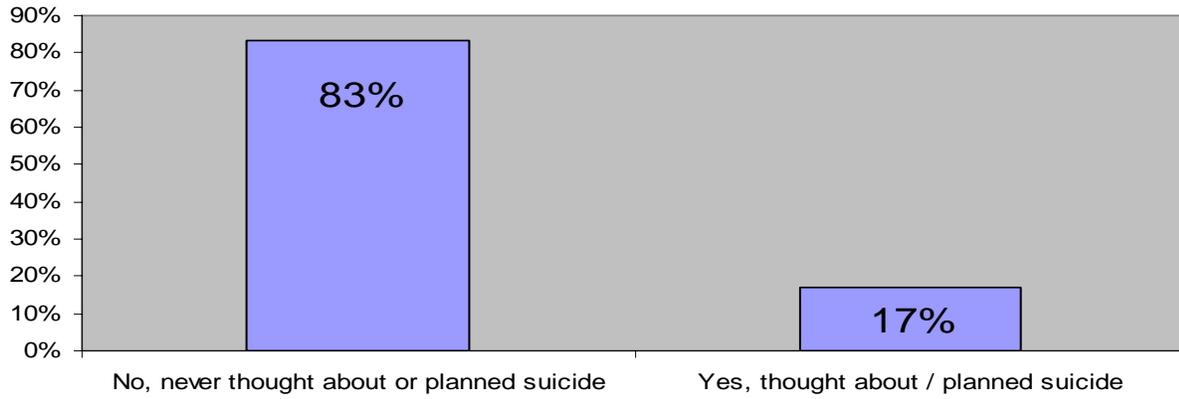
Would Teens Like More Smoke Free Restaurants?



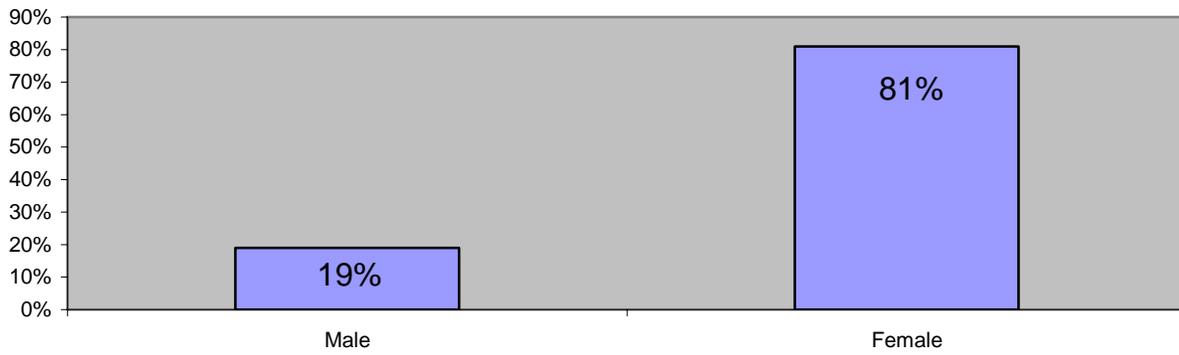




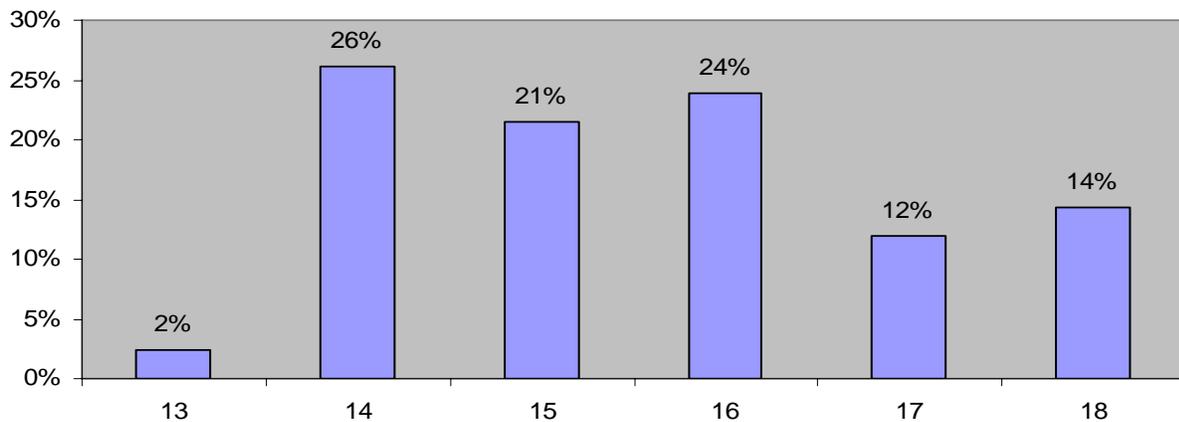
Teens that Thought About or Planned To Kill Themself



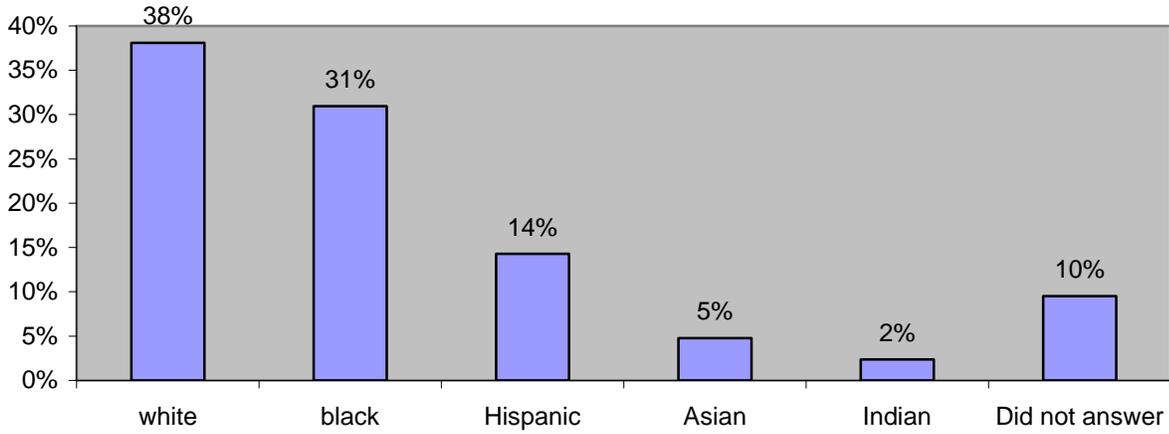
Teens That Have Thought or Planned Suicide By Gender



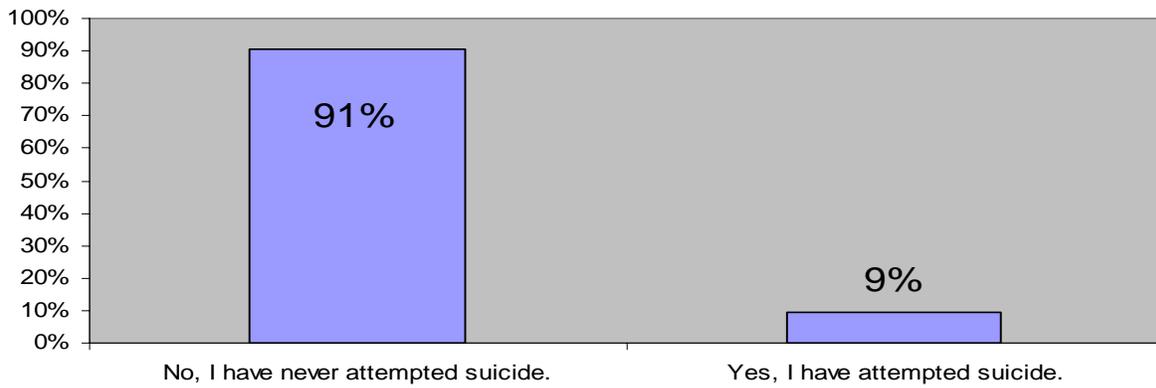
Teens That Thought About Or Planned To Kill Themself By Age



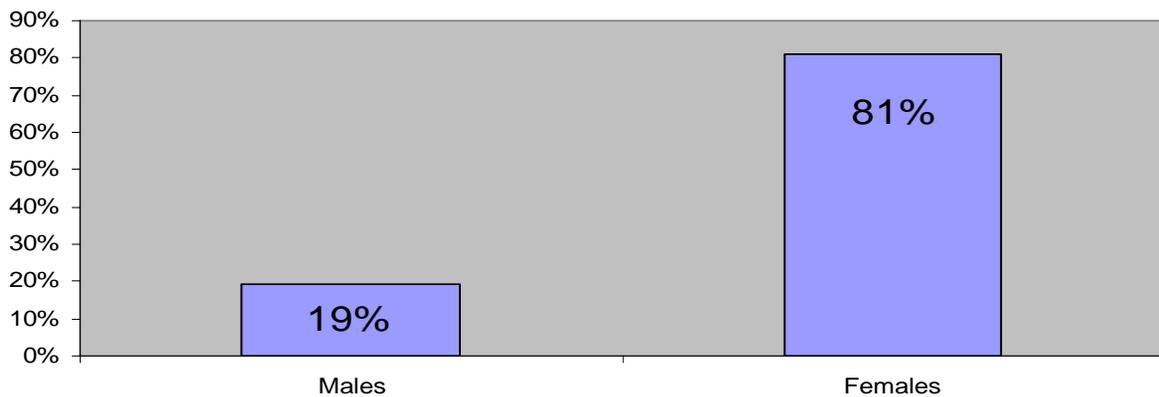
Teens That Have Thought About or Planned To Kill Themselves By Race / Ethnicity



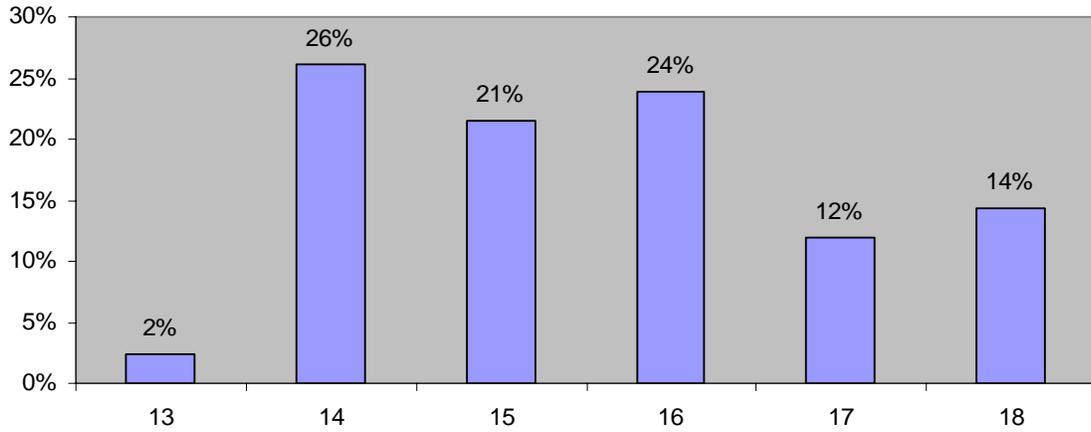
Have Teens Attempted Suicide?



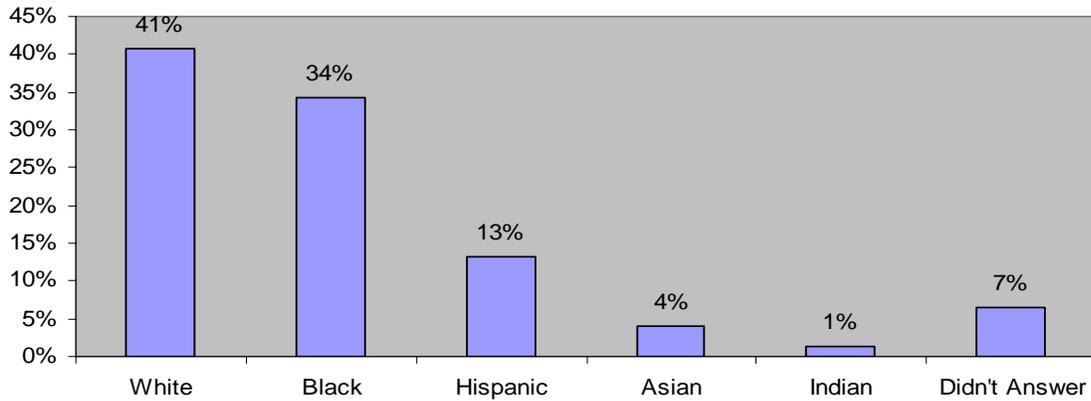
Teens That Have Attempted Suicide By Gender



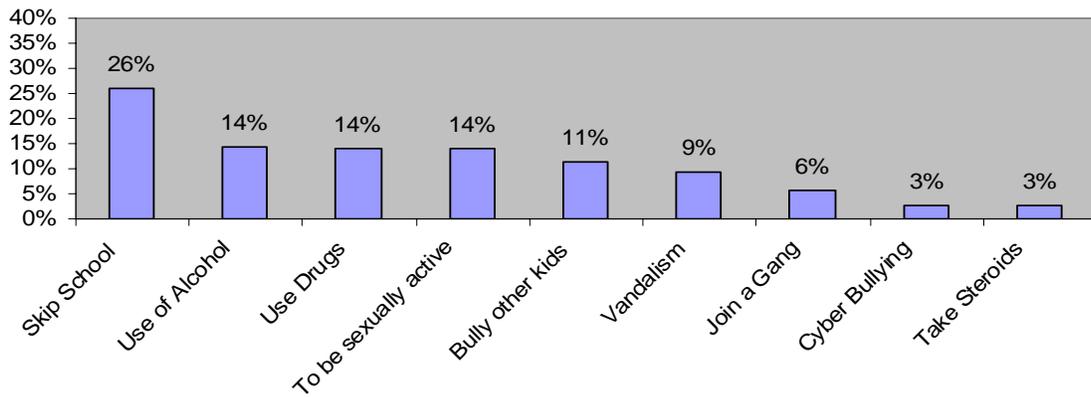
Teens That Have Attempted Suicide By Age



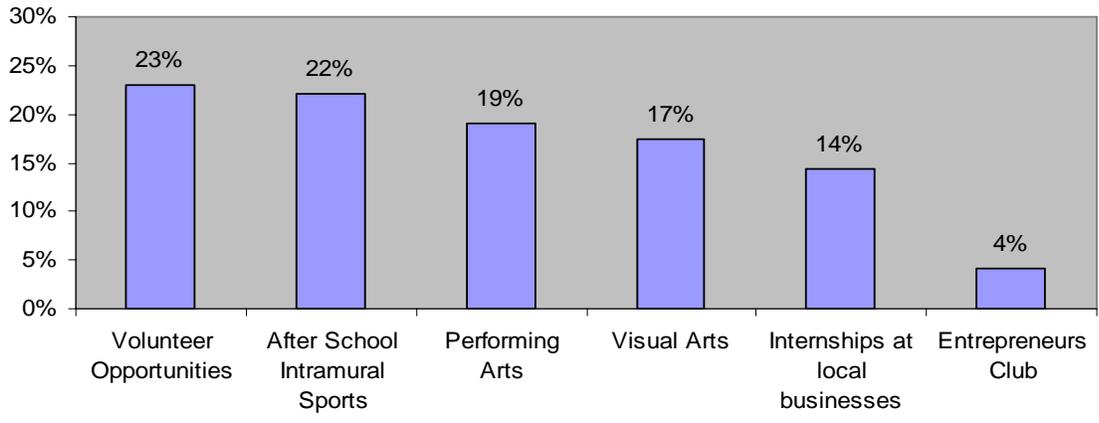
Teens That Have Attempted Suicide by Race / Ethnicity



In What Ways Have Teens Experienced Peer Pressure?



Teen Recreation Requests



Summary of Focus Groups

Focus Groups Held

Mayors
School Health Advisory Council
Emergency Service Providers
Health Care Providers and Public Health Professionals
Environmental Professionals
Clergy and Mental Health Professionals
Senior Citizens
Teens
Hispanic Citizens

FOCUS GROUP RESULTS

During the community assessment nine focus groups were conducted with specific niche groups. Three demographic groups were selected due to the likelihood that they were at-risk populations. The remaining six groups were chosen based upon profession or elected position within the county. The people within the six groups selected by profession or elected position are in the optimal position to be able to affect real change within the county, this was considered when determining what groups should participate.

FOCUS GROUP SUMMARIES

Teen Focus Group Summary

Health Issues that teens are facing that impact their health:

- Peer pressure to engage in unhealthy behaviors
- Sexually Transmitted Diseases (STDs)
- Insufficient sex education to understand STDs
- Depression, stress, thoughts of suicide

Behaviors teens feel are causing poor health:

- Unprotected sex
- Poor Eating Habits
- Eating Disorders (bulimia, anorexia)
- Insufficient amount of sleep
- Drinking Alcohol
- Drinking and Driving

Stresses felt by teens:

- Peer pressure
- Parental pressures to succeed
- School work
- Societal Pressures (conforming to unrealistic standards they see in media)

SUMMARY OF CONSENSUS FOR REMAINING FOCUS GROUPS

Question 1) Are there enough opportunities in Union County for fitness and recreation?

- Insufficient number of opportunities for fitness and recreation in the county
- Opportunities that do exist are not convenient or affordable for most residents
- Uneven distribution of opportunities across the county, few opportunities in eastern and northern Union County
- Best option for fitness is Monroe Aquatics Center, not affordable or convenient for all residents

Suggestions to Improve

- Make Union County more pedestrian friendly, add sidewalks for connectivity of communities
- Walking trails, bike paths are needed, creating more opportunities for exercise, fewer vehicles on the road and it allows for walking and biking to be safer as modes of transportation
- Schools need to add more emphasis on fitness and physical activity which should help educate students on the importance of exercise, improve health and build good habits for their future
- Free / low cost after school and summer intramural sport leagues , open to all students (school sport teams are limited in participant number and only some students can afford to play.)
- Build more parks for passive recreation, evenly distribute them across the county
- Build a public swimming pool with an entrance fee that is affordable
- Allow public access for walking and running on tracks at schools when school is not in session
- Senior citizens need safe, affordable places to walk and exercise
- Employers should encourage exercise, employers should start wellness programs
- Public health sector should start a campaign to educate and emphasize the importance of exercise, fitness and physical activity on health

Question 2) Environmental Health: Do you feel that air quality is a health concern?

- Air quality issues in Union County were viewed as part of a larger regional problem
- Air quality issues in Union County were believed to originate in Charlotte
- Solutions will need to stem from a regional approach
- Within Union County the decreasing number of trees and increasing numbers of buildings, residents and vehicles were seen as taking from both sides of the air quality equation.
- The proposed bypass was not seen as part of the air quality solution, participants felt that it will just relocate pollution from one area of the county to another.
- Higher numbers of children developing asthma and more adults having respiratory diseases were concerns viewed as directly connected to poor air quality.

Suggestions to Improve

- Be involved in regional solutions for improving air quality
- Educate the public on ways to be part of the solution
- Have more mass transit options for residents
- Make the county more pedestrian friendly, build sidewalks, bike paths and walking trails
- Have tree ordinances and preservation of green space rules for development, make certain they are enforced, have municipalities on board to ensure success and compliance county wide.

Do you feel that the stream water and drinking water quality in the county is a health concern?

- All groups unanimously felt that the county has water quality issues
- The drought was seen as making existing water problems worse
- Participants felt that access to county and city water was not sufficient
- Concern that uncontrolled well drilling has negatively impacted the water table

- Quality of well water in the county is poor, specifically it contains differing levels of arsenic that should be tested for in individual wells
- Costs associated with necessary water tests are too high for most residents
- Costs of filtration systems to improve well water quality are too high for most residents
- Concern that there is inadequate planning for the county's future water supply

Suggestions to Improve

- Develop a comprehensive plan to get water to more county residents
- Rewrite the county's Self-Help Program for communities to get access to county water, the present program has too many requirements and costs that are too extensive for most communities to successfully apply
- Local streams need to be better cared for by the property owners
- Educate property owners with streams on how to better care for the streams
- Educate the public on how to conserve water
- Educate the public on the fact that arsenic and other well water issues often result from naturally occurring large underground slate tables such as the one in Union County

How do you feel about preserving green space and having tree ordinances?

- All participants felt preservation of green space and tree ordinances are needed
- A general concern was that often tree ordinances are unclear
- A second concern regarding tree ordinances is that they lack the teeth to make them enforceable
- The large numbers of trees that have already been removed from the county is seen as detrimental to our environment and is already perceived as having negative impacts on health
- Developers are viewed as not adhering to the ordinances
- Loopholes often exist in rules governing development, density and preservation of green space
- Loss of green space and not enough parks in the county are seen as limiting the places where families can take children for recreation

Suggestions to Improve

- Conservation rules and ordinances should be designed to maintain a balance between conservation and development, not presented as anti-development
- Conserve green space by establishing and enforcing rules for development and protection of the land and trees, rules should be clearly written and have the teeth to be enforced at the county level
- Rules should be written in conjunction with the municipalities so that the rules at both the county and city level are complimentary
- Continue to educate the public on the importance of these environmental health issues through the County's Urban Forester and community outreach programs

Question 3) How do you feel about access to medical care in Union County?

- Free clinic is needed for adult indigent county residents
- Improvements have been made, but with such a rapidly growing population it is increasingly difficult to meet existing needs
- Care is adequate for middle class, but the lower income, working poor and indigents have access issues
- Costs associated with having health insurance, co-pays and deductibles make accessing care increasingly prohibitive for more and more people

- Perception exists that residents of western Union County go to Charlotte for medical services, while eastern Union County residents and Monroe residents stay in the county for medical services
- Perception that the medical care in Union County is not as good as it is in Charlotte
- Many participants stated that they go into Charlotte for services due to exceedingly long wait times at Union County hospital ERs, urgent care facilities and even at primary care offices
- Union County needs more Emergency room capacity
- Accessing care is often delayed at hospitals due to the affiliation of the patient's primary care physician not being the same as the hospital providing the treatment. This causes delay of care, medical complications, patient frustration and added patient costs
- Specific specialized care is seen as lacking in the county, especially in the following areas; mental health services,, substance abuse treatment, pediatric endocrinology, pediatric neurology, cardiac intervention, geriatric specialists, Alzheimer's specialists, dermatologists, grief counseling and lack of a psychiatric hospital
- Access has improved since many private practices now accept Medicaid, however, if a specialist is required access becomes an issue, as most specialists do not accept Medicaid.
- Lower socioeconomic families do not typically access preventative care which creates health disparities
- New medical facilities coming to Waxhaw are needed on that side of the county
- Dental health services are seen as luxury that is unaffordable for most people.
- Dental costs are high which causes a lot of people to neglect preventative dental services
- People only access dental care when they are in crisis or in pain
- Very few people were aware that the Health Department offers adult dental services for uninsured county residents, (100% pay, there is a misconception that services are free).
- Existing mental health services cannot adequately handle the current level of mental health crises, or serve all the mental health needs. Participant stated that within the state health care region that includes Union County only \$1.50 per person is spent for mental health care, this is one of the lowest in the state.
- Local law enforcement officers can be occupied with the commitment process for a patient going into a state hospital for 48 to 72 hours.
- Substance abuse treatment within the county is minimal, many residents simply do not access treatment due to having to be put on a waiting list, or having to travel out of county for treatment
- Veterans and military personnel have access issues in Union County
- Senior citizens, Latinos and low income residents, especially uninsured residents are all seen as at-risk for health care issues
- Latinos have barriers to accessing care that include; lack of understanding of the required paperwork necessary to receive assistance and access care, inability to afford insurance
- Latinos are uncertain who to call or where to go to access dental care
- Within the Latino home culture there is often domestic violence and alcohol related issues, when Latino children are witnessing these behaviors they are negatively impacted. There is a need for bilingual counselors to work with the Latino families, especially the children.
- Transportation was seen as a barrier to accessing care for many residents, especially senior citizens. With the present gasoline prices increasing, the cost of transportation to and from doctor appointments will further impact residents' abilities to access care.

Suggestions to Improve

- Free clinic should continue to be worked on by the Affordable Healthcare Committee.
- The Union County Health Department, CMC Union and Presbyterian Hospital must all be included and in collaboration on the free clinic in order for it to be successful.
- CMC Union should continue their pursuit of a Level I Trauma Center.

- Expansion of mental health and substance abuse treatment services are needed.
- Increase opportunities for free health screenings within the municipalities. Communities should establish partnerships with health care agencies in order to offer screenings within their municipality for elderly and low income residents who may have transportation issues.
- Public health should offer a health education program targeted at lower socioeconomic families on the importance of preventative healthcare, especially dental health. It was suggested that this be done in conjunction with the public schools.
- Participants felt understanding medical conditions, medical services and treatments, and especially understanding prescriptions are serious problems for many residents, particularly the elderly. This can make accessing care an issue because people become intimidated and do not seek care when it is needed, or do not properly take medications, which can lead to medical crisis situations.
- Transportation options need to be improved in Union County. Existing services should be better promoted to the public.

Question 4) What other health care concerns do you have? What emerging health care problems are you aware of?

- Politics that exist between CMC Union and Presbyterian Hospital are negatively affecting the delivery of care.
- Increasing abuse of the Emergency Room for primary care is a serious issue.
- Rising costs of living will force more people into becoming uninsured.
- Residents will have to choose between buying food, paying for utilities, or buying their prescription medications, this will become a reality for many people.
- Senior citizens need assistance with planning for assisted living, extended or nursing home care. People are beginning to outlive their finances.
- Obesity and related diseases such as diabetes and heart disease are emerging concerns.
- Child obesity is becoming more prevalent, which is leading to diabetes in children presenting in much younger children than was common in the past.
- Teen and youth abuse of prescription and over the counter drugs is a concern.
- Teen and youth gang issues, gang activities and want-to-be gangs are emerging locally.
- Concern over a rise in teen driving accidents, due to inexperienced drivers causing accidents which are typically more drastic and often include fatalities was a concern with all participants, especially law enforcement.
- Unsafe roads that are narrow and very congested from all the residential growth is a safety concern.
- Increasing incidents of domestic violence, particularly in the Latino community are issues, with many incidents going unreported and women remaining in violent situations.
- The large influx of immigrants bringing in higher incidence of communicable diseases into the county due to a lack of immunizations was considered a health hazard.
- High and continually increasing case loads and patient counts at the Health Department and WIC are due to the influx of immigrants.
- Lack of education and understanding in the Latino community of our traffic laws is believed to be causing accidents due to speeding, not obeying traffic laws and drinking and driving.
- The unsafe practice of some Latino families of leaving older siblings home alone and in charge of younger siblings was a concern expressed by the Latino focus group participants.
- A lack of community outreach programs for preventative health measures, and a general lack of health information being provided to the public was a concern.
- There was a need expressed regarding the promotion and encouragement for residents to recycle.

Suggestions to Improve

- Public health sector should have a staff member dedicated to marketing and promoting health information and education to the public
- Obesity epidemic should be worked on beginning with children, removing unhealthy food choices in schools, promoting physical activity and improving eating habits
- Make the County more pedestrian friendly to encourage everyone to exercise more
- After school programs and after school / weekend recreation facilities are needed for youth
- Mentor programs for youth to combat drinking, drug and gang issues
- Community and neighborhood level programs to work on educating and fighting against the emergence of serious gang problems
- Educational programs in Spanish on domestic violence geared toward women, informing them of the domestic violence laws,, where and how to access help, and emphasizing the importance of reporting the incidents and cooperating with law enforcement.
- Educational programs in Spanish on drinking and driving laws
- Spanish speaking Alcoholics Anonymous Group is needed
- Educational and promotional program (with an information guide) on Recycling

Teen Focus Group

Group one was made up of teenagers, with the purpose being to obtain information about what the adolescents perceived as the major health issues and concerns facing the teens in Union County. The students that participated all volunteered to do so and were required to get parental permission slips signed, as well as signing minor consent forms. The students used fictitious names. Five students participated, four females and one male.

The questions asked of the students were as follows:

What do you feel are the most important health issues facing teens living in Union County?

What do you feel are some behaviors that may cause poor health?

Have you ever been pushed by your friends or classmates to engage in any of these behaviors?

What are the main causes of stress in your life?

Question 1) Responses from teens regarding the most important health issues facing teens:

The majority of the discussion focused on sexually transmitted diseases (STDs). The students did not feel HIV or Aids was an issue, but were emphatic about the frequency and amount of sexual activity that goes on with teens and the trading of sexual partners. Participants stated that they did not feel the sex education they received in school was helpful, nor was the school teaching the right things. The group stated that they were provided an opportunity to ask questions and speak with the school nurse, but she was not allowed to answer certain questions. The participants said that the information received as part of sex education does not emphasize the importance of understanding the dangers of sexually transmitted diseases.

Suicide was the second major topic. Students understood the correlation of how depression could lead to thoughts or attempts of suicide. Rejection from the opposite sex was linked directly to depression. One student specifically stated that suicide is always an option for her.

Question 2) Behaviors that teens feel cause poor health:

The majority of the discussion focused on unprotected sex and all the things that occur as a result. The participants all knew teen girls that were pregnant. One student mentioned a 17 year old that was

having her second baby. They all felt that condoms should be used and were easy to obtain, but they all admitted that unprotected sex is commonplace with teens. Several students brought up the fact that many teen girls were dating and having sex with men ten and fifteen years older than them.

The next main behavior discussed was poor eating habits. Students agreed that too often teens eat fast food, or due to home life and parents work schedules, they eat alone and are left to prepare their own meals. They admitted that if you are eating alone you are more likely to make an unhealthy choice.

The females discussed eating disorders as a behavioral health issue for their gender. Two out of the four stated that they had been bulimic. The main reason given for this behavior was peer pressure and societal pressures to look a thin.

The subject of not getting enough sleep was mentioned by several participants. The students said the pressures they felt due to schoolwork, at home chores and extra curricular activities caused them to miss out on getting sufficient sleep. They would stay up very late to study, and try to fit in time to get on the computer or on the phone with friends instead of sleeping. Consequently they said they were often tired while driving, fall asleep in class and frequently feel run down.

The use of alcohol was discussed at length. However, the core of the discussion about alcohol was self-esteem issues. The students discussed drinking, drinking and driving, drinking alone and drinking with the intent purpose of getting drunk, or drinking to gain the attention of the opposite sex. Smoking was also mentioned as negative behavior. Only one of the participants was a smoker.

Question 3: Response to being pushed by friends or classmates to engage in unhealthy behaviors.

Peer pressure was an underlying theme for all unhealthy behaviors mentioned. Peer pressure was an everyday occurrence. They admitted to doing things that they knew were unhealthy or unsafe as a result of peer pressure.

Question 4: Response to what are the main causes of stress in the lives of teens.

All students made comments about high stress levels. They were all in agreement that they felt stress from not having enough time to get everything done. Stress increased due to not having any time for relaxation.

They all expressed parental stress, related to expectations for good grades, or to excel in sports or the stress of absentee parents. Participants stated that parents travel for work and leave them alone a great deal.

Often stress resulted from friendships and a lack of time to spend with friends. Several females expressed stressful friendships due to friends with serious depression issues, some had friends threaten suicide. They expressed stress from worrying and feeling guilty for not doing enough to help.

All focus groups (except teens) were asked the following questions:

Are there enough opportunities in Union County for fitness and recreation?

Do you feel the air quality in Union County is a health concern?

Do you feel that the stream water and drinking water quality in Union County is a health concerns?

How do you feel about preserving green space and tree ordinances?

*How do you feel about access to medical care in Union County?
How do you feel about the cost and quality of care in the county?
What other health care concerns do you have?
Are you aware of any emerging health care problems in the county?*

Mayoral Focus Group

Group two was made up of mayors and designated representatives of municipalities. Union County has 14 municipalities, 13 out of the 14 municipalities participated.

Question 1) Response to the opportunities for fitness and recreation in Union County:

The participants agreed that there are not enough opportunities countywide. The City of Monroe is well served with the Monroe Aquatics Center, but it is not easily accessible to all residents. There are not enough passive fitness and recreation opportunities such as parks, walkways and greenways. Neighborhoods are not connected by sidewalks or greenways. The county is not pedestrian friendly.

Organized athletic associations do exist, but they are restrictive because a lot of residents cannot afford to allow their children to participate or play. There are very few opportunities for seniors and what is available is cost prohibitive.

The participants stated several obstacles to improving the amount of fitness opportunities; primarily funding, security, vandalism, concern about control and appropriate use and a lack of planning to secure land for these types of uses.

Question 2) Response to Environmental Questions:

Overall the participants did not feel that the county air quality is a health concern. They were aware that Charlotte has air quality issues connected to ozone levels, they agreed that air quality is a regional issue and is difficult to address as an individual community. It was mentioned that cars are the biggest source of pollution and people are not willing to give up their cars. They would like to see people move toward non-polluting green alternatives such as walking, biking and using public transportation when available. They feel that more education on air quality is needed. The decreasing number of trees and increasing buildings in the county are taking from both sides of the equation.

In response to the question regarding stream water and drinking water quality, they all felt that the main cause of the issues with water were directly related to all the development and growth in the county. They also agreed that the drought has exacerbated the situation. They felt that uncontrolled well drilling has negatively impacted the water tables. There was more in depth discussions on other issues impacting wells and drinking water, the permitting process for wells, specifically more testing prior to occupancy, the maintenance and care of wells, and more water testing. They would like to see a plan to get water to more county residents that do not have access.

In discussion of preserving green space and having tree ordinances, the consensus was that existing attitudes and ordinances are not anti-development, but strive to appropriately maintain a balance. It was stated that it is difficult for people to say no or to enforce the swap of green for developed land. The fact that the majority of the municipalities that are experiencing the rapid growth have tree ordinances, but the problems arise when developers are unwilling to adhere to them, or the ordinances are not clear, or do not have any teeth in them for enforcement purposes. The participants felt that the population is becoming increasingly concerned about these issues, but they do not always understand or make the connection between green space and tree ordinances with maintaining good air quality.

Question 3) Response to Access to Healthcare:

The participants felt that the cost of insurance makes accessing care prohibitive for a lot of people. Many people without insurance use local emergency rooms for their medical needs.

Dental costs were believed to be even more cost prohibitive and the participants felt that many people go without dental care and are neglecting dental health.

Even though Monroe has CMC Union and numerous medical and dental practices, the consensus was that the majority of the people that live on the western side of the county go into Charlotte for medical care. The residents in Monroe and further east stay in the county for care. The participants were aware that both Presbyterian and CMC were developing additional healthcare facilities within Union County.

There was a short discussion regarding increasing the number of opportunities for residents to have free health screenings done within their municipality. Communities should establish partnerships with healthcare agencies and arrange these health screenings, especially for seniors who often have transportation issues.

Question 4) Emerging healthcare issues

This question elicited immediate responses from participants. There was total agreement that the politics that exist within the healthcare communities, specifically between hospitals affects the delivery of care. A discussion of issues that negatively impact the ability to deal with mental health patients and substance abuse patients locally suggested improvements are needed. It was stated that substance abuse issues come to elected officials as crime issues not healthcare issues.

A lengthy discussion occurred regarding abuse of the emergency room being used for primary care by indigents. Some participants felt it will always be an issue, while others felt the issue will become much worse due to increasing numbers of uninsured. It was expressed that illegal aliens use the ER more prevalently because they are afraid of using traditional providers for basic care, less information is required to access service at an ER.

The discussion of emerging healthcare issues centered around two topics. The first being senior citizens needing more help in planning for long term care, and obtaining care for themselves or a spouse. The participants felt that issues facing seniors needed to be addressed, especially Alzheimer's.

The second emerging healthcare issue discussed was obesity and all related diseases that come with it; diabetes, heart conditions, mobility problems, etc. The group felt that the problem needs to be addressed first with children, with more physical activity needed and changes in eating habits. Schools should take the lead and increase physical activity requirements and not allow so many unhealthy food options for students.

School Health Advisory Council Focus Group

Group three was the School Health Advisory Council. This group had 17 participants from various backgrounds within the school system, CMC Union Hospital, the Health Department, Social Services, and other organizations that are affiliated with the school system.

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group felt that there are very few recreation activities or facilities for families or youth. The programs that exist have high costs. The Monroe Aquatics Center was the best option, but was still viewed as cost prohibitive. They also felt that there are not enough after school and weekend activities, especially for middle school students, this led to a discussion regarding the increasing epidemic of child obesity.

Everyone agreed that the county does not have enough parks. Specific needs that were mentioned were walking and bike trails, a public swimming pool and opportunities for affordable or free youth recreation.

They did not feel the county has enough fitness and recreation opportunities for senior residents. They were aware of the fact that the Ellen Fitzgerald Center offered some things, but they did not feel it was convenient for most county residents.

They would like to see more emphasis placed on the importance of fitness and recreation for improving the health of all residents.

Question 2) Response to Environmental Questions:

The consensus of the group was that the county air quality is decreasing due mainly to congested traffic on the roads. They do not feel that the proposed bypass will help with the pollution problem, but instead will simply shift the pollution to other areas of the county. Another contributing factor that the group mentioned was loss of trees due to the growth.

They felt the air quality issues could be seen in the number of increasing asthma cases among children.

The group felt the access to city and county water sources are not adequate. A specific complaint was the fact that long time county residents cannot get county water, but the new developments on the western side of the county are able to get water. The people that had well water stated that the quality of the well water is very poor. The participants felt that the over development in the county is having tremendous negative impacts on the stream water and therefore the vegetation and wildlife. The statement was made that all the environmental issues are being addressed on an individual basis, which serve as bandaids rather than long term solutions.

During the discussion pertaining to preservation of green space, the fact that developers are required to designate a percentage of land as green space or recreational space was mentioned. However, it was also brought up that the developers of smaller communities are not required to do this, which the group felt provides a loophole.

Question 3) Response to Access to Healthcare:

The group agreed that the care in the county is adequate for the middle class and for people that have insurance, but that still leaves a great many residents without access to care, due to not having insurance, or being part of the working poor.

Specialized care is viewed as not available in the county; pediatric endocrinology, pediatric neurology and mental health services for teens and children. They stated that these services were unavailable regardless of your socioeconomic status. They also felt that substance abuse treatment services are lacking in the county. Many people simply do not get care because they do not want to go outside the county, or do not have the money or transportation to access the care. Other practices they felt are needed were; dermatologists and oral surgeons.

The discussion regarding lack of mental health services included the fact that they are seeing emotional issues more frequently with children and increases in children with biomedical conditions resulting from parental drug use.

The fact that the county does not have any free clinics was discussed. The fact that most general practice doctors now accept Medicaid is helpful, but it does not help once someone is referred to a specialist because most specialists do not accept Medicaid. The group discussed the fact that the emergency rooms are used by the uninsured for primary care. The group felt that the county needs an indigent care clinic.

Another issue the group felt strongly about was the need for patient advocates at hospitals. A participant offered the example that if someone is very ill, or is having an emergency procedure, they may not be in an appropriate state of mind or even capable of understanding and negotiating the intricate, complicated process of obtaining the necessary care or treatment. Not all patients have family or someone to advocate on their behalf.

A barrier to accessing care, especially for children is the lack of understanding on the part of the lower socioeconomic parents of the importance of preventative care, especially dental health care. Several of the school employees would like to see an educational program aimed at parents on preventative healthcare practices, with an emphasis on dental health. The group was unaware that the Health Department was offering dental services to uninsured adults.

Question 4) Emerging healthcare issues:

The main focus of the response to this question was the reality of the rising cost of living impacting residents' abilities to access healthcare. The example was used that with the high costs of gasoline people have less money to spend on healthcare. The group felt the economy is going to push even more people into not being insured.

This group felt an emerging healthcare issue locally is domestic violence. The point was made that domestic violence is not always perpetuated against only adults, often it is committed against children. Even when children see domestic violence at home, it negatively impacts them. They stated that they feel the acceptance and tolerance of domestic violence within some cultures hampers improvement of this issue.

The group discussed homelessness and lack of affordable housing in the county. As school officials they see and hear about this often through the children. They learn about homeless people relocating from one residence to another to live with different friends and family members.

The politics involved in the healthcare system was seen as an issue. The group felt it impacts the quality of service you receive. Examples were given regarding hospital personnel not wanting to contact a primary care doctor because they work for the other hospital system and referrals and follow ups not being done.

The lack of community outreach programs for preventative measures was viewed as an issue. As educators they discussed the rise that they are seeing in child obesity. Although the group felt it was an issue for all children, they saw it more pronounced in the African American and Latino communities. The factors that they see pushing the obesity issue are lifestyle, poor nutrition, not making exercise a priority, cultural attitudes and the county not being pedestrian friendly.

For teens, the educators felt safety and well-being is deteriorating. There is a rise in teens abusing prescription drugs, and also over the counter medications. They felt gangs and want-to-be gangs are on the rise in the county. All of these factors combined with no place for teens for recreation and spending time on the weekends and after school leads to more problems.

Hispanic Focus Group (group had representation from Mexico, Cuba, Columbia and Honduras)

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group felt there is a need for walking and bicycle trails in the county. They do not feel there are enough safe places for children to play, therefore many Latino families keep their children inside in front of TV.

Gyms and fitness centers are too expensive. A suggestion was made that local governments look into converting old commercial and industrial buildings into low cost gyms. Public swimming pools with low entry fees are also wanted and needed.

Question 2) Response to Environmental Questions:

The discussion focused on the big picture topic of global warming and the lack of knowledge and understanding of this issue within the Latino community. They would like to see some education done on this issue for their community so that they could be a part of the solution. On the local level they did feel that the air quality is poor and that it is largely due to having so many cars on the roads resulting from all the development. They felt there is a connection to the poor air quality and asthma.

The water quality was viewed as very poor, with people stating that the water has a too many sediments in it resulting in poor taste and foul smells. Several people made reference to the high costs associated with having your water tested, which they thought was around \$300.

The participants want to see more conservation of green space, with more trees and gardens being planted. They felt that when trees were cut down, the developers should be required to replant trees.

A general suggestion was made that the local government should include information inside utility bills on how to conserve both water and energy and how to help with cleaning up the air.

Question 3) Response to Access to Healthcare:

The consensus of the group was that the Latino community has difficulty accessing medical services due to the high costs and health insurance is too pricey to obtain. There is a definite need for a public clinic for people with low incomes. In addition to cost, another barrier to accessing care was the inability of Latinos to understand all the required paperwork and forms to qualify for assistance.

They specifically mentioned that access to affordable dental care and any type of medical specialist is virtually impossible. For dental care they are not aware of where to go and specialists are too expensive.

The issue of mental health services was raised, but more from an educational standpoint than an access issue. The group stated that there is a lot of violence, drinking and abuse within the Latino community which they know is directly impacting the children that are witnessing it. They feel more access to bilingual mental health counselors is needed.

Question 4) Emerging healthcare issues:

The first thing mentioned was safety. They did not feel the Latino community feels safe. The increase in gang activity was the first topic. Participants said that they have seen middle and high school students dressing in gang colors, and trying to copy cat gang mentality and activities.

A specific issue that they would like to see addressed in the Latino community is education on the unsafe practice of parents leaving an older sibling home alone and in charge of younger children. Also, a lot of Latino children are not provided a key to their home and enter through the garage door, which can lead to robberies and is an unsafe practice. They feel an answer to this issue is to have more after school programs.

A major issue that the group talked about was the prevalence of domestic violence in Latino homes. They estimated that one in three Latino couples live under extreme domestic violence. They did make the clarification that often the abuse is mental and verbal rather than physical, regardless they knew it would impact the children. A need was expressed for more education on this subject for the entire Latino community, which should include education for Latino women on laws and where to seek help for this abuse.

The subject of drinking and driving was also believed to be serious within their community. The consensus was that this was a common practice, but that it could be changed through proper education and more police enforcement. A need for Spanish speaking AA groups was mentioned.

A general statement regarding the emerging health issues that are also legal issues was that more education is needed on the civic duties that are expected of the Latinos who are living here.

Senior Citizen Focus Group

The senior citizen focus group had 12 participants which included men and women, varying races and ethnicities. The Director for the Council on Aging and the Director of the Ellen Fitzgerald Senior Center both participated.

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group does not feel there are enough options for recreation and fitness. They mentioned that the Ellen Fitzgerald Center and the Lake Park Senior Center both offer opportunities, but this is not convenient for all seniors and transportation can be an issue. A senior resident from Waxhaw said there is nothing for seniors in the Waxhaw area.

Safe walking trails are something that all the seniors felt are needed. The seniors were emphatic about the trails being safe. It was mentioned that the Belk Tonawanda Park has a trail that the city of Monroe is extending, but none of the seniors felt they would use it because they would not feel safe there. Also in regards to walking, the seniors wanted to see sidewalks in communities for the ease of getting around and for exercise. Sidewalks were viewed as an inexpensive fix.

The statement was made that the gyms and fitness centers are too expensive for seniors on fixed incomes. The Monroe Senior Center was praised for keeping their membership fee the same since 1996, it is still \$15.00 annually. There was a brief discussion about the Monroe Aquatics Center, the statement was made that seniors make up the majority of the membership base there, but the senior discount that is offered is not enough.

An observation was made that the county is continually building new school across the county, all with new tracks, however the facilities are always locked prohibiting residents from walking in the tracks when school is not in session. Seniors would like to be able to access the tracks when school is out.

Question 2) Response to Environmental Questions:

The group did not believe that Union County has an air quality issue presently, but felt that it would in the future due to all the growth. A suggestion was made that the municipalities look at better synchronization of traffic lights to keep traffic flow moving and avoid idling for so many stops so close together.

The consensus regarding water quality issues was unanimous in that the county has well water issues. They mentioned the arsenic in wells as a concern. The purchase of water from Anson county was seen as the best alternative to fixing Union County's water problems, but others were not comfortable with Union being reliant on another county to meet our water needs.

The county and city water departments were viewed to be doing a good job maintaining water quality but it is not enough, it was stated that the water and sewer issues are interconnected, and there has been too much passing the buck. The immediate solution that was suggested was for the county not to issue anymore permits for new projects.

The seniors main concern regarding tree ordinances was whether or not the ordinances that existed were actually being enforced.

A major environmental concern that they brought up was recycling. They knew that the county did recycle, but it was not clear what could be recycled, where to drop off recyclables, etc. The group felt that recycling was not encouraged or promoted sufficiently in the county. It was suggested that the county develop a recycling guide.

Question 3) Response to Access to Healthcare:

The immediate response to the question was that CMC Union is a tremendous asset to the county and that CMC taking over for Union Regional was the best thing to ever happen in Union County. It was praised for being very clean and for having "old fashioned caring doctors that are willing to spend time with patients".

The group felt the new medical facilities coming to Waxhaw are needed on that side of the county.

The seniors were unclear as to what services were offered by the Health Department.

A specific request was made that with the aging population, the county will need a doctor that specializes in Geriatrics.

Overall the seniors felt access to medical care was alright in the county. The issue that received the most discussion was transportation to and from medical services. Seniors talked about knowing other seniors that are homebound and therefore don't see doctors even if they have a need. Other seniors are too afraid to drive. The seniors were aware that the county did offer some type of transportation service, but they did not know any details such as cost, or who could use it.

The discussion on accessing dental care was short and to the point, they were unaware that the Health Department is now seeing uninsured adults for dental services. They also were in agreement that the costs associated with dental services were out of reach for most seniors.

Question 4) Emerging healthcare issues:

The biggest concern they had was dealing with the needs for extended care, finding assisted living facilities, nursing homes and long term care facilities. Adult daycare was mentioned as a possible need, but they were uncertain how many existed in the county.

Safety was a concern that they shared. They would like to see a self-defense course for seniors offered.

Understanding and navigating the medicare / medigap system was a concern and frustration for all of the seniors.

The overall issue that kept surfacing across all topics they discussed during the session was the need for information and education on these issues, resources, services, etc. They felt that there is a lack of information on topics that were having a direct impact on their health. They want to see agencies working more closely together on getting information out to seniors. They stated that the Health Department should have a marketing person to get information and resources publicized.

One senior made the following statement, "Senior citizens have a strong voice, and in Union County they are a tremendous sleeping giant. They have the time to get things done, if they are willing to work".

Mental Health Service Providers and Clergy

This group consisted of 11 participants with either a clergy background, or they worked in the mental health profession.

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group agreed that there are not enough safe areas for recreation that are open to the general public. There are absolutely no parks in the northern part of the county. Accessibility and affordability to recreation for youths and families are a concern. There are private facilities and organizations, but they are expensive and not possible for children without money or transportation.

Cane Creek Park was discussed as a nice park, but the rising costs, particularly for rental of shelters was thought to be too much, especially when the groups that rent the shelters are still being charged by the car for the guests. The cost for shelter rental is now \$175, with each car being charged a separate entrance fee of \$4.00. If a group rents a shelter, their guests should not be charged per car, it was seen as double charging. Many people cannot afford the shelter rental fee and the additional \$4.00 per car.

Seniors were viewed as having the fewest alternatives for recreation, with no appropriate parks, no safe places to walk and no transportation to the few things that do exist for them.

Churches offer some recreation programs. These programs were seen to be generally more affordable.

Question 2) Response to Environmental Questions:

The group was not concerned about air quality as a health concern. They felt that compared to Charlotte Union County had clean air. Any air quality issues were a result of the cars on the road and these types of pollutants are regional and beyond the county's control.

The air quality issues that they felt could be impacted by the county were to continue to have emission control standards, have and enforce tree ordinances which include replanting requirements and designate park land and green space. Alternatives to driving a car should be available. If light rail existed locally people would use it.

The consensus was that residents need to be educated and have a better understanding of air pollution and the affects it has on their health, and on ways they can help with environmental issues.

The discussion of water issues as a health concern resulted in the comment that the county has major issues. Contamination of well water in sections of the county was viewed as a serious problem. A specific concern was for people moving into a residence that has well issues and they are not being made aware of it, the claim was made that there are no requirements for disclosure of these problems.

The participants discussed the fact that it is nearly impossible for existing residences to acquire county water, yet new communities continue to get access. There are already too many demands on the county system and they feel that there is still inadequate planning for the water supply for the county's future needs. More efforts should be made to provide water to long time county residents rather than providing water to new developments.

The discussion about preserving trees was in favor of having ordinances that are enforceable, they felt that the loss of trees is already detrimental and that it would have a long term environmental impact. In discussing green space it was stated that the existing green space that is left is so broken up that its impact and benefit to the environment is diminished. They felt that having a citizen based and driven group to work on these environmental issues would help. They could push for things like tree replanting programs and raise awareness about local environmental issues.

Question 3) Response to Access to Healthcare:

The focus of the conversation was that the barrier to accessing care is cost, whether people can afford insurance, and whether businesses can afford to offer insurance to employees are both factors. Dental care is often not even an option and when it is, it is not at an affordable level. More and more people are resorting to using the hospital emergency rooms as primary care.

Dental health in general was discussed as a concern, people do not understand the importance of dental health to their overall health. Dental care has become a luxury that most people cannot afford.

Transportation was seen as a barrier to accessing medical services, particularly for seniors, low income and disabled residents.

The group felt that many people go without care because there are not enough specialists practicing in the county. People have scheduling issues when specialists are only in the county a few days each week. They expressed a lack of care availability for chronic conditions.

Access to mental health services was a tremendous concern to the group. The first thing mentioned is the lack of a psychiatric hospital in the county. Day Mark and the hospital ER are overrun and the assessment process was said to be lacking. The group stated that often people go without mental health services because they are unwilling to look for help and the family is unwilling to have them committed. The participants agreed that the existing mental services in the county cannot adequately handle the current level of mental health crises and cannot address all of the people with mental health needs that are on their way to being in a mental health crisis. The problem is self-perpetuating.

The group unanimously felt that there simply are not enough mental health services. There is a huge lack of psychiatrists and clergy are overworked trying to provide counseling to people who actually need mental health assistance.

Until recently Union County had no grief counseling available. Journey to Hope has opened a grief counseling service in the Waxhaw area.

Daymark has recently started a mobile crisis service program which has helped expand their reach, but it is still not seen as enough to cover all the growing mental health problems.

The topic of substance abuse treatment elicited a strong response. The group was in agreement that the costs associated with treatment are too expensive, Medicaid does not adequately cover treatment, therefore most people without insurance simply do not get treatment. It was stated that people that are treated in the state system only receive 2 weeks of treatment which is not enough. Another issue with the state system that was brought up is the fact that the state has a waiting list, which typically takes about 6 weeks and during that time the person must stay sober, which normally is too difficult and the person winds up not ever getting into treatment.

The group also discussed Medicaid at length, stating that many people who qualify do not use it because of the stigma, or a lack of understanding of what it covers. Another issue that was mentioned is the fact that Medicaid does not cover any prevention measures or awareness.

The participants commented on the fact that many county residents still seek medical services outside of the county due to concerns about the quality of care available in Union County.

The wait time at the CMC Emergency room was seen as extremely long, the participants felt that this wait is largely due to so many people using the ER for their primary care. The ER staff at CMC in Monroe was not viewed as customer friendly.

A specific issue with CMC Union was brought up. The statement was made that if a patient's physician is not associated with CMC the physician is not called in which results in delay of care, medical complications, patient frustration and added patient costs. These were the types of things that the group felt cause many residents to have a negative opinion of CMC Union.

The group consensus also included the concern that most people have that they can be employed, working hard, and with or without insurance, one major medical problem can put them over the edge financially.

Question 4) Emerging healthcare issues:

Elderly care was seen as a major issue. With an aging population and people living longer, the concern for seniors to outlive their financial resources is a reality. With the rising cost of living, especially gasoline and utility costs, many seniors have to choose between their medications and the lights or heat for their home. A lot of seniors are one medical problem away from bankruptcy. With all of these factors that seniors are dealing with, reverse mortgages are on the rise with seniors trying to overcome fixed incomes to maintain their standard of living.

Another issue that this group felt will be continuing to rise is more and more people seeking counseling for domestic violence and sexual abuse. Locally this issue is being worked n through the coordination and cooperation of law enforcement and counseling agencies, awareness and training for educators in identifying and referring victims and awareness of counseling services. The group

also shared the fact that studies have shown that treatment of young offenders of these crimes is very effective in preventing future occurrences.

Medical Professionals

There were 10 participants in this group, it consisted of the Union County Health Director, Public Health Nurses, Nurse Practitioner, Pharmacists, a dentist, and a physician.

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group felt opportunities were scarce and the ones that do exist are too expensive for most families. They want to see more parks, more walking trails, more bike paths. A related issue for them was having more emphasis on fitness and physical activity within the schools. They stated that they thought the importance of the health benefits of exercise were not stressed in school and school opportunities such as being on a team sport were limited to only a handful of students. Furthering that discussion, they discussed the fact that very few employers encourage fitness with their employees.

A disparity with regard to exercise, fitness levels and prevention was brought up, specifically the fact that lower income groups have fewer opportunities for fitness than higher income groups. The eastern side of the county was seen as having fewer opportunities and facilities for exercise.

The group felt that a better awareness of the importance of fitness as it relates to prevention and good health, should be made and headed up by the Public Health sector.

Question 2) Response to Environmental Questions:

The biggest issues that this group discussed pertaining to air quality centered around the respiratory problems related to air quality. They made a correlation between Asthma and COPD problems and poor air quality. They mentioned that Asthma numbers with children are also on the rise.

Water quality was the focus of a lengthy discussion. Arsenic in well water was a concern. They felt that the long term affects are still unknown. Another critical concern was the numerous issues being worsened by the drought conditions such as degradation of the water supply, once it does rain the potential exists to have toxins and other animal wastes running off into streams and drinking water sources causing bacteria levels to increase. They expressed concern over the drilling of wells for irrigation purposes. They felt this would add to the depletion of the aquifer. The group was uncomfortable with the fact that the county does not have its own source for drinking water.

Sewage treatment plant over flow was a cause of concern.

The group was in agreement regarding the need to conserve green space and trees, everyone felt this was beneficial. The statement was made that once you lose green space to development and asphalt you cannot reclaim it. The idea of the proposed regional thread trail linking counties was praised as a positive project that should be supported.

The consensus on environmental issues was that these issues are all a great health concern for both present and future generations.

Question 3) Response to Access to Healthcare:

The group overall felt that improvements have been made, but with such a fast growing population it was exceedingly difficult to meet health care needs. They felt that senior citizens and low income residents were at risk for health care issues.

A need for more local specialists was expressed. The statement was made that most referrals from Union County doctors are sent to specialists in Charlotte, which presents transportation issues for some people.

Competition between CMC Union and Presbyterian was viewed as hampering the delivery of quality care to patients.

The group felt that more and more people are electing not to purchase health insurance even if they can afford it due to the high deductibles or co-pays, it makes the insurance seem useless. When people are uninsured they rarely seek out any preventative services. The aging population often requires care they can't afford. All of these factors were seen as contributing to more residents using emergency rooms for primary care. The need for a free clinic was expressed. It was also mentioned that CMC Union has filed a Certificate of Need for additional ER capacity.

The free clinic in Matthews was discussed. The fact that a large percentage of their patients were from Union County was known, and the general feeling was that even more county residents would go if transportation was not an issue.

The group was aware that the Affordable Healthcare Committee was researching possible options for a clinic for Union County. The focus of this discussion was the importance of including physicians, both CMC and Presbyterian Hospitals and the Health Department in these discussions and planning sessions.

Mental health care was viewed as the largest hole in the county. The statement was made that the state of NC has relinquished responsibility which has resulted on more pressure on the Health Department, Emergency Room at CMC and law enforcement. According to a participant, within the state health care region that includes Union County, only \$1.50 per person is spent for mental health care, this is one of the lowest in the state.

Dental health access was viewed by the group as something most people seek only on as needed basis. People no longer seek preventative dental services due to cost, they go only when they are in pain, or have a serious problem.

Question 4) Emerging healthcare issues:

Issues directly related to the county growth were the first to be mentioned, such as unsafe roads due to neglect and overuse, filled with too many drivers, some are uninsured.

The large influx of immigrants has brought issues, such as higher incidences of communicable diseases. The immigrants are not immunized and have already been exposed. Immigrants are coming to the Health Department in large numbers for pre-natal care, but are presenting late in the pregnancy. This can result in complications at delivery or later on with the infant. Presently the Health Department is handling the case load in clinic and WIC, but they cannot take on much of an increase.

Issues not related to growth were also discussed. A rise in gang activity and drug use with youth, specifically abuse of prescription drugs was mentioned.

Sexual abuse of children and domestic violence are both on the rise locally. The number of incidents of cases and of victims seeking help has drastically increased with sexual abuse of children. The issue has become more publicly acknowledged and the forming of a local coalition to work on this has provided assistance. Domestic violence was viewed as on the rise but people are often not seeking help due to being ashamed or in denial, or simply not knowing where to get help.

A disease that was stated as on the rise was diabetes, especially in children. Due to the increase in the number of overweight and obese children diabetes is more prevalent now than it used to be. The group also said that the disease is also more prevalent within certain ethnic groups, lower income families and people living in poverty. Often times these groups are uninsured or underinsured and are typically are uneducated about diabetes.

Emergency Service Providers and First Responders

This group consisted of 11 participants; Sheriff Deputies, State Troopers, Homeland Security Director, 911 Operators, Fire Chief, Fireman, EMS Director and CMC Union Safe Communities Coordinator.

Question 1) Response to the opportunities for fitness and recreation in Union County:

There are opportunities for recreation and fitness in the county, but most people cannot afford to join. There are also athletic leagues and organizations, but they are also cost prohibitive for most families.

Some neighborhoods have recreation areas, this group felt they are needed so that kids have positive activities within their own neighborhood. The group also discussed some negative issues related to having these areas. The example was given of the Skate Park put in for the town of Waxhaw. The park was recently closed due to drug problems associated with the park. Often times vandalism and drug use in these areas forces the removal of equipment from these type of parks.

The group agreed that Union County needs more safe walking and bike trails. The subject of cyclists that often ride in large groups on the road were deemed a safety hazard for both themselves and for motorists. Everyone was in agreement that county roads are simply not wide enough for cyclists. It would be in everyone's best interest for the cyclists to have a safe bike path to ride on.

The Monroe Aquatic Center was discussed. Participants were aware of the Aquatics Center and its programs, but many people feel it has become too crowded. Other comments were made that summer camps for kids are offered, but they are too expensive.

A statement was made that when parents cannot afford to send kids to camp, they are often left home alone with nothing to do which provides an opportunity for the kids to get into trouble.

Question 2) Response to Environmental Questions:

The overall opinion of the group regarding air quality in the county was that an issues Union County has are a result of proximity to Charlotte. There was a belief that the air quality locally is worse than it is in counties to the north. Everyone understood that the summer months have the greatest air quality issues.

It was stated that respiratory distress is the third most frequent type of EMS call.

The discussion of the quality of drinking water resulted in the agreement that the county well water has issues, specifically arsenic being present in the water. Filtration systems were mentioned, but the related costs were seen as too high for most families.

There was a discussion on the Self help Program that the County Public Works Department offers. According to a participant the program is under review because many of the communities and residents that applied to get water under this program were unable to meet all the requirements.

Another water related safety matter that was brought up was the strain on the infrastructure to receive water. The group felt that the growth has resulted in the over taxing of the water system, which can cause water pressure problems. In the event of a fire, water pressure can play a critical role in the ability to contain and put out a fire in a timely manner. A participant stated that the county has built water towers to help with water pressure during high demand periods.

Everyone was in agreement that the drought was exacerbating all water related problems.

The loss of green space and trees was a concern to everyone, they all felt the rapid growth of the county, particularly on the western side was to blame. The loss of trees was seen as contributing to air pollution and the loss of green space was limiting places where families can go for recreation and where children can play.

The group would like to see a county ordinance with penalties that would be enforced be adopted for preservation of green space and to save and replant trees. They also felt municipalities should have their own ordinances for these same things and they must be enforceable and also have penalties.

If bike trails and walking paths are developed, that should help preserve green space, they gave the example of Cane Creek Park.

Question 3) Response to Access to Healthcare:

The initial discussion regarding access to care centered around CMC Union. The group stated that CMC has seen their patient load triple recently more and more uninsured are using the CMC ER for primary care. The results of this are over crowding, long waits and wear and tear on the hospital itself. The statement was made that thee growth of the immigrant population has exasperated the situation at the CMC ER.

The participants felt that uninsured residents are more likely to skip any preventative medical services or routine services due to associated costs, which will result in health crisis situations emerging later.

The County Health Department is required to serve the uninsured. The Health Department has hd to serve many more people with no new resources.

According to a participant, CMC Union has improved tremendously over the past 20 years, and is in the process of working toward a Level I Trauma Center rating. This has been delayed due to the certificate of need being contested. The group agreed that the competition between hospitals has caused delays in additional services and capacity being available locally.

Accessing mental health and substance abuse services was a topic that the group felt strongly about. The law enforcement participants expressed frustration with the commitment process to state facilities. They are often waiting with patients that are to be committed between 48 and 72 hours at the hospital. Concern about the fact that Union County does not have a local facility for the treatment of youth substance abuse abusers was brought up. The treatment therefore requires separation from family, which is tough on the family and detrimental to the person receiving treatment.

Transportation to medical specialists was seen as a barrier to accessing care for many people. An example was the fact that CMC does not offer emergency services for patients with renal issues, or certain cardiac issues. People are therefore required to travel out of county for these services.

A participant stated that a Spanish speaking urgent care center recently opened in Monroe.

Other people mentioned as having difficulty accessing care were military and veterans. There are no local service providers except the hospital that accept military health insurance.

Question 4) Emerging healthcare issues:

The discussion centered around safety being negatively impacted by the density of the growth that the county is experiencing, and the inability of infrastructure to keep up. The age and condition, including width of local roads that are now overly congested was seen as a definite safety issue. The density of housing in some areas can increase fire risk, when one structure catches fire, if homes are built too close together the fire can easily spread to surrounding homes. According to a participant state regulations were recently reduced to a space requirement of only 6 feet between houses, however the county and many municipalities have more restrictive regulations on this, it is all presently being reviewed.

Housing construction as it pertains to safety was discussed. The current standards for residential construction can create higher risk, the participants felt that when builders have to choose between their finances and safety, the finances win out. It was suggested that residential sprinkler systems would greatly reduce fire related fatalities because most fire deaths occur in homes. The fireman would like to see an awareness campaign on the topic of residential sprinkler systems.

Domestic violence was seen as an emerging issue. The law enforcement officers commented that recent legislation has helped with eviction and prosecution of offenders, however cultural differences within the immigrant population directly impacts the efforts of law enforcement in dealing with domestic violence in Hispanic families. The impacts are seen in the fact that domestic violence is an accepted behavior in their culture, victims mistrust law enforcement, there is a language barrier and although they do seek medical attention, they rarely report anything to law enforcement. Victims return themselves to the situation.

Traffic incidents are on the rise according to law enforcement, they stated several factors. A participant offered the statistic that 65% of the traffic deaths in Union County were not wearing seatbelts. Vehicle accidents often involve alcohol and young inexperienced drivers are causing lots of accidents. Law enforcement stated that vehicle accidents involving youth are often more drastic and often result in death, parents are not enforcing age related driving restrictions and the young drivers do not even understand restrictions that are age related. The officers offered that the number one question in driver training classes is if a young driver with a permit can be a designated driver for a parent? The immigrant population also cause hazards in that they do not understand our motor vehicle laws and often cause accidents by speeding, not obeying traffic signals and drinking and driving.

Also in regards to the immigrant population, there was a concern for acute diseases being brought into the country due to a lack of immunizations.

The growth in the county is resulting in a direct impact on the demand for emergency services. The group is seeing noticeable increases, yet in most cases they are not being provided substantial additional personnel or equipment to respond to demands.

Youth problems were seen to be on the rise, especially pertaining to abuse of over the counter drugs and prescription medications. Law enforcement is continually seeing the age of children becoming involved with drugs getting younger and younger.

A law enforcement participant shared that there are reports of some form of gang activity in over half of the county high schools and middle schools. He stated that typically the problems that he sees in the schools are fights, vandalism, and alcohol and drug abuse. He feels that the influx of students coming from larger urban areas is bringing the gang influence. He feels that mentor programs and a consistent policy from the school system for dealing with these issues would all be working toward a solution. He stated that a smaller community approach is the most effective method for dealing with gangs, it should be dealt with at the neighborhood / subdivision level where the kids actually live.

Environmental Health Professionals

Question 1) Response to the opportunities for fitness and recreation in Union County:

The group felt that the opportunities that do exist are not evenly distributed across the county. The feeling was that affordable opportunities for those with lower incomes are lacking. It was mentioned that although the eastern side of the county has more space, the western side has more opportunities for recreation and fitness. Regardless of geographic location everyone agreed there are not enough safe places to walk.

A discussion on the existing opportunities included the following facilities; Cane Creek Park, Wingate University Pool, and the Monroe Aquatics Center. Although everyone felt these were good options they were not seen as affordable or convenient for everyone.

Free options such as the tracks and tennis courts at schools are not open to the public when schools are closed. The group would like to see more parks and more recreation options outside of the traditional sport league team sports.

Within the schools the group expressed a need for more physical activity and more emphasis on fitness. It was stated that PE is limited in elementary and middle school and is only an elective in high school. The group felt that most parents abdicate the responsibility of making certain their children exercise to the schools.

Question 2) Response to Environmental Questions:

The consensus was that the air quality in Charlotte does not meet standards and that has a negative impact on the air in Union County. The air quality issues will only be solved with a regional approach. The group felt that one of the largest air pollutants is vehicle exhaust. A solution that was made was to increase mass transit locally. The group also suggested that there needs to be more awareness about air quality and children suffer the most from poor air quality, with the onset of asthma and other respiratory diseases showing up in younger and younger children.

The group discussed water quality issues in the county and they felt that a lot of the water quality issues were the result of naturally occurring situations, such as the arsenic in the well water, and the hard and often strong tasting water resulting from the underground slate bed that is under the county. They stated that the slate bed does not cause harmful affects. The question was raised with the group that people that had well water felt that their children may not be receiving enough fluoride, as fluoride is present in the water from the county and city. The response was that the organic fluoride content in well water is adequate for dental health.

Another well issue that was raised was the fact that wells drilled for irrigation have an adverse affect on drinking water wells. Some irrigation wells are being drilled too close to drinking water wells.

The group had a lengthy discussion regarding the quality of stream water. The consensus was that local streams need to be better cared for. The list of impaired streams had recently been updated, streams were removed and added to the list. Participants stated that residents need to take better care of streams on their property by removing debris and making certain that the streams are not blocked. The statement was made that most property owners that have streams on their property do not remove debris for several reasons; they are not aware of the new state laws that allow them to do so or they expect the Wildlife Department to clear the streams. Another stream related issue that was mentioned was the fertilizers from lawns washing into streams and impacting the eco system.

A discussion about preserving green space and tree ordinances included the fact that the county has included preservation of trees and green space in its development requirements, but it does not have a tree ordinance. The group felt that developers receive a lot of blame for tree removal, but the point was made that when possible developers try to preserve trees in residential areas because it increases the values of lots. The participants stated that often it is the installation of infrastructure that typically causes the loss of trees. A participant stated that the county does allow cluster development on less than one acre lots and does require the developer to plant trees on the right of ways, but not on lots. There is concern that land rehabilitation and tree replacement are not strong enough to compensate for what is removed.

Another point that was made is the fact that the County shoulders a lot of the blame for the destruction of green space and tree removal, but often it is occurring within a municipality which has its own rules and laws. Many of the municipalities are now taking steps toward rehabilitation and conservation.

Union County has an Urban Forester on staff at the Cooperative Extension who is working with 9 out of 14 municipalities on preservation and tree ordinances.

General concerns and issues that were mentioned regarding loss of trees and green space included the following; it directly impacts air and water quality, the majority of tree loss is due to farmers clearing land, and the fact that trees are so effective at cleaning the air they are used at landfills to offset pollution and hazardous waste. One participant provided the following fact; Union County has about 140,000 acres of timber and is losing about 3,000 acres each year.

Question 3) Response to Access to Healthcare:

The participants were in agreement that the care available in Union County is better than it used to be. They also agreed that a lot of people still drive to Charlotte.

A consistent complaint was the lengthy wait in waiting rooms at everything from ER, urgent cares and private practices. Participants felt that this is a contributing factor to so many people being willing to drive to Charlotte for care. Another issue that was brought up was that it is difficult to find critical care even with the few new urgent care facilities that have been built recently.

Several types of healthcare were viewed by the group as not adequately provided or not provided at all in the county; dermatologists, pediatricians, plastic surgeons, specialists and dental care. Other areas that were pointed out as deficient were elder care, cardiac intervention, Alzheimer specialists, and a lack of adult day care. Mental health services were considered insufficient across the board, but especially weak for children.

The participants all believed there is a general perception in the county that Presbyterian Hospital in Matthews offers better care than CMC Union. However, there were participants within the group that had positive and negative experiences at both hospitals. The group agreed that it is just like any other business, it comes down to not only the quality of care you receive, but also the type of customer service that you receive that shapes your experience.

Question 4) Emerging healthcare issues:

Illegal drug use is viewed as on the rise, especially in middle and high schools.

Obesity is on the rise with all age groups, but seems to be more prevalent in children. The group felt that too much junk food and too many unhealthy food options are available to kids in school. Another factor that was viewed as impacting youth in general was the amount of hormones that is put into our meat supply which then is ingested by humans and the opinion was that these hormones are causing children to mature earlier.

High school students were seen as being involved in lots of behaviors that put them at risk for health problems; smoking, drug use, joining gangs, being sexually active, resulting in STDs and teen pregnancies.

The cultural differences were a concern because the immigration population was considered to be a risky health group due to not being immunized appropriately and risky behaviors being culturally acceptable such as domestic violence, and drinking and driving.

MRSA was perceived to be on the rise, but after further discussion it was deemed that maybe that is due to a heightened level of awareness rather than actual increases in cases.

Allergies and asthma were viewed as emerging issues that were related to poor air quality.

Stakeholder Interviews

By Vivian Wiese-Hansen

As part of the Healthy Carolinians initiative, the Union County Health Department has been conducting a community needs assessment. A variety of methods have been used to compile information on the health needs of the county. These include focus group discussions, resident surveys and stakeholder interviews. The information obtained will be part of a final report on the health needs of the community. Stakeholder interviews are a vital component in any needs assessment process. These in-depth interviews can provide a clearer understanding of the health needs for a specific population and the barriers that exist to prevent access to health care.

Teen Pregnancy

Adolescent pregnancy is a health concern because of the increase in the number of teens who have become pregnant. In an interview with a school health nurse and the coordinator of the Best Start Program, both stated the number pregnant teenagers followed appears to have doubled in one year. The Union Smart Start Best Start Program was developed to assist teen mothers complete their high school education. This position further assists the teen mother to access information about health, child development, and parenting classes.

There are a number of issues that surround teen pregnancy. Girls often lack self-esteem and are generally from lower income single parent families. There is little expectation to go onto higher education past high school. These girls want affection and feel the need to have something to love such as an infant. Having a baby is often seen as a status symbol by both adolescent girls and boys. Girls see other young family members or school mates having a child and they want to be like everyone else. The boys are heard bragging to friends about how many children they have fathered. In the Hispanic culture, it is common for girls to marry and have children while still in their teens. This cultural norm makes it difficult to keep Hispanic girls in school once their baby is born.

In school, African American and Caucasian teens have been overheard speaking about going onto community college after completing high school. This is a positive step because these girls are thinking about their future. A higher percent of African American and Caucasian teens return to school. It is estimated that 85-90 % will return to school, M. Hadley (personal communication June 30, 2008).

Support for teen mothers is available through Department of Social Services and the Union County Health Department. Teen mothers speak among themselves about what services are free. To some teens these supports are seen as a right and expectation. Adolescent mothers do not see all the responsibility of parenting a child. They expect their mother to care for the infant while they go out with friends. Teen fathers do not accept responsibility for parenting a child. South Carolina has a system in place to garnish wages of fathers making them accountable for their actions M., Hadley (personal communication June 30, 2008).

The coordinator for the Smart Start Best Start Program would like to organize a teen mother to mother support group. Lack of transportation after school would make it difficult for this group to meet B. Anderson (personal communication June 26, 2008). Teen mothers who have completed school while raising a child would speak to current teen mothers. These women could relate their difficulties of raising a child while trying to finish school. These young mothers could give adolescent teens a realistic picture of what their responsibilities will be and that they should be raising the child not their parents B. Anderson (personal communication June 26, 2008). Other issues involving adolescent girls are peer pressure to become sexually active, sexually transmitted disease (STD's) are talked about in school but teens think about them after they have become sexually active. The school drop-

out rate is higher if an adolescent girl has a repeat pregnancy B. Anderson (personal communication June 26, 2008).

Mental Health

Support and assistance for persons with mental health issues is provided by Daymark Recovery Services. Clients who access these services are offered the opportunity for recovery, independence, and a better life. One of the support staff positions is that of Community Support Professional. This position provides support to persons who are isolated and need assistance in accessing public services. Lack of transportation is a major problem A. Leslie (personal communication June 26, 2008). Bus service in Union County stops at 5:00 p.m. and county transportation requires a 48 hour notification. This makes it difficult for clients to attend evening classes offered at Daymark Recovery Services if the need occurs unexpectedly. Clients with phobias are dependant on a support professional to provide transportation just to obtain weekly groceries.

Some clients have difficulty affording their medications. Daymark Recovery Services refers clients to HealthQuest a non-profit pharmacy operating in Union County. The need for a shorter approval time for a disability would allow clients to schedule a physician appointment sooner. Currently, the wait time for a physician is about 4-6 weeks A. Leslie (personal communication June 26, 2008). If medications are not working or side effects occur, it again is 4-6 weeks before the client can see a physician.

Few clients maintain full-time or even part-time jobs because they lack social aptitude skills. Low self-esteem and non-valid drivers' license are contributing factors to seeking employment.

The needs of this population are on-going and continued support from a network of family, friends, and religious and health services are needed.

Latino/Hispanic Population

The Latino/Hispanic growth in Union County has put increasing demands on health services for about 10 years. The community has been able to provide health care services for a culture they initially had little understanding of but have worked hard to accommodate.

One of the biggest barriers to services is communication both by professionals and the Hispanic population G. Arevalo, (personal communication, July 7, 2008). Hispanics who do not speak English do not access health services because they do not know where to go. They may have received misinformation about services from a friend or neighbor. This population must build a trust before they will use private clinics. This is why they have turned to the health department because they trust this group of professionals. The Hispanic community must trust those outside their own culture before they will ask or seek services G. Arevalo, (personal communication, July 7, 2008). The Hispanics are very respectful of professionals but are shy to ask for services often due to lack of funds. Service providers are willing and want to learn to speak Spanish.

Many Hispanics have no health insurance. They do not believe in nor are they concerned about not having health insurance. This attitude stems from feeling well and therefore they question the need to pay for health insurance. As avid church goers, the Hispanic people believe they will not get sick. When a health issue arises such as a tooth ache then they go to the dentist. The Hispanic population is willing to pay for healthcare but often have limited funds and need to pay small amounts over a longer period.

The communication between the Hispanic population and the community is much improved from 10 years ago. Hispanics widely know where to go for health services. The community has responded to the needs of the Hispanic population by hiring bilingual Spanish staff. Many Americans are learning Spanish to better serve this population. The police department in Monroe currently has 7 officers who speak Spanish.

Getting the Hispanic population to think and be proactive about their health is a work in progress. The United Way employs a Latino Outreach Specialist who works in the community to provide information lectures to the Hispanic people. This position is actively involved in arranging health education and literacy classes or information discussion groups. The Latino Outreach Specialist is also a central contact for persons seeking information on legal and financial matters and employment.

Many Hispanic families are making Union County their home. They still worry about deportation given the number of company raids by immigration occurring across the county. Their needs still exist for affordable health care, housing, a means to drive legally (driver's license) and a means of transportation G. Arevalo, (personal communication, July 7, 2008). They have strong family values and work to provide for their children to ensure they have healthcare and a proper education. The community is responding through better communication and understanding of the Latino culture. Americans want to help and have good will to help G. Arevalo, (personal communication).

Conclusion

There are a number of common threads that are considered barriers to accessing services in Union Co. Communication and lack of understanding of the Latino/Hispanic culture or persons with Mental Health issues sometimes results in health issues not being addressed. Lack of transportation after 5:00 p.m. and limited bus routes affect clients accessing night therapy classes or needing to get to and from appointments during the day. Undocumented persons do not qualify to apply for a driver's license. These persons will drive illegally as the need arises putting themselves and others at risk. Home ownership is important to create stability in any community. Banks have put systems in place to help the Latino families gain home ownership. The need to inform the community of this available service will create a stable environment for young families.

Affordable prescription medications are available in Union County. The information about these free pharmacies needs to be communicated more in the community. Access to medical providers in a reasonable time is critical for persons with mental health issues. Long wait times could have irreversible effects.

Adolescent pregnancy presents a different set of issues for the community. Teens have an unrealistic picture of motherhood and their expectation is that community services will cover all their infant's needs. Lack of transportation makes it difficult to organize a mother to mother support group so adolescent mothers can begin to understand what being a parent truly involves. To address issues of self-esteem and to break the cycle of single parent families, adolescents need to finish school. The need for effective sex education including STD's and HIV transmission is apparent from professionals working with pregnant teens. Teen fathers should be accountable for their actions. This is a policy issue that needs to be addressed by government.

References:

Anderson, B., (personal communication, June 26, 2008)
Arevalo, G., (personal communication, July 7, 2008)
Hadley, M., (personal communication, June 30, 2008)
Leslie, A., (personal communication, June 26, 2008)

Secondary Data / Health Indicators
By; Karen Morris, Masters Intern

Personal Health

Leading Causes of Death

This section covers the five leading causes of death in Union County. Secondary data was obtained from various links from the North Carolina State Center for Health Statistics' website: <http://www.schs.state.nc.us/SCHS/index.html> and also from the Agency of Healthcare Research on Quality Indicators: www.ahrq.gov. Healthy Carolinians 2010 Objectives were obtained from the website: www.healthycarolinians.org.

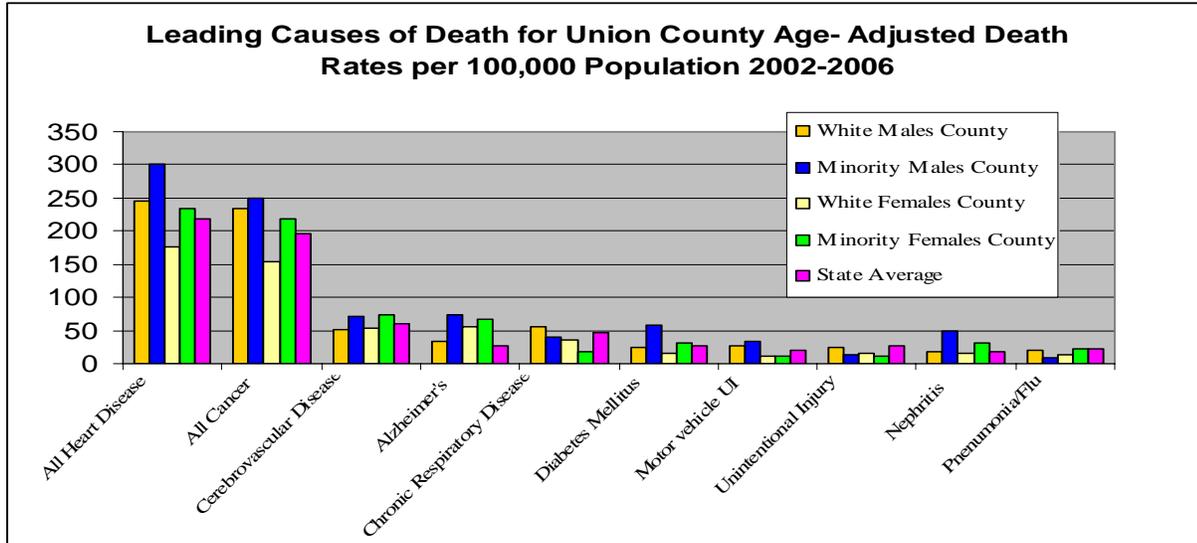
Union County has seen mortality rates decrease in several areas in 2006, with the largest decreases occurring in Heart Disease, Cerebrovascular disease and Diabetes. Areas in which Union County exceeded the state rate include Cancers of the lung, trachea, and bronchus, Homicide rate and Cancer of the colon, rectum and anus. Areas in which the county rate exceeds the state rate are Alzheimer's disease, Cancer of the Lung, Trachea and Bronchus, Nephritis and Motor Vehicle Injuries. (Figure 1)

Figure 1

Rank	Top Ten Leading Causes of Death ALL Ages	Death Rates per 100,000 for Union Co. 2001-2005	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
1	Heart Disease	226.9	214.2	217.9
2	All Cancers	187.3	192	196.4
3	Cerebrovascular Disease (stroke)	60.4	55.1	61.1
4	Alzheimer's Disease	50.5	50.8	27.7
5	Respiratory Disease	42.4	41.3	47.1
6	Diabetes	25.4	21.5	27.1
7	Motor Vehicle	20.6	19.7	19.1
8	Unintentional Injuries	18.8	19.7	27
9	Nephritis	19.7	19.1	18.2
10	Pneumonia & Influenza	17	15.4	22.5

Figure 2 depicts race and sex specific age-adjusted death rates for the period of 2002-2006 per 100,000 population for Leading Causes of Death for Union County. Most of these diseases have higher rates among minorities when compared to whites.

Figure 2



The following tables list Causes of Death categorized by age groups. (See Figures 3-7)

Figure 3

Age Group 0 to 19 years	Cause of Death	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
Rank	All Causes	66.9	76.6
1	Conditions originating in perinatal period	18.4	23.7
2	Congenital anomalies (birth defects)	12.1	8.9
3	Motor Vehicle Injuries	11.7	11.8
4	Cancer All Sites	3.3	2.3
5	Other Unintentional Injuries	3.3	5.8
6	Homicide	2.9	3.8
7	SIDS	2.1	4.1
8	Diseases of the Heart	1.7	2
8	Suicide	1.7	2
10	Septicemia	0.8	*
10	In-situ / benign neoplasms	0.8	*
10	Pneumonia & Influenza	0.8	0.8

* Note: Did not make the top 10 causes for the State

Figure 4

Age Group 20 to 39 years	Cause of Death	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
Rank			
	All Causes	93.8	126.4
1	Motor Vehicle Injuries	24	25
2	Other Unintentional Injuries	13.6	18.9
3	Cancer - All Sites	11.8	11.3
4	Homicide	9.5	13.6
5	Suicide	8.6	13.6
6	Diseases of the Heart	5.9	11
7	HIV Disease	2.7	5.4
8	Congenital anomalies	2.3	1.2
9	Cerebrovascular Disease	1.8	*
10	Septicemia	0.5	*
10	Viral Hepatitis	0.5	*
10	Anemias	0.5	*
10	Diabetes mellitus	0.5	*
10	Hypertension	0.5	*
10	Pneumonitis due to solids & liquids	0.5	*
10	Chronic liver disease & cirrhosis	0.5	*
10	Complications of medical and surgical care	0.5	*

Figure 5

Age Group 40 to 64 years	Cause of Death	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
Rank			
	All Causes	453.5	597.8
1	Cancer	159.5	186.8
2	Diseases of the Heart	103	130.7
3	Chronic Lower Respiratory Diseases	20.3	20.7
4	Other Unintentional Injuries	19.1	25.9
5	Motor Vehicle Injuries	17	17.9
6	Suicide	15.8	16.6
7	Diabetes Mellitus	12.9	22.5
8	Cerebrovascular Disease	11.6	24.3
9	Chronic Liver Disease & Cirrhosis	10.8	16.5
10	Nephritis	9.6	*

* Note: Did not make the top 10 causes for the State

Figure 6

Age Group 65 to 84 years	Cause of Death	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
Rank			
	All Causes	3538	3754.5
1	Cancer	1005.7	1009.3
2	Diseases of the Heart	878.4	944.3
3	Cerebrovascular Disease	264.5	262.7
4	Chronic Lower Respiratory Diseases	212.2	279.2
5	Alzheimer's Disease	150.2	102
6	Diabetes Mellitus	114.3	133.8
7	Nephritis	86.5	86.1
8	Pneumonia & Influenza	55.5	84.2
9	Septicemia	53.9	66.8
10	Parkinson's Disease	39.2	*

Figure 7

Age Group 85 + years of age	Cause of Death	Death Rates per 100,000 for Union Co. 2002-2006	Death Rates per 100,000 for North Carolina 2002-2006
Rank			
	All Causes	15866.1	14806.7
1	Diseases of the Heart	4973.2	4494.3
2	Alzheimer's Disease	2062.7	1017.3
3	Cancer	1610.6	1645.7
4	Cerebrovascular Disease	1215	1514.1
5	Chronic Lower Respiratory Diseases	664	615.3
6	Pneumonia & Influenza	466.2	673.2
7	Pneumonitis due to Solids & Liquids	381.5	259.9
7	Nephritis	381.5	346.3
9	Hypertension	353.2	*
10	Other Unintentional Injuries	310.8	319.5

* Note: Did not make the top 10 causes for the State

Heart Disease and Cerebrovascular Disease

Although, there has been a decrease in the rate of death from Heart disease in Union County in recent years, chronic illnesses such as Heart disease, Cancer and Cerebrovascular disease still remain among the leading causes of death and account for mortality and morbidity in Union County. These diseases are linked to hereditary factors, aging, high blood pressure and behavioral factors such as high fat diet, low fiber diet, lack of adequate physical activity, overweight and obesity and smoking. Some of these diseases can be prevented or controlled by implementing lifestyle changes. Heart disease is the leading cause of death in Union County, ranking Cancer as 2nd followed by Cerebrovascular Disease as the 3rd leading cause of death for the county.

Heart disease and Cerebrovascular (Stroke) death rates for Union County have decreased over the years. Data from 2001-2005 indicated a rate of 226.9 deaths per 100,000 population which decreased in 2002-2006 to 214.2 deaths per 100,000 population for Heart disease. The North Carolina rate was 217.9 deaths per 100,000 population during 2002-2006 period. (Figures 8, 9)

Figure 8

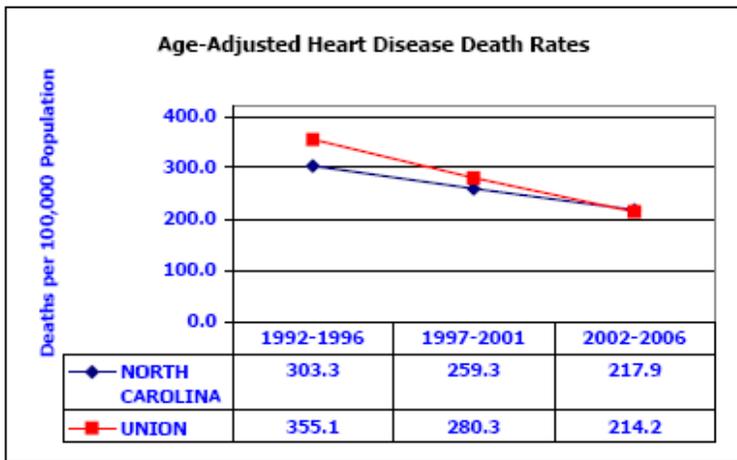
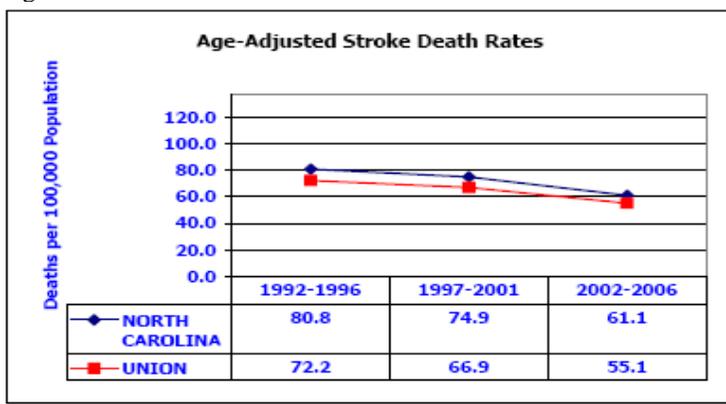


Figure 9



Data on Cerebrovascular (Stroke) death from 2001-2005 revealed a rate of 60.4 deaths per 100,000 population which decreased to a rate of 55.1 deaths per 100,000 population during 2002-2006 which

is much lower than the state rate of 61.1 deaths per 100,000 population for the period of 2002-2006. According to the Agency for Healthcare Research Quality Indicators, heart disease accounts for a large portion of hospitalizations. (Figure 10) In addition, these diseases are responsible for financial burden due to healthcare costs.

Figure 10

Prevention Quality Indicators	Union County 2005	NC 2005	Union County 2006	NC 2006
Diabetes short-term complication admission rate	171.851	182.852	none listed	232.3
Diabetes long-term complication admission rate	274.961	213.665	262.5	323.6
Chronic Obstructive Pulmonary Disease admission rate	171.851	268.521	262.5	458.3
Congestive Heart Failure admission rate	567.108	402.781	738.3	740.8
Adult Asthma Admission Rate	206.221	258.362	328.1	322.6
Pediatric Asthma Admission Rate	181.352	230.643	182.5	208.9

The Healthy Carolinians 2010 Objective related to Heart Disease and Stroke are as follows:

- **Reduce heart disease death rates. Target: 219.8 deaths per 100,000 population. Baseline, 1996-1998: 274.7 heart disease deaths per 100,000 population (age adjusted to the year 2000 U.S. standard population).**

Union County currently meets this goal at a rate of 214.2 deaths per 100,000 population from the period of 2002-2006.

- **Reduce stroke death rates. Target: 61.0 deaths per 100,000 population. Baseline, 1996-1998: 76.2 stroke deaths per 100,000 population (age adjusted to the year 2000 U.S. standard population).**

Union County is below the target at a rate of 55.1 deaths per 100,000 population for the period of 2002-2006 for cerebrovascular deaths

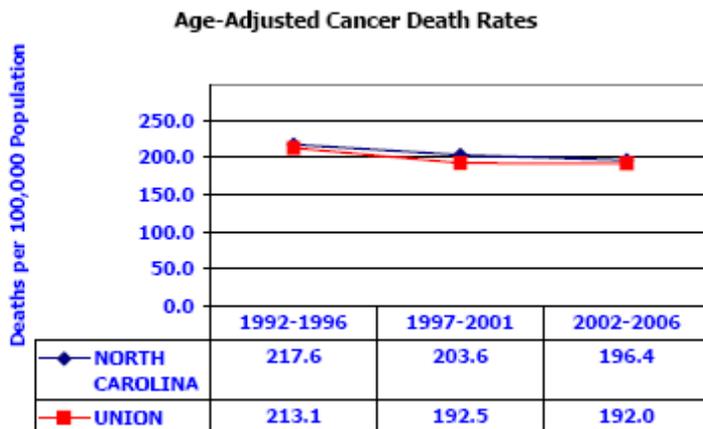
- **Increase the proportion of adults who have had their cholesterol checked within the preceding five years. Target: 90.9 percent. Baseline, 1995, 1997, 1999: 79.1 percent of adults ages 18 years and older had their blood cholesterol checked within the preceding 5 years.**
- According to the 2005 Behavioral Risk Factor Surveillance System (BRFSS) survey, 28.2% (75 out of 377 respondents) indicated that they had not had their cholesterol checked in the last 5 years or ever.
- **Increase the proportion of adults who have had their blood pressure measured within the last year. Target: 95 percent. Baseline, 1995, 1997, 1999: 88.9 percent of adults ages 18 years and older had their blood pressure measured in the past year.**

Data was not available that provides the number of adults who have had their blood pressure measured within the last year.

Cancer

Cancer is the second leading cause of death in Union County, responsible for 1,148 deaths for the 2002-2006 period. Union County had a cancer death rate of 192.0 deaths per 100,000 population which is lower than North Carolina's rate of 196.4 deaths per 100,000 population. However, Union County's rate for 2002-2006 increased from 187.3 deaths per 100,000 population in 2001-2005. (Figure 11)

Figure 11



Highest to lowest incidence of specific types of Cancer is as follows: (1) Trachea, Bronchus and Lung, (2) Breast (3) Prostate, (4) Colon, Rectum and Anus and (5) Pancreas. However, Cancer deaths among minorities are generally higher in all areas than for whites with the exception of Cancer of the Pancreas as shown in Figure 12 below.

2002-2006 Race and Sex Specific Age-Adjusted Death Rates per 100,000 Population

Figure 12

Type of Cancer	Rate of Cancer				
	White Males	White Females	Minority Males	Minority Females	Overall
All Cancers	235.0	154.6	248.7	219.0	192.0
Colon, Rectum, And Anus	19.4	13.2	44.6	23.7	17.8
Pancreas	15.7	6.9	8.3	7.8	10.5
Trachea, bronchus, and lung	82.6	45.7	96.9	61.6	62.8
Breast	0.6	21.8	0.0	33.0	23.5
Prostate	19.9	0.0	38.4	0.0	21.4

The Healthy Carolinians 2010 Objective for cancer deaths is as follows:

- **Reduce the overall cancer death rate. Target: 166.2 deaths per 100,000 population. Baseline, 1994-1998: 207.8 cancer deaths per 100,000 population (age adjusted to the year 2000 U.S. standard population).**

Union County has a rate of 192.0 deaths per 100,000 which is lower than the North Carolina State rate of 196.4 deaths per 100,000 but significantly higher than the target of 166.2 deaths per 100,000 set by Healthy Carolinians for the 2002-2006 period.

- **Reduce the colorectal cancer death rate. Target: 16.4 deaths per 100,000 population. Baseline, 1996-1998: 20.5 colorectal deaths per 100,000 population (age adjusted to the year 2000 U.S. standard population).**

Union County's rate for Cancer of colon, rectum and anus has a rate of 17.8 deaths per 100,000 population which has decreased from 16.8 deaths per 100,000 in the 2001-2005 period. The county's rate is lower than North Carolina's rate of 18.2 deaths per 100,000 population for 2002-2006. Union County does not currently meet the target of 16.4 deaths per 100,000 population as set by Healthy Carolinians.

- **Reduce the breast cancer death rate. Target: 22.6 deaths per 100,000 population. Baseline, 1996-1998: 28.2 breast cancer deaths per 100,000 population (age adjusted to the year 2000 U.S. standard population).**

Union County has seen a decrease in breast cancer. From 2002-2006, Union County had a rate of 23.5 deaths per 100,000 population down from 24.1 deaths per 100,000 in 2001-2005. The North Carolina rate is slightly higher than Union County at 25.7 deaths per 100,000 population. Currently, Union County does not meet the target of 22.6 deaths per 100,000 population as set by Healthy Carolinians.

The Healthy Carolinians 2010 Objective for Cancer Screenings is as follows:

- **Increase the proportion of adults who have ever had a colorectal cancer screening examination. Target: 49.8 percent. Baseline, 1998-1999: 31.5 percent adults age 18 and older received a sigmoidoscopy or proctoscopy.**

Results from a BRFSS survey in 2006 for Union County indicated 65.1% (134 out of 207 respondents) indicated they have had colorectal cancer screening with a 61.8% (5,426 out of 5426 respondents) for North Carolina indicating the same.

- **Increase the proportion of women age 50 and older who have had a mammogram in the last 2 years. Target: 85.2 percent. Baseline, 1998-1999: 79.6 percent of women aged 50 years and older received a mammogram within the last 2 years.**

Results from a BRFSS survey in 2006 indicated that 84.6% (111 out of 136 respondents) of Union County women age 50 and older replied yes when asked if they have had a mammogram in the last 2 years. 83.7% (782 of 925 respondents) for North Carolina replied yes to the same question.

Alzheimer 's disease

The fourth leading cause of deaths in Union County is Alzheimer 's disease. Alzheimer's disease is common form of dementia that affects a person's ability to carry out daily activities. It initially involves the part of the brain that controls thought, memory and language. This disease usually affects persons after age 60; with an increase in risk of developing Alzheimer's as age increases although this is not a normal part of the aging process.

Union County has an alarming rate for this disease despite only 8% of residents are of 65 years of age and older. Data revealed a rate of 50.5 deaths per 100,000 population in 2001-2005 and that rate

slightly increased to a rate of 50.8 deaths per 100,000 in 2002-2006 which is significantly higher than the North Carolina has a rate of 27.7 deaths per 100,000 population for 2002-2006.

Healthy Carolinians does not have specific objectives for Alzheimer’s disease.

Chronic Lower Respiratory Disease

The fifth leading cause of death in Union County is Respiratory disease which includes Chronic Lower Respiratory Diseases such as Chronic Obstructive Pulmonary Disease (COPD) emphysema, bronchitis and cystic fibrosis.

Data indicated a death rate of 42.1 deaths per 100,000 population for the year 2001-2005, and 41.3 deaths per 100,000 population for 2002-2006 for respiratory disease. The North Carolina rate is higher at 47.1 deaths per 100,000 population for the 2002-2006 periods.

One common form of respiratory disease is Asthma. Asthma is a health problem among people of all ages but is increasingly becoming more common among children.

Asthma is a respiratory condition which causes obstructed airways in the bronchial tubes. The prevalence of Asthma in children has increased over the past decades and this condition is associated with hospitalizations and sometimes restricted activity and can even result in death. Many children that suffer from asthma remain undiagnosed and untreated. Healthy Carolinians list the following as determinates and risk factors for asthma: exposure to allergens and pollutants, lack of adequate primary care, inadequate financial sources; inadequate social support, respiratory infections, climate changes, physical and emotional changes such as coughing, laughing, exercise and stress.

Healthy Carolinians 2010 Objective related to Asthma is as follows:

- **Reduce the rate of asthma related hospitalizations. Target: 118 per 100,000. Baseline, 1998: 143.9 per 100,000 persons were hospitalized for asthma.**

Union County had a 79.0 rate per 100,000 in 2006 for hospitalizations for a primary diagnosis of asthma. This rate is lower than North Carolina’s rate of 118.5 hospitalizations per 100,000 which meets the target set by Healthy Carolinians.

2006 NC Hospital DischargesWith a primary diagnosis of Asthma Numbers and Rates per 100,000 Population**
Figure 13

	Total Number	Total Rate	Number Ages 0-14	Rate Ages 0-14
Union County	136	79.0	54	130.5
North Carolina	10,500	118.5	2,732	152.8

Communicable Disease

Case Numbers

Communicable diseases are illnesses that are transmitted to humans from other humans, animals, insects and the environment. Secondary data has been taken from Union County’s State Of The

County Health Report 2007 (SOTCH), North Carolina State Center for Health Statistics' website www.schs.state.nc.us and North Carolina HIV/STD Surveillance Report 2007 found at the website: www.epi.state.nc.us/epi.hiv

Figure 1 represents the diseases that affect Union County. Data from the 2002-2004 period has the highest total for Salmonellosis followed by Campylobacter and Hepatitis B Carrier.

Figure 1

Number of Cases	2003	2004	2005	2002-2004 Total
Campylobacter	24	14	28	94
E.coli	2	4	1	21
Hepatitis A	4	1	0	12
Hepatitis B	5	3	2	13
Hepatitis B Carrier	10	14	15	39
Hepatitis C	0	0	0	1
Lyme Disease	4	3	0	9
Meningococcal	1	1	1	5
Meningitis Pneumonococcal	0	2	0	5
Rocky Mountain Spotted Fever	1	11	3	22
Rubella	0	0	0	8
Salmonellosis	29	44	40	173
Shigellosis	58	2	2	84
Whooping cough	13	4	6	26

* Data from 2007 State of The County Health Report

HIV/AIDS and other Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) usually include HIV/AIDS, gonorrhea, syphilis and chlamydia. These diseases are usually transmitted through sexual contact. Union County's rates of HIV infection, syphilis, gonorrhea and Chlamydia are lower when compared to rates in North Carolina.

The Healthy Carolinians 2010 Objective for HIV infection is as follows:

- **Reduce the rate of HIV infection. Target: 14.7 per 100,000 population. Baseline, 1998: 19.7 new cases per 100,000 population.**

Data from the North Carolina HIV/STD Surveillance Report included the following rates and average rate for HIV disease. (Figure 2)

Figure 2

	2005	2006	2007	Average Rate
North Carolina	21.1	24.2	21.9	22.4
Union County	3.7	5.1	10.3	6.4

Union County does meet the target set by Healthy Carolinians. However, there was an increase from 2005 to 2007 with the rate for 2007 almost double of that in 2006. North Carolina's rates for years 2005 through 2007 are significantly higher than the target set by Health Carolinians for HIV disease.

Risk factors for this disease include high risk sexual behavior, drug and alcohol abuse, low socioeconomic status and limited or no access to health care.

AIDS, a more life threatening stage of HIV disease accounts for morbidity in Union County and is a cause of disability and death. Figure 3 shows the total AIDS cases and rate for both the county and state. (Figure 3)

NC Resident AIDS Cases and Rates per 100,000 Population 2002-2006

Figure 3

	Total AIDS Cases	Rate per 100,000
Union County	35	4.6
North Carolina	5,310	12.4

The Healthy Carolinians 2010 Objective related to Gonorrhea is as follows:

- **Reduce the rate of gonorrhea. Target: 191 new cases per 100,000 population. Baseline, 1998: 254.7 new cases of gonorrhea per 100,000 population.**

North Carolina's rate of 182.0 per 100,000 is much greater than Union County's rate of 98.1 per 100,000 for gonorrhea. Both the county and state meet the target as set by Healthy Carolinians for the 2002-2006 period. Figure 4 shows minorities are disproportionately affected by STDs such as gonorrhea.

NC Resident Gonorrhea Cases and Rates per 100,000 Population 2002-2006

Figure 4

	Total Gonorrhea Cases	Rate per 100,000	Minority Gonorrhea Cases	Rate per 100,000
North Carolina	77,948	182.0	63,449	585.0
Union County	754	98.1	601	592.8

The Health Carolinians 2010 Objective related to Syphilis is as follows:

- **Reduce the number of new cases of Primary and Secondary Syphilis. Target: 0.25 per 100,000 population. Baseline, 1998: 9.6 primary and secondary cases per 100,000 population.**

Union County has a rate of 0.9 per 100,000 population; a rate lower than North Carolina's rate of 2.8 per 100,000 population. Neither Union County nor North Carolina meets the target as set by Healthy Carolinians for number of new cases of primary and secondary syphilis. (Figure 5)

NC Resident Primary and Secondary Syphilis Cases and Rates per 100,000 Population 2002-2006

Figure 5

	Total Syphilis Cases	Rate per 100,000	Minority Syphilis Cases	Rate per 100,000
North Carolina				

	1,195	2.8	825	7.6
Union County	7	0.9	1	1.0

Healthy Carolinians has a developmental objective to reduce the rate of Chlamydia trachomatis infection in 15 to 24 year olds but no baseline has been determined yet. However, Chlamydia has shown an increase from 2003 through 2005 with a decrease in 2006 as represented in Figure 6 below.

Figure 6

Number of Cases	2003	2004	2005	2006
HIV Disease	14	8	7	25
AIDS	7	7	6	9
Chlamydia	154	204	353	274
Syphilis	1	3	4	3
Gonorrhea	125	144	197	161

Reproductive Health Profile

This section covers health issues related to specific age groups and populations regarding pregnancy, fertility, abortion and infant mortality. Secondary Data was obtained from various links from the North Carolina State Center for Health Statistics website: <http://www.schs.state.nc.us/SCHS/index.html>

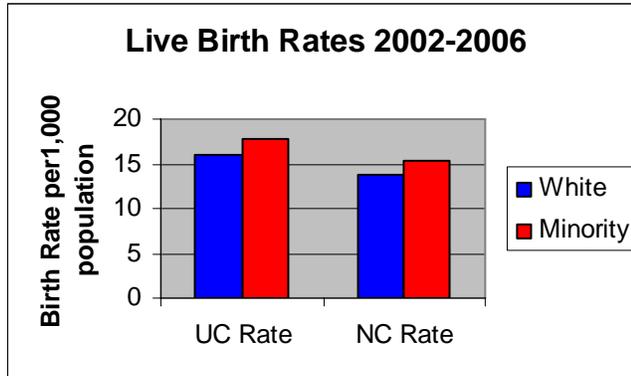
Live Birth Data

From 2002-2006, there were 12,406 live births in Union County with an overall live birth rate of 16.1 births per 1,000 population which is slightly higher than the North Carolina live birth rate of 14.2 during the same period. (Figures 1, 2)

Figure 1 Live Birth Rates per 1,000 Population from 2002-2006

	Total Births	Total Rate	White Births	White Rate	Minority Births	Minority Rate
North Carolina	606,058	14.2	440,130	13.8	165,928	15.3
Union County	12,406	16.1	10,611	15.9	1,795	17.7

Figure 2



Pregnancy, Fertility and Abortion Rate (Ages 15-19) 2006

Union County’s total pregnancy rate was lower than the rate in North Carolina (53.6 per 1,000 vs. 63.1 per 1,000) with a significantly higher rate among minorities when compared to whites. Teenage fertility rate was lower than the North Carolina rate (41.0 per 1,000 vs. 48.3 per 1,000) but also higher among minorities when compared to whites. Total teenage abortion rate was lower than the North Carolina rate (12.3 per 1,000 vs. 14.5 per 1,000). However, there were more abortions among minorities than whites. (Figure 3)

Pregnancy, Fertility and Abortion Rates per 1,000 Population: Females ages 15-19 by Race for 2006

Figure 3

	Pregnancy Rate			Fertility Rate			Abortion Rate		
	Total	White	Minority	Total	White	Minority	Total	White	Minority
North Carolina	63.1	52.9	82.1	48.3	42.8	60.0	14.5	9.8	21.3
Union County	53.6	42.8	101.5	41.0	33.8	77.8	12.3	9.0	21.6

Pregnancy, Fertility and Abortion Rate (age 15-44) 2006

Union County’s total pregnancy rate was close to the North Carolina rate (84.8 per 1,000 vs. 83.2 per 1,000) with a much higher rate among minorities as compared to whites. Total fertility rate was higher than the state rate (71.7 per 1,000 vs. 68.5 per 1,000) with a slightly higher rate among minorities as compared to whites.

Total abortion rate was lower than the rate in North Carolina (11.1 per 1,000 vs. 15.8 per 1,000) although a higher rate exists among minorities as compared to whites.

(Figure 4)

Pregnancy, Fertility and Abortion Rates per 1,000 Population: Females ages 15-44 by Race for 2006

Figure 4

	Pregnancy Rate			Fertility Rate			Abortion Rate		
	Total	White	Minority	Total	White	Minority	Total	White	Minority
North Carolina	84.8	79.1	93.2	68.5	69.3	66.7	15.8	9.5	25.8
Union County	83.2	78.5	100.5	71.7	71.1	75.7	11.1	7.2	24.0

Birth weight Distribution

Babies that are born under 2500 grams are considered low birth weight.

The Healthy Carolinians 2010 Objective related to low birth rate is as follows:

- **Reduce the incidence of low birth weight. Target: 7.0 percent of live births. Baseline, 1997-1999: 8.9 percent of infants were born weighing less than 2500 grams.**

Union County is slightly above the target recommended by Healthy Carolinians' 2010 Objective at 7.3% total low birth weight. It is lower as compared to the North Carolina rate of 9.1% Minority low birth weight is almost twice as high as compared to white low birth weight. (Figure 5)

North Carolina Births - 2002-2006: Number and Percent of Low Birth Weight by Race
Figure 5

	Total Low Birth weight		White Low Birth weight		Minority Low Birth weight	
	Number	Percent	Number	Percent	Number	Percent
North Carolina	54,991	9.1	32,664	7.4	22,327	13.5
Union County	908	7.3	688	6.5	220	12.3

Infant Mortality

Infant Mortality is the death of a live born child before the age of 1 year. Several factors contribute to birth outcomes including the number of visits for prenatal care, age of the mother, access and intake of proper nutrition, substance abuse such as tobacco and alcohol, as well as stress and poverty can all influence if a child will be born healthy.

Healthy Carolinians 2010 Objective related to infant mortality is as follows:

- **Reduce infant deaths within the first year of life. Target: 7.4 per 1000 live births. Baseline, 1997-1999: 9.1 per 1000 all infant deaths (within first year of life).**

In Union County for the period of 2002-2006, the infant death rate was 7.3 per 1,000 live births which is lower than the North Carolina rate of 8.4 per 1,000 live births. The minority infant death rate is more than double that of whites. Union County currently is on target to meet the Healthy Carolinians Objective for 2010 for infant death rate. (Figure 6)

Infant Death Rates per 1,000 Live Births from 2002-2006
Figure 6

	Total Infant Deaths	Total Infant Death Rate	White Infant Deaths	White Infant Death Rate	Minority Infant Deaths	Minority Infant Death Rate
North Carolina	5,084	8.4	2,680	6.1	2,400	14.5
Union County	91	7.3	64	6.0	27	15.0

The Healthy Carolinians 2010 Objective related to prenatal care is as follows:

- **Increase the proportion of pregnant women who receive prenatal care beginning in the first trimester of pregnancy. Target: 90 percent.**
Baseline, 1997-1999: 84.0 percent of pregnant women received prenatal care in first trimester.

For the period of 2002-2006, Union County had 85% total women receiving care in 1st trimester which is slightly higher than North Carolina's 83.0%. (Figure 7)

Figure 7 Women Receiving Care in 1st Trimester, 2002-2006

	Total Receiving Care in 1 st Trimester		Blacks Receiving Care in 1 st Trimester		Native Americans Receiving Care in 1 st Trimester	
	Number	Percent	Number	Percent	Number	Percent
North Carolina	503,331	83.0	105,837	75.4	6,562	79.3
Union County	10,539	85.0	1,224	78.0	30	81.1

Healthy Carolinians 2010 Objective related to smoking is as follows:

- **Reduce cigarette smoking among pregnant women. Target: 7.0 percent.**
Baseline, 1998: 15.2 percent of women smoked while pregnant.

Data for Union County reveals 9.3% of pregnant women smoked cigarettes, a much lower percentage as compared to North Carolina's 12.4% for the period of 2002-2006 (Figure 8)

Figure 8

Births to Mothers Who Smoke 2002-2006	Number and % Smoking	
	Number	Percent
North Carolina	74,901	12.4
Union County	1,149	9.3

The Healthy Carolinians 2010 Objective related to alcohol use prior to or during pregnancy is as follows:

- **Reduce alcohol use among women prior to becoming pregnant and during pregnancy. Target: 19 percent women consume alcohol 3 months prior to pregnancy; 0.6 percent women consume alcohol during pregnancy.**
Baseline, July 1997-December 1998: 38 percent of women consumed alcohol 3 months before they were pregnant; 3.7 percent of women consumed alcohol during pregnancy.

The following information was provided by the 2006 North Carolina Pregnancy Risk Assessment Monitoring Survey System (PRAMS) which is also found on the North Carolina Center for Health Statistics' website. This chart provides data for alcohol use during the 3 months before pregnancy for the state of North Carolina. Data for Union County was not available. (Figure 9)

Alcohol Use During the 3 Months Before Pregnancy Figure 9

Demographic Groups	Total Respond.#	NO			YES		
		N	%	C.I.(95%)	N	%	C.I.(95%)
Total	1334	711	56.1	52.7-59.5	623	43.9	40.5-47.3
Age							
< 20 years	131	91	74.0	63.7-82.2	40	26.0	17.8-36.3
20-24 years	295	163	56.4	49.2-63.4	132	43.6	36.6-50.8
25-34 years	686	351	54.6	49.9-59.3	335	45.4	40.7-50.1
35+ years	222	106	45.4	36.9-54.1	116	54.6	45.9-63.1
Race							
White	972	480	52.2	48.2-56.1	492	47.8	43.9-51.8
Black	284	178	65.8	58.2-72.7	106	34.2	27.3-41.8
Other	78	53	65.8	50.9-78.1	25	34.2	21.9-49.1

Fetal, Neonatal, and Post Neonatal Deaths

For the period of 2002-2006, total fetal death rate for Union County was 5.9 per 1,000 deliveries and 7.0 per 1,000 deliveries for the state of North Carolina. Minority fetal death rate is significantly higher (12.7 per 1,000 deliveries vs. 4.8 per 1,000 deliveries) than that of whites. (Figures 10, 11, 12)

Fetal Death Rates per 1,000 deliveries, 2002-2006
Figure 10

	Total Fetal Deaths	Total Fetal Death Rate	White Fetal Deaths	White Fetal Death Rate	Minority Fetal Deaths	Minority Fetal Death Rate
North Carolina	4,277	7.0	2,303	5.2	1,968	11.7
Union County	74	5.9	51	4.8	23	12.7

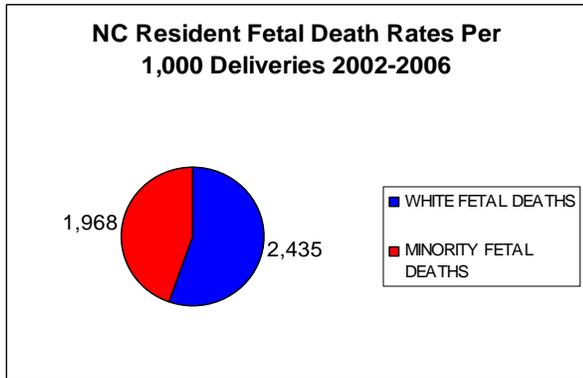


Figure 11

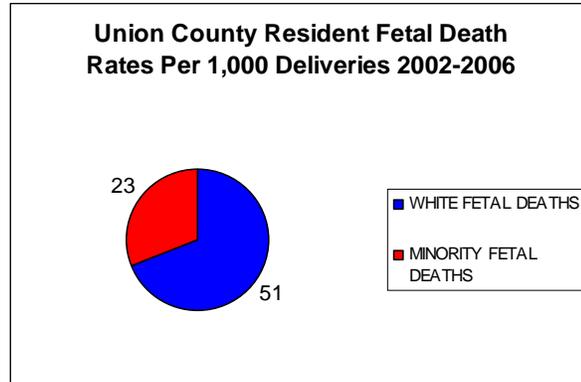


Figure 12

Healthy Carolinians 2010 Objective for neonatal mortality is as follows:

- **Reduce neonatal mortality (death of an infant less than 28 days). Target: 5.9 per 1000 live births Baseline, 1997-1999: 6.5 per 1000 neonatal deaths (within the first 28 days of life).**

For the period of 2002-2006, both Union County and the state of North Carolina appear to be on target to meet Healthy Carolinians Objective, with a total neonatal death rate of 4.7 per 1,000 live births and 5.8 per 1,000 live births respectively. The county and state were relatively close for the total rate for post neonatal deaths (death of an infant 28 days to 1 year) for the period of 2002-2006 which were 2.6 per 1,000 live births and 2.7 per 1,000 live births respectively, with minorities' total rate for post neonatal deaths about 3 times higher when compared to whites. (Figures 13,14)

North Carolina Resident Neonatal (<28 Days) Death Rates per 1,000 Live Births for 2002-2006

Figure 13

	Total Neonatal Deaths	Total Neonatal Death Rate	White Neonatal Deaths	White Neonatal Death Rate	Minority Neonatal Deaths	Minority Neonatal Death Rate
North Carolina	3,512	5.8	1,796	4.1	1,713	10.3
Union County	58	4.7	42	4.0	16	8.9

North Carolina Resident Post Neonatal (28 days-1year) Death Rates, 2002-2006
Figure 14

	Post Neonatal Deaths	Total Post Neonatal Death Rate	White Post Neonatal Deaths	White Post Neonatal Death Rates	Minority Post Neonatal Deaths	Minority Post Neonatal Death Rate
North Carolina	1,572	2.6	884	2.0	687	4.2
Union County	33	2.7	22	2.1	11	6.2

Environmental Health

Air Quality

Poor indoor and outdoor air quality can adversely affect health particularly health of the lungs. Lung tissue can be quickly damaged by air pollutants which will result in an increase in asthma, allergies, bronchial conditions, lung cancer and other respiratory conditions. Air pollution can affect everyone but more sensitive groups include children, those with preexisting lung conditions and the aging populations.

Healthy Carolinians 2010 Objective related to air quality are:

- **Ensure that all North Carolinians breathe air that meets the new health-based standard for ozone. Target: 100 percent. No people will be exposed. Baseline, 2001 (Baseline To Be Established) Target Setting Method: Consistent with the Federal Clean Air Act (Public Law 101-549) and consistent with Division of Air Quality, NC Department of Environment and Natural Resources Key Performance Measures 2000.**
- **Increase the percent compliance rate for major and minor emission sources. Target: 90 percent. Baseline, 1999: 84.67 percent of major and minor emissions sources were compliant. Target Setting Method: Consistent with the Federal Clean Air Act (Public Law 101-549) and consistent with Division of Air Quality, NC Department of Environment and Natural Resources Key Performance Measures 2000.**

* There is no current data available for Union County related to these objectives.

Outdoor Air Quality

The Clean Air Act requires that the Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for harmful pollutants for public health and the environment. (Figure 1) The six common criteria pollutants are: particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxides, ground-level ozone, and lead. Ozone and particulate matter present a greater risk to human health.

Figure 1

National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour	None	
	35 ppm (40 mg/m ³)	1-hour		
Lead	1.5 µg/m ³	Quarterly Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 µg/m ³)	Annual (Arithmetic Mean)	Same as Primary	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour	Same as Primary	
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual (Arithmetic Mean)	Same as Primary	
	35 µg/m ³	24-hour	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour	Same as Primary	
	0.08 ppm (1997 std)	8-hour	Same as Primary	
	0.12 ppm	1-hour (Applies only in limited areas)	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m ³)	3-hour

Source: <http://epa.gov/air/criteria.html>

Particulate Matter (PM) pollutants are usually small in size and includes: dust, dirt, soot, smoke and liquid droplets emitted directly into the air by factories, power plants, fires and vehicles. * *Data not available for this pollutant.*

Carbon Monoxide (CO) is a colorless, odorless gas formed by incomplete combustion of organic matter and fuels. CO can displace oxygen in the bloodstream and reduces the delivery of oxygen to organs when it is inhaled. High levels of CO are found among transportation sources, primarily highway vehicles but other sources include wood-burning stoves, and incinerators. * *Data not available for this pollutant.*

Sulfur dioxide (SO₂) and nitrogen dioxide (NO₂) are both emitted from coal and oil burning power plants and combustion of fossil fuels. Nitrogen dioxide helps to form ground level ozone, acid rain and particulate matter. Acid rain, damage to plants and respiratory problems in human health is caused by high levels of SO₂. * *Data not available for this pollutant.*

Ground-level ozone

Ozone (O₃) is the major component of smog and is created by a reaction between nitrogen oxides and volatile organic compounds. Inhalation of ozone can cause coughing, damage to lung tissues, reduced lung function and chest pain. Children are particularly at risk since their lungs are still developing and they spend more time outdoors. Union County is listed by the EPA as a non-attainment area for ozone level. Union County exceeds the standard of 0.075ppm for 8-hour ozone level. Figure 2

Figure 2

Ozone Values (8-hour) for 2005, 2006 & 2007

Year	Ozone 8 hours Value (4 th Max.) in ppm
2005	0.082ppm
2006	0.080ppm
2007	0.082ppm

Source: www.epa.gov/air/data/repSCO.html?co~37179~Union%20Co%2C%20North%20Carolina

EPA uses calculations by using the concentrations of these pollutants in an area to find the Air Quality Index (AQI) which helps to explain the relationship between local air quality and health. The Air Quality Index is divided into six categories. (Figure 3)

Figure 3

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
When the AQI is in this range:	...air quality conditions are:	...as symbolized by this color:
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

Source: <http://airnow.gov/index.cfm?action=aqibroch.aqi#4>

According to AIRNOW, each category corresponds to a different level of health concern.

- **"Good"** The AQI value for your community is between 0 and 50. Air quality is considered satisfactory, and air pollution poses little or no risk.
- **"Moderate"** The AQI for your community is between 51 and 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number

of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.

- **"Unhealthy for Sensitive Groups"** When AQI values are between 101 and 150, members of sensitive groups may experience health effects. This means they are likely to be affected at lower levels than the general public. For example, people with lung disease are at greater risk from exposure to ozone, while people with either lung disease or heart disease are at greater risk from exposure to particle pollution. The general public is not likely to be affected when the AQI is in this range.
- **"Unhealthy"** Everyone may begin to experience health effects when AQI values are between 151 and 200. Members of sensitive groups may experience more serious health effects.
- **"Very Unhealthy"** AQI values between 201 and 300 trigger a health alert, meaning everyone may experience more serious health effects.
- **"Hazardous"** AQI values over 300 trigger health warnings of emergency conditions. The entire population is more likely to be affected.

Source: <http://airnow.gov/index.cfm?action=aqibroch.aqi#4>

Union County has seen an increase in poor air quality days. The following table shows the number of days that were considered “moderate,” “unhealthy for sensitive groups,” “unhealthy,” and “very unhealthy” which are of particular concern due to the health effects listed above. There were no reports of “hazardous” days. (Figure 4)

Number of “Moderate” “Unhealthy for Sensitive Groups,” “Unhealthy” and “Very Unhealthy” Days - Union County 2005, 2006 and 2007

Figure 4

Year	Moderate AQI 51-100	Unhealthy for Sensitive Groups AQI 101-150	Unhealthy AQI 151-200	Very Unhealthy AQI 201-300	Main Pollutant
2005	52	14	0	0	Ozone
2006	49	5	1	0	Ozone
2007	60	15	1	1	Ozone

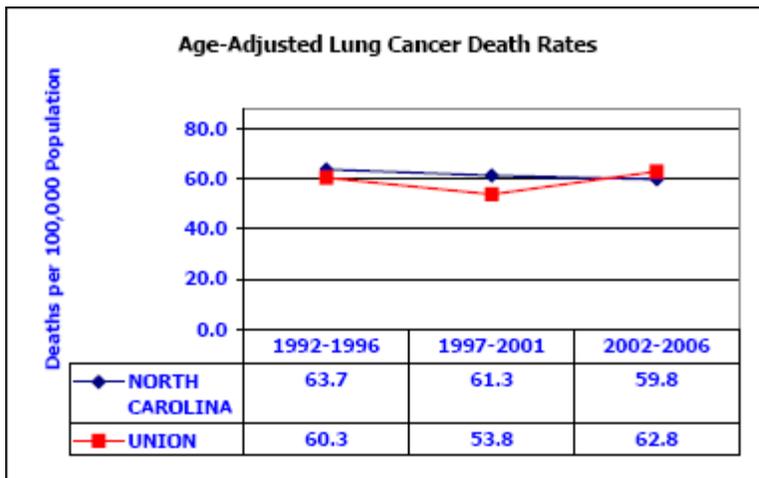
Data compiled from Air Quality Report Source:

<http://www.epa.gov/air/data/monaqi.html?co~37179~Union%20Co%2C%20North%20Carolina> and [Purple Ozone Day 2007.pdf](#)

Respiratory disease is Union County’s fifth leading cause of death. One common form of respiratory disease is asthma, a health problem among people of all ages but is increasingly becoming more common among children. Exposure to pollutants and allergens is among the risk factors for asthma.

Union County saw an increase in the lung, trachea and bronchus cancer rate. The county rate has also exceeded that of the state for the same time period. (Figure 5) With air quality remaining an environmental issue for the Charlotte region, these numbers may continue to climb.

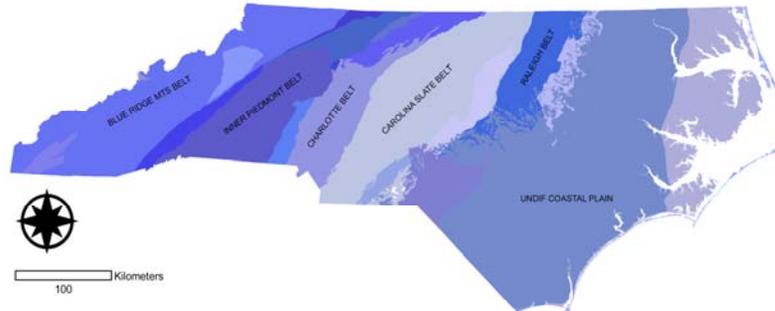
Figure 5



Source: <http://www.schs.state.nc.us/SCHS/data/trends/pdf/Union.pdf>

Water Quality

Major hydrogeological units of North Carolina



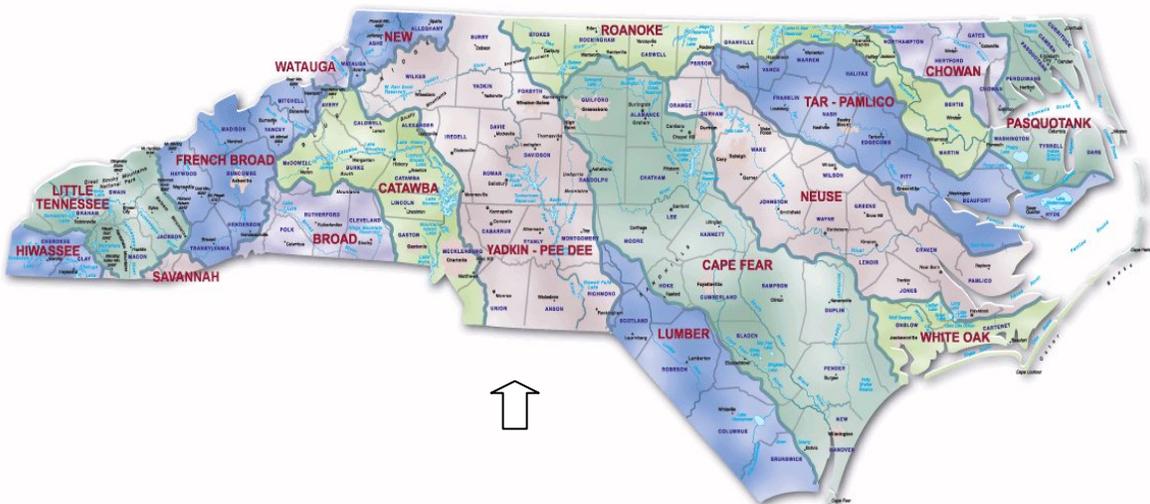
Healthy Carolinians 2010 Objective for Water Quality:

There are no Healthy Carolinians objectives for water quality.

Surface Water

Rivers and streams in Union County are part of the Yadkin-Pee Dee River Basin and the Catawba River Basin as shown in Figure 1. The North Carolina Division of Water Quality released basinwide assessment reports of the Yadkin-Pee Dee River Basin in 2007 and Catawba River Basin in 2008.

Figure 1



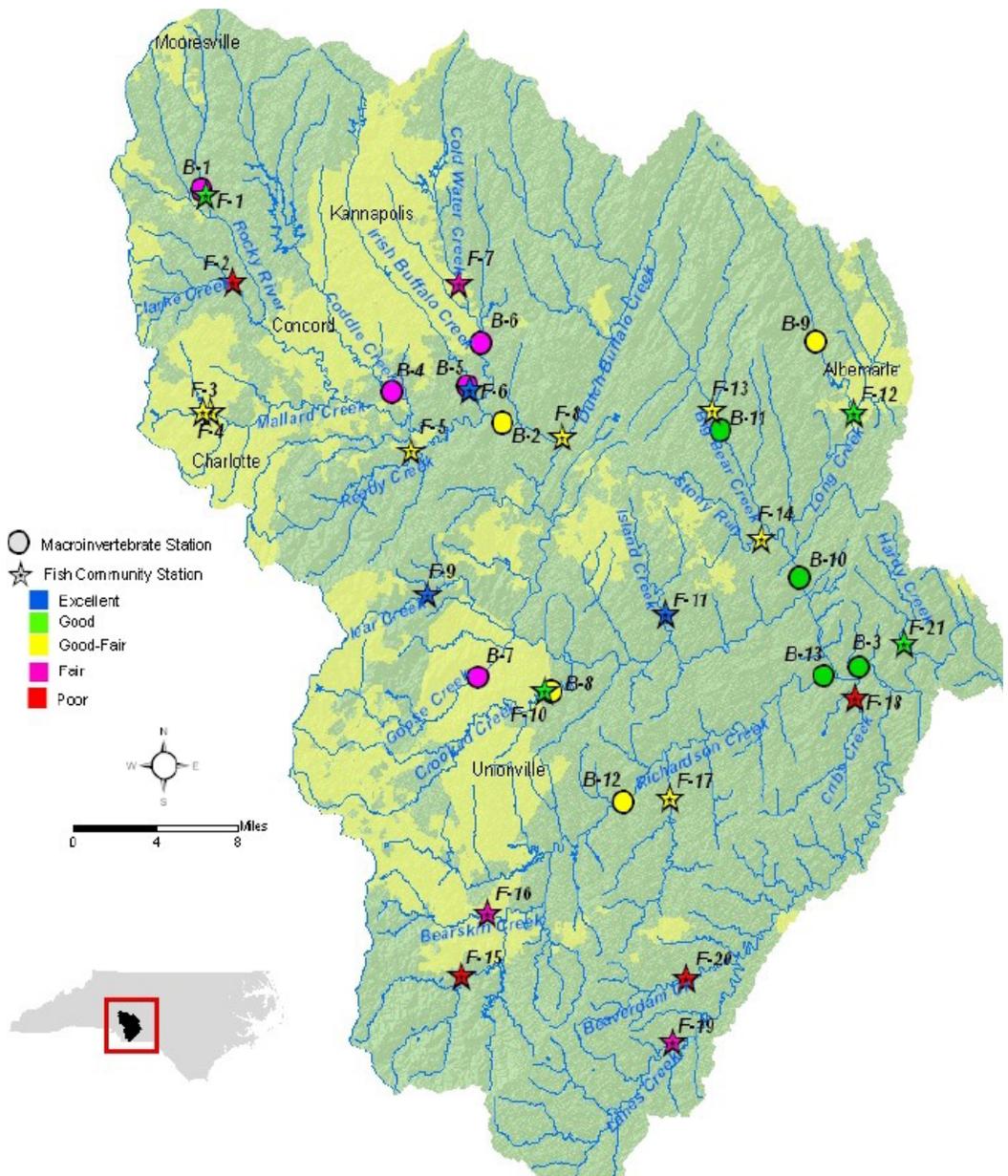
Union County is located just above the arrow.

Source: http://www.ncdrought.org/graphics/major_river_basins.jpg

Yadkin-Pee Dee River Basin

Union County is located in subbasin 14 and includes the Rocky River and the entire watersheds on Richardson and Lanes Creeks. The towns of Marshville, Wingate and Monroe are the only large urban areas in this subbasin according to the report. Land use is primarily cultivated cropland.

Figure 2 Sampling sites in the Yadkin River Basin. Monitored sites are listed in the next table – Figure 3.



Source: <http://h2o.enr.state.nc.us/esb/Basinwide/YADBasinwide2007.pdf>

Waterbodies monitored in the Yadkin River Basin for basinwide assessment, 2001 and 2006

Figure 3

Map	Waterbody	Location	2001	2006
B-7	Goose Creek	US 601	Poor	Fair
B-8	Crooked Creek	SR 1547	Good-Fair	Good-Fair
B-12	Richardson Creek	SR 1649	Fair	Good-Fair
F-10	Crooked Creek	SR 1547	-----	Good
F-15	Richardson Creek	NC 207	Good-Fair	Poor
F-16	Bearskin Creek	NC 200	-----	Fair
F-17	Salem Creek	SR 1006	Good	Good-Fair
F-19	Lanes Creek	SR 1929	Fair	Fair
F-20	Beaverdam Creek	SR 1005	-----	Poor

----- denotes data not listed in original table

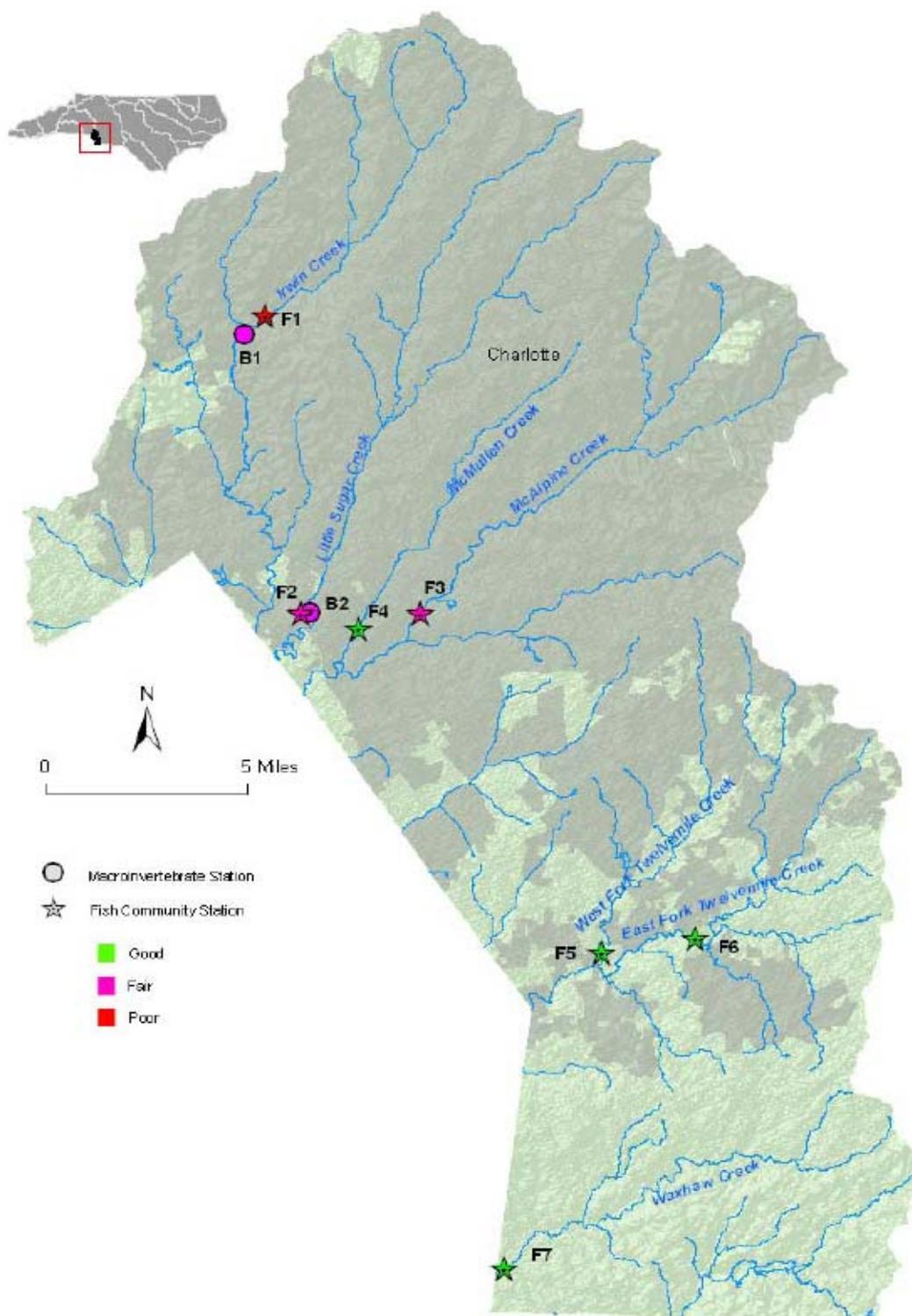
Source: <http://h2o.enr.state.nc.us/esb/Basinwide/YADBasinwide2007.pdf>

Union County's monitoring sites show one site with a "Good" rating, three sites with a rating of "Good-Fair", three sites with a rating of "Fair," and two sites with a "Poor" rating. *Data not available for some sites in 2001.* Overall, most sites had improved or stable ratings from 2001 as compared to 2006 with the exception of two sites: Richardson Creek site at NC 207 rated "Good-Fair" in 2001 and rated "Poor" in 2006. Salem Creek at SR 1006 had a rating of "Good" in 2001 and a rating of "Good-Fair" in 2006.

Catawba River Basin

The Catawba River's streams are located within Mecklenburg and Union counties. These streams drain the southern and southwestern portion of Charlotte and then flow into South Carolina. The Catawba River contains subbasins 34 and 38. Subbasin 38 includes portions of the Southern Outer Piedmont and Carolina Slate Belt. Twelve mile and Waxhaw Creeks are the only basinwide sites in this area that are located in the Carolina Slate Belt region as noted in the assessment. Land use is mainly forest and cultivated agriculture. According to the report, poor habitat, large wastewater treatment plant discharges, nonpoint source and urban runoff are major sources of decline in the water quality in this area.

Figure 4 Sampling sites in the Catawba River Basin. Monitoring sites are listed in the next table-figure 5



Source: <http://h2o.enr.state.nc.us/esb/documents/2008CTBBAU rptweb.pdf>

Waterbodies monitored in Catawba River Basin for basinwide assessment, 2002 and 2007

Figure 5

Map #	Waterbody	Location	2002	2007
F-5	W Fk Twelvemile Creek	SR 1321	-----	Good
F-6	E Fk Twelvemile Creek	SR 1008	-----	Good
F-7	Waxhaw Creek	SR 1103	-----	Good

---- denotes data not available for that year

Source: <http://h2o.enr.state.nc.us/esb/documents/2008CTBBAUrptweb.pdf>

Union County received an overall rating of “Good” for monitored sites located in Catawba County shown in the tables below for 2007. *Ratings were not available for 2002.

Fish Kills

There have been no significant fish kill events in recent years in Union County. The County did have several small scale fish kill events in local creeks believed to be the result of a natural process called turnover.

Source: <http://h2o.enr.state.nc.us/esb/Fishkill/fishkillmain.htm>

Personal contact with Union County Environmental Health Department

Contaminants in Drinking Water

Bacteria and other microbes may be present in water; an indication of a problem with the treatment system or in the pipes which distributes the water. This means that water may be contaminated by these disease producing microbes. Microbes may come from wastewater treatment plants, septic systems and agricultural livestock. Organic contaminants present in water, include pesticides, herbicides and other petroleum products. These contaminants are usually present in water via storm water runoff. Inorganic contaminants such as metals and salts can be present naturally or as a result of wastewater discharges, industrial plumbing and other industrial activities and storm water runoff.

Water Quality

Union County's Public Works (UCPW) department has annual reports listed on the county website and indicates that water quality is in compliance with Federal and State drinking water regulations. More detailed information can be found at

<http://www.co.union.nc.us/PropertyServices/PublicWorks/Water/AnnualWaterQualityReports/tabid/788/Default.aspx>

Groundwater

Wells also account for Union County's water supply. Well water quality is determined by sampling the water to assess its safety for drinking.

EPA reports that drinking water may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily mean that water poses a health risk. EPA has set standards for about 90 contaminants in drinking water. Information about the standards, each contaminant and its source and associated health effects are available at www.epa.gov/safewater/mcl.html.

Coliform bacteria is an indicator bacteria which gives the evidence that some type of contamination is in the water supply. E. Coli bacteria, when present in the water, indicates contamination in accordance with human or animal feces. Typically when E. Coli is present, Coliform is present. However, Coliform can be present and E.Coli will not.

Contamination can be a problem with the treatment system or the pipes which distributes the water. These contaminants can cause short-term health effects, such as nausea, cramps, diarrhea, headaches and other symptoms. Figures 6 and 7 present data for samples analyzed for bacteria and a few organic and inorganic contaminants.

Figure 6 Sample Analysis for 2006 and 2007

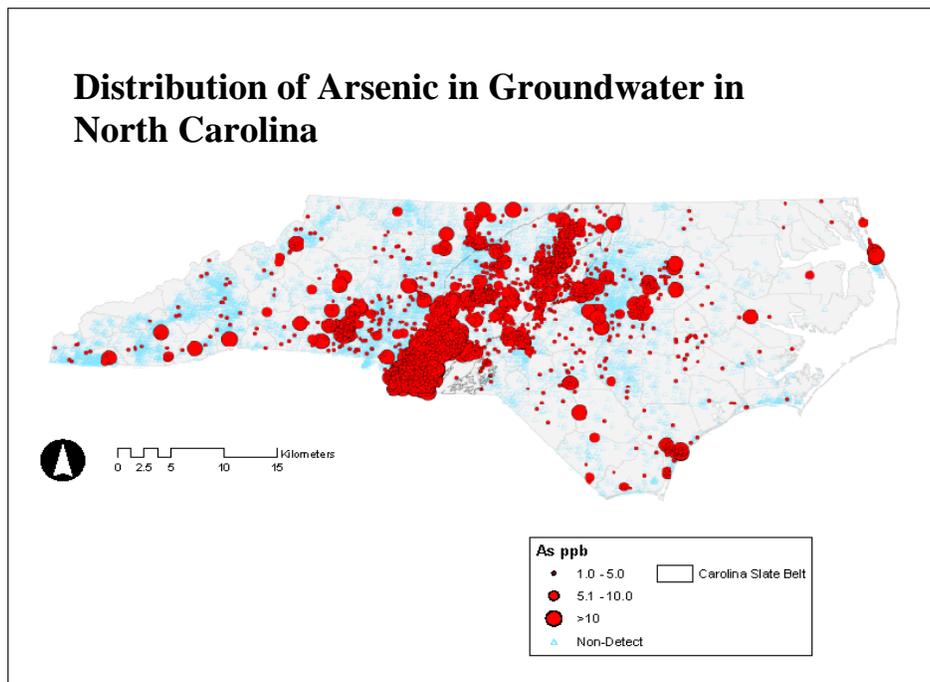
Year	# of Total samples	# of samples containing coliform bacteria	# of Samples containing E.coli
2006	389	145	23
2007	336	114	13

Source: Personal communication with representative from Public Work's Well Water Section

Figure 7 Sample Analysis for 2006 and 2007

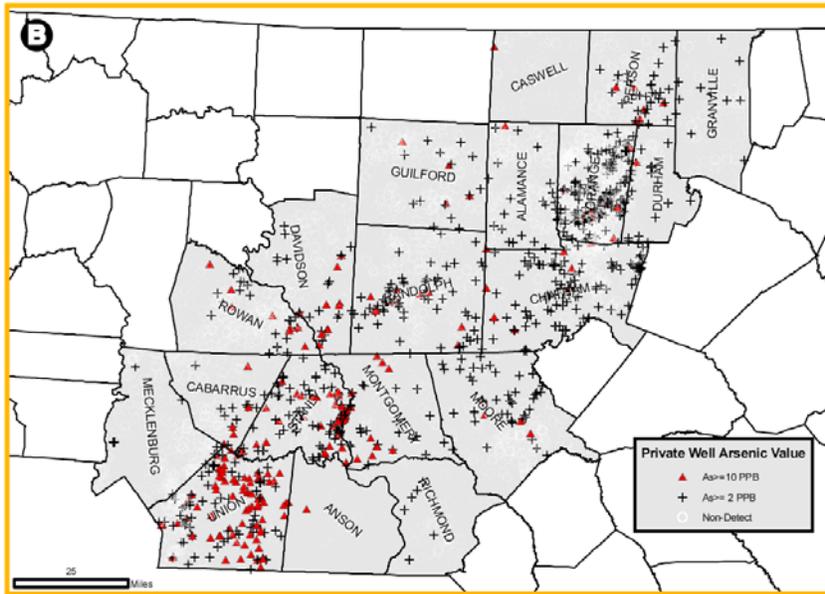
Year	#of samples	# of samples containing Nitrate/Nitrite	#of samples containing Pesticide	# of samples containing Petroleum
2006	252	28	18	18
2007	422	58	20	17

Source: Personal communication with representative from Public Work's Well Water Section



USDA Project 2006 – 03956 (Water Study)

High-arsenic Groundwater in the Slate Belt



(SOURCE of page 118 illustrations; USDA Project 2006 – 03956 Water Study)

Arsenic, an inorganic contaminant can enter the drinking water supply from natural deposits or from agricultural and industrial activities. A particular concern in Union County is the level of arsenic present in groundwater. Arsenic can cause health problems such as skin damage and circulatory problems. In addition, it has been linked to various cancers of the bladder, lungs, skin, liver, prostate and kidney as EPA reports. EPA has set the arsenic standard for drinking water at .010 parts per million in hopes of raising consumer awareness about long-term exposure to arsenic and its health effects.

<http://www.epa.gov/safewater/arsenic/index.html>

Drought Conditions in Union County

Union County experienced abnormally dry conditions in 2006, spent the large part of 2007 in drought conditions, and closed out the fall of 2007 in an extreme drought. (Figures 8&9) The county was able to maintain water availability for residents and as of November 2007, had not seen a noticeable increase in dry wells, or subsequent requests to tap onto the County water supply. UCPW was able to meet outstanding commitments for water connections, although they were forced to stop the issuing of new commitments for all residential subdivisions until an additional water treatment source was made available.

Several options to improve the County's water situation are in the planning stages. The expansion of the Catawba Water Treatment Plant is approximately three to four years away. A design plan to receive an additional 3 million gallons per day is in the early stages, as are discussions with Anson County to develop a long term water source from the Yadkin-Pee Dee River.

As a result of dry conditions and huge demand, UCPW had to declare mandatory restrictions for Union County water system users for most of 2007. UCPW pumped 21 million gallons one day in 2007, its highest ever. Annual average demand is 10 million gallons per day. Mandatory conservation was necessary so that all Union County residents would have access to water. Those residents not in compliance with restrictions were assessed fines.

Source: <http://www.co.union.nc.us/Portals/0/PublicWorks/Documents/WaterShortage/StageIIb.pdf> and Union County SOTCH 2007

Impacts from the Drought

One result of the severe drought conditions experienced in the county, are increased requests for wells being drilled strictly for irrigation purposes. This increase became most noticeable once the county implemented watering restrictions and began implementing fines.

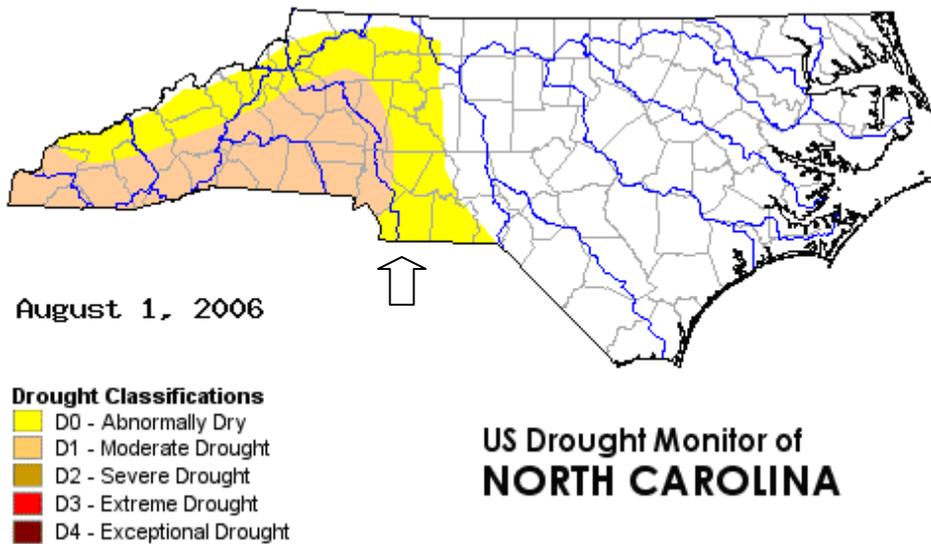
The Environmental Health Department made preparations for the implementation of the new well legislation to be implemented in July 2008. A public hearing at a Board of County Commissioners meeting was held in the spring of 2007. The purpose was to discuss raising the well permitting fees in order to help offset costs associated with the new state mandated well regulations. The new regulations significantly increase the amount of time Environmental Health employees are required to spend when permitting a new well. The new fee for a well permit was set at \$275.

On July 1, 2008, statewide legislation passed mandating that each county establish an inspection and testing program for wells designated for drinking. Previously, Union County operated under local well rules and with a few modifications followed most of the requirements of the new legislation. However, this new legislation did not require mandated testing of irrigation wells, resulting in the Union County Board of Health adoption of an additional rule. This additional rule also mandated legislation for the continued inspection and testing of irrigation wells drilled in the county. The Board of Health adopted this well ordinance in June 2008 to commence in July 2008.

Source: Union County Board of Commissioners Action Agenda Item Abstract

In 2006, there were a total of 467 well permits issued and in 2007; there were a total of 592 permits issued. There was no differentiation of well types until August 14, 2007. From August 14, 2007, there were a total of 263 well permits of which 130 were for drinking water, 133 wells for irrigation and 24 replacement wells.

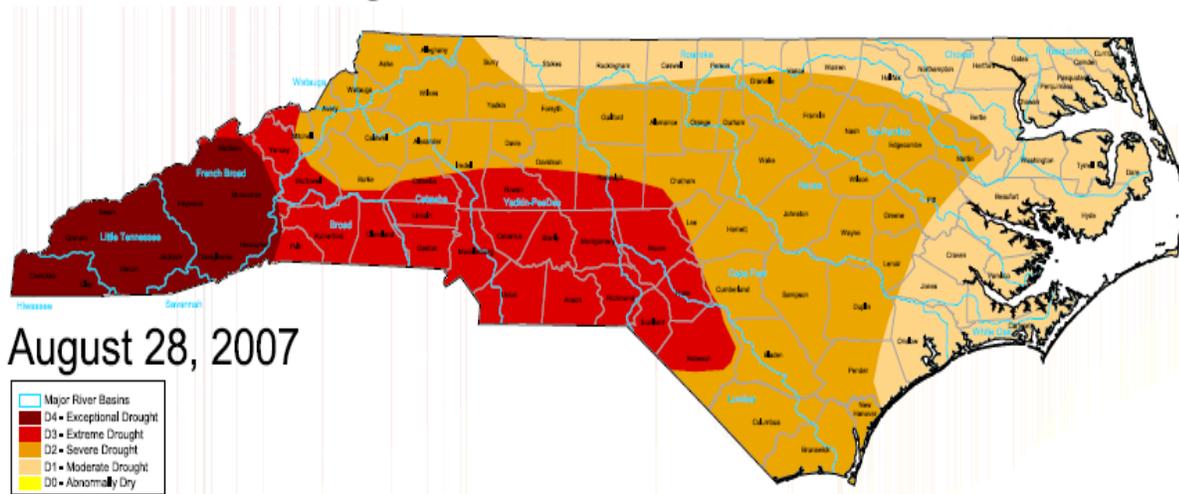
Figure 8



Source: <http://www.ncdrought.org/archive/index.php>

Figure 9

U.S. Drought Monitor of North Carolina



Source: <http://www.ncdrought.org/archive/index.php>

Stormwater

Public Works indicates that storm water runoff occurs when precipitation from rain or snowmelt flows over the ground. Surfaces such as driveways, sidewalks and streets prevent stormwater from naturally soaking into the ground.

Storm water flows into a storm sewer system or directly to a lake, stream, river, wetland or coastal water and may pick up pollutants such as debris and chemicals along the way. These pollutants in storm water can enter a storm sewer system and be discharged untreated into the waterbodies that are used for the drinking water supply, recreation and fishing.

Storm water Management will be an area of focus due to the rapid growth and development of the county. The Union County Storm water Program is dedicated to addressing future development issues and public education. Public Works is working to create a public education program to define and discuss storm water issues facing Union County. An ordinance is also being created to address how to manage storm water, the draft of which is available at www.co.union.nc.us. **There is currently no reporting or data collection involving stormwater.*

Source: <http://www.co.union.nc.us/PropertyServices/PublicWorks/Stormwater/tabid/279/Default.aspx>

Solid Waste, Recycling

Land Contamination

According to the EPA, Union County does not have any sites listed on the federal “Superfund” Program List or otherwise known as EPA’s National Priorities List. EPA defines “Superfund sites” as the worst toxic waste sites in the nation that are required by law for long term remediation. North Carolina has a total of 29 sites and 2 of those sites are in Mecklenburg and Gaston counties which are adjacent to Union County.

Solid Waste Management/Landfill

Union County Public Works owns and operates a construction & demolition landfill, and a solid waste transfer station. Public Works also operates six satellite collection container sites in various locations throughout the county. Waste is collected as various types including municipal solid waste, animal carcasses, yard waste, construction and demolition debris, white good and non ferrous metals (household appliances such as refrigerators, freezers, etc.) and tires. Union County contracts out with Mecklenburg County for Hazardous waste materials to be deposited at their site. The following figures show total waste for Union County in tons for the last few years for municipal solid waste (Figure 1) and other waste including construction and demolition, yard, white goods or metals and tires. (Figure 2).

Totals for Municipal Solid Waste (In Tons)

Figure 1

Date (Fiscal Year)	Totals In Tons
July 2005-June 2006	80,452.36
July 2006-June 2007	91,494.85
July 2007-June 2008	93,983.66

Totals for Other Waste (In Tons)

Figure 2

Date (Fiscal Year)	Construction and Demolition	Yard Waste	Metals	Tires
July 2005- June 2006	27,859.03	787.69	639.77	2149.48
July 2006-June 2007	27,989.44	1045.47	413.40	2192.15
July 2007-June 2008	13,690.64	1418.50	333.75	2350.98

Recycling

Recycling is encouraged by residents and businesses in Union County as it is an important way for everyone to be involved in maintaining a sustainable environment.

Recyclables are accepted free at the landfill in Union County. Accepted recyclables include the following: aluminum, steel and spiral cans, glass, plastic containers, corrugated cardboard, newspapers, magazines, inserts, catalogs, white goods and non-ferrous metals. Figure 3 shows a total of recycling material accepted at the Union County Landfill & Transfer Station over the last few years.

Figure 3

Dates (Fiscal Year)	Tons of Recycling Material
July 2003-June 2004	3,348.03
July 2004-June 2005	4,214.14
July 2005-June 2006	3,994.92
July 2006-June 2007	3,465.52

Food & Lodging Program

Food, Lodging and Institutions Program

The Food, Lodging and Institutions Program (FL & I Program) is a progressive team dedicated to promoting safe practices in many different settings. The team protects public health through enforcing rules governing facilities. These include, but aren't limited to:

- Restaurants and Food Stands
- Meat Markets
- Mobile Food Units and Pushcarts
- School Cafeterias
- Elderly Nutrition Sites
- Special Events
- Lodging
- Resident and Summer Camps
- Daycares and After schools
- Nursing Homes
- Hospitals
- Residential Care Homes
- Swimming Pools

All of the facilities are inspected up to four times per year. In addition to state mandated inspections, members of the FL & I Program respond to complaints, provide training to owners, operators and staff of facilities, Plan Review for all new facilities and serve on the Epidemiology (Epi) Team in case of an outbreak or other public health threats.

The Epi Team responds to infectious and communicable disease concerns and outbreaks within Union County. This is a full, versatile and experienced team of numerous staff professionals who also are trained in bioterrorism response training and bioterrorism response event planning activities. The team provides 24-four hour coverage, seven days a week for emergencies that request immediate attention. Meetings are held quarterly.

In August 2007, the Epi Team partnered with the North Carolina Department of Agriculture and Consumer Services in the nationwide Castleberry food recall. There are few recalls that rise to the level of this one in terms of potential risk to public health and scope of products involved. The Union County Epi Team pulled over 300 cans of this potentially deadly product off local store shelves.

One of the greatest achievements the FL & I Program met in 2007 was enrolling in the Federal Food and Drug Administrations (FDA) Voluntary National Retail Food Regulatory Program Standards. The FDA works with the staff using a risk-based approach to all inspections to reduce or eliminate the occurrence of illnesses and deaths from food produced at the retail level.

These Program Standards enable the program to identify areas where the greatest impact on retail food safety can be made and improve consumer confidence in food protection programs by enhancing uniformity within the department. This helps improve the services the citizens of Union County deserve and proves the FL & I staff are committed to devoting their time and resources to be their best at promoting public health.

2007 FOOD, LODGING AND INSTITUTIONS STATISTICS

- 2128 Food Service Inspections
- 234 Child Care Center Inspections
- 153 Swimming Pool and Spa Inspections
- 67 School Building Inspections
- 55 Residential Care Inspections
- 184 Complaint Investigations
- 298 Permits Issued
- 93 Site Visits
- 24 Pre-opening Visits
- 7 Environmental Health Specialists
- 1 Field Supervisor

Community Response / Priority Setting

Community Health Assessment Health Concern Priority Results

A community meeting was held in early November to present the results and highlights of the 2008 Union County Community Health Assessment. The Union County Office of Healthy Carolinians presented a power point overview of the findings. The power point was followed by individual, topic specific breakout sessions on the findings and related secondary data. At the conclusion of the breakout sessions participants voted on the numerical priority order for the topic. All groups voted on the priority ranking of the identified at-risk populations.

The results listed below will be used by the Health Department in the strategic planning of programs and services. The Union County Office of Healthy Carolinians will utilize the results in establishing task forces and action plans to work on improving health outcomes related to the identified priority concerns.

Priority Ranking Results from Breakout Sessions (Ranked highest to lowest within each sub-topic)

Adult Health Concerns

1. Obesity
2. Lack of Exercise
3. Poor Eating Habits
4. Alcohol Abuse
5. Pedestrian Friendly Improvements

Senior Health Concerns

1. Long Term Care Planning
2. Prescription Drug Costs
3. Indigent Care
4. Lack of Adult Daycare

Teen Health Concerns

1. Sex Education
2. Peer Pressure
3. Teen Pregnancy
4. Soft Drink Consumption

Priority Ranking Results from Breakout Sessions, CONT.

Environmental Health Concerns

1. Drinking Water Quality
2. Outdoor Air Quality
3. Drinking Water Access
4. Restaurant Safe Food Handling
5. Smoke Free Restaurants

General Community Concerns

1. Indigent Care
2. Local Access to Care
3. Mental Health Services
4. Substance Abuse Services
5. Pedestrian Friendly Improvements

Chronic Diseases

1. Alzheimer's Disease
2. Heart Disease
3. Diabetes
4. Cancer

Identified At-Risk Populations Priority Ranking

1. Pregnant Teens and their Babies
2. Uninsured Residents
3. Long Term Care Planning Assistance for Seniors

Report Data Sources

NC Census Data, People Quick Facts 2006

NC Census Data, 2006 American Community Survey, Data Profile Highlights

Union County Public Schools One Month Enrollment Report 2007-2008

Union County Public Schools One Month Ethnicity Report 2007-2008

Monroe Economic Development Existing Industry Handbook, 2008

www.charlotteusa.com Regional Partner Profile, Union County, ESRI Data 2007

www.co.union.nc.us

Union County Public Works, Recycling Coordinator

Union County Public Works web page

<http://www.schs.state.nc.us/SCHS/index.html> (State Center for Health Statistics)

www.ahrq.gov (Agency of Healthcare Research on Quality Indicators)

www.healthcarolinians.org (2010 Healthy Carolinian Objectives)

North Carolina HIV / STD Surveillance Report 2007

www.epi.state.nc.us/epi.hiv

Affordable Health Care – A Solution for Union County (Report)

Behavioral Risk Factor System (BRFSS) Survey 2005, 2006

Union County Council on Aging

2006 North Carolina Hospital Discharges (Primary Diagnosis Asthma)

Union County State of the County Health Report 2007

State Center for Health Statistics, County Health Data Book

State Center for Health Statistics, Baby Book

State Center for Health Statistics, 2006 PRAMS (Pregnancy Risk Assessment Monitoring Survey System)

EPA, Clean Air Act

<http://epa.gov/air/criteria.html>

<http://epa.gov/air/data/repSCO.html?co~37179~Union%20Co%2C%20North%Carolina>

<http://airnow.gov/index.cfm?action=aqibroch.aqi#4>

EPA Air Quality Report Source

<http://schs.state.nc.us/SCHS/data/trends/pdf/Union.pdf>

USDA Project 2006 – 03956 (Water Study)

Partner Pages

The completion of the Union County Health Assessment would not have been possible without the cooperation, support and assistance from the community. Thanks to the following individuals, organizations and agencies who provided their time, efforts and energies with this assessment project and in having surveys completed within their agency.

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Vivian Wiesse-Hansen, Masters Intern
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Kim Walters, Consolidated Metco
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Gustavo Arevalo, Latino Outreach Project
Susan Suarez-Webster, Union County Library
Union County Mayors
Paul Smith, United Way
United Way Agencies
Linda Smith, Council on Aging
Omar Cury, Volunteer
Lt. Don Donahue, Monroe Police Department
Reverend Osco E. Gardin Jr., Elizabeth Missionary Baptist Church
Union County WIC
Safe & Drug Free Schools
Shelia Mobley, The Wellness Center / Monroe Aquatics Center
Jennifer Nance, Union County Recycling Center Coordinator
Mayor Linda Paxton, Town of Stallings
Jill Peth, Union County Library
Diana Rosa, Volunteer
Leah Ross, Volunteer
Jerry & Joan Kocsis, Volunteers
Courtney Thomas, Cotton Street Commons
Anne Velasaco, CMC Community Outreach
Stuart Wasilowski, South Piedmont Community College
Carl Webber, Town of Marshville
Carolyn White, School Health Advisory Council
Union County Sheriff's Department
Focus Group Participants*

Appendix A - ADULTS
2008 Union County Community Health Assessment Survey
 Adult Residents (between 19 and 54)

The intent of this survey is to help identify the major health issues facing Union County residents today. Please take a few minutes to complete the survey. **The survey is anonymous. DO NOT put your name on the survey. Your answers will not be connected to you in any way.**

Please complete the following for statistical purposes only.

Zip Code _____	Age _____	I am	Male	Female	
Which town or city in Union County do you reside in? _____					
Race:	White	Black	American Indian	Asian	Other
Hispanic:	Yes	No	Do you live alone?	Yes	No
What type of health insurance do you have?	Private	Medicare / Medicaid	No Insurance		
What is your annual household income?					
\$0 - \$9,999	\$10,000 - \$14,999	\$15,000 - \$24,999	\$25,000 - \$34,999	\$35,000 - \$49,999	
\$50,000 - \$74,999	\$75,000 - \$99,999	\$100,000 - \$149,999	\$150,000 - \$199,999	\$200,000+	

HEALTH CONCERNS

1. Listed below are health concerns. Please circle the letter of the five that you are MOST concerned about in Union County.

- | | |
|---|--|
| <p>A Asthma</p> <p>B Alzheimers</p> <p>C Bioterrorism</p> <p>D Cancer (what type? _____)</p> <p>E Dental Health Problems</p> <p>F Diabetes</p> <p>G Heart Disease</p> <p>H High Blood Pressure</p> <p>I Respiratory Disease (Bronchitus)</p> <p>J HIV/AIDS</p> <p>K STDs (sexually transmitted diseases)</p> <p>L Teen Pregnancy</p> <p>M Underage Drinking</p> <p>N Liver Disease (Hepatitis, Cirrhosis)</p> <p>Other: _____</p> | <p>P Sexual Assault / Rape</p> <p>Q Motor Vehicle Injuries</p> <p>R Unintentional injuries (drownings, burns)</p> <p>S School Violence</p> <p>T Gang Violence</p> <p>U Domestic Violence</p> <p>V Mental Illness</p> <p>W Suicide, Suicide Attempts</p> <p>X Depression</p> <p>Y Obesity / Overweight</p> <p>Z Eating Disorders (Anorexia, Bulimia)</p> <p>AA Lack of Basic Needs</p> <p>BB Pollution (air, water)</p> <p>CC Indigent Health Care (no insurance)</p> |
|---|--|

UNHEALTHY BEHAVIORS

2. Listed below are *BEHAVIORS* that may cause poor health. Please circle the letters of the top three behaviors that you think keep people in Union County from being healthy.

- A** Alcohol Abuse
- B** Not getting doctor checkups
- C** Child Abuse / Neglect
- D** Not wearing seatbelts
- E** Domestic Violence
- F** Reckless Driving
- G** Drinking & Driving
- H** Poor Eating Habits
- I** Drug Use
- J** Tobacco Use
- K** Lack of Exercise
- L** Unsafe Sex
- M** Not asking for help with personal problems
- N** Youth Violence

Other behaviors, please explain: _____

3. Was there a time that you needed to see a doctor but did not?

Yes No

4. If yes, what was the main reason that you did not see a doctor?

- A** Did not have money to go
- B** I was afraid / I don't like to go to the doctor
- C** I had no transportation
- D** Did not know who to call or where to go
- E** Office was not open when I could get there

Other reason: _____

5. Was there a time during the last 12 months when you needed to see a dentist but did not?

Yes No

6. If yes, what was the main reason that you did not see a dentist?

- A** Did not have money to go
- B** I was afraid / I don't like to go to the dentist
- C** I had no transportation
- D** Did not know who to call or where to go
- E** Office was not open when I could get there

Other reason: _____

7. Where do you go most often when you are sick and need medical care? Please circle ONLY one.

- A** Doctors office in Union County
- B** Urgent Care Facility
- C** Doctors office outside Union County
- D** Union County Health Department
- E** CMC Union Emergency Room
- F** Franklin Street Ambulatory Clinic
- G** Emergency Room outside Union County
- H** Chiropractor
- I** First Care in Monroe
- J** Community Health Services

Other: _____

8. Have you ever needed prescription medicine and did not get it?

Yes No

9. If yes, why didn't you get your medicine?

- A** Did not have money to go
- B** I had to pay other bills (food, utilities, gas, etc.)
- C** No transportation to the Pharmacy

Other, please explain: _____

10. Are you familiar with Health Quest Pharmacy Program?

Yes No

11. Are you familiar with the Community Health Services Emergency Prescription Program?

Yes No

12. How many days a week do you normally get at least 20 to 30 minutes of exercise?

None 1 2 3 4 5 or more

13. Are there enough opportunities for physical activity near your home?

Yes No

14. If not, what would you like to have near your home? Circle all that apply.

- A* Aerobics Classes *B* Bike Paths *C* Sports Leagues
D Sidewalks *E* Walking Trails *F* Gym / Fitness Center
G Public Swimming Pool *H* YMCA Other: _____

15. How many servings of fruits and vegetables do you normally eat per day?

None 1 2 3 4 5 or more

16. What are the three largest sources of stress / concern in your life? Please circle the letter of up to three of the choices listed below.

- A* Worry about money *B* Medical Problems *C* Paying for Prescription Drugs
D Transportation *E* Personal Safety *F* Memory related problems
G Community problems *H* Loneliness *I* Boredom
J Tobacco use *K* Use of Alcohol *L* Use of Drugs
M Domestic Violence *N* Unemployment *O* Lack of Health Insurance
P Lack of funds for food *Q* Worry about long term care for self or relative
R Environmental Concerns *S* Dealing with Family Members

17. How often do you use seat belts when you drive or ride in a car?

Always Sometimes Never

18. Do you have a gun in your home?

Yes No

19. If yes, are the gun and ammunition locked up?

Yes No

20. Do you smoke cigarettes, cigars, or use smokeless tobacco?

Yes No

21. If yes, would you like to quit?

Yes No

22. Would you like to see more smoke free restaurants in Union County?

Yes No

23. Do you drink alcoholic beverages?

Yes No

24. Do you ever drive after drinking alcoholic beverages?

Yes No

25. Have you ever seriously thought about or made a plan to kill yourself?

Yes No

26. Have you ever attempted suicide?

Yes No

27. Do you have a smoke detector in your home? Yes No

28. Do you have a carbon monoxide detector in your home? Yes No

29. ENVIRONMENTAL HEALTH (circle your answer)

	Great Concern	Some Concern	No Concern
Outdoor Air Quality	GC	SC	NC
Indoor Air Quality	GC	SC	NC
Stream Water Quality	GC	SC	NC
Drinking Water Quality	GC	SC	NC
Preserving Greenspace	GC	SC	NC
Tree Ordinances (replanting)	GC	SC	NC
Daycare Sanitation	GC	SC	NC
Nursing Home Sanitation	GC	SC	NC
Community Pool Sanitation	GC	SC	NC
Restaurant Safe Food Handling	GC	SC	NC

Vector Control (mosquitos)	GC	SC	NC
Septic System, sewage disposal	GC	SC	NC
Solid Waste (discarded appliances, mattresses, etc.)	GC	SC	NC

30. What specific things do you think could be done to improve the health of Union County? Please explain.

APPENDIX A1 - TEENS

2008 Union County Community Health Assessment Survey FOR TEENS

The intent of this survey is to help identify the major health issues facing Union County teens today. Please take a few minutes to complete the survey. **The survey is anonymous. DO NOT put your name on the survey. Your answers will not be connected to you in any way.**

Male or Female

What is your zip code? _____ **What is your age?** _____

What is your race? **White** **Black** **Asian** **Native American**
Other _____

Are you Hispanic? **Yes** **No**

What type of health insurance do people in your home have?
Private Insurance **Medicare / Medicaid** **None / Uninsured**

1. Listed below are health concerns in the United States. Please circle the letter of the five that you are MOST concerned about in Union County.

- | | |
|---|---|
| <p>A Indigent Healthcare (no insurance)</p> <p>B Alzheimers</p> <p>C Asthma</p> <p>D Cancer (what type? _____)</p> <p>E Dental Health Problems</p> <p>F Diabetes</p> <p>G Domestic Violence (abuse at home)</p> <p>H Heart Disease</p> <p>I High Blood Pressure</p> <p>J Respiratory Disease (Bronchitis)</p> <p>K HIV/AIDS</p> <p>L STDs (Sexually transmitted diseases)</p> <p>M Teen Pregnancy</p> <p>N Liver Disease (Hepatitis, Cirrhosis)</p> | <p>O Sexual Assault / Rape</p> <p>P Motor Vehicle injuries</p> <p>Q Unintentional Injuries</p> <p>R Gang Violence</p> <p>S School Violence</p> <p>T Peer Pressure</p> <p>U Mental Illness (Bipolar, Anxiety, etc)</p> <p>V Suicide, Suicide Attempts</p> <p>W Depression</p> <p>X Obesity / Overweight</p> <p>Y Eating Disorders / Body Image</p> <p>Z Lack of Basic Needs (food, shelter)</p> <p>AA Pollution (air, water)</p> <p>BB Tobacco Use</p> |
|---|---|

2. Listed below are some behaviors that may cause poor health. Please circle the letters of three behaviors that you think keep people in Union County from being healthy.

- | | |
|---|---|
| <i>A</i> Alcohol Abuse | <i>I</i> Not getting doctor checkups |
| <i>B</i> Child Abuse / Neglect | <i>J</i> Not wearing seatbelts |
| <i>C</i> Domestic Violence (abuse at home) | <i>K</i> Reckless Driving |
| <i>D</i> Drinking & Driving | <i>L</i> Poor Eating Habits |
| <i>E</i> Drug Use | <i>M</i> Tobacco Use |
| <i>F</i> Lack of Exercise | <i>N</i> Unsafe Sex |
| <i>G</i> Not asking for help with personal problems | <i>O</i> Youth Violence / School Violence |
| <i>H</i> Obesity | <i>P</i> Poor dental health |

Other behaviors, please list: _____

3. Was there a time that you needed to see a doctor but did not?

Yes No

4. If yes, what was the main reason that you did not see a doctor? Circle the letter of your answer.

- A* I did not have the money to go
- B* I had no transportation
- C* The office was not open when I could get there
- D* I was afraid / I don't like to go to the doctor
- E* Did not know where to go or who to call

Other Reason: _____

5. Was there a time during the last 12 months when you needed to see a dentist but did not?

Yes No

6. If yes, what was the main reason that you did not see a dentist?

- A* I did not have the money to go
- B* I had no transportation
- C* The office was not open when I could get there
- D* I was afraid / I don't like to go to the dentist
- E* Did not know where to go or who to call

Other reason: _____

7. Where do you go MOST OFTEN when you are sick, hurt or need medical care? Circle the letter of your response, choose ONLY one.

- | | |
|--|------------------------------------|
| <i>A</i> Doctors office in Union County | <i>H</i> Community Health Services |
| <i>B</i> Doctors office outside Union County | <i>I</i> First Care in Monroe |
| <i>C</i> CMC Union Emergency Room | |
| <i>D</i> Emergency Room outside Union County | |
| <i>E</i> Urgent Care Facility | |
| <i>F</i> Union County Health Department | |
| <i>G</i> Franklin Street Ambulatory Clinic | |

Other: _____

8. How many days a week do you get at least 20 to 30 minutes of exercise?

None 1 2 3 4 5 or more

9. Are there enough opportunities for physical activity near your home?

Yes No

10. If not, what would you like to have near your home? Circle all that apply.

- A** Aerobics Classes **D** Bike Paths **G** Tennis Courts
- B** Sidewalks **E** Walking Trails **H** Gym / Fitness Center
- C** Public Swimming Pool **F** YMCA **I** Basketball Courts

Other _____

11. How many servings of fruits and vegetables do you normally eat per day?

None 1 2 3 4 5 or more

12. On average, how many times per week do you eat at a fast food restaurant?

None 1 2 3 4 5 or more

13. What type of milk do you usually use?

Whole 2% 1% Skim/Fat Free Soy None

14. How many soft drinks or “high sugar” fruit drinks do you drink per day?

Examples: Fruitopia, soda, sweet tea, Snapple, Gatorade, Sunny Delight, etc.

None 1 2 3 4 5 or more

15. Do you buy your lunch at school?

Yes No

16. If yes, what do you normally eat?

- A** school lunch (meal of the day) **B** snack food (chips,ice cream)
 - C** fruits/ vegetables **D** Ala Carte Menu (french fries, pizza, chicken sandwich etc.)
- Other, please explain: _____

17. If no, why do you not buy or eat lunch at school?

- A** no money **B** not enough time **C** socializing during lunch **D** dieting

E Do not like food choices Other, reason: _____

18. Do you bring lunch from home? Yes No

19. If yes, what do you bring to eat: _____

20. How do you deal with everyday life stresses? (Circle ALL that apply)

- A** Attend Church **B** Pray / Meditate **C** Art / Music
- D** Exercise **E** Hobbies **F** Talk to Doctor

31. Have you ever seriously thought about or made a plan to kill yourself?

Yes

No

32. Have you ever attempted suicide?

Yes

No

33. Have you been pushed by friends or classmates to do any of the following: Please circle all that apply.

A To be sexually active

B Vandalism

C Use of Drugs

D Use of Alcohol

E Join a Gang

F Skip School

G Bully other Kids

H Cyber Bullying

I Take Steroids

34. If the following activities / facilities were available in Union County, would you be interested in participating or joining? Please mark all that apply.

A After School Intramural Sports

B Internships at local Businesses

C Performing Arts (theater, music)

D Visual Arts(drawing, painting, sculpture)

E Entrepreneurs Club

F Volunteer Opportunities

Other: _____

35. Do you have any other concerns about the health of teens in Union County?

APPENDIX A2 - SENIORS

2008 Union County Community Health Assessment Survey

For Seniors (55 and older)

The intent of this survey is to help identify the major health issues facing Union County seniors today. Please take a few minutes to complete the survey. The survey is anonymous. **DO NOT** put your name on the survey. Your answers will not be connected to you in any way.

Zip Code _____	Age _____	I am: Male	Female	
What city or town in Union County do you live in? _____				
Race: White Black Asian Native American		Other _____		
Hispanic: Yes	No	Do you live alone? Yes	No	
What type of insurance do you have?		None	Private Medicare / Medicaid	
What is your annual household income?				
\$0 - \$9,999	\$10,000 - \$14,999	\$15,000 - \$24,999	\$25,000 - \$34,999	\$35,000 - \$49,999
\$50,000 - \$74,999	\$75,000 - \$99,999	\$100,000 - \$149,999	\$150,000 - \$199,999	\$200,000+

1. Listed below are some behaviors that may cause poor health. Please circle the letter of **three** behaviors that you think keep people in Union County from being healthy.

- | | |
|---|-----------------------------------|
| A Alcohol Abuse | I Not going to a doctor |
| B Child Abuse / Neglect | J Not wearing seatbelts |
| C Domestic Violence | K Reckless Driving |
| D Drinking & Driving | L Poor Eating Habits |
| E Drug Use | M Tobacco Use |
| F Lack of Exercise | N Unsafe Sex |
| G School / Gang Violence | O Lack of Health Insurance |
| H Not asking for help with personal problems | P Poor Dental Health |
- Other behaviors, please explain: _____

2. Was there a time that you needed to see a doctor but did not?

Yes No

3. If yes, what was the main reason that you did not see a doctor?

- | | |
|---|--|
| A I did not have money to go | D I was afraid / I don't like to go to the doctor |
| B I had no transportation | E Did not know who to call or where to go |
| C The office was not open when I could get there | |

Other: _____

4. Was there a time during the last 12 months when you needed to see a dentist but did not?

Yes No

5. If yes, what was the reason that you did not see a dentist?

A I could not afford to go *D* I was afraid / I don't like to go to the dentist

B I had not transportation *E* Did not know who to call or where to go

C The office was not open when I could get there

Other reason: _____

6. Where do you go most often when you are sick and need medical care?

Circle one.

A Doctors office in Union County *B* Urgent Care Facility

C Doctors office outside Union County *D* Union County Health Department

E CMC Union Emergency Room *F* Franklin Street Ambulatory Clinic

G Emergency Room outside Union County *H* Chiropractor

I First Care in Monroe *J* Community Health Services

Other: _____

7. If you have seen a doctor outside of Union County, what was the reason?

8. Have you ever needed prescription medicine and did not get it?

Yes No

9. If yes, why didn't you get your medicine?

A Did not have the money to go *B* I had to pay other bills (food, gas, etc.)

C No transportation to the Pharmacy Other: _____

10. Are you familiar with HealthQuest Pharmacy Program? Yes No

11. Are you familiar with Community Health Services Emergency Prescription Program?

Yes No

12. How many days a week do you normally get at least 20 to 30 minutes of exercise?

None 1 2 3 4 5 or more

13. Are there enough opportunities for physical activity near your home?

Yes No

14. How many servings of fruits and vegetables do you normally eat per day?

None 1 2 3 4 5 or more

15. If there was a Senior Nutrition Site near your home, would you go there for lunch during the week?

Yes No

16. Do you have your vision checked?

Yes No

17. Do you have your hearing checked?

Yes No

18. What are three reasons for stress / concern in your life? Please circle the letter of three listed below that apply to you.

A Worry about money

B Dental Health needs

C Medical Problems

D Paying for Prescription Drugs

E Transportation

F Personal Safety

G Memory related problems

H Community Problems

I Loneliness

J Affordable Housing

K Tobacco use

L Use of Alcohol

M Use of Drugs

N Domestic Violence

O Unemployment

P No Health Insurance

Q Not Able to Understand Medications

R Limited funds for food

S No Money for Home Repairs

T Unable to pay for utilities

U Abuse by Family Member / Care Giver

V Family misusing money

W Worry about long term care for myself or family member

19. Is there a lack of adult daycare in Union County?

Yes

No

20. How often do you use seat belts when you drive or ride in a car?

Always

Sometimes

Never

21. Do you have a gun in your home?

Yes

No

22. If yes, are the gun and ammunition locked up?

Yes

No

23. Do you have a smoke detector in your home?

Yes

No

24. Do you have a carbon monoxide detector in your home?

Yes

No

25. Do you smoke cigarettes, cigars, or use smokeless tobacco?

Yes

No

26. If yes, would you like to quit?

Yes

No

27. Would you like to see more smoke free restaurants in Union County?

Yes

No

28. Do you drink alcoholic beverages?

Yes

No

29. Do you ever drive after drinking alcoholic beverages?

Yes

No

30. Have you ever seriously thought about or made a plan to kill yourself?

Yes

No

31. Have you ever attempted suicide?

Yes

No

32. ENVIRONMENTAL HEALTH (circle your answer)

	Great Concern	Some Concern	No Concern
Outdoor Air Quality	GC	SC	NC
Indoor Air Quality	GC	SC	NC
Stream Water Quality	GC	SC	NC
Drinking Water Quality	GC	SC	NC

Preserving Greenspace	GC	SC	NC
Tree Ordinances (replanting)	GC	SC	NC
Daycare Sanitation	GC	SC	NC
Nursing Home Sanitation	GC	SC	NC
Community Pool Sanitation	GC	SC	NC
Restaurant Safe Food Handling	GC	SC	NC
Vector Control (mosquitos)	GC	SC	NC
Septic System, sewage disposal	GC	SC	NC
Solid Waste (discarded appliances, mattresses, etc.)	GC	SC	NC

33. What specific things do you think could be done to improve the health of seniors in Union County? Please explain.

APPENDIX B

Community Health Assessment Survey Results

ADULTS

(Survey can be found in Appendix A)

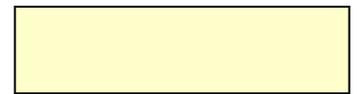
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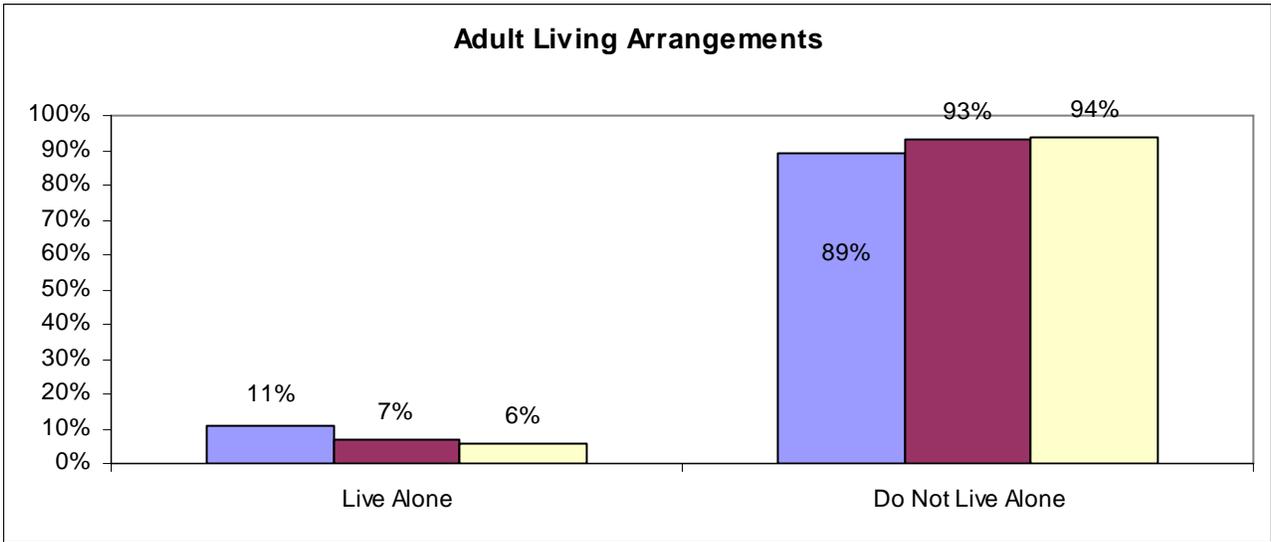
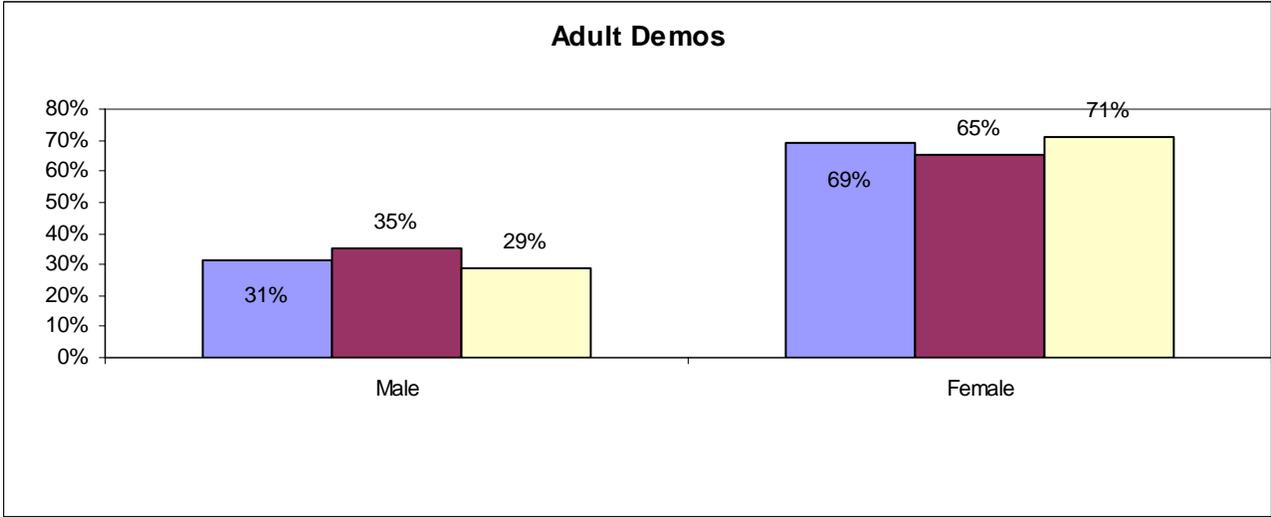
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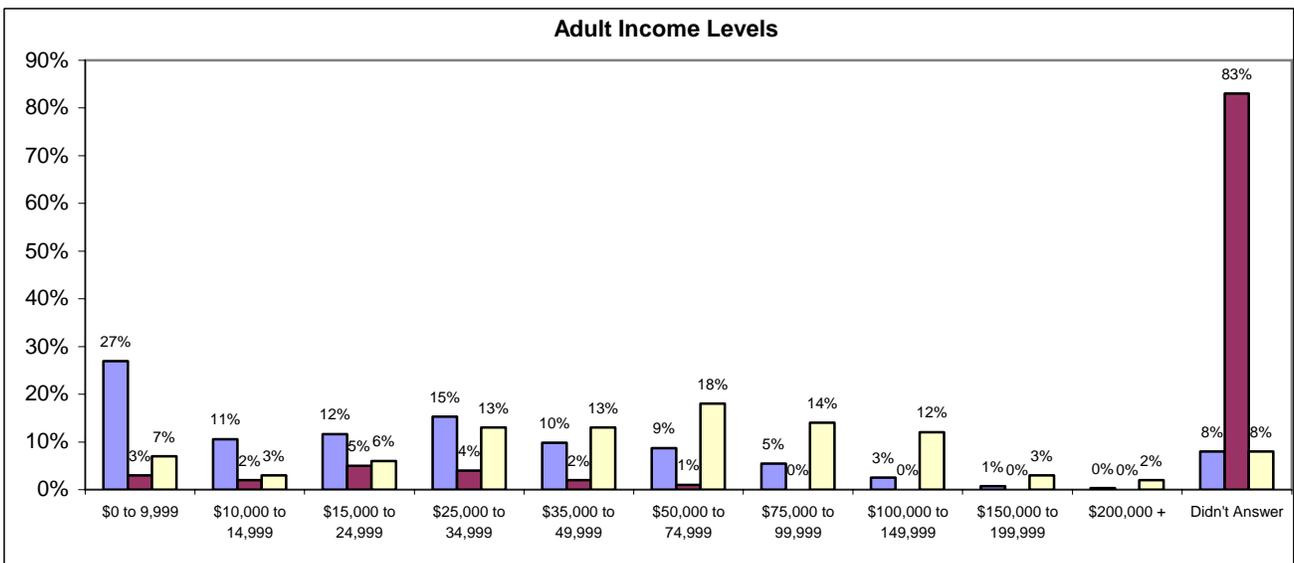
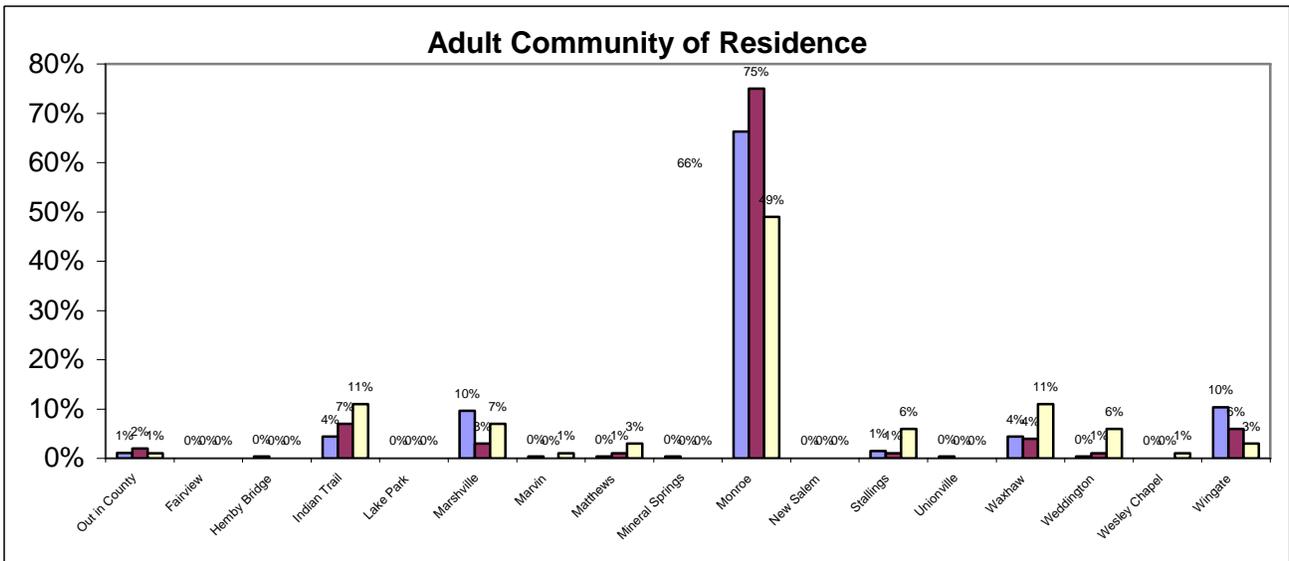
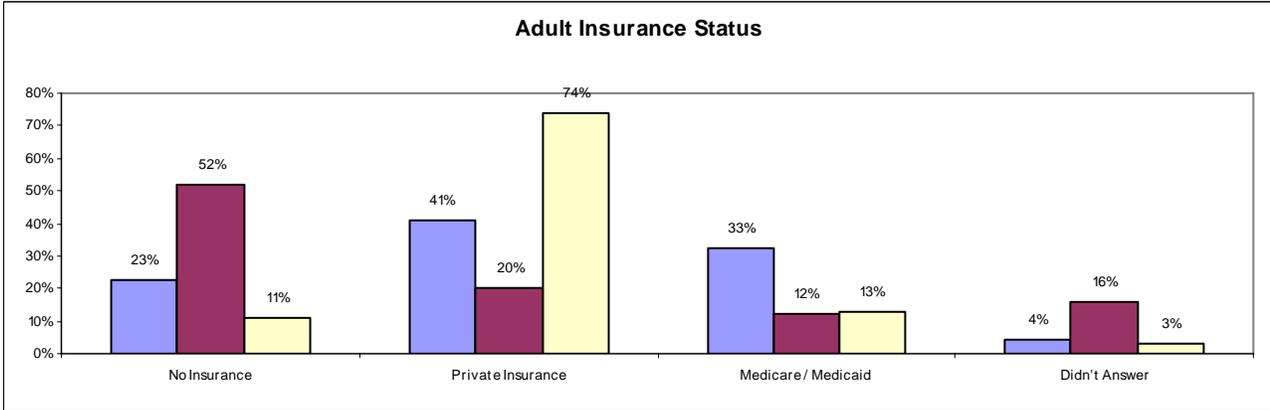


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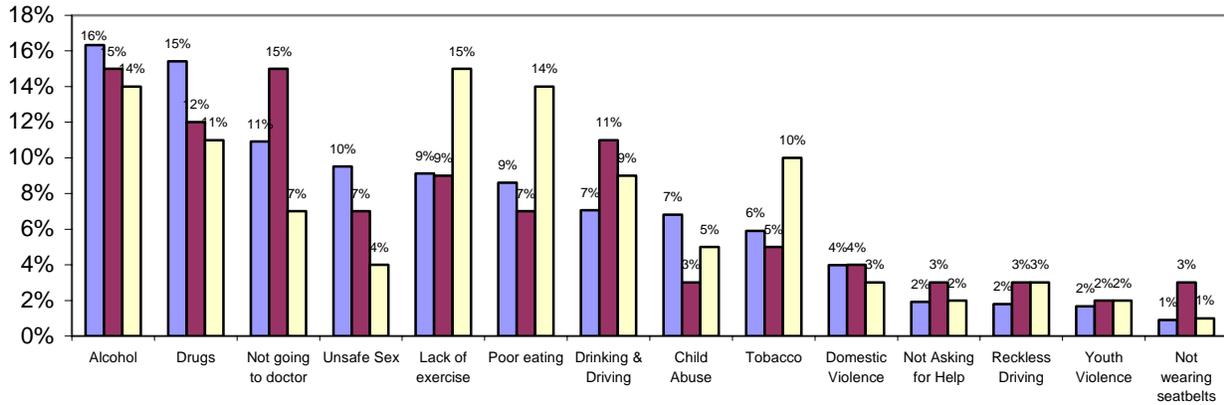


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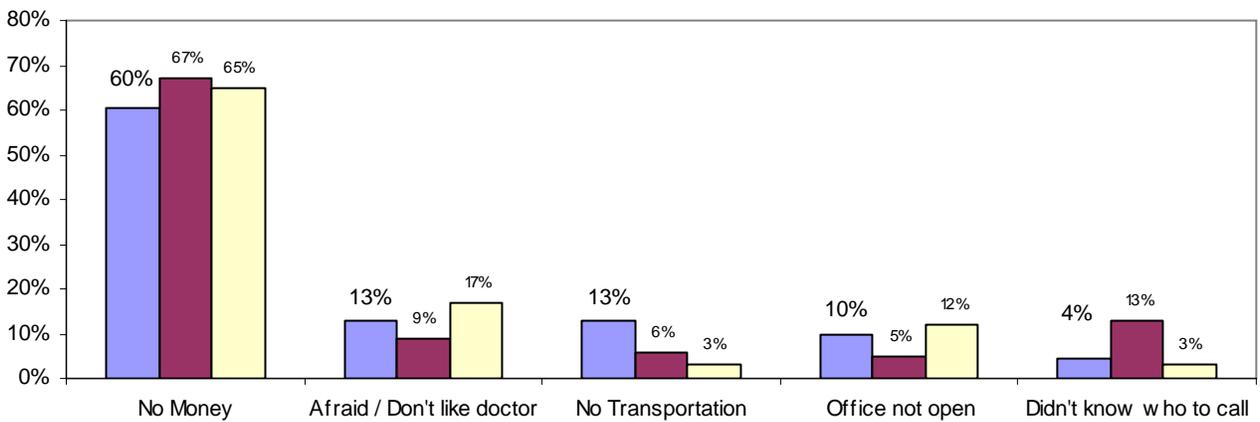




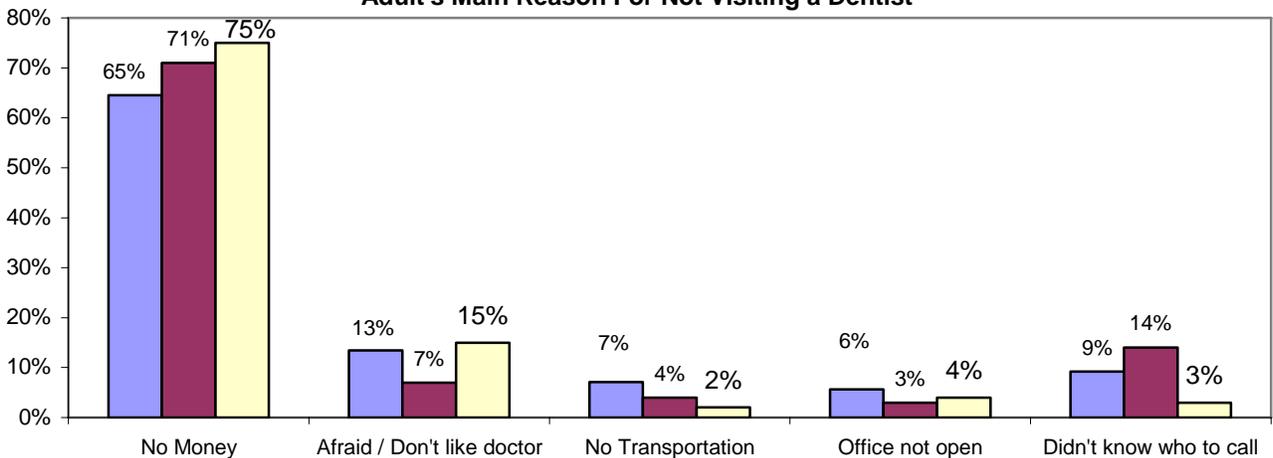
Adult Unhealthy Behaviors

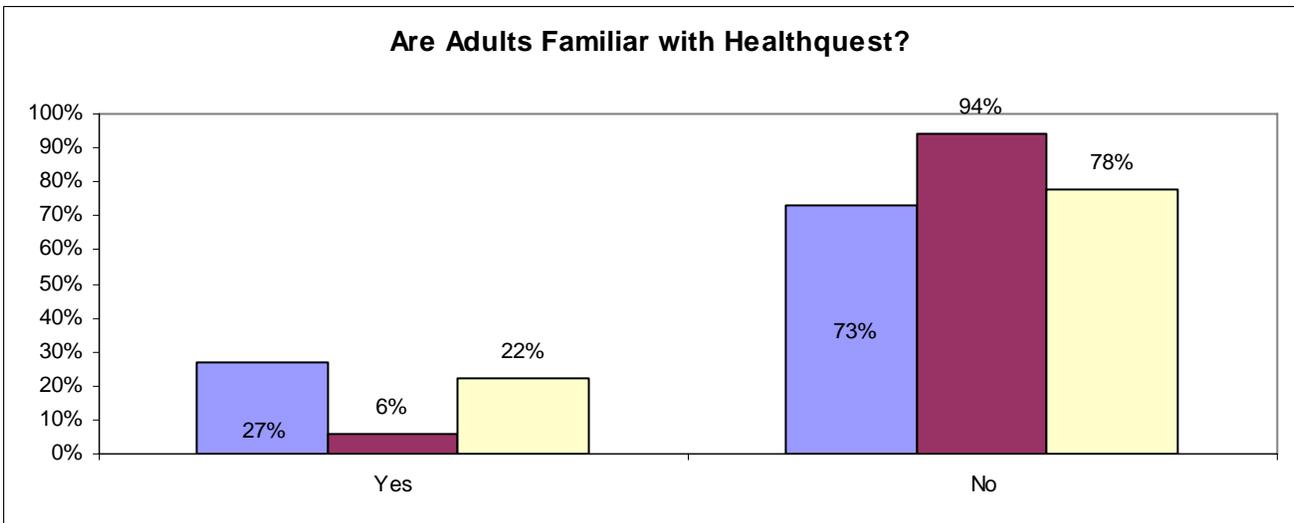
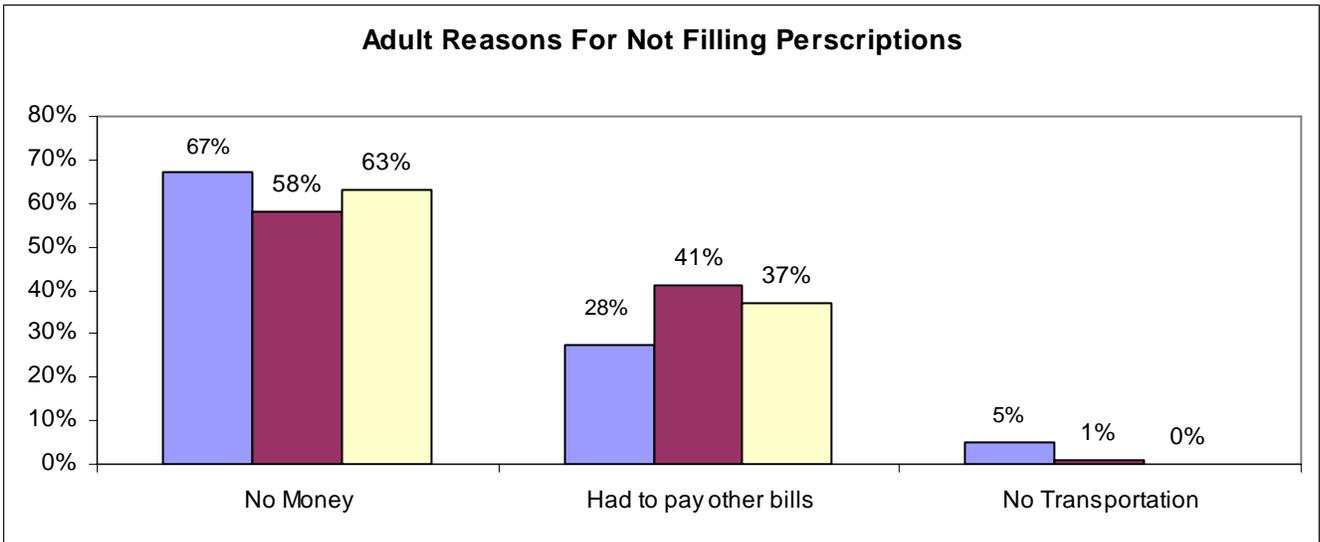
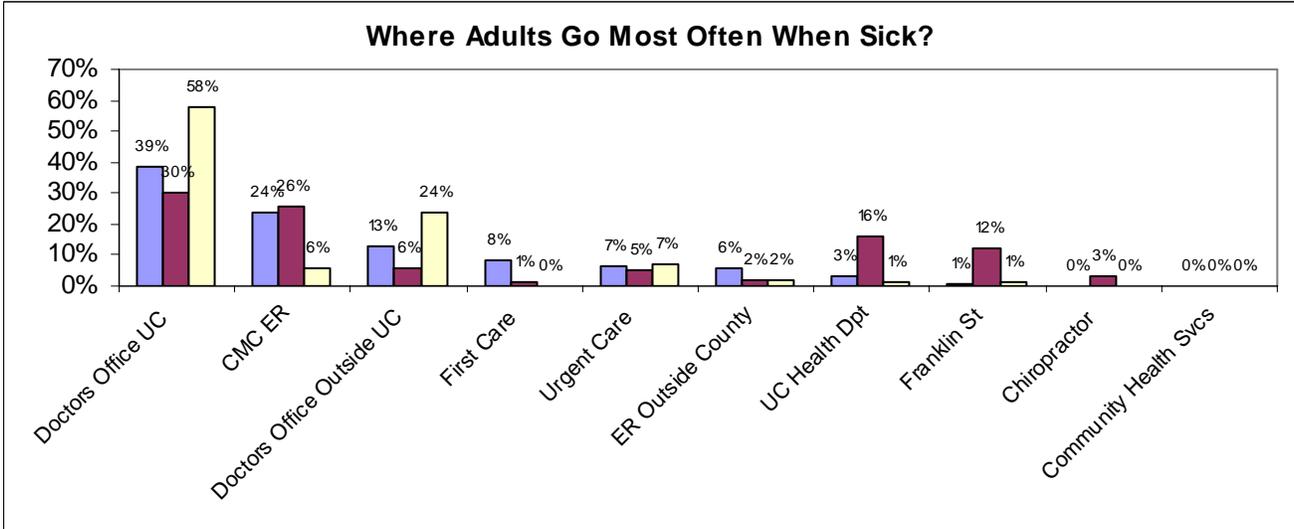


Adult's Main Reason For Not Visiting a Doctor

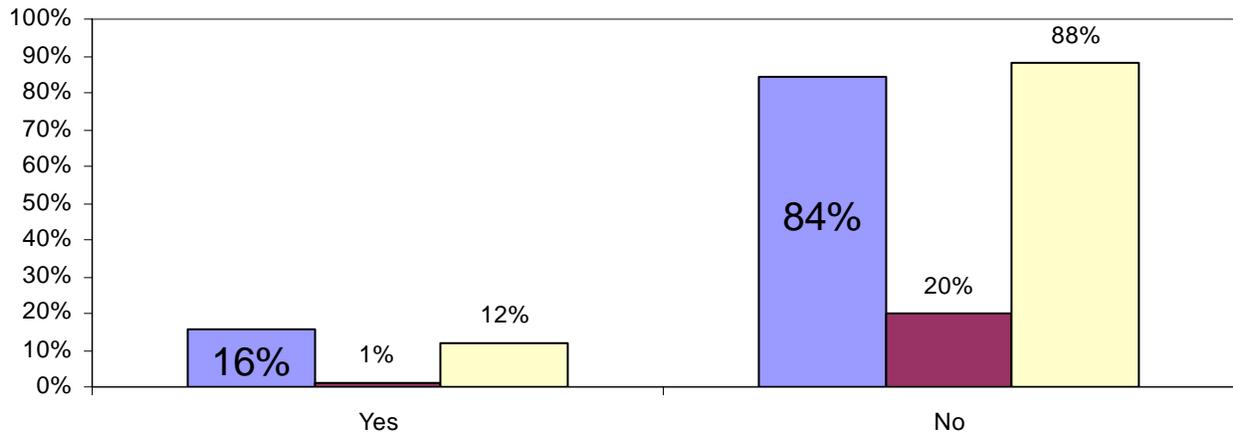


Adult's Main Reason For Not Visiting a Dentist

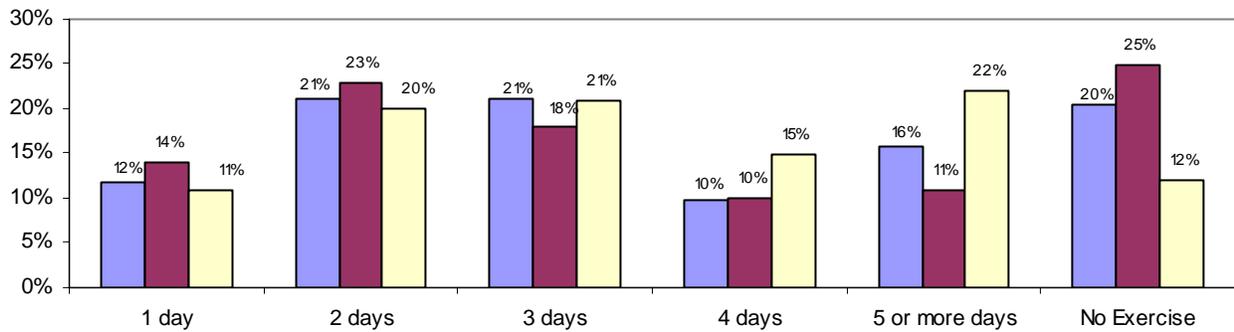




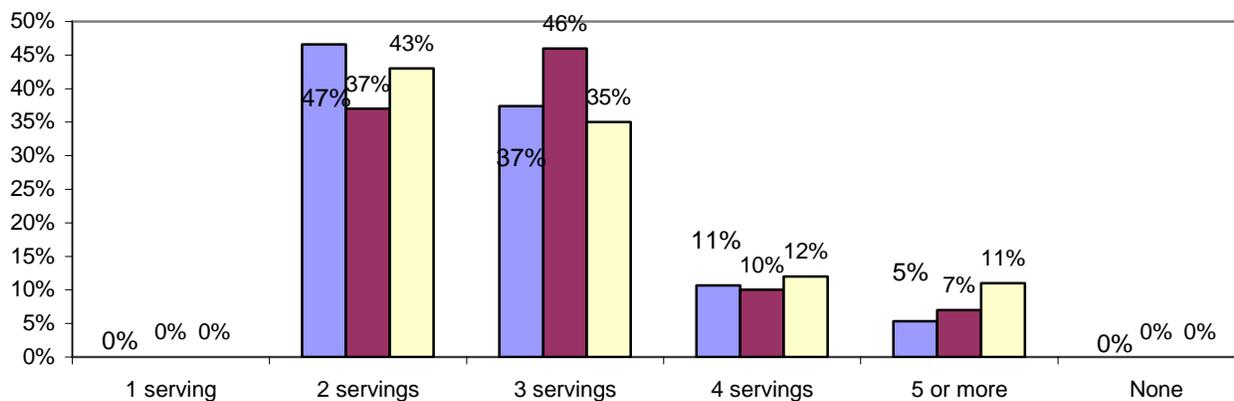
Are Adults Familiar With Community Health Services Emergency Prescription Program ?



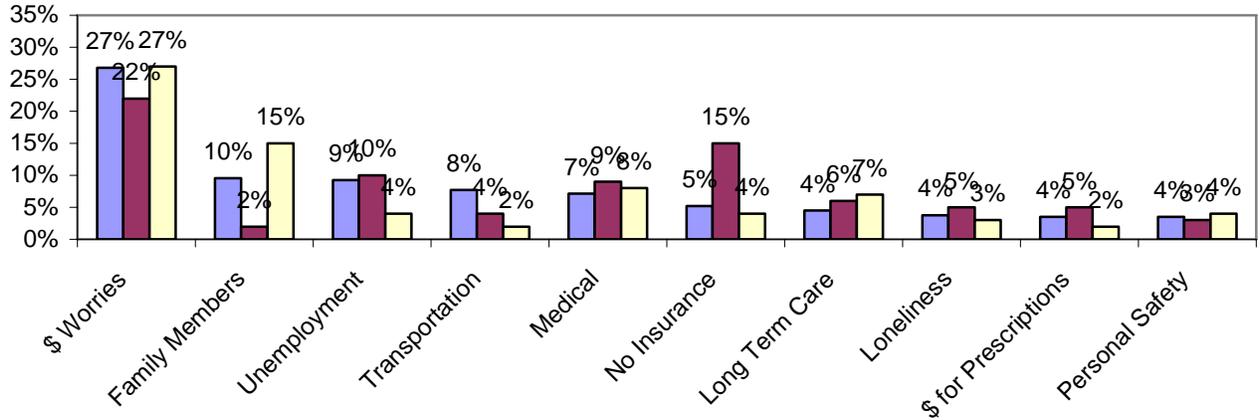
Adult Weekly Exercise



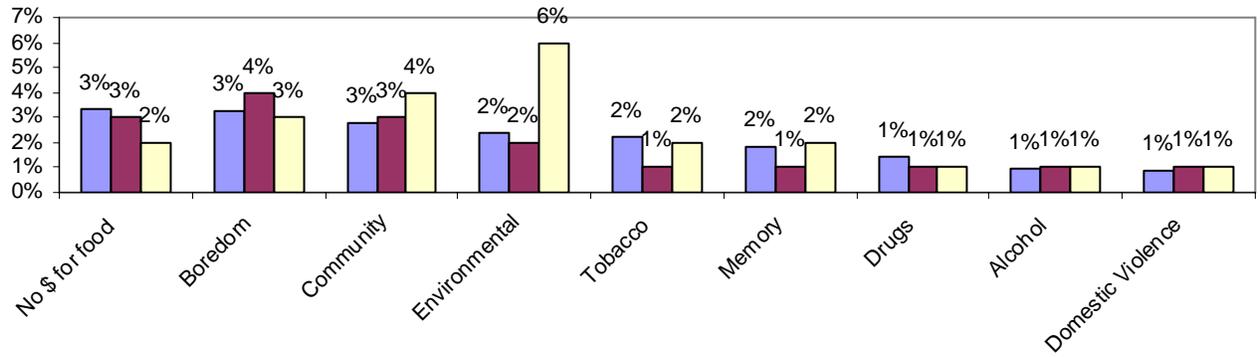
Adult Daily Servings of Fruits and Veggies



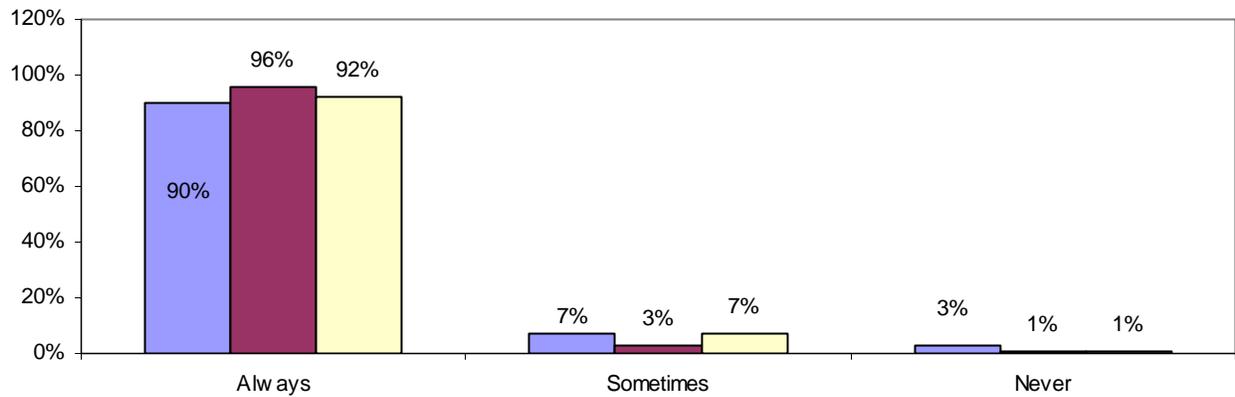
Adult Stress (Chart 1 of 2)

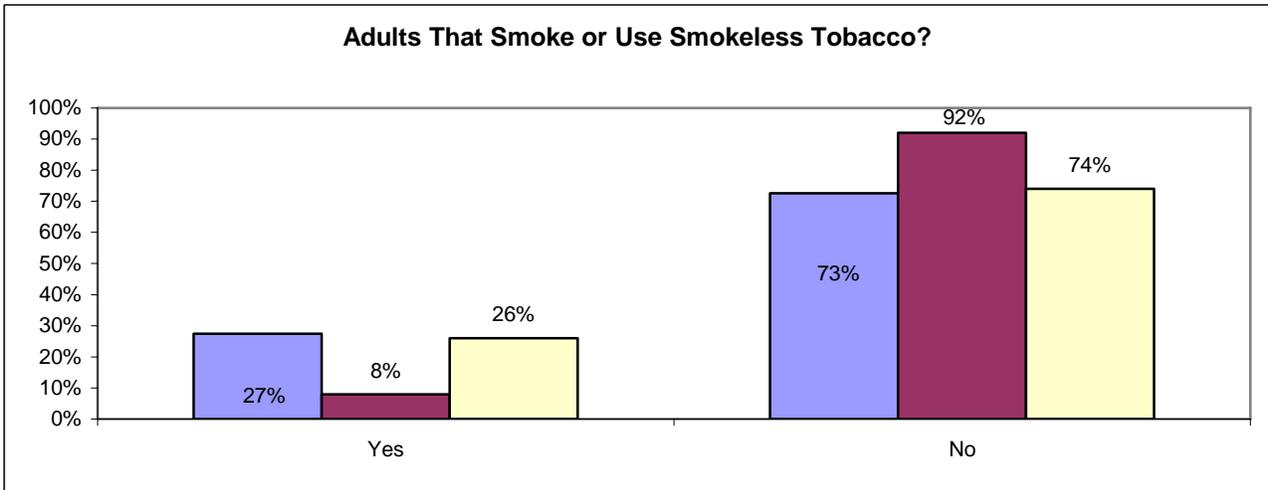
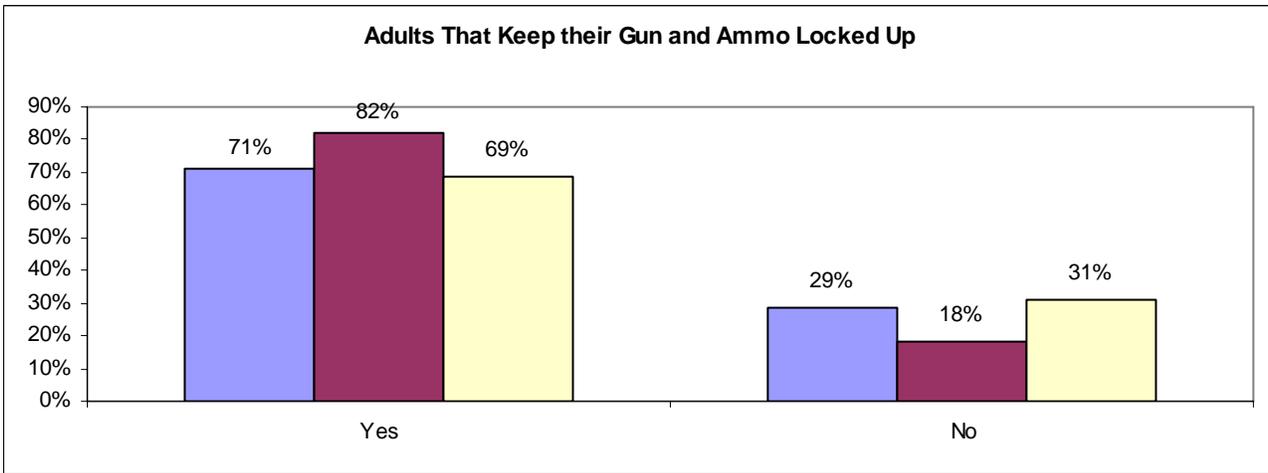
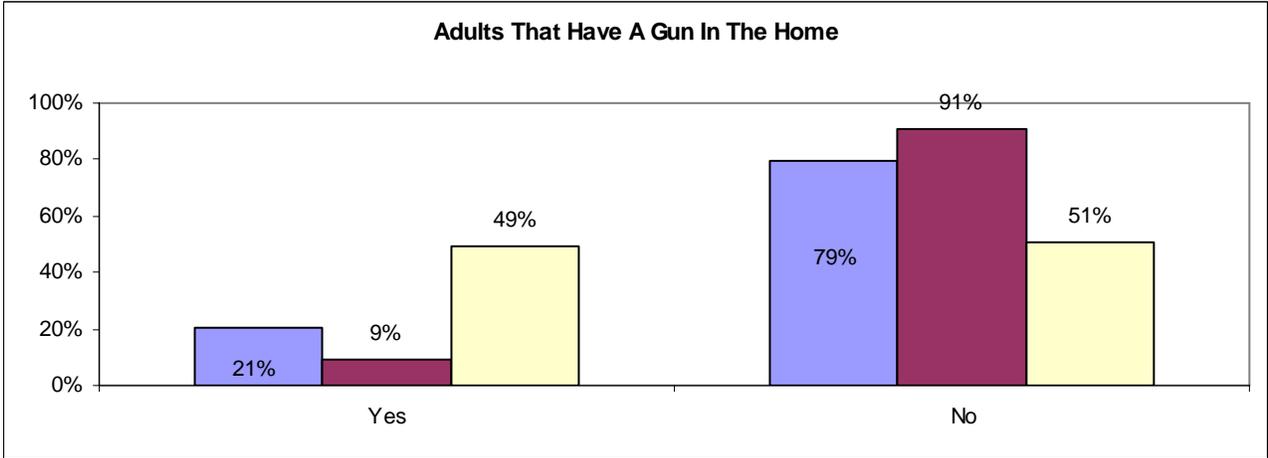


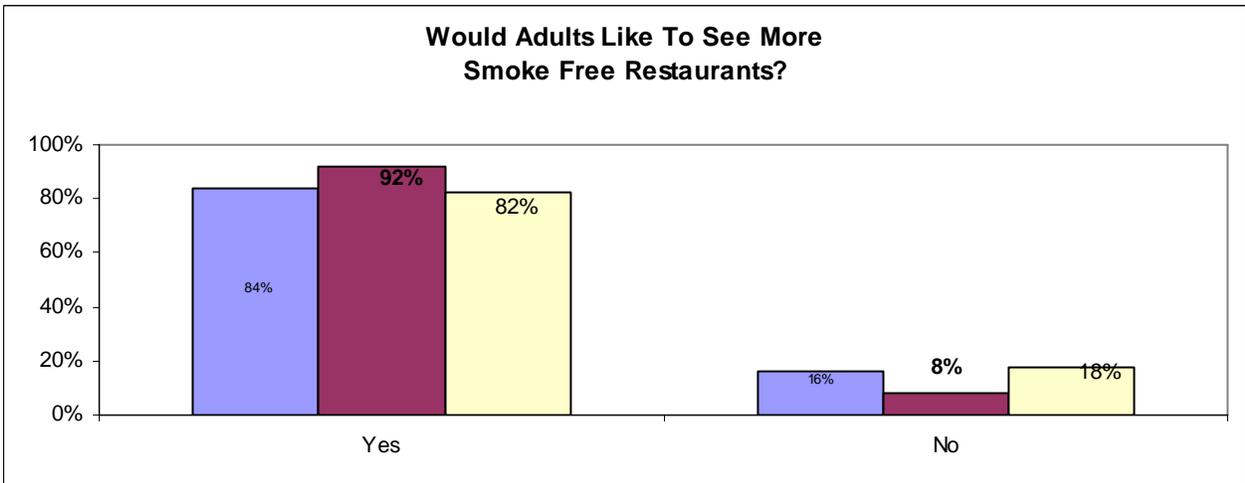
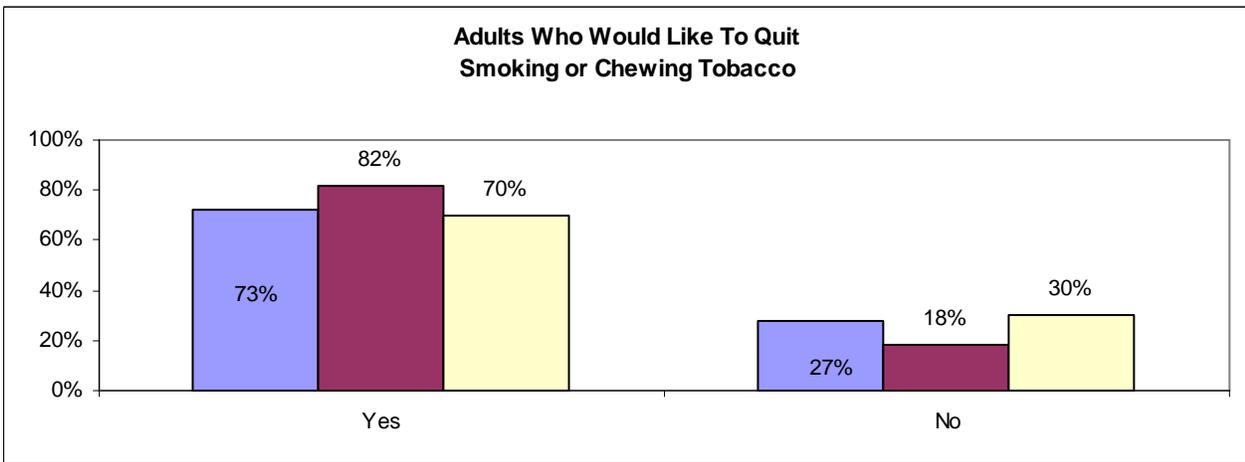
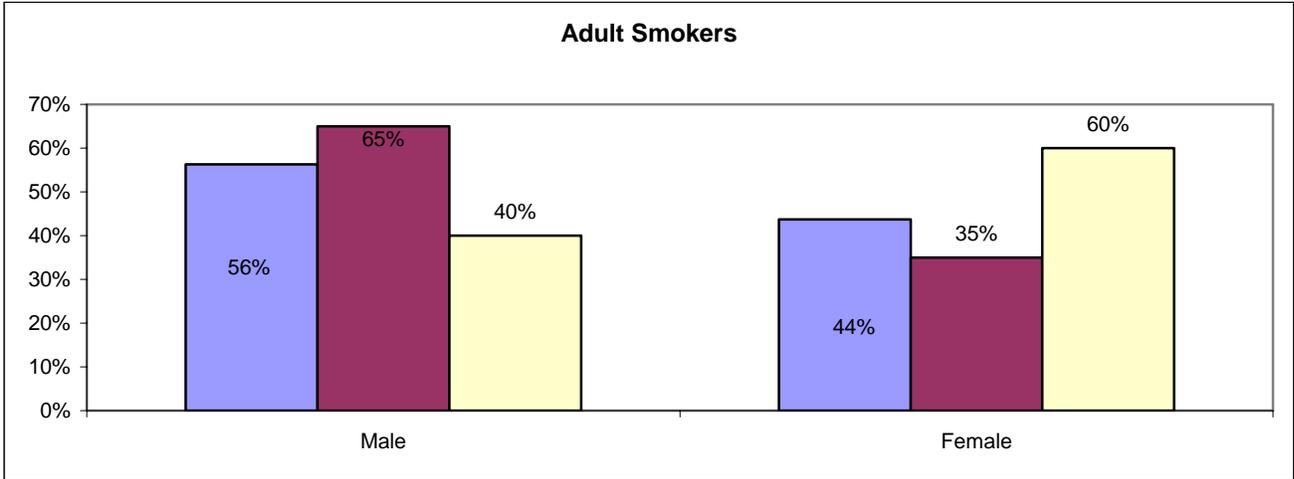
Adult Stress (Chart 2 of 2)



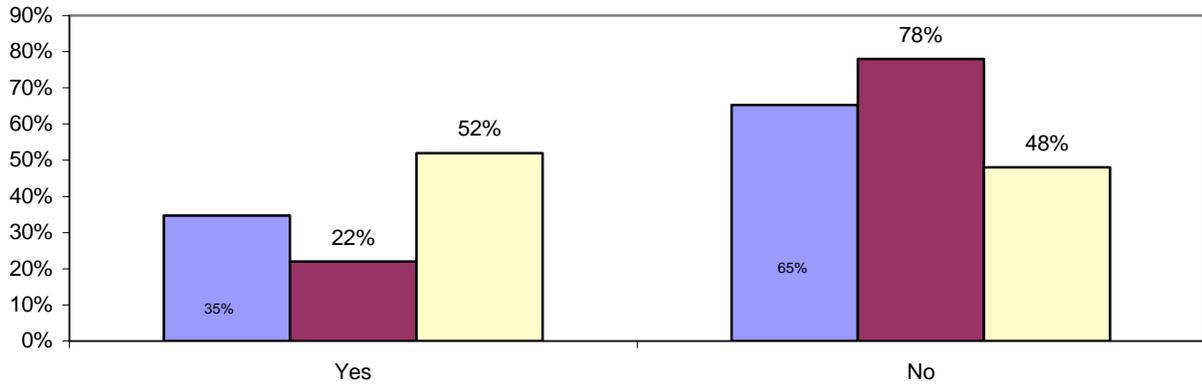
Adult Seat Belt Use



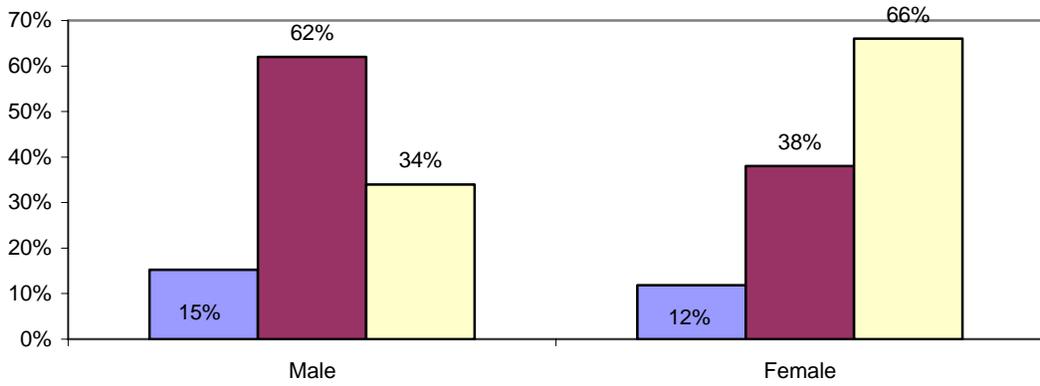




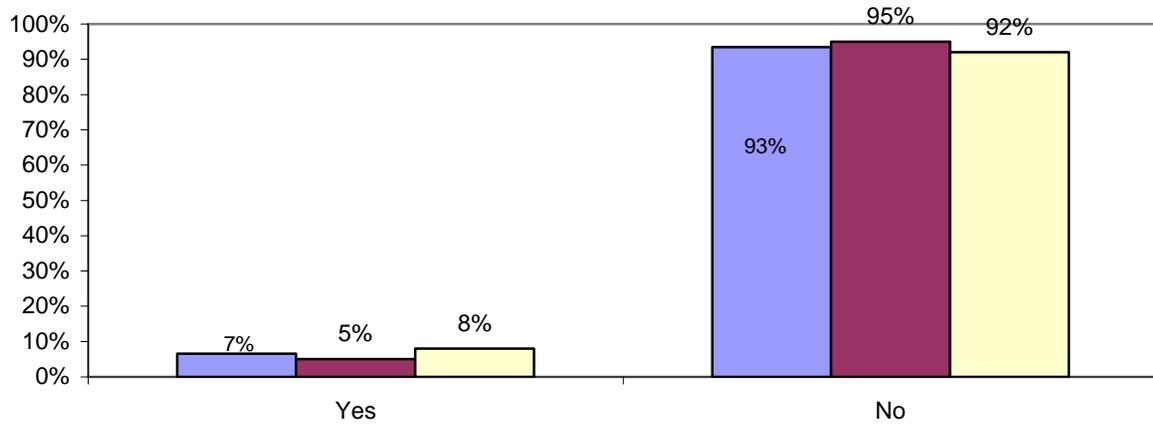
How Many Adults Indicated They Drink Alcohol?

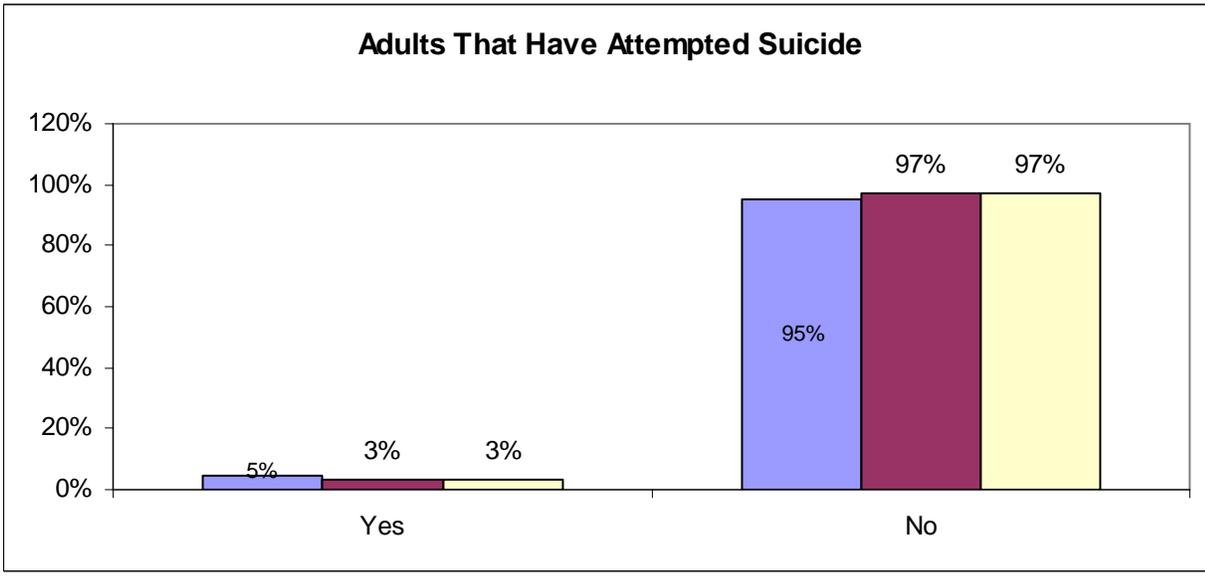
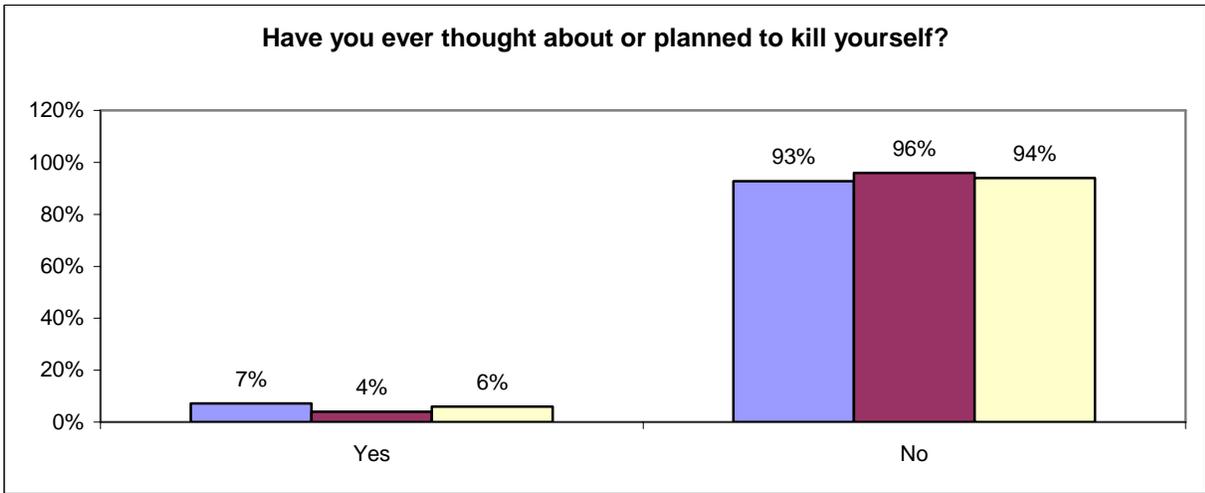
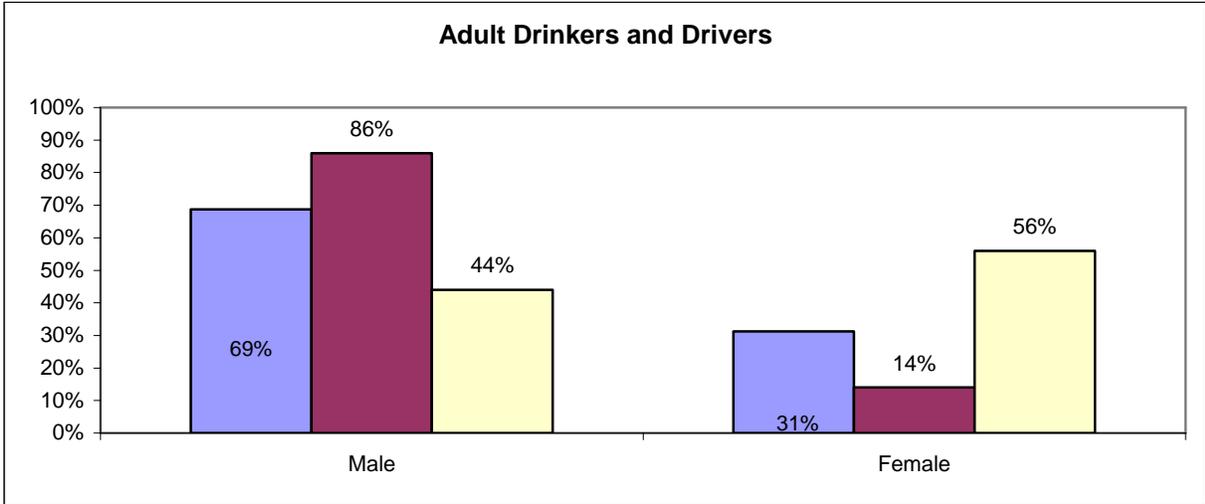


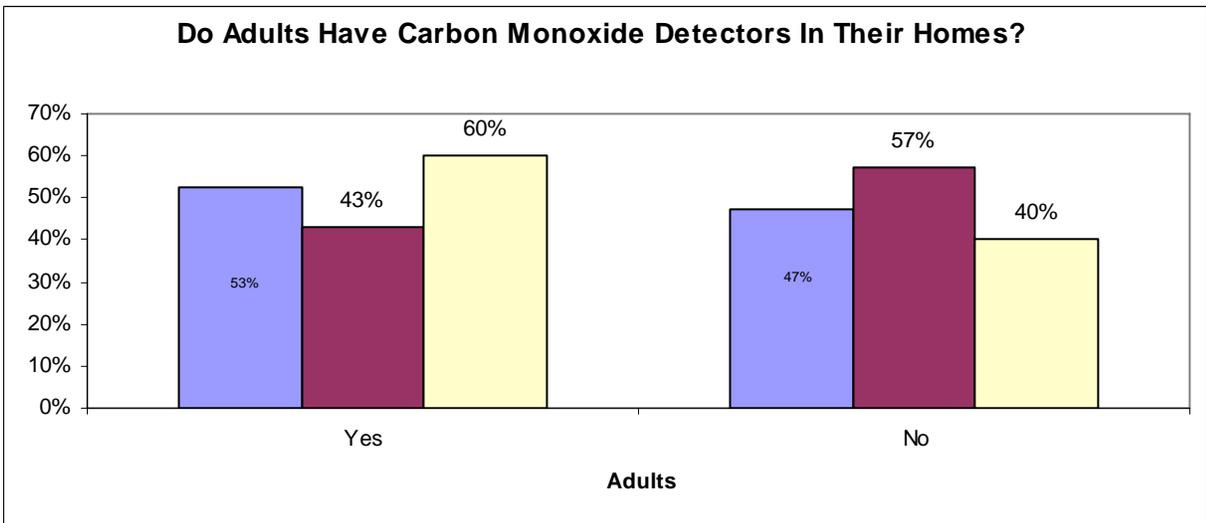
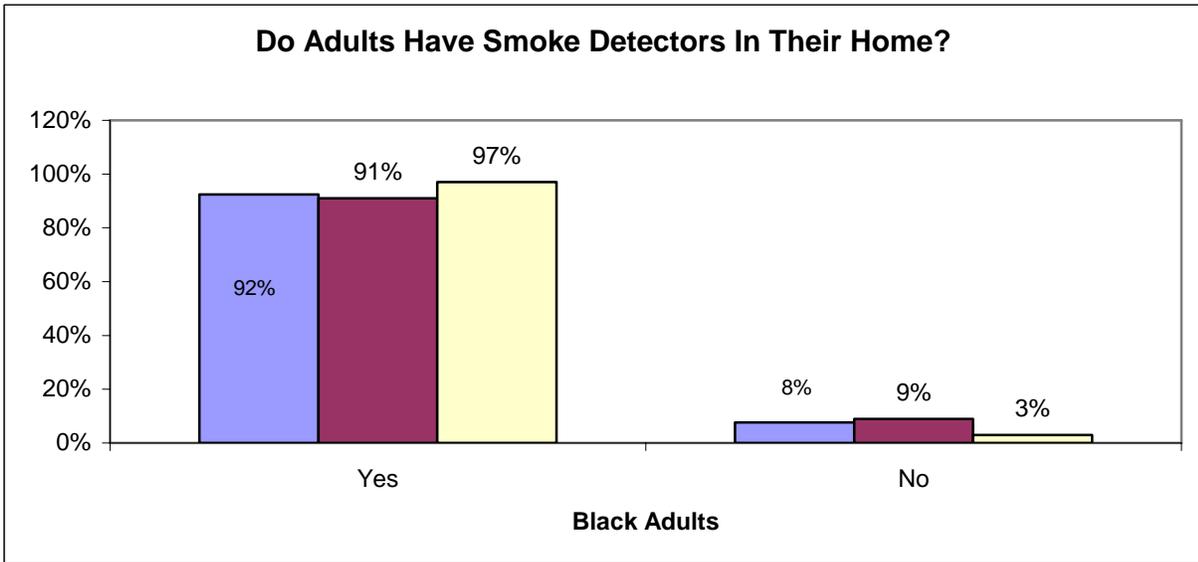
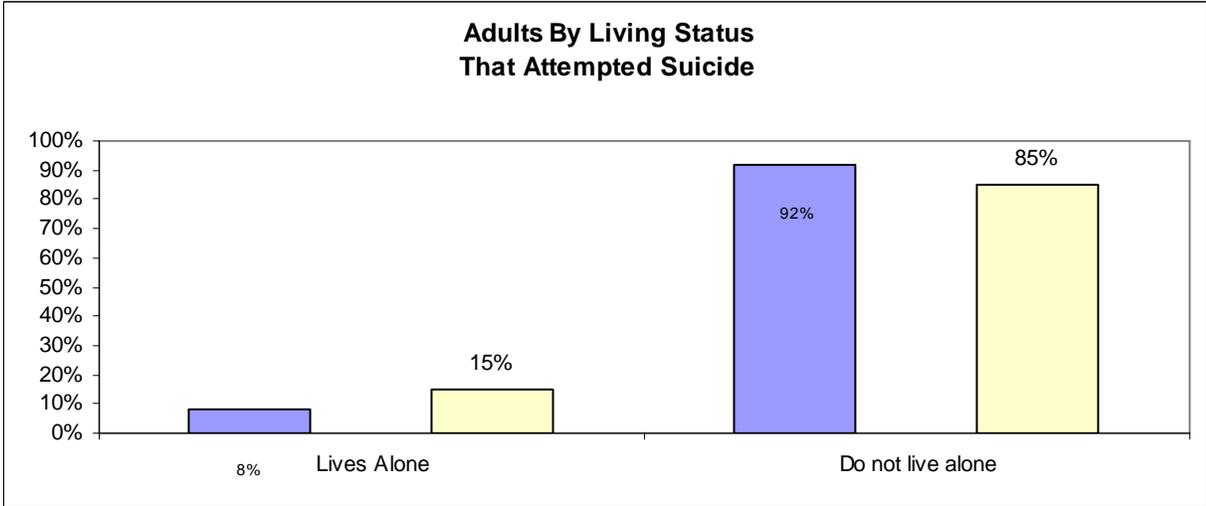
Adult Drinkers



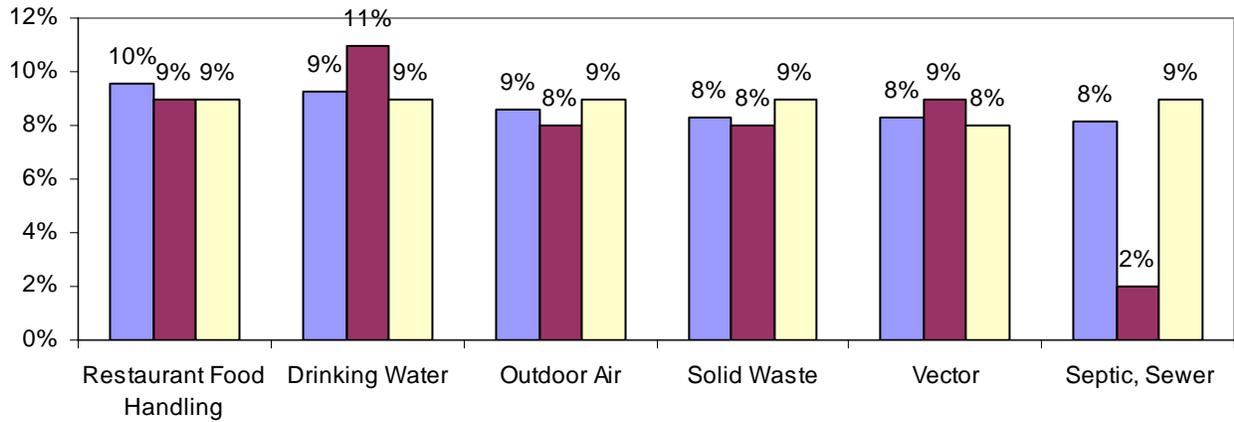
Adults That Indicated They Drive After Drinking



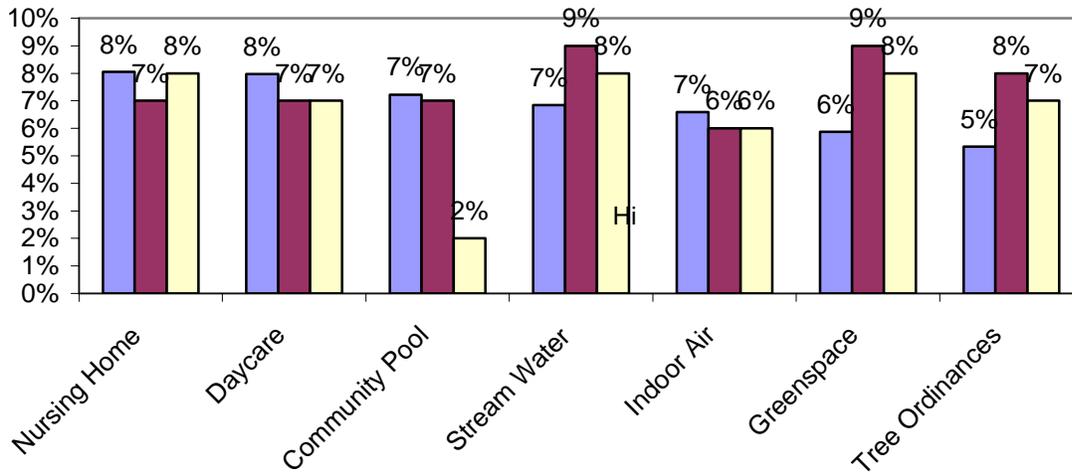




Adult Environmental Health Concerns (Chart 1 of 2)



Adult Environmental Health Concerns (Chart 2 of 2)



APPENDIX B1

Community Health Assessment Survey Results

TEENS

(Survey can be found in Appendix A1)

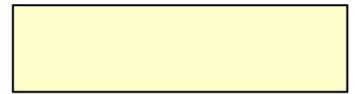
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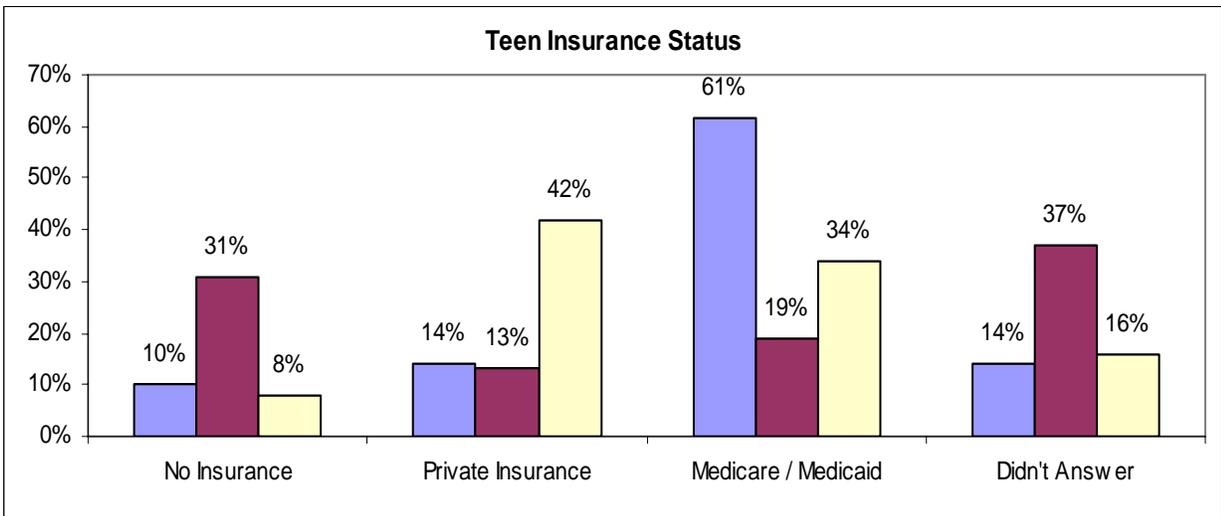
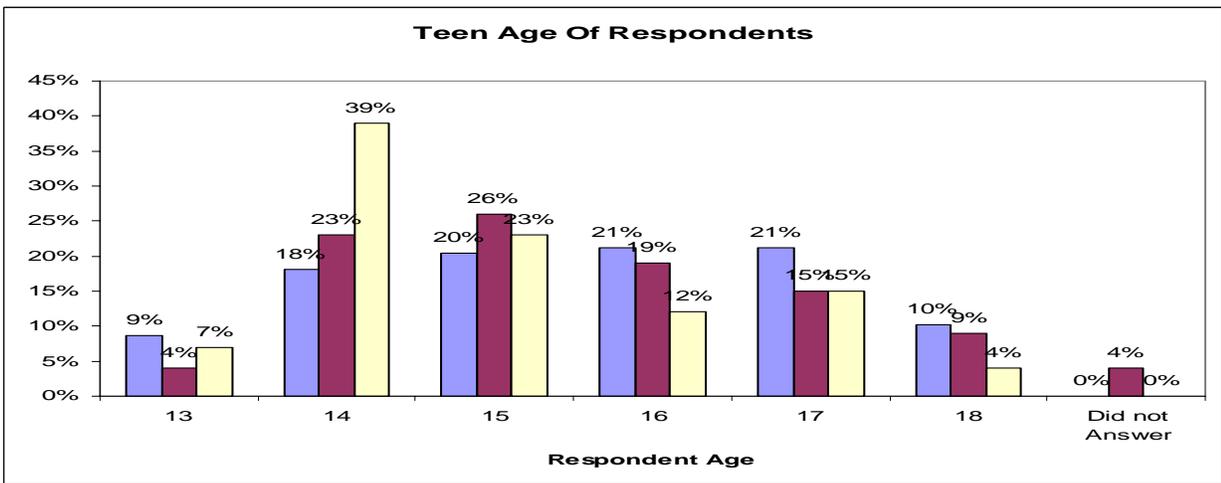
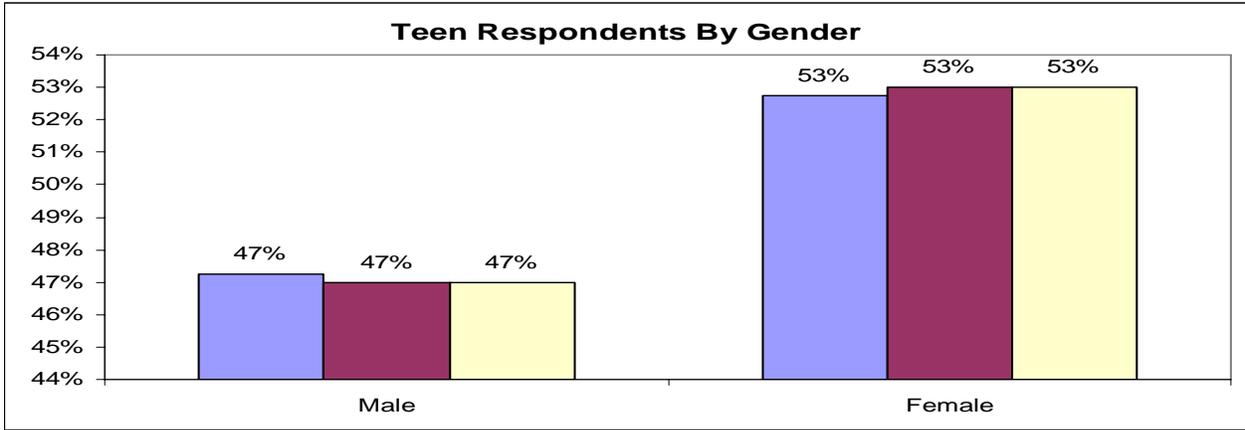
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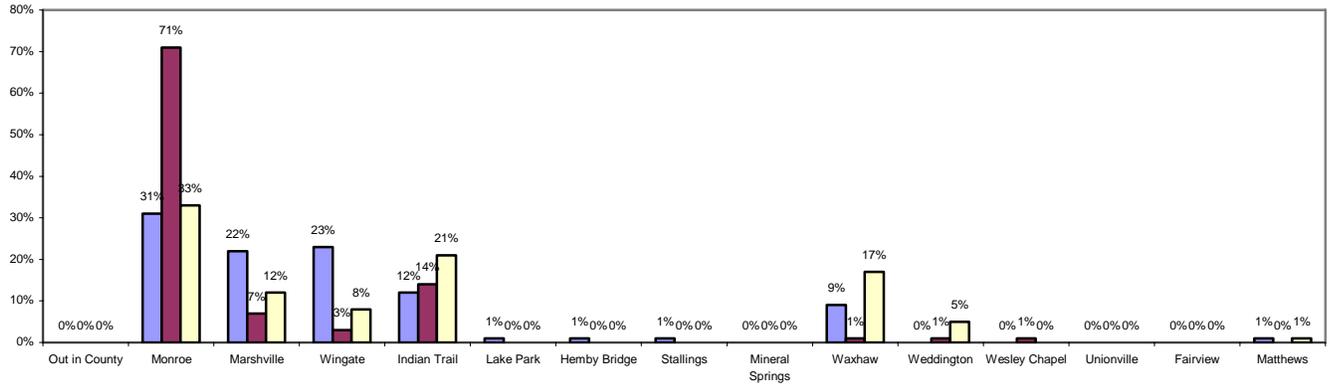
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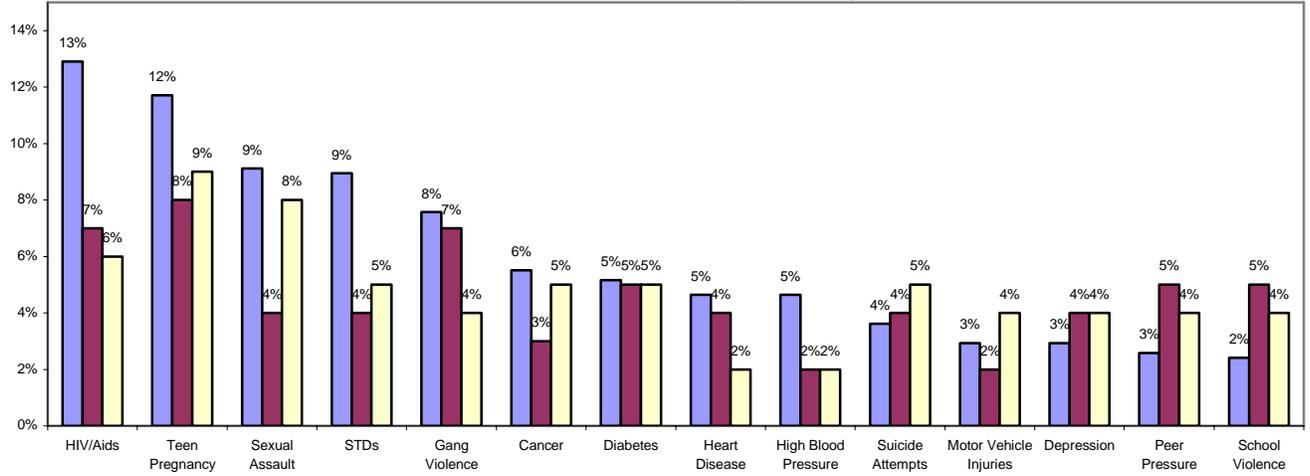
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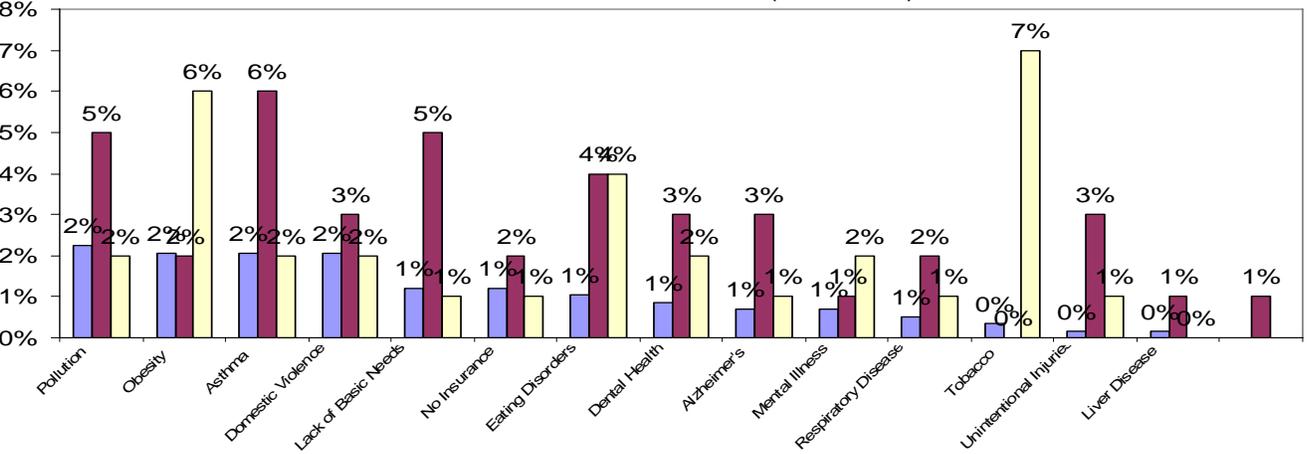
Teen Community of Residence



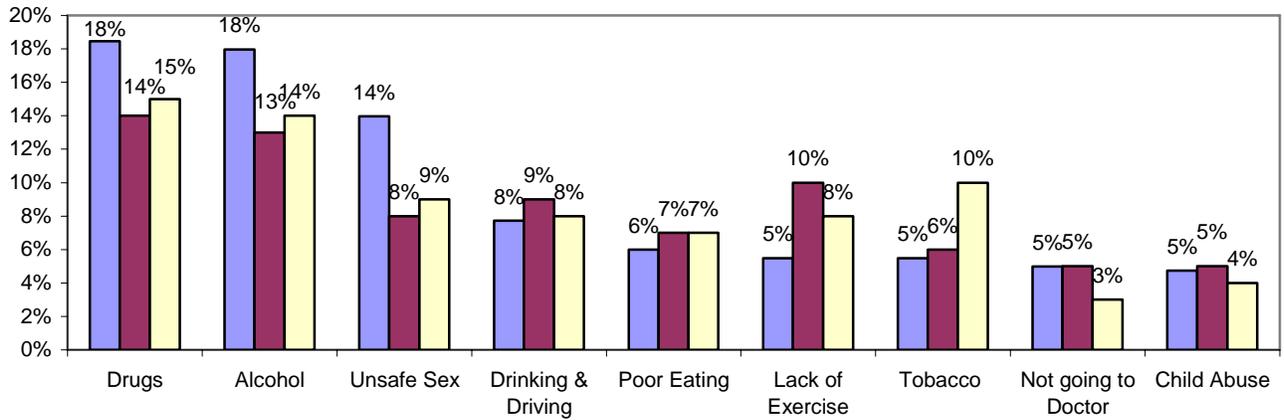
Teen Health Concerns (Chart 1 of 2)



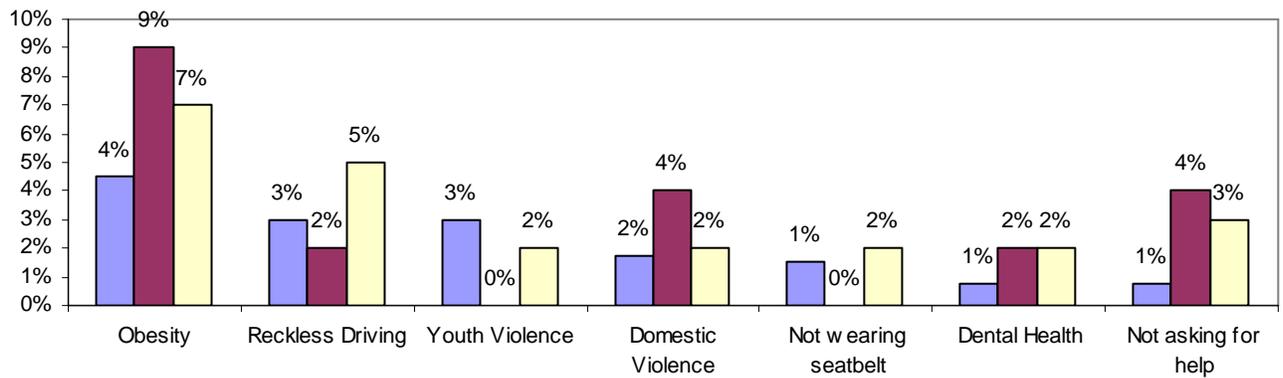
Teen Health Concerns (Chart 2 of 2)



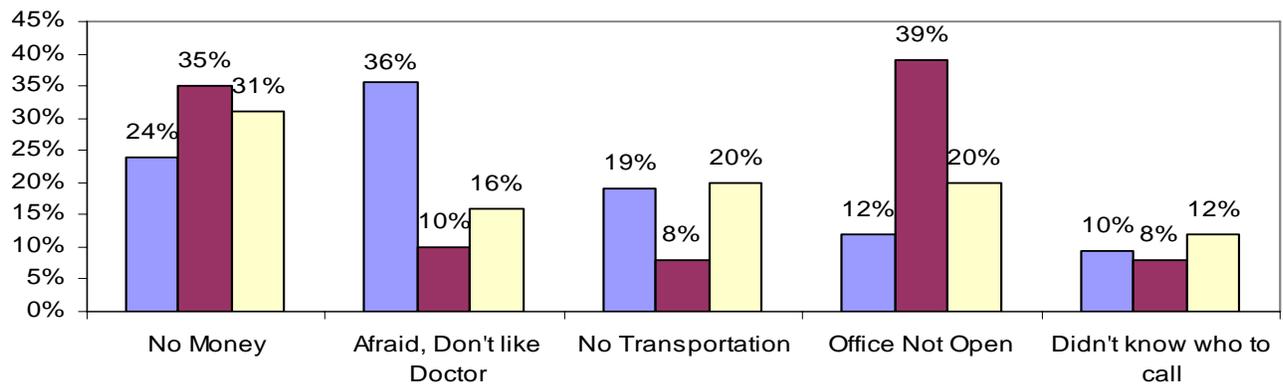
Behaviors Teens Believe Cause Poor Health
(Chart 1 of 2)



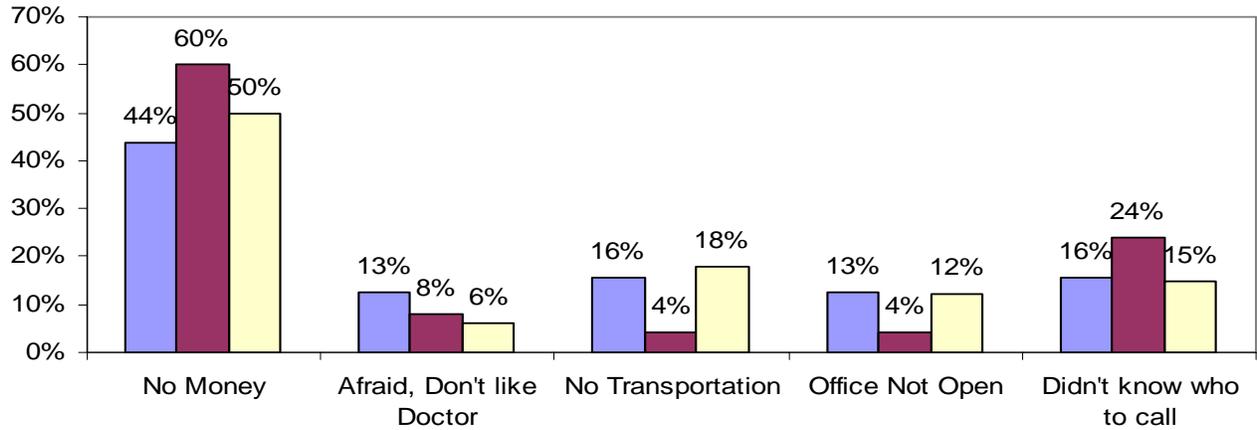
Behaviors Teens Believe Cause Poor Health
(Chart 2 of 2)



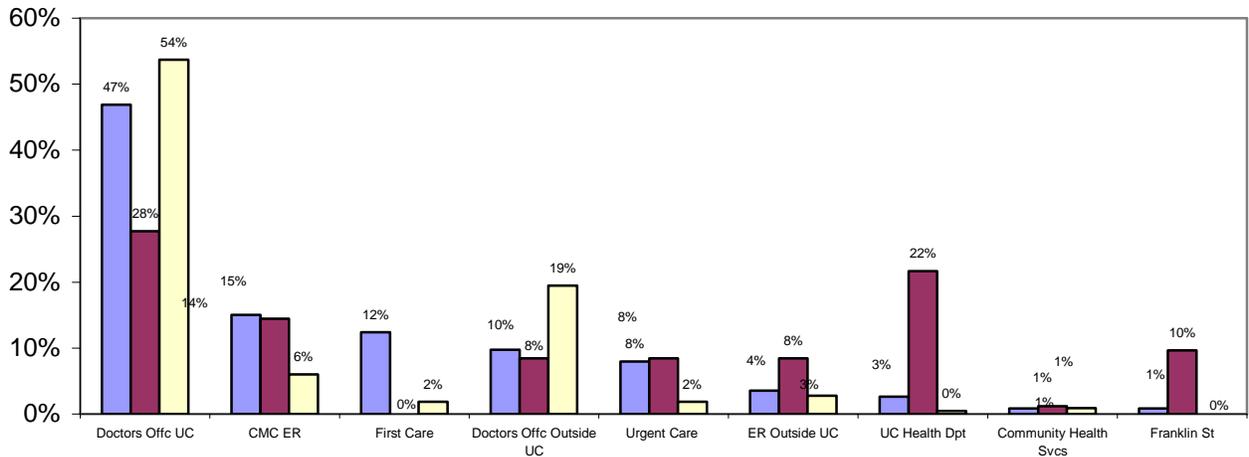
Reasons Teens Gave For Not Seeing A Doctor



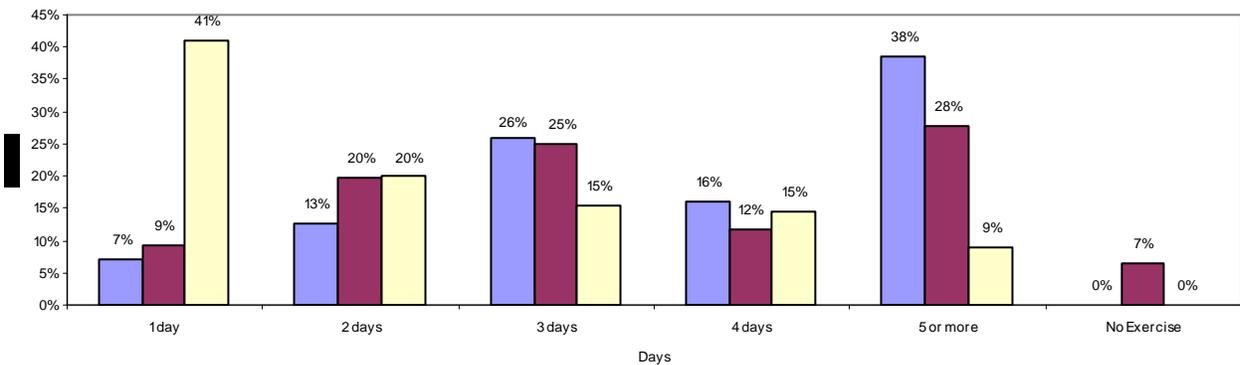
Reasons Teens Gave For Not Seeing A Dentist

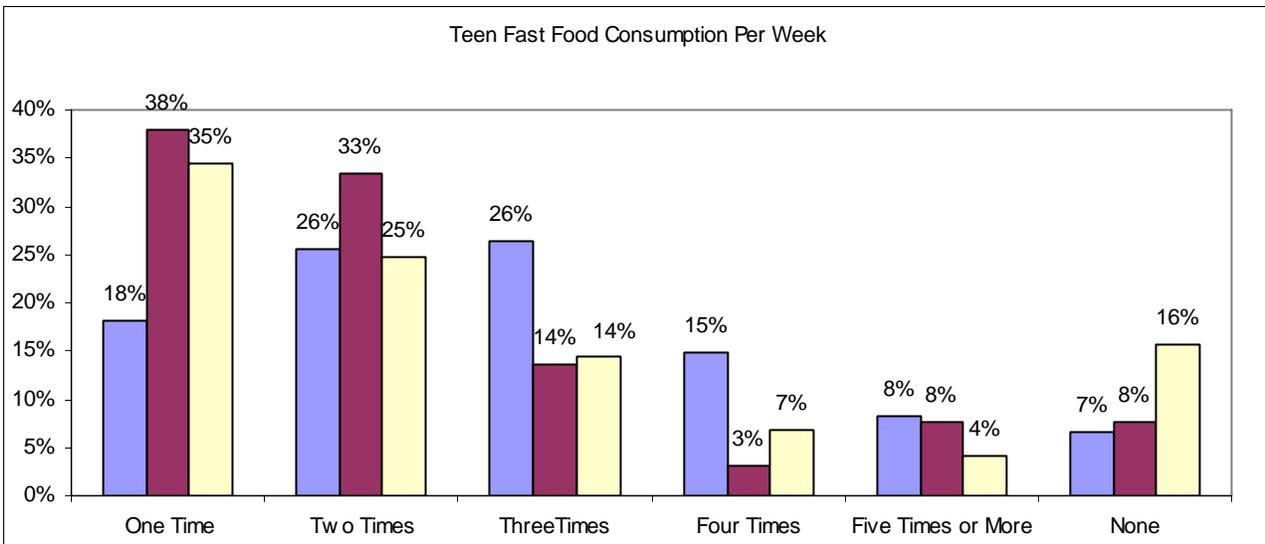
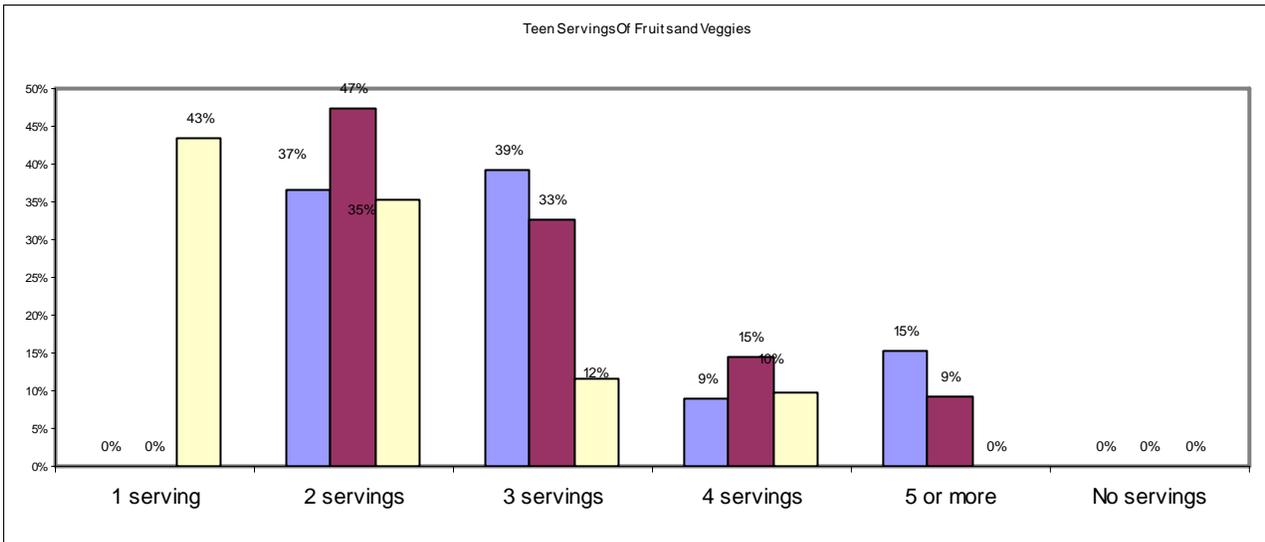
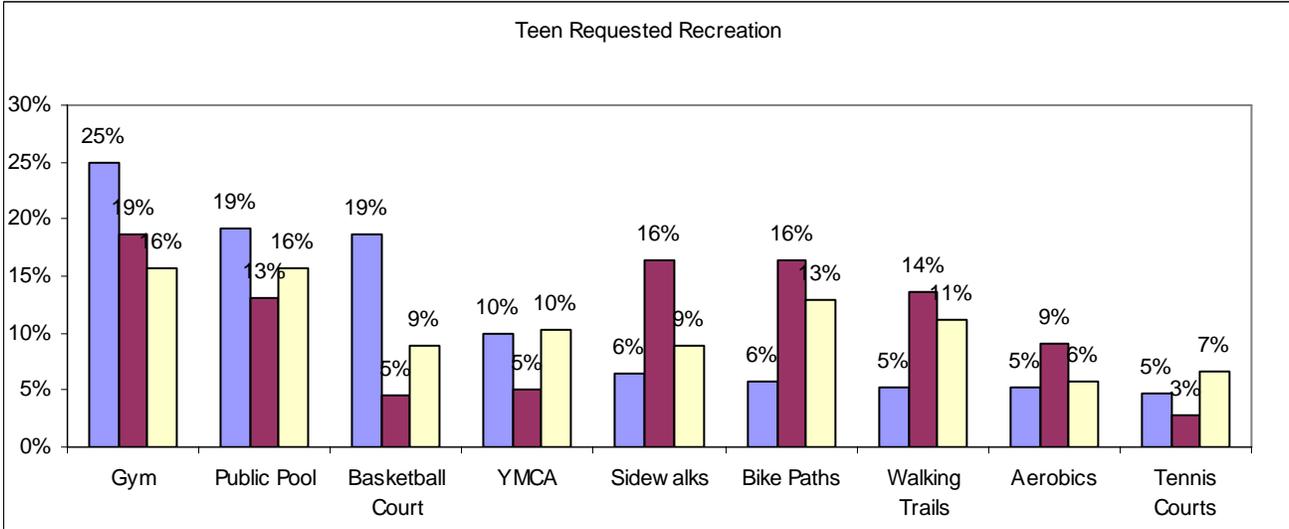


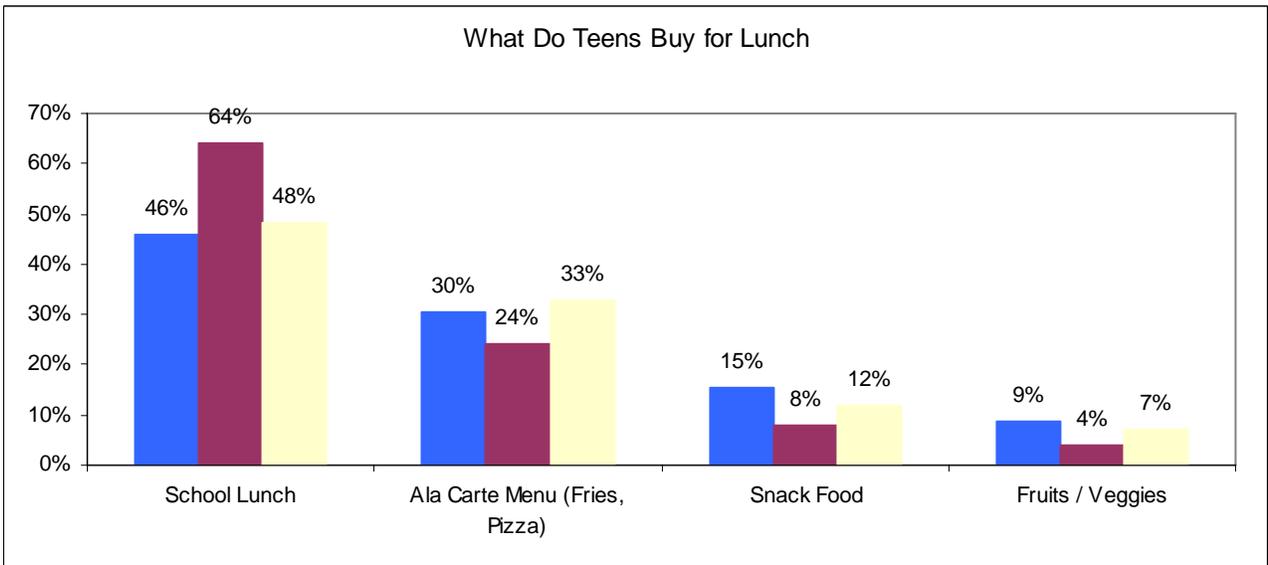
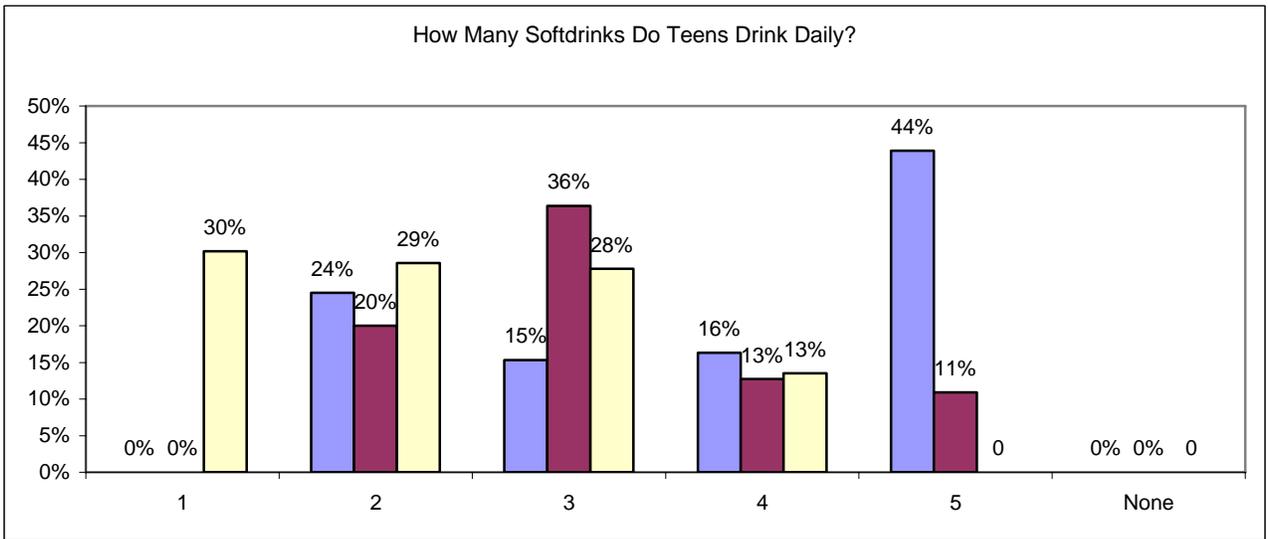
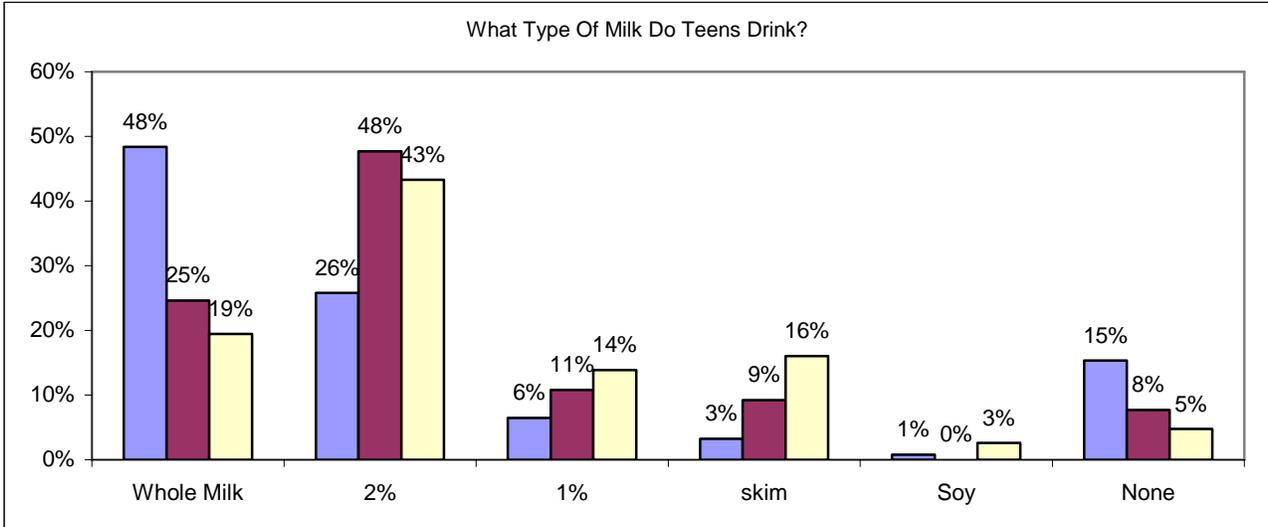
Where Teens Go Most Often When Sick



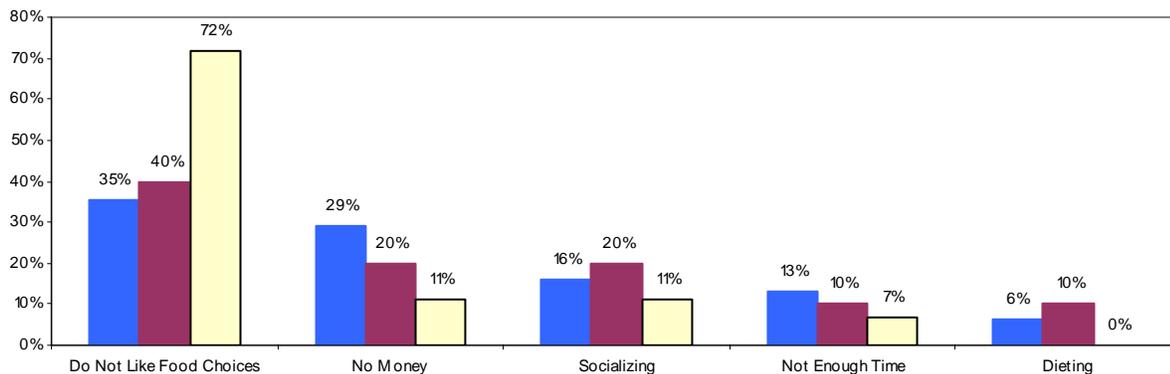
Teens Weekly Exercise





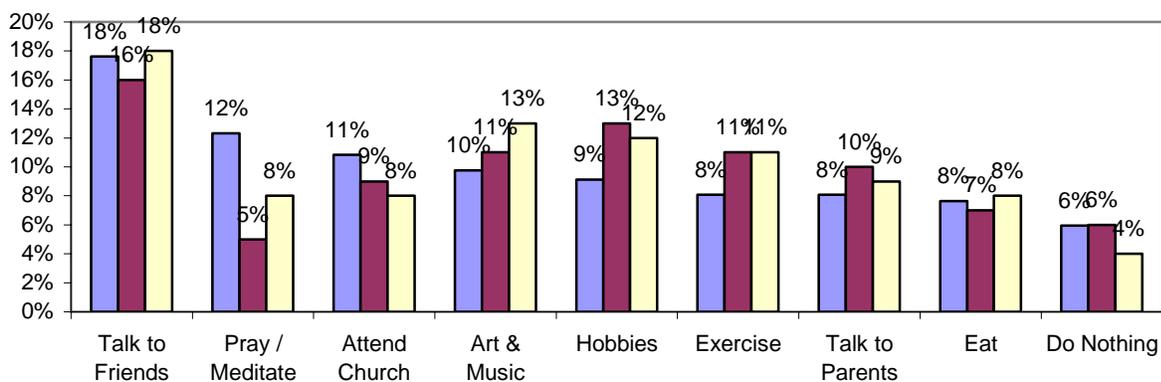


Reasons Teens Gave for Not Buying Lunch



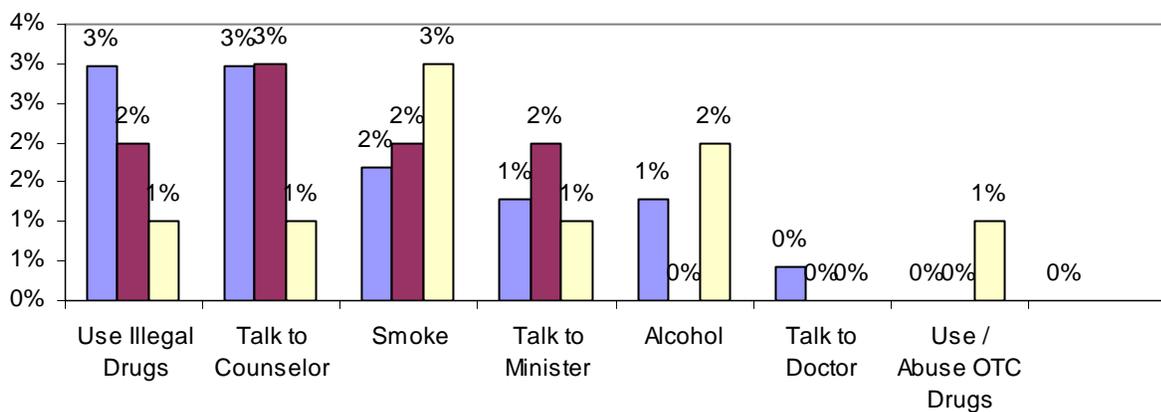
Black Teen Coping Mechanisms For Stress

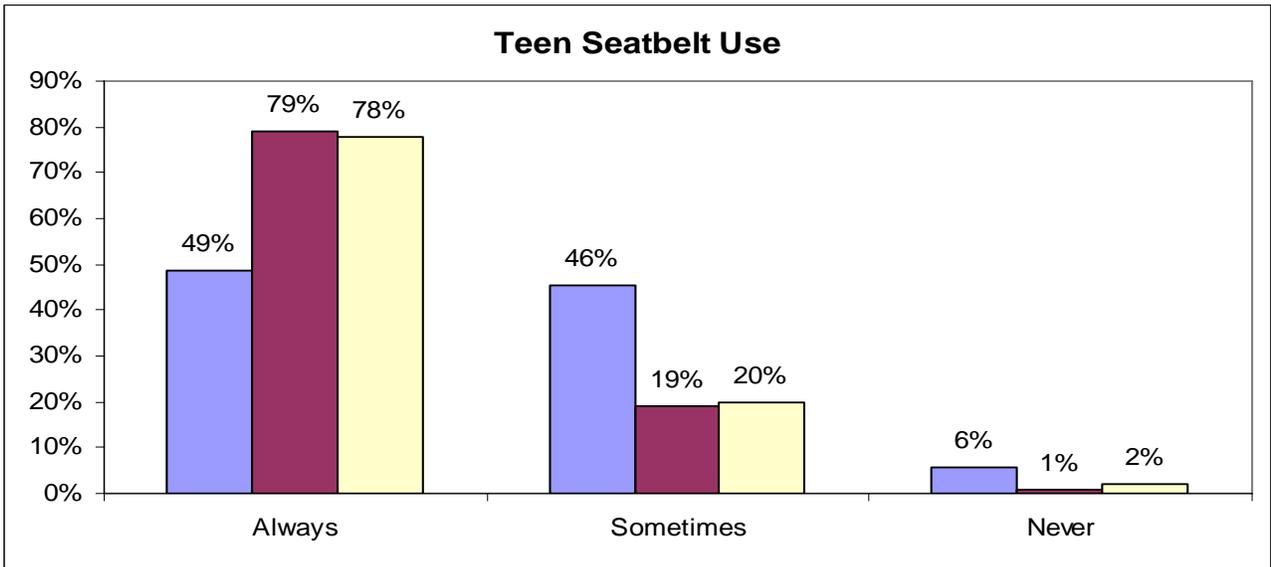
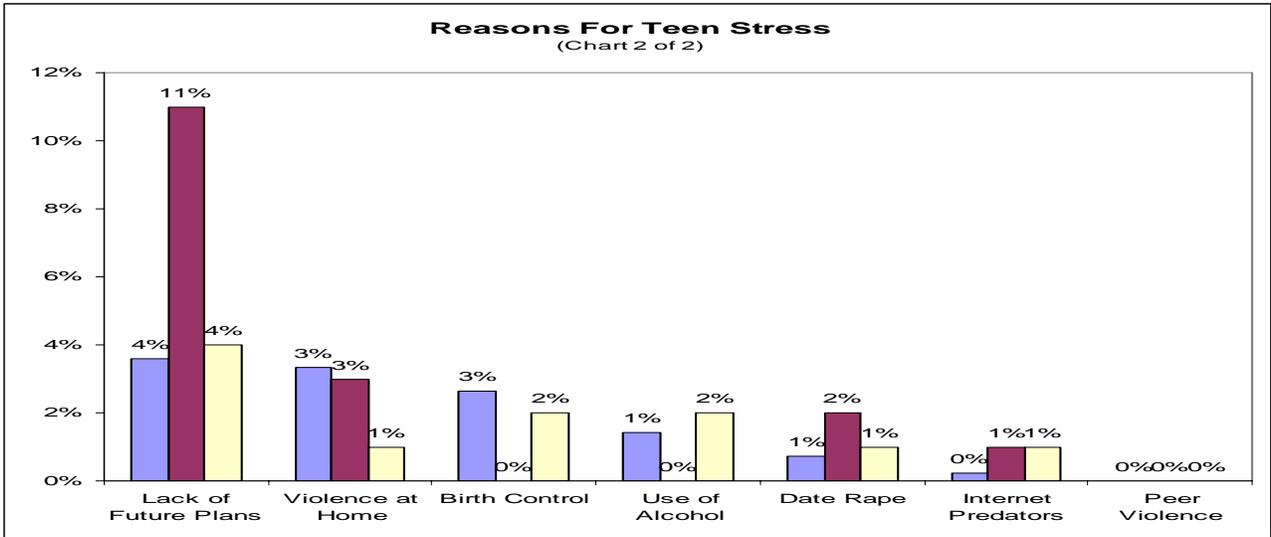
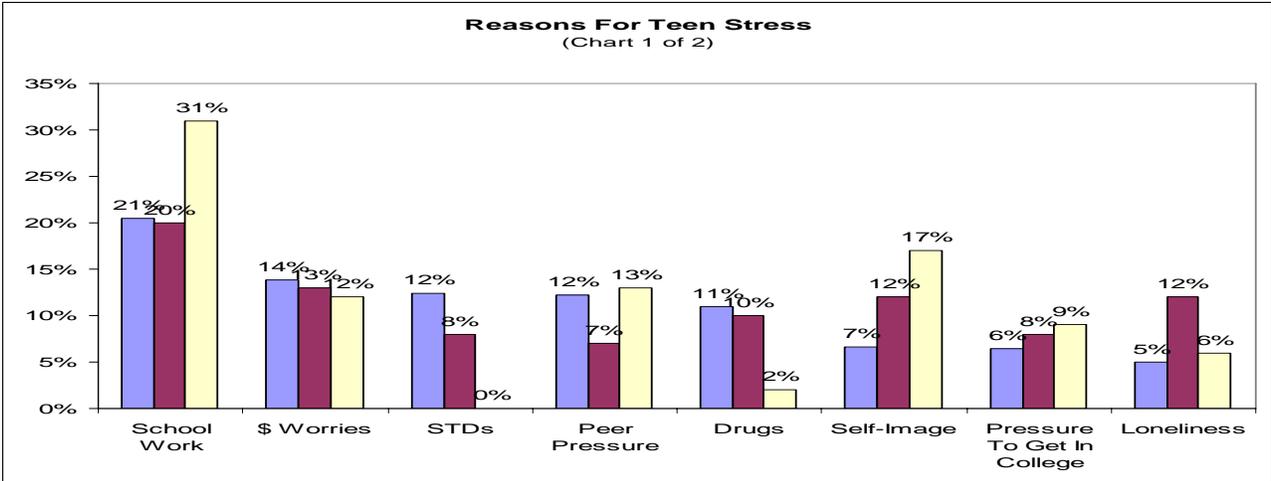
(Chart 1 of 2)

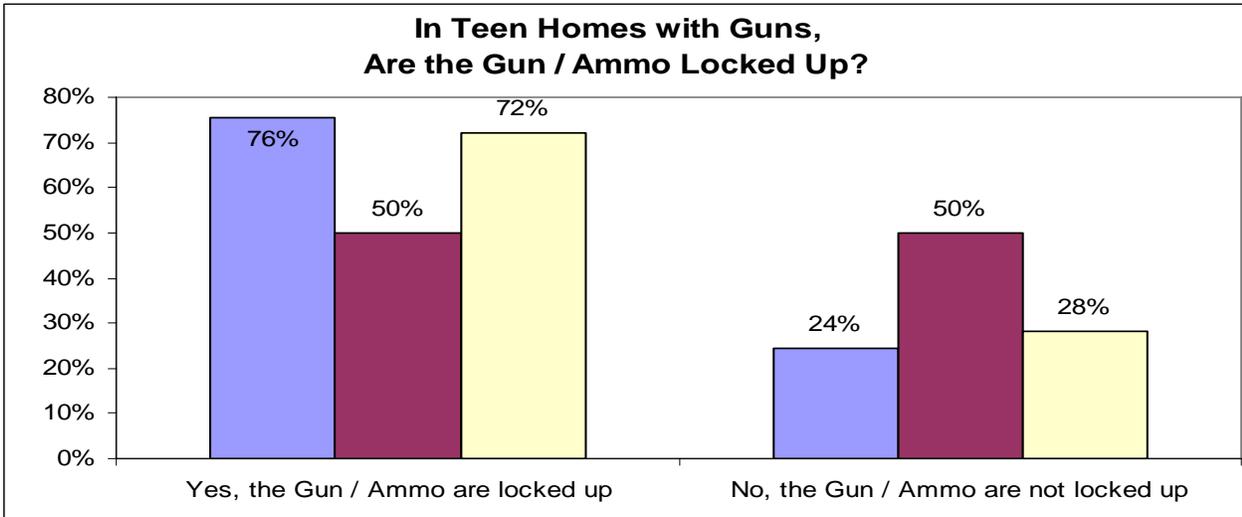
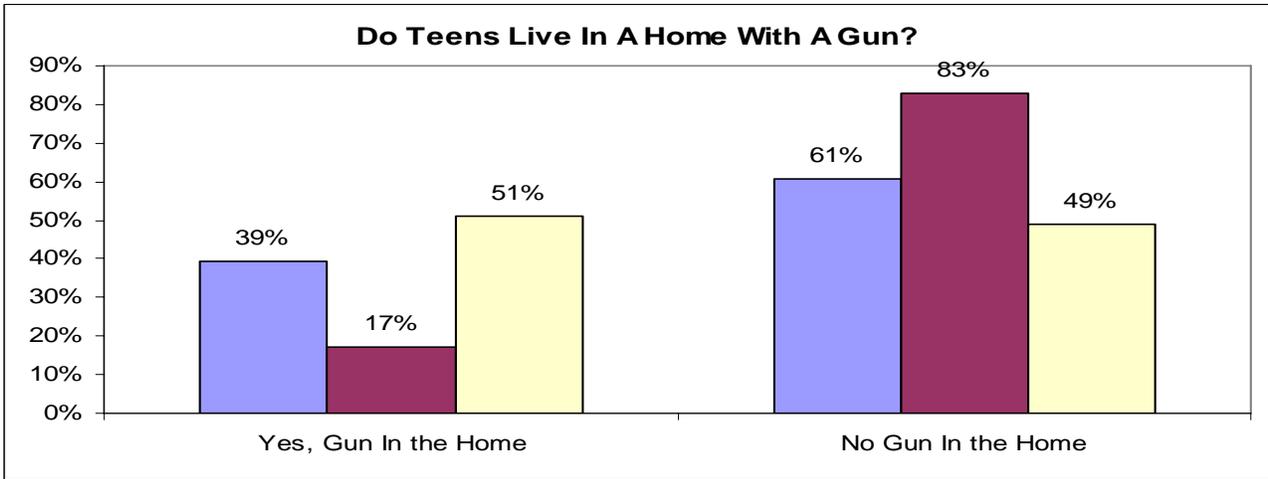
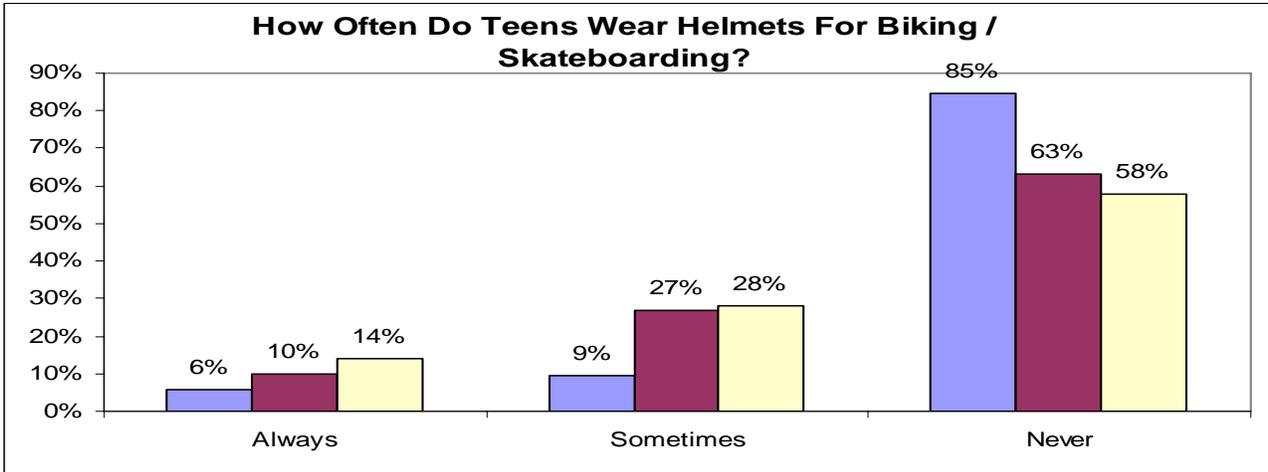


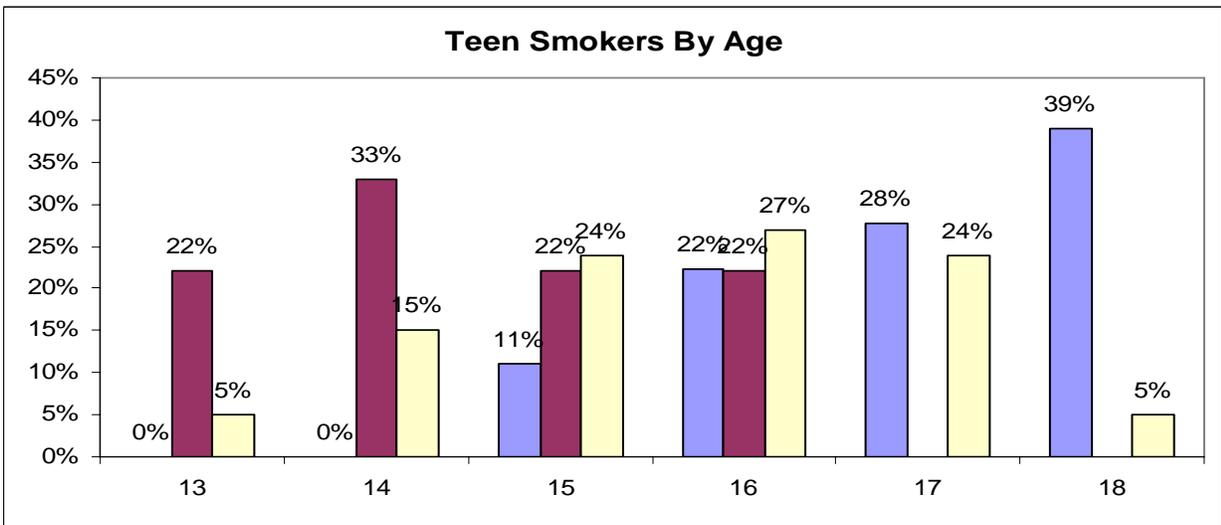
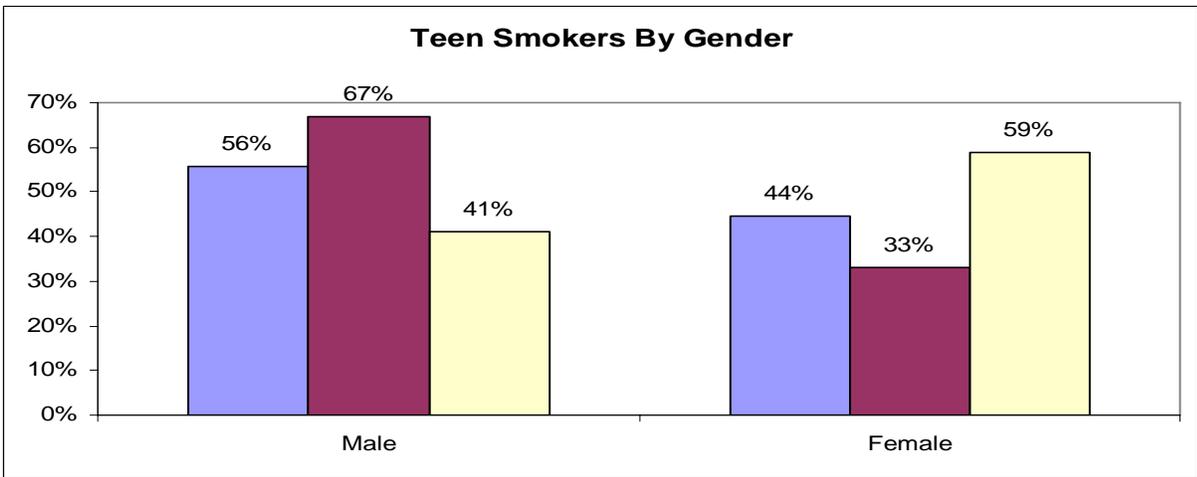
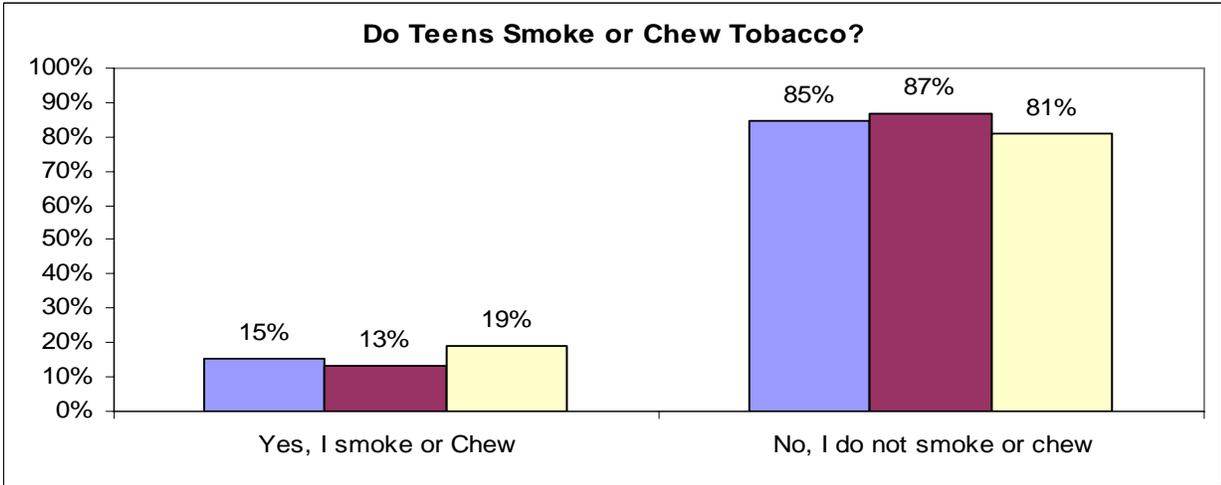
Black Teen Coping Mechanisms For Stress

(Chart 2 of 2)

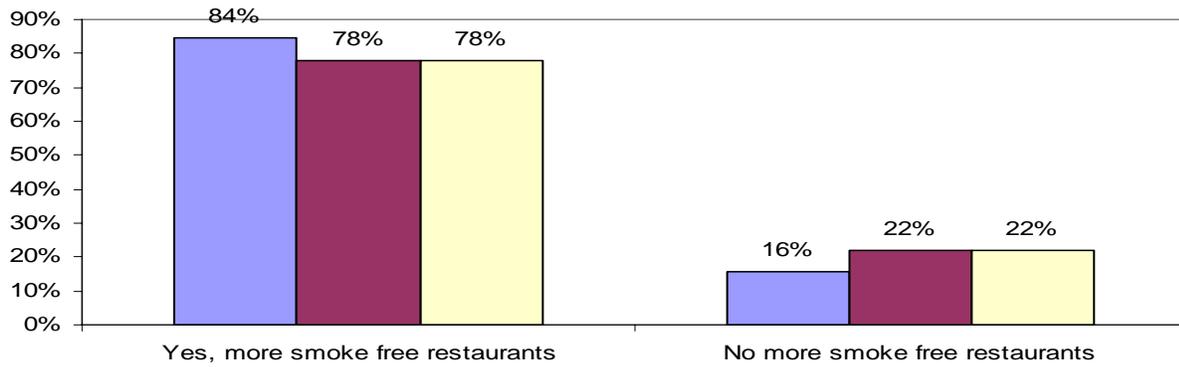




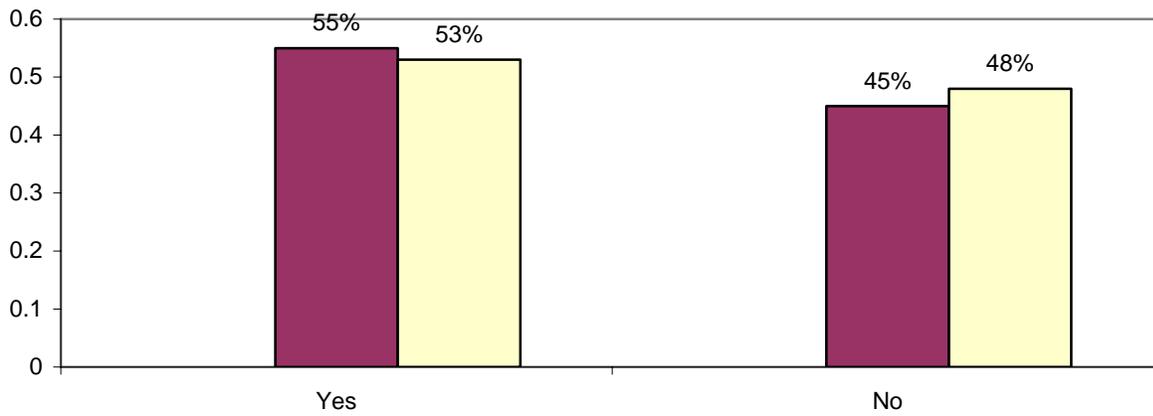




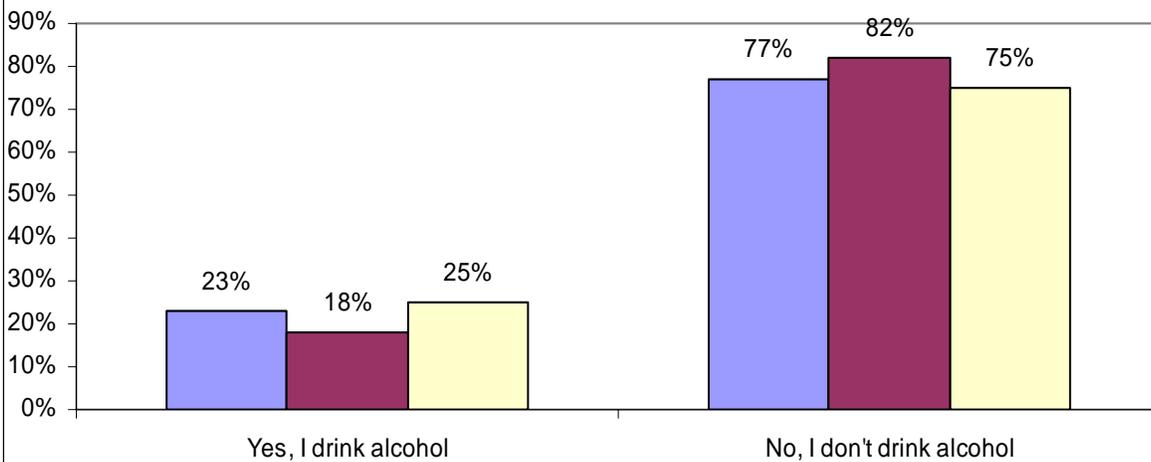
Do Teens Want More Smoke Free Restaurants?

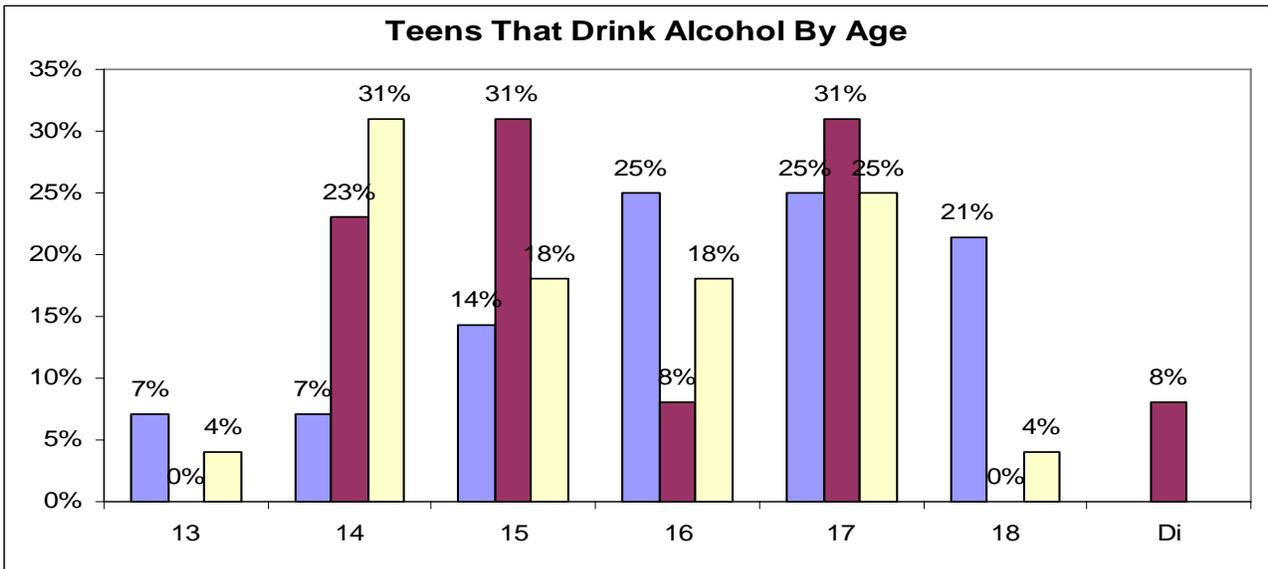
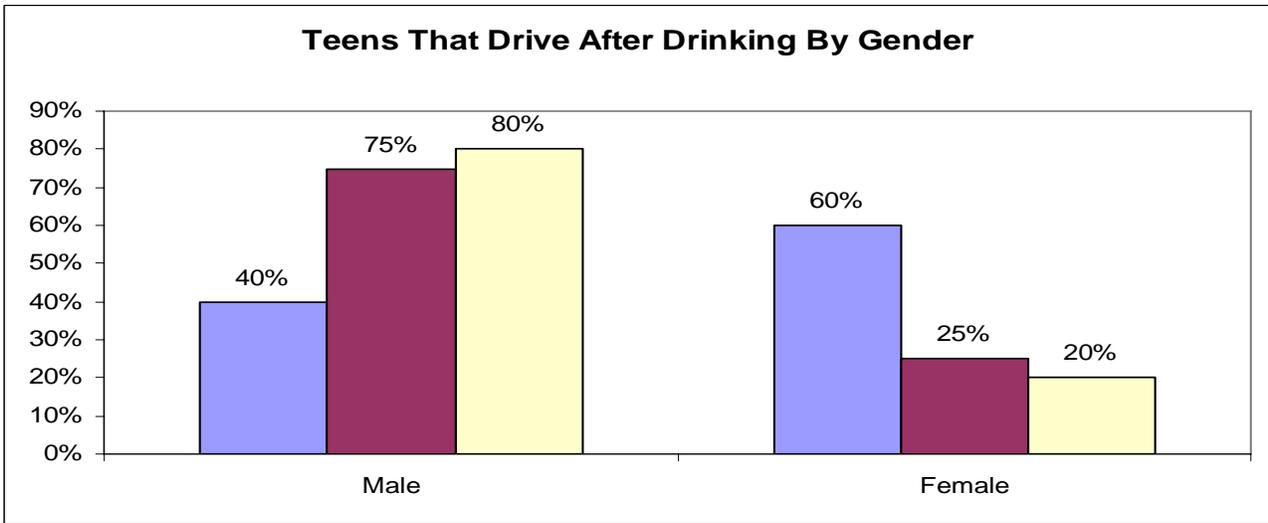
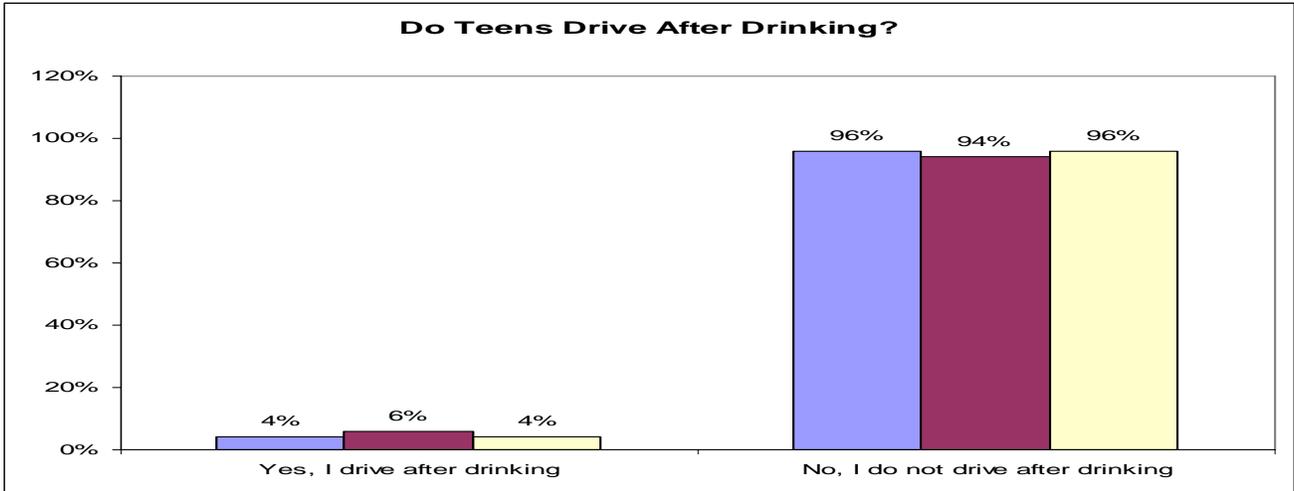


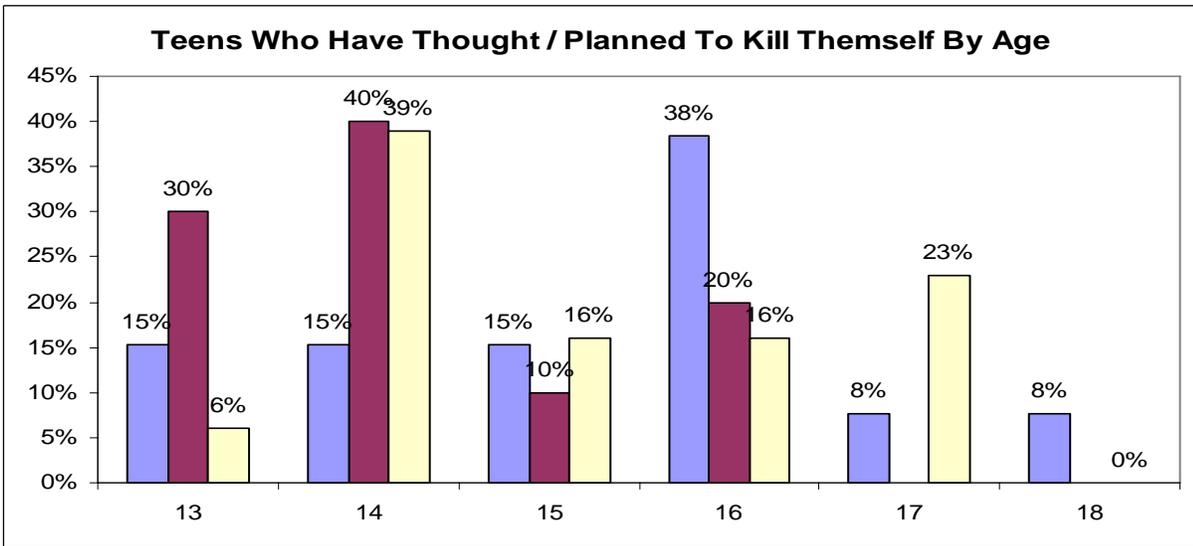
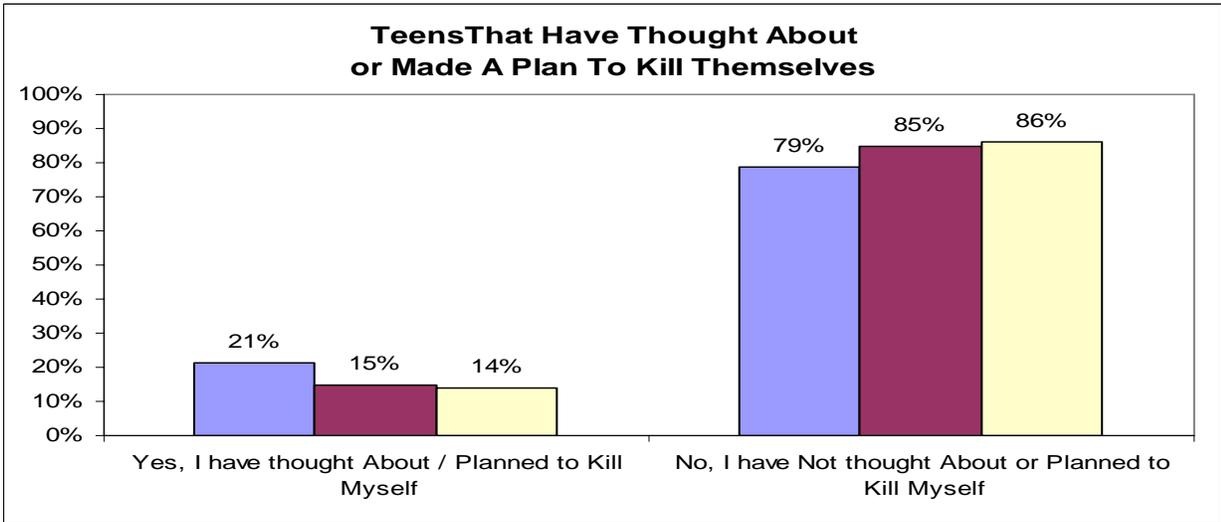
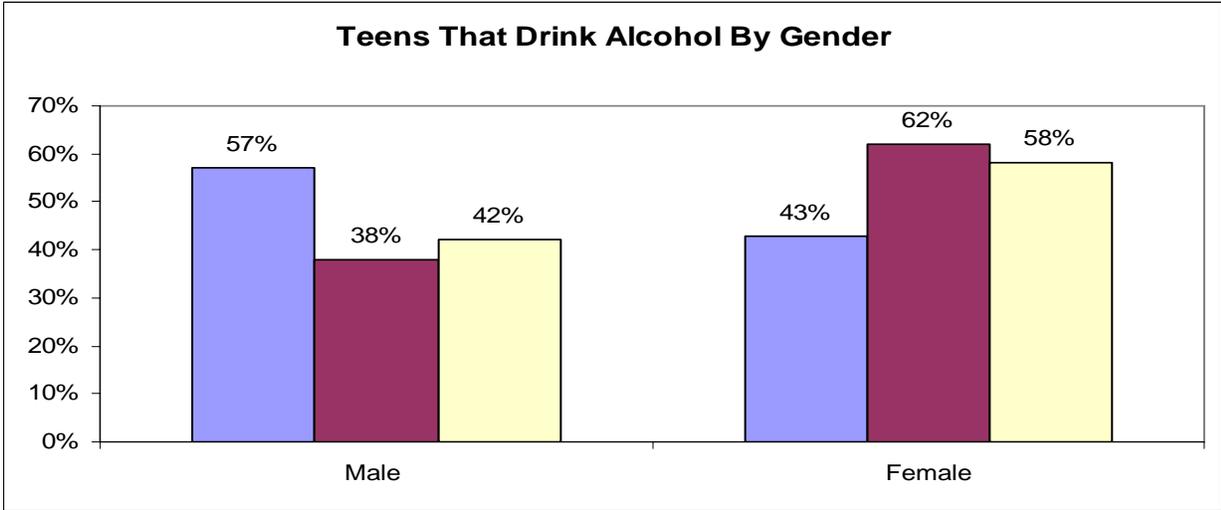
Would Teens like to Quit Smoking



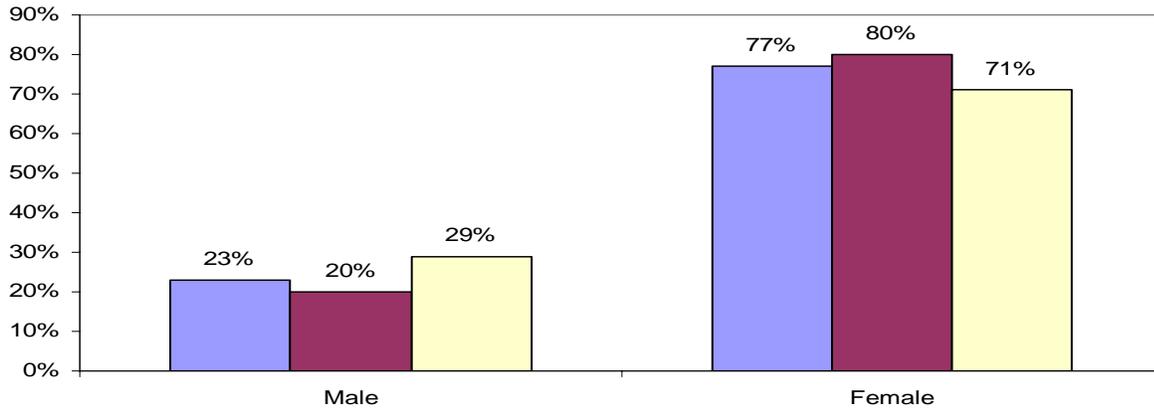
Do Teens Drink Alcohol?



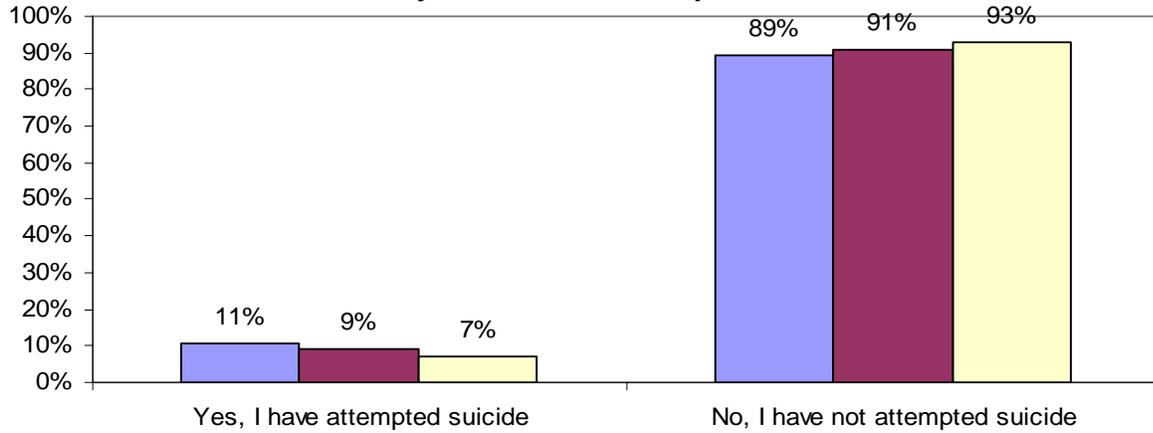




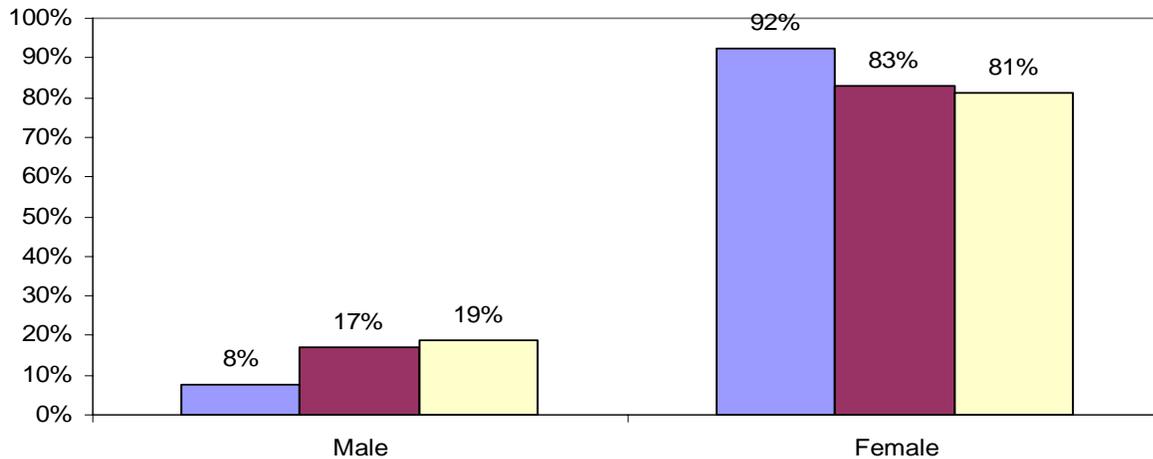
Teens Who Thought About / Planned Suicide By Gender



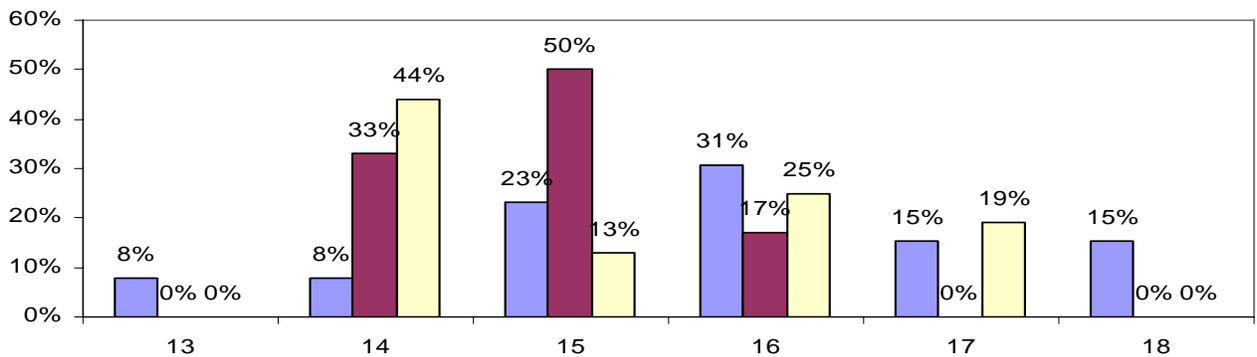
How Many Teens Have Attempted Suicide?



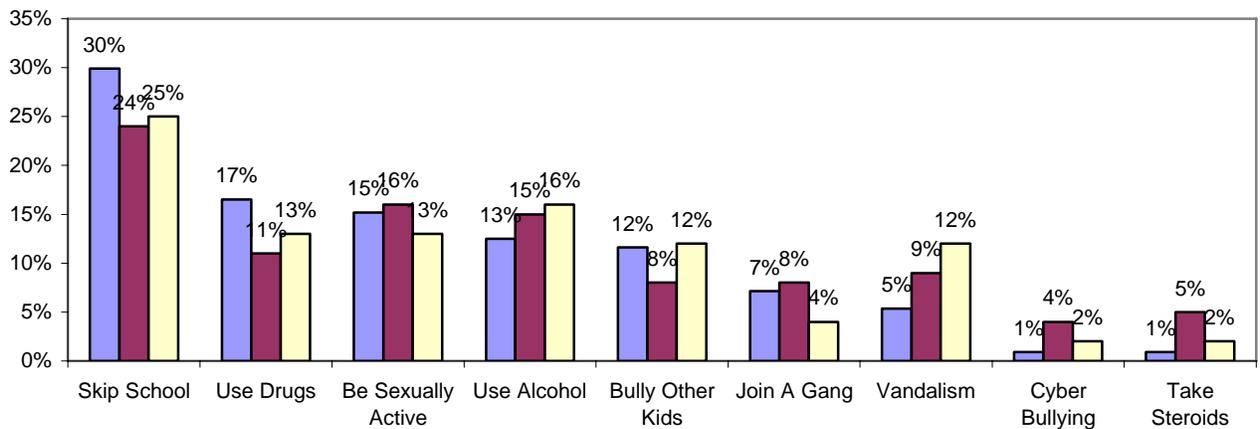
Teens That Attempted Suicide By Gender



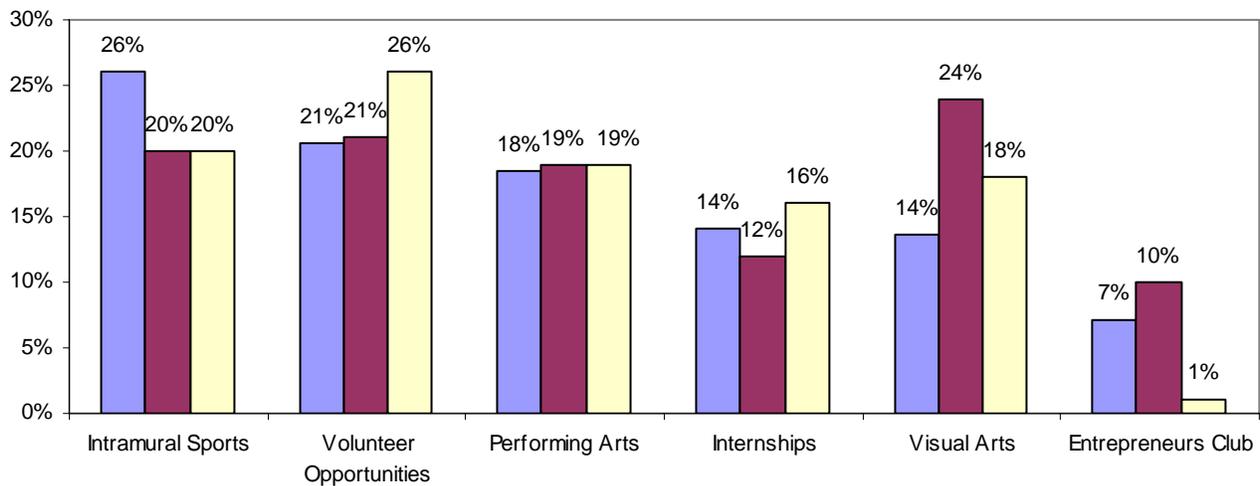
Teens That Have Attempted Suicide By Age



What Did Teens Feel Peer Pressure to Do?



Teen Requested Recreation Opportunities



APPENDIX B2

Community Health Assessment Survey Results

SENIOR ADULTS

(Survey can be found in Appendix A2)

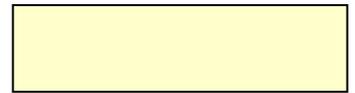
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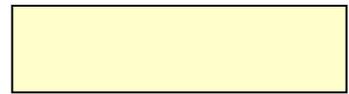
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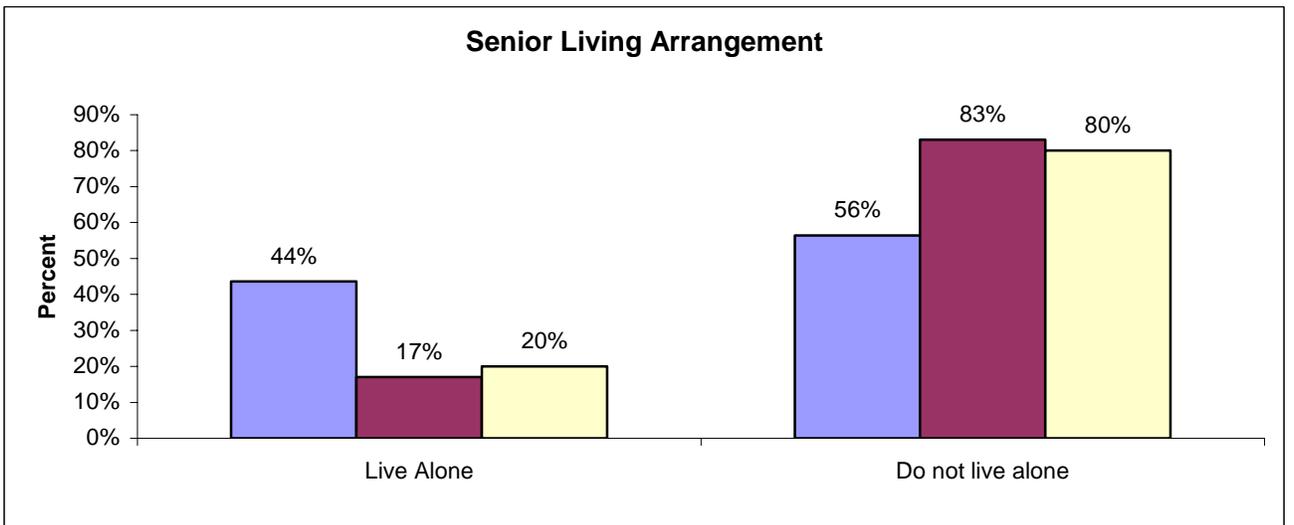
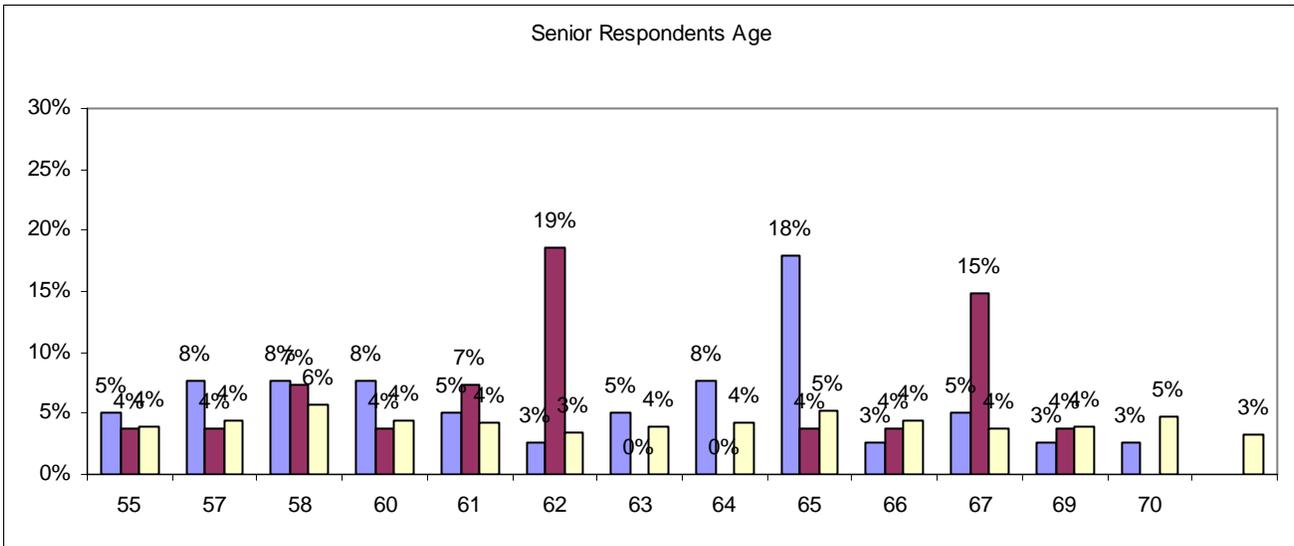
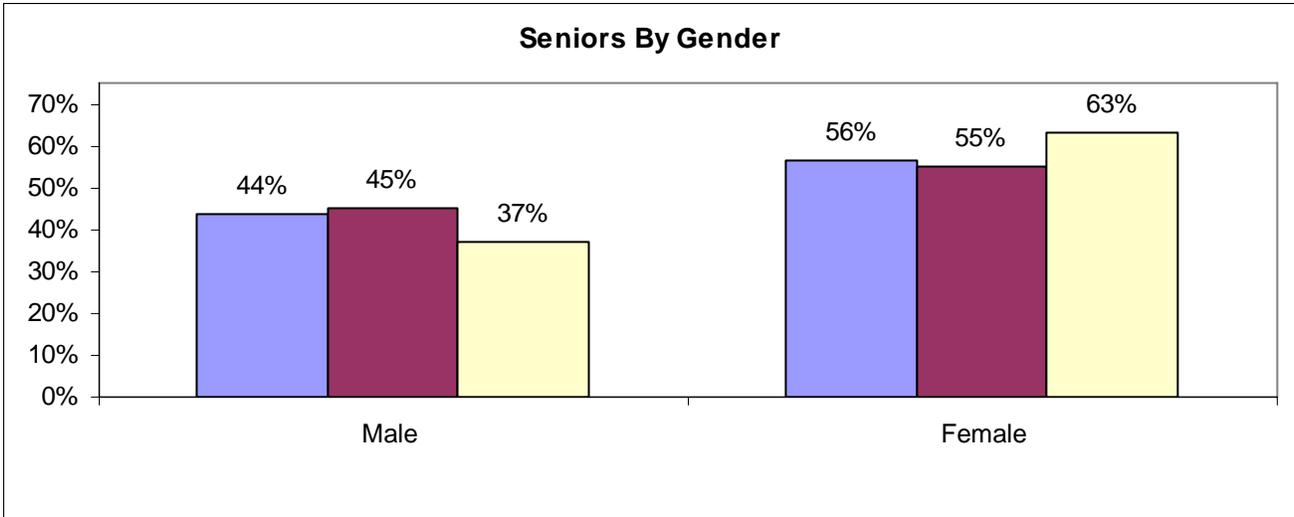
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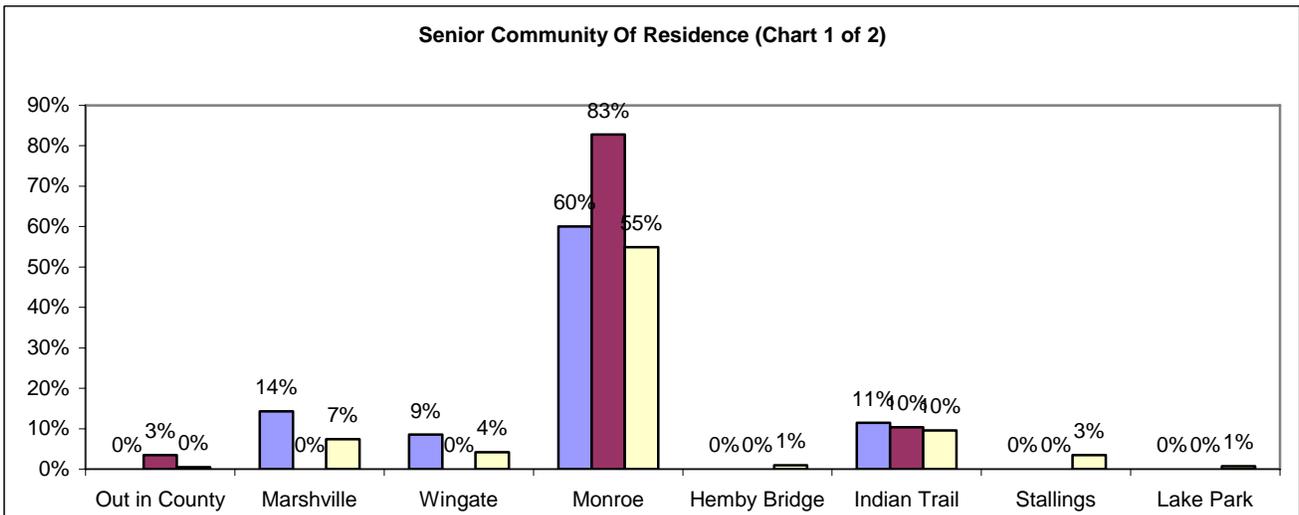
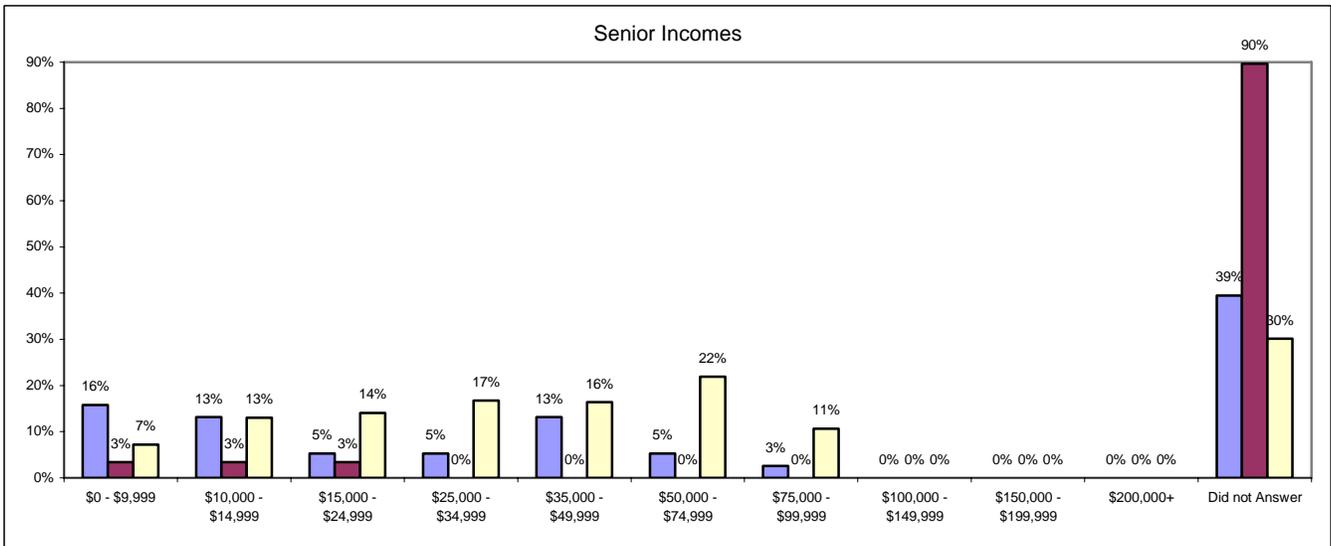
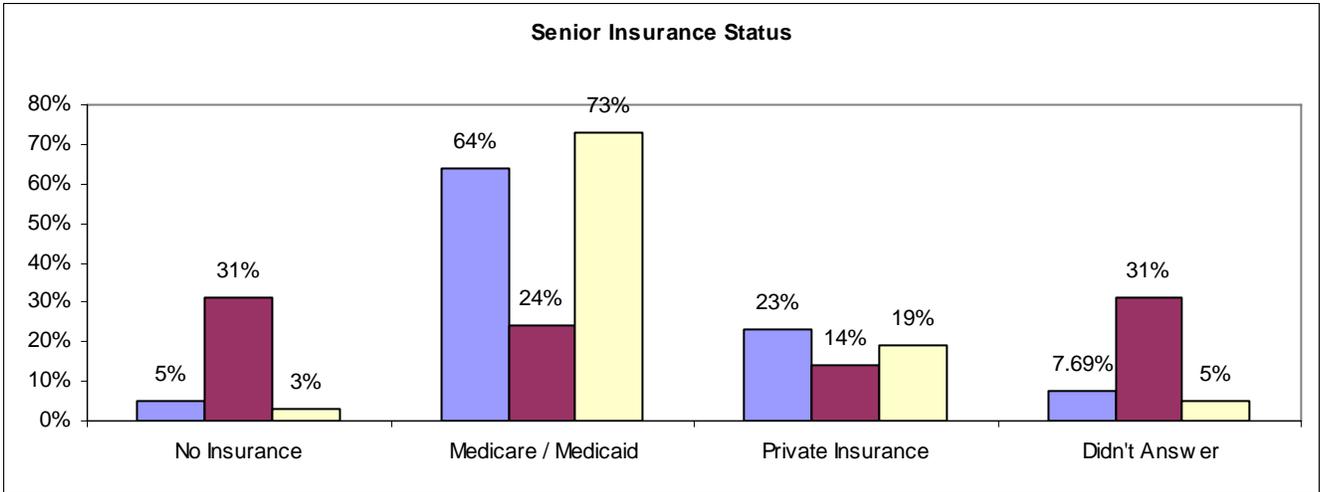


WHITE

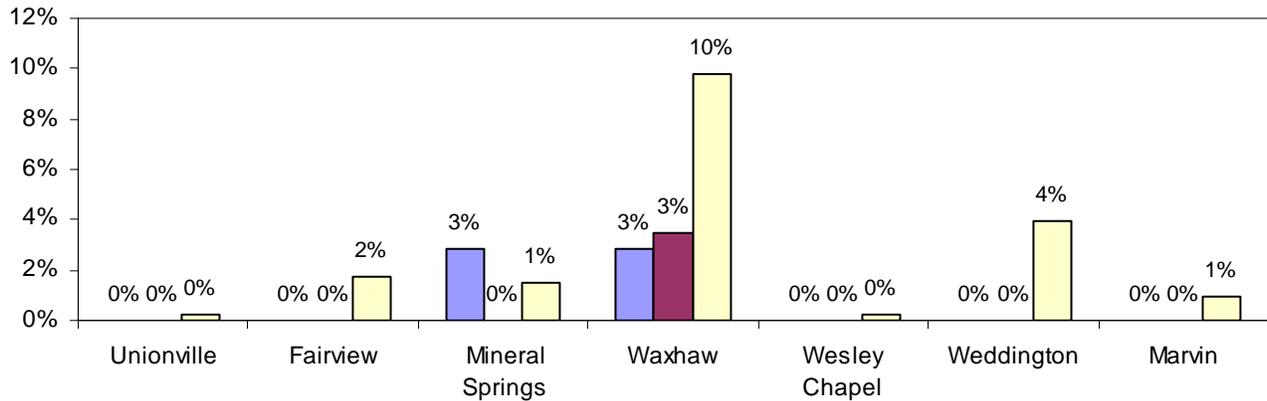


Senior Adult

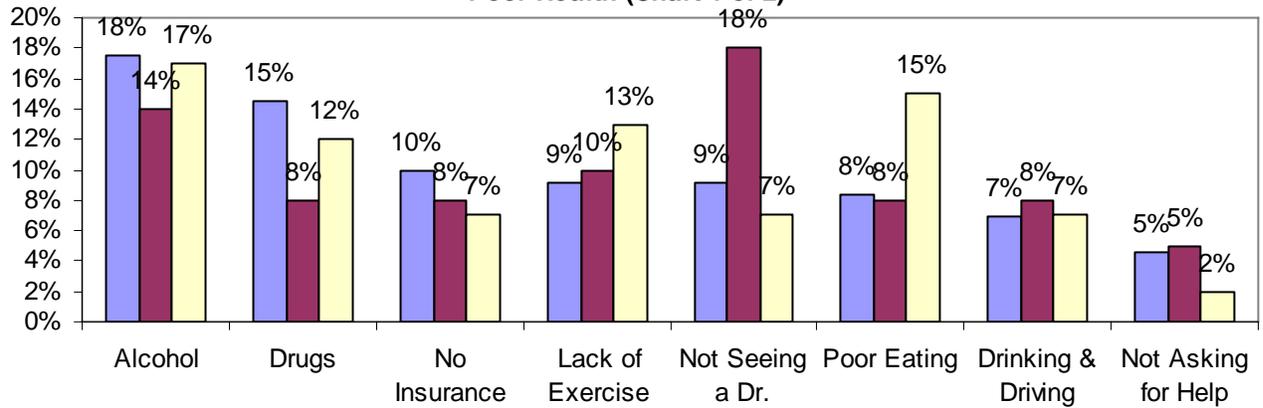




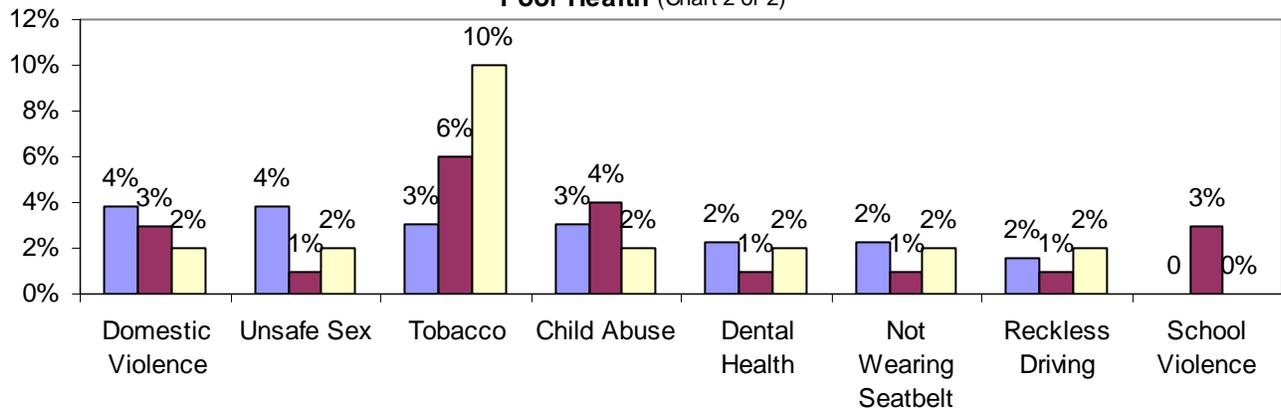
Senior Community of Residence (Chart 2 of 2)



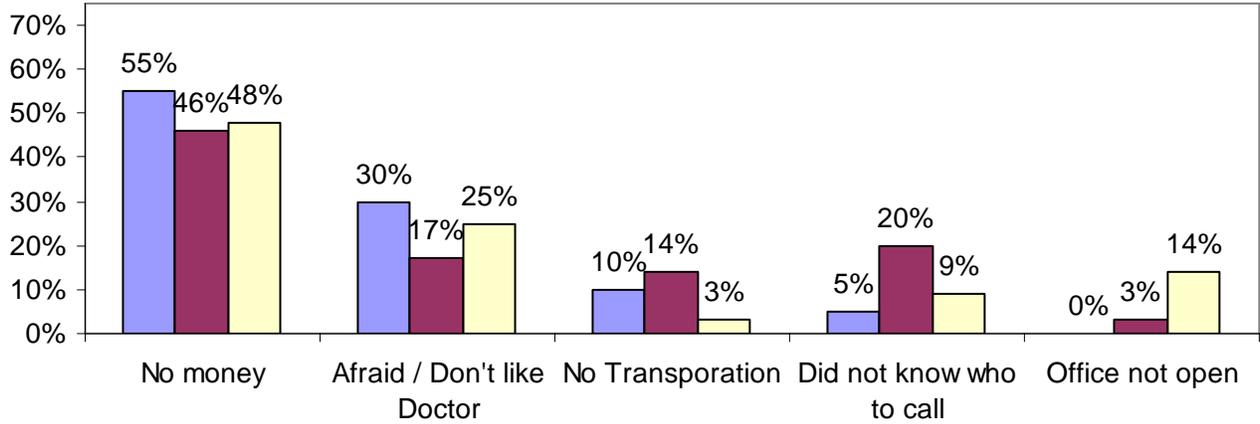
Unhealthy Behaviors Seniors Believe Cause Poor Health (Chart 1 of 2)



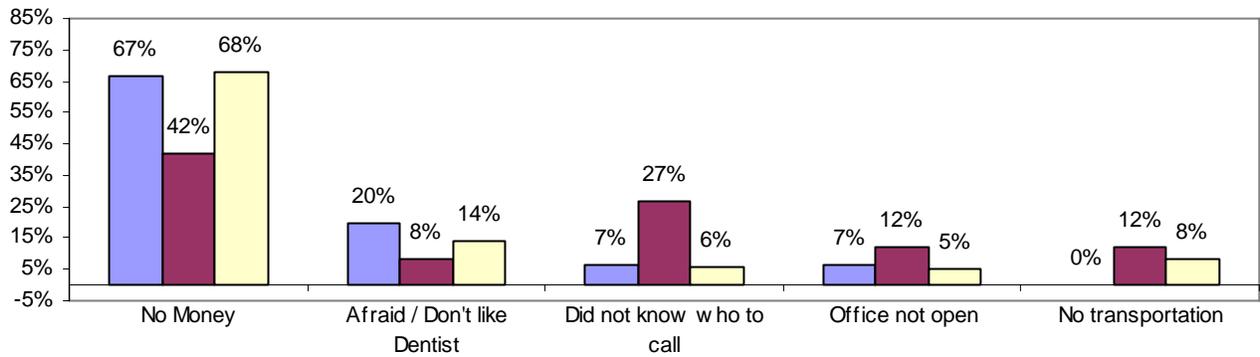
Unhealthy Behaviors Seniors Believe Cause Poor Health (Chart 2 of 2)



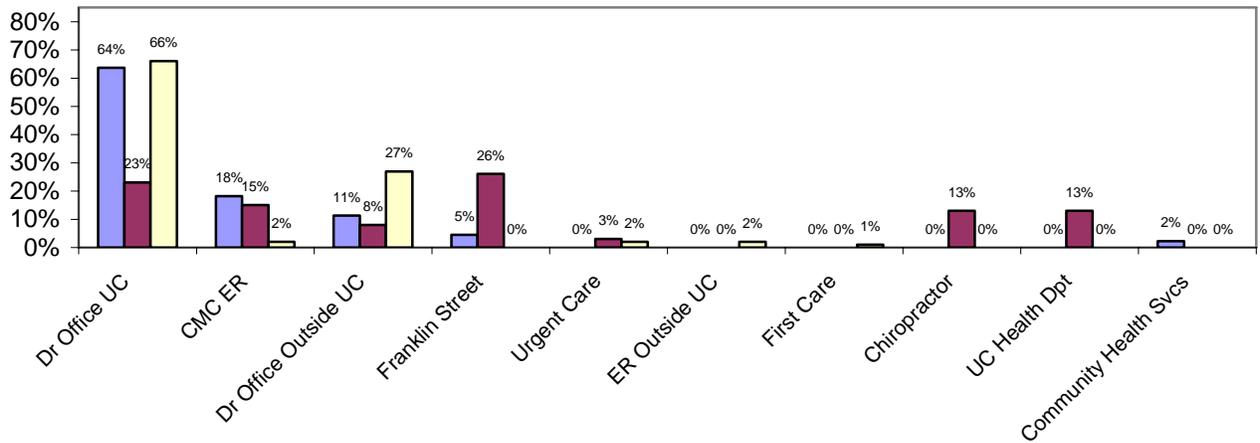
Main Reason Seniors Gave For Not Seeing A Doctor

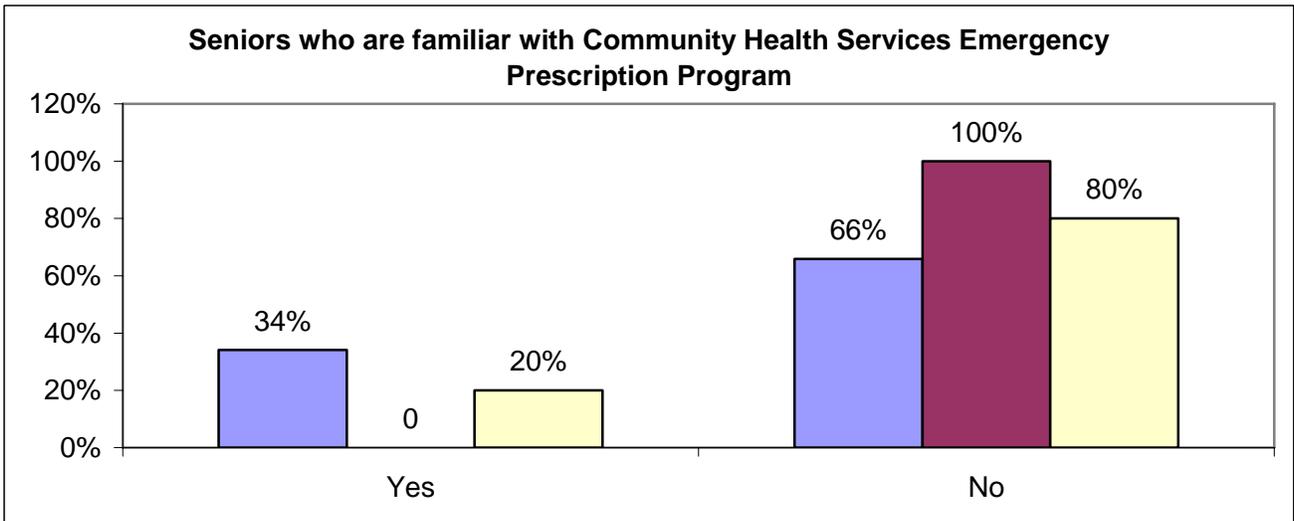
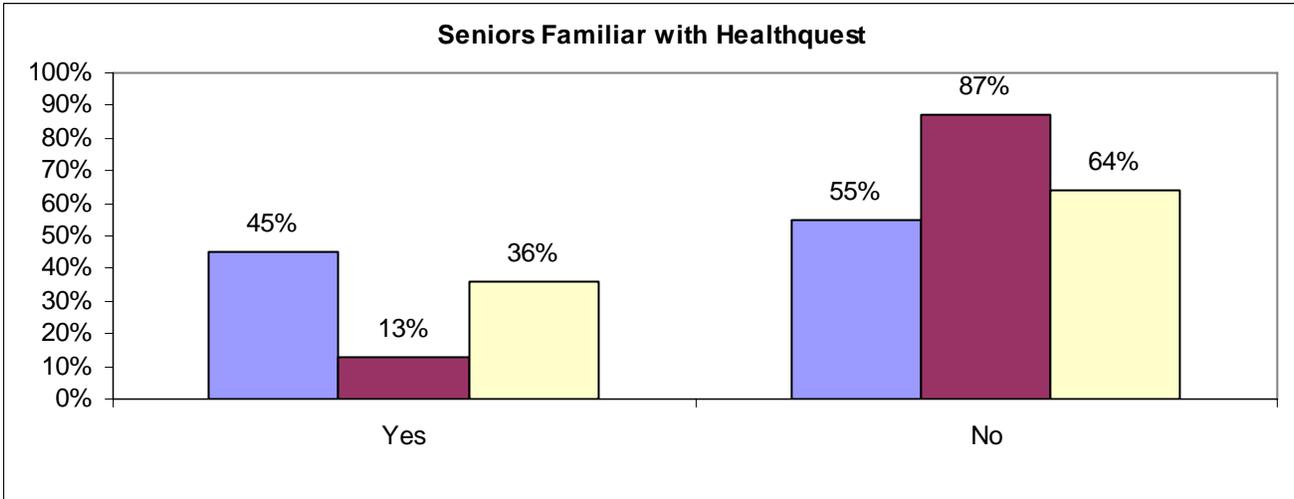
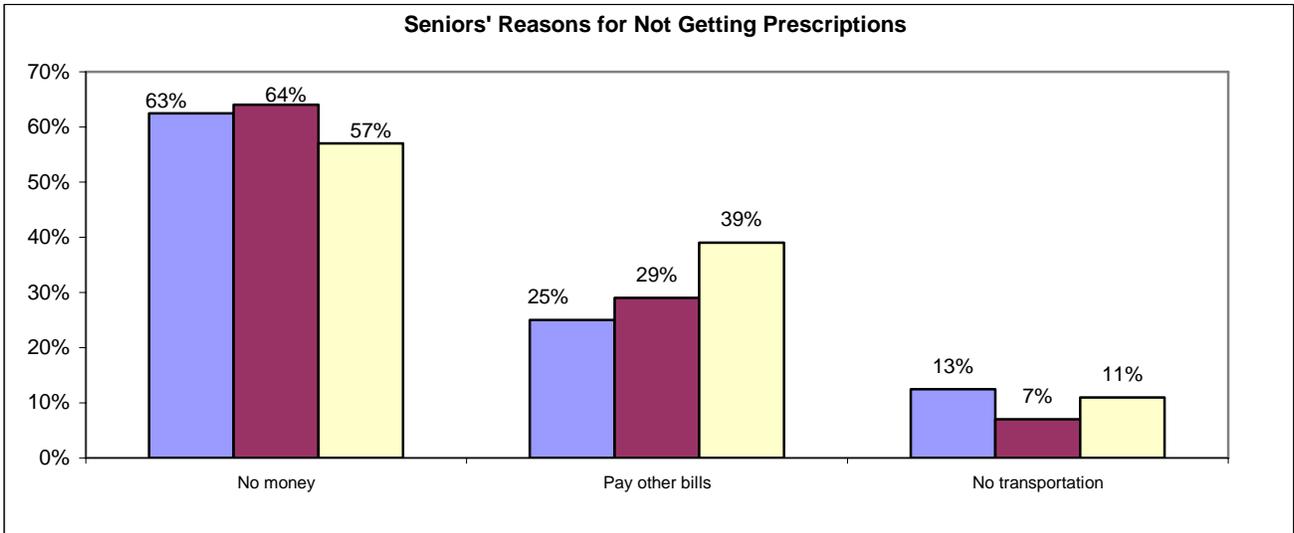


Main Reason Seniors Gave For Not Seeing A Dentist

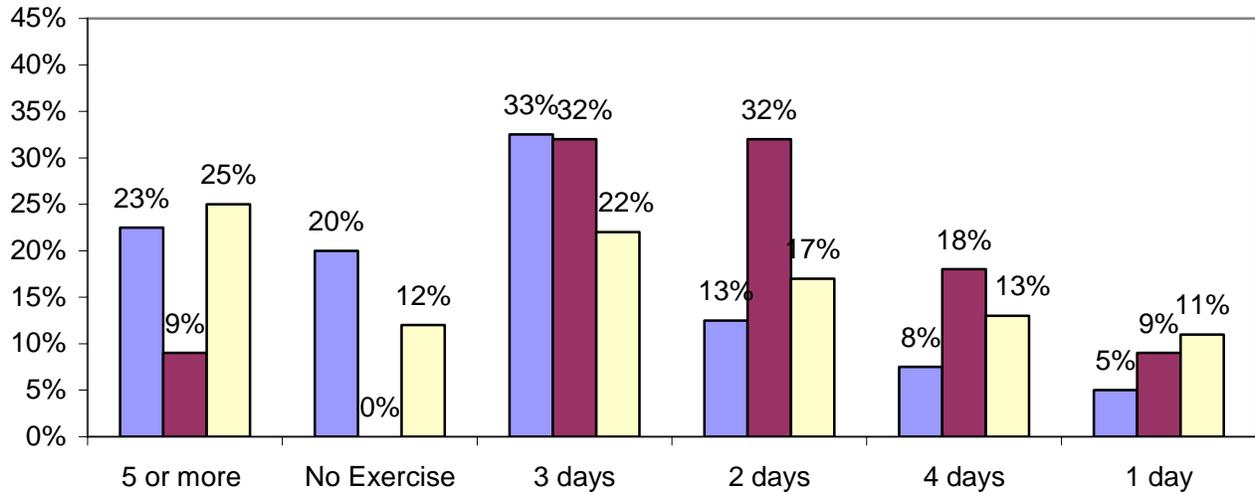


Where Seniors Go Most Often When Sick

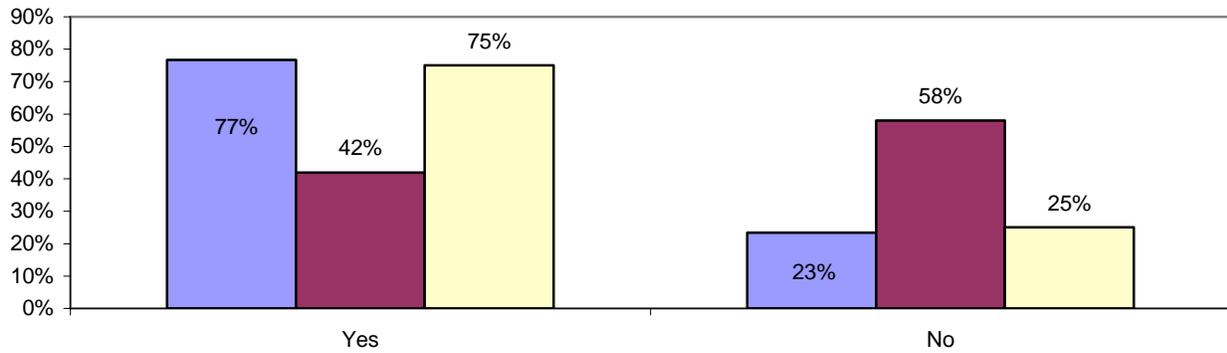




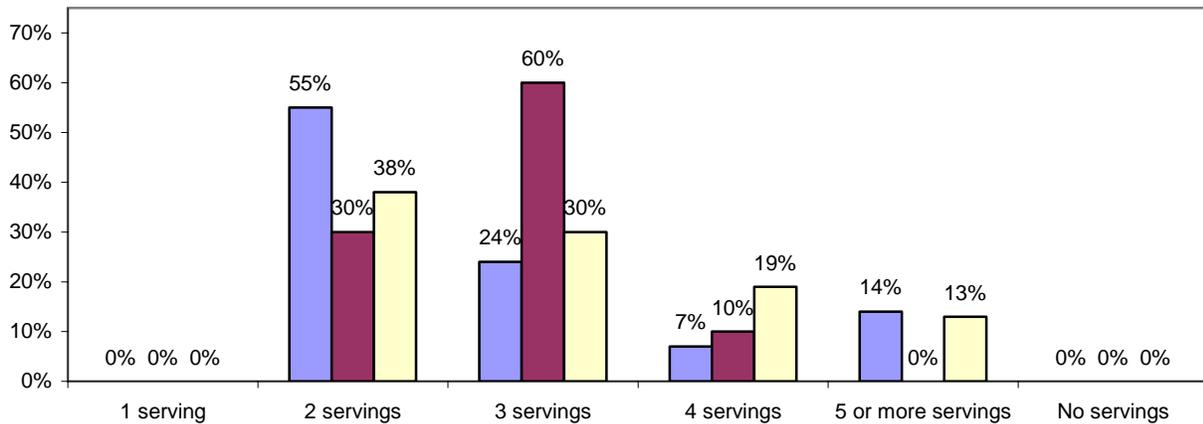
Seniors Weekly Exercise

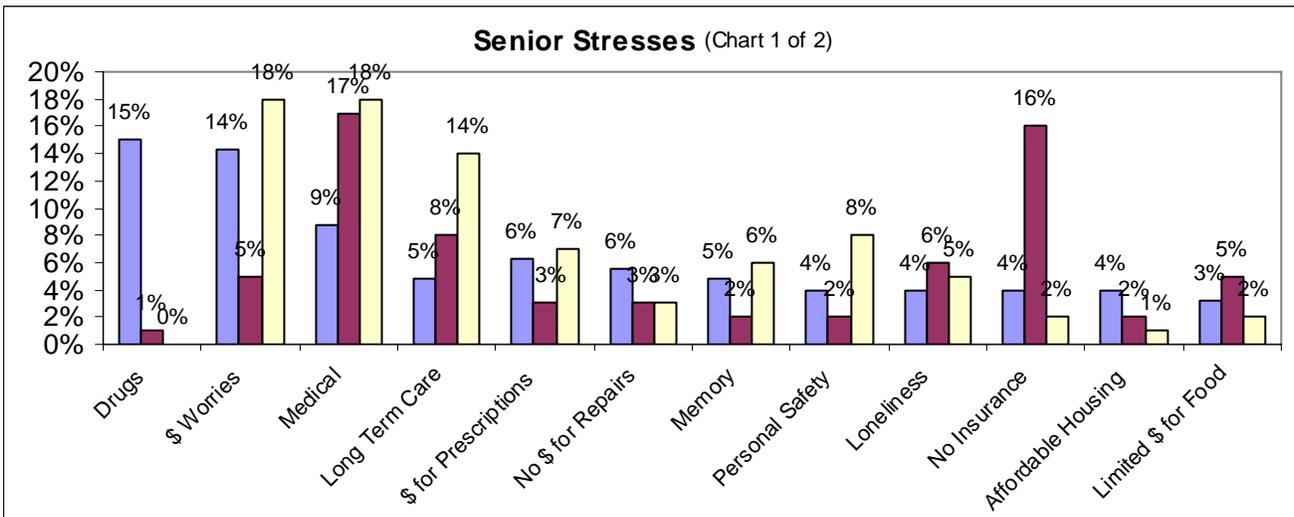
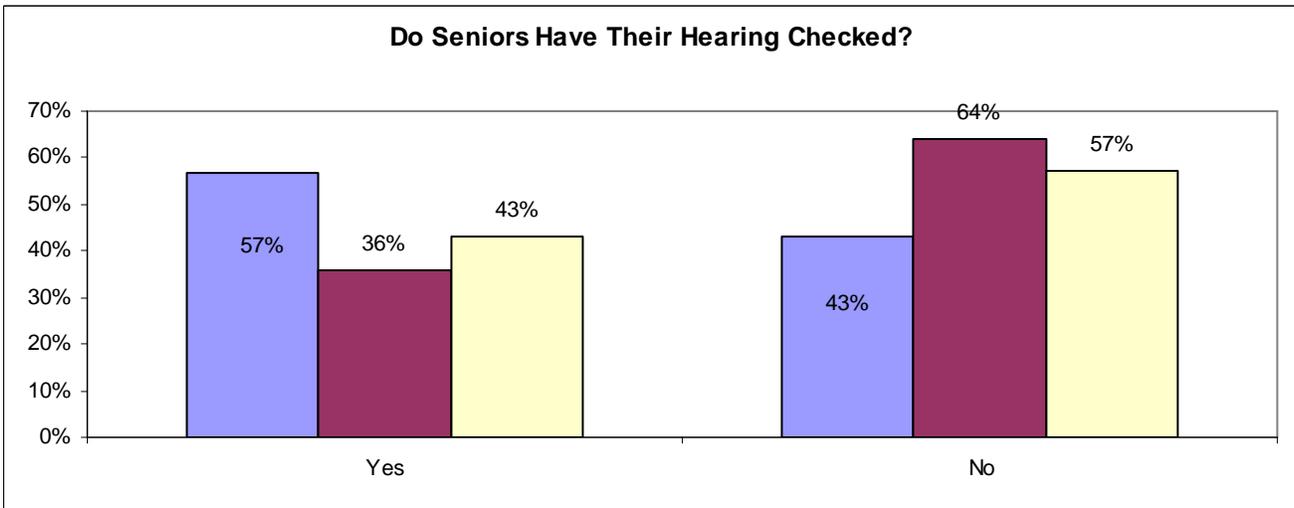
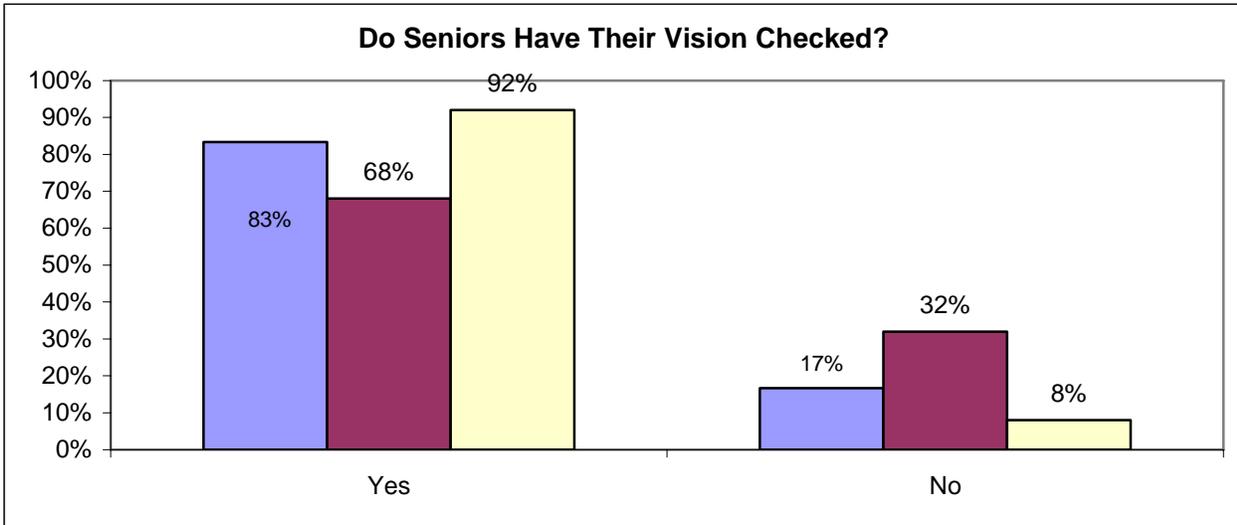


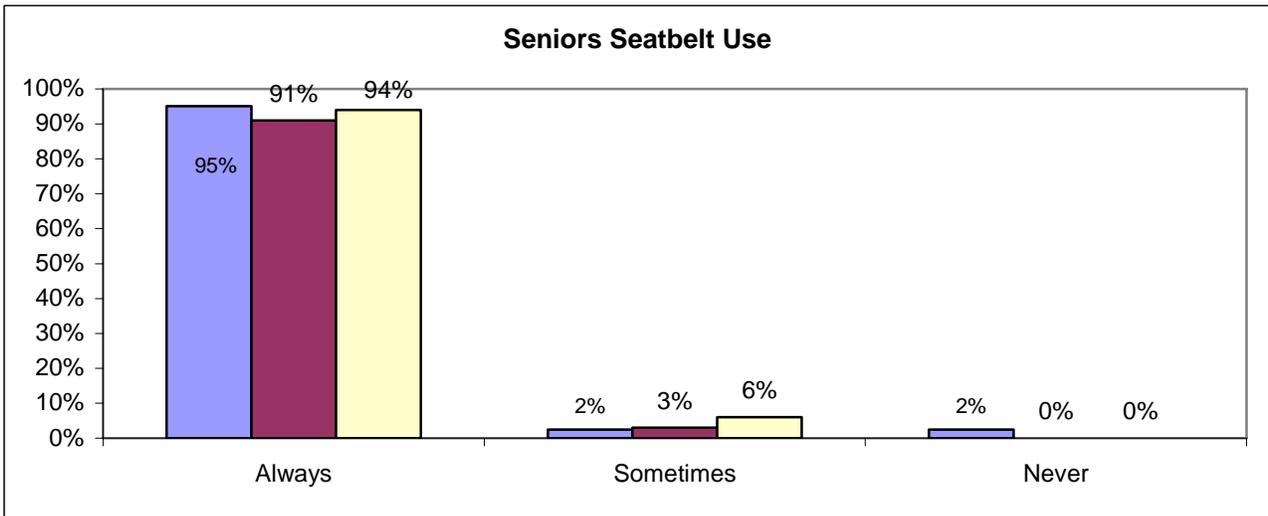
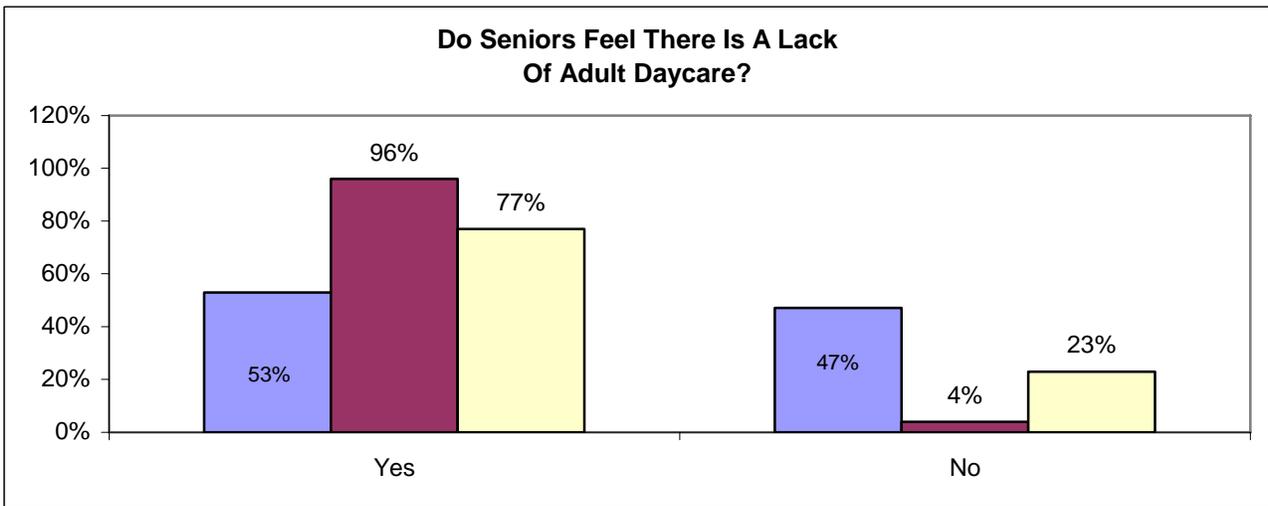
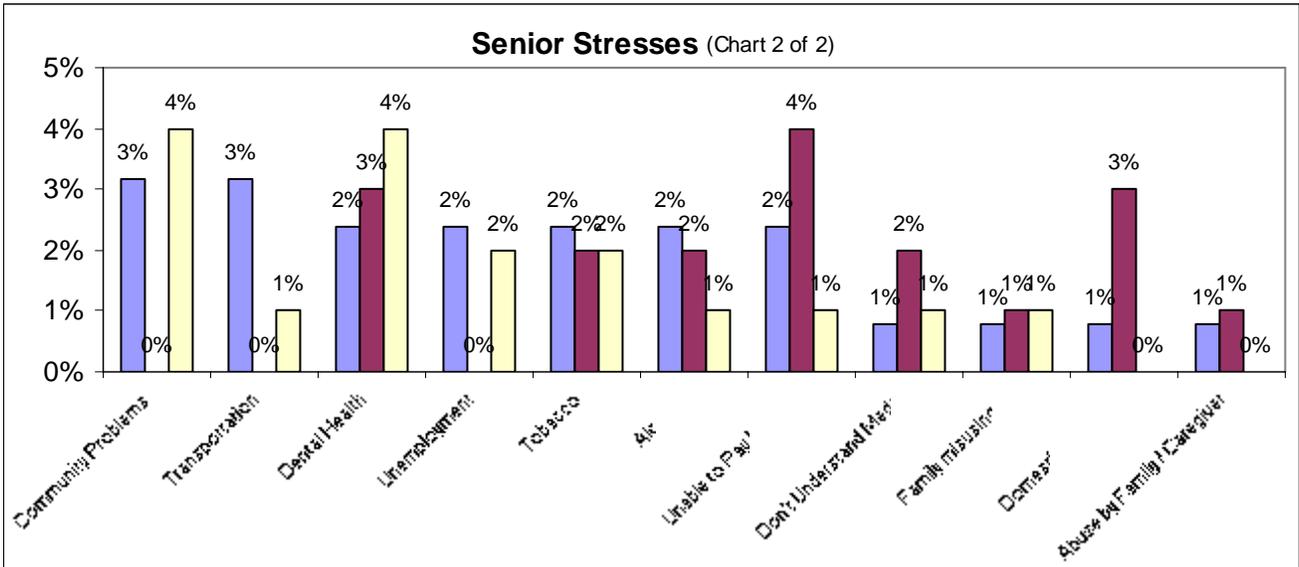
Do Seniors Feel There Are Enough Opportunities For Physical Activity Near Their Home?



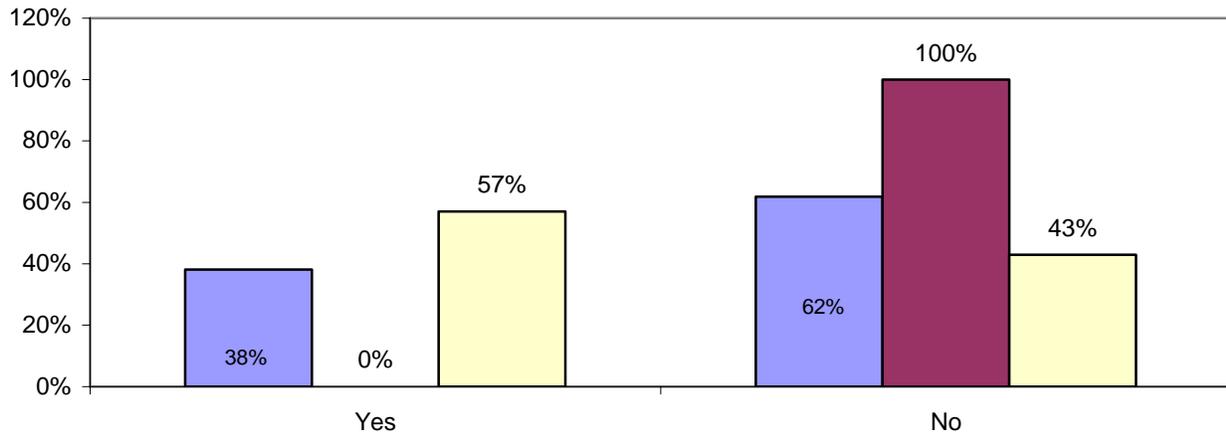
Senior Daily Serving of Fruits And Veggies



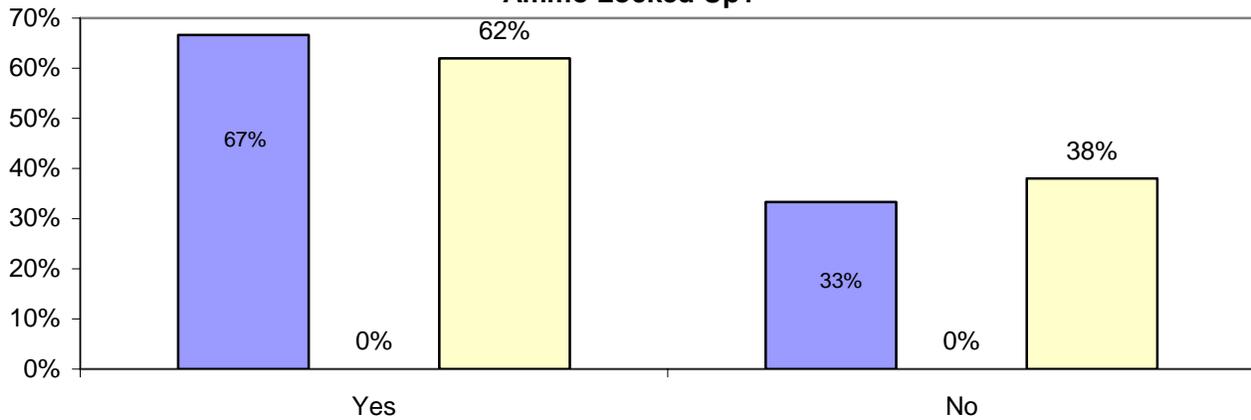




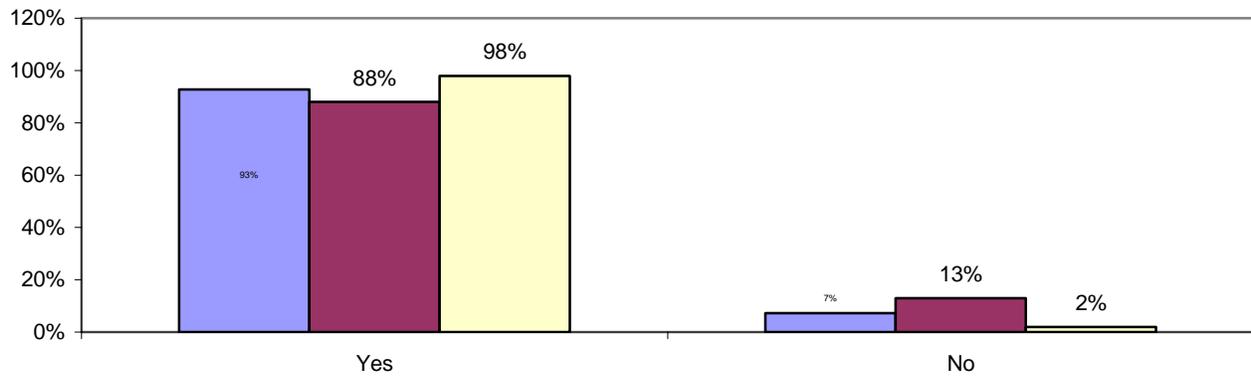
Do Seniors Have A Gun In Their Home?



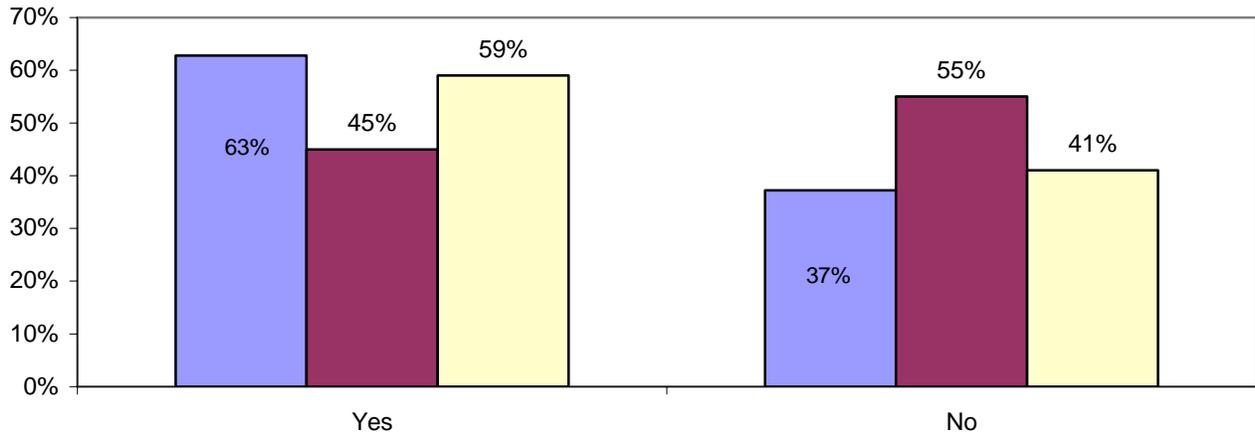
Do Seniors Keep Their Guns And Ammo Locked Up?



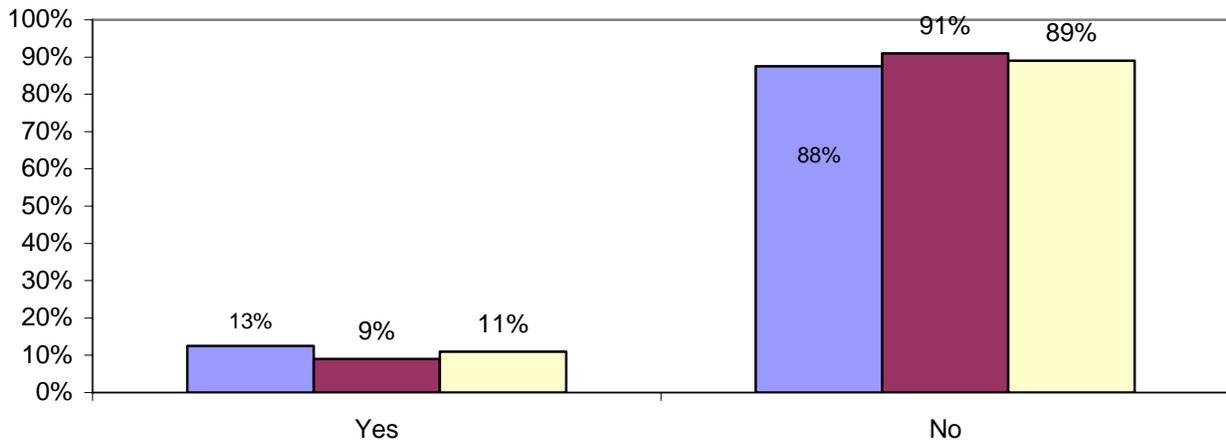
Do Seniors Have Smoke Detectors In Their Home?



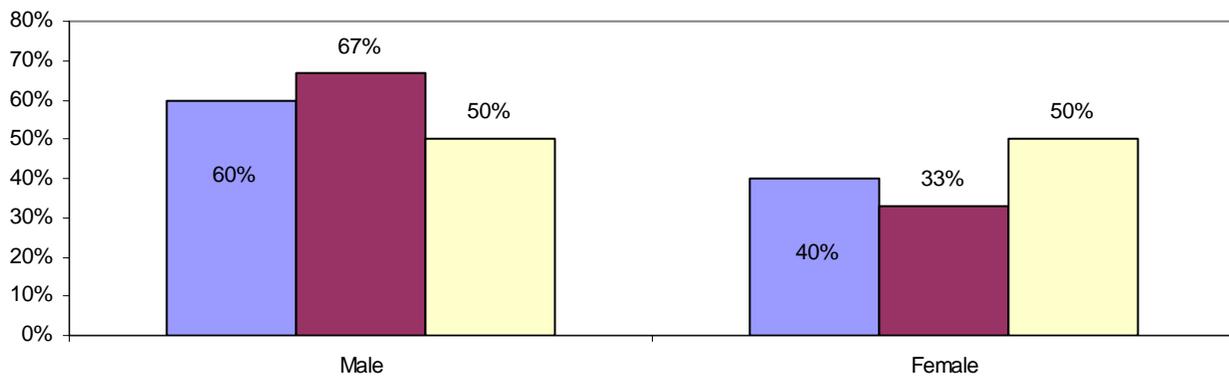
Do Seniors Have Carbon Monoxide Detectors In Their Home?



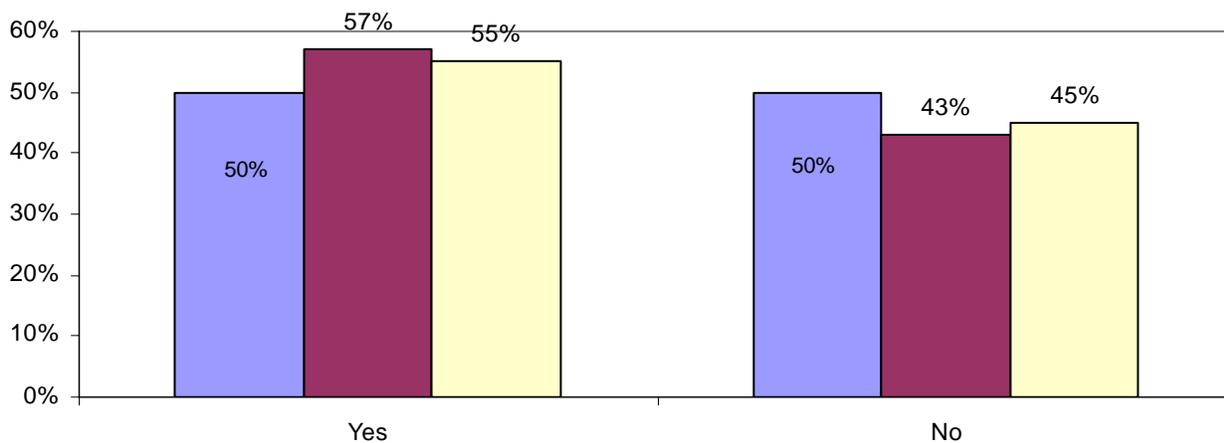
Seniors That Smoke Or Use Smokeless Tobacco



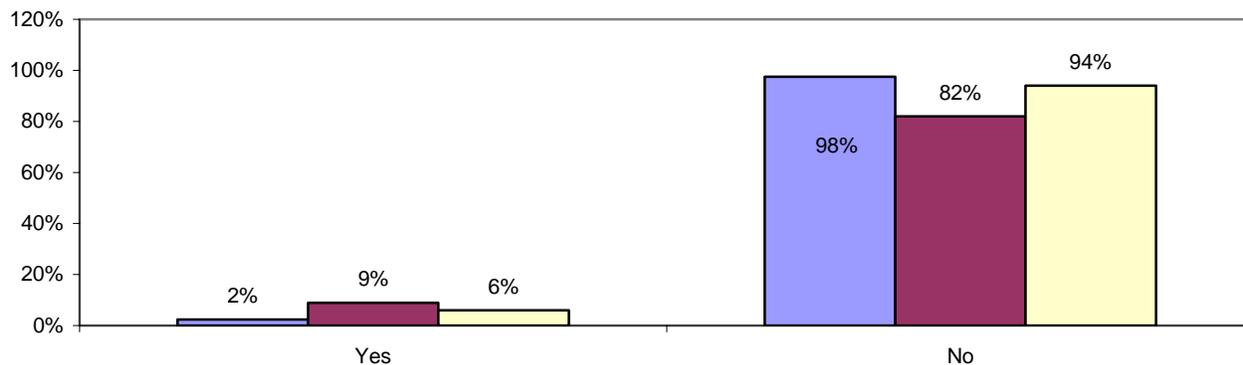
Seniors That Smoke By Gender



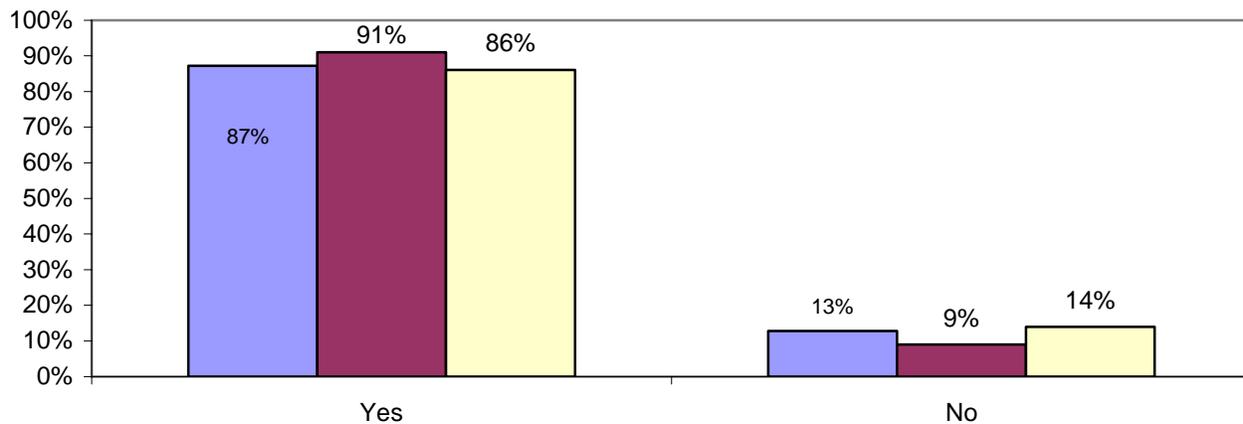
Would Seniors Like To Quit Smoking or Chewing?

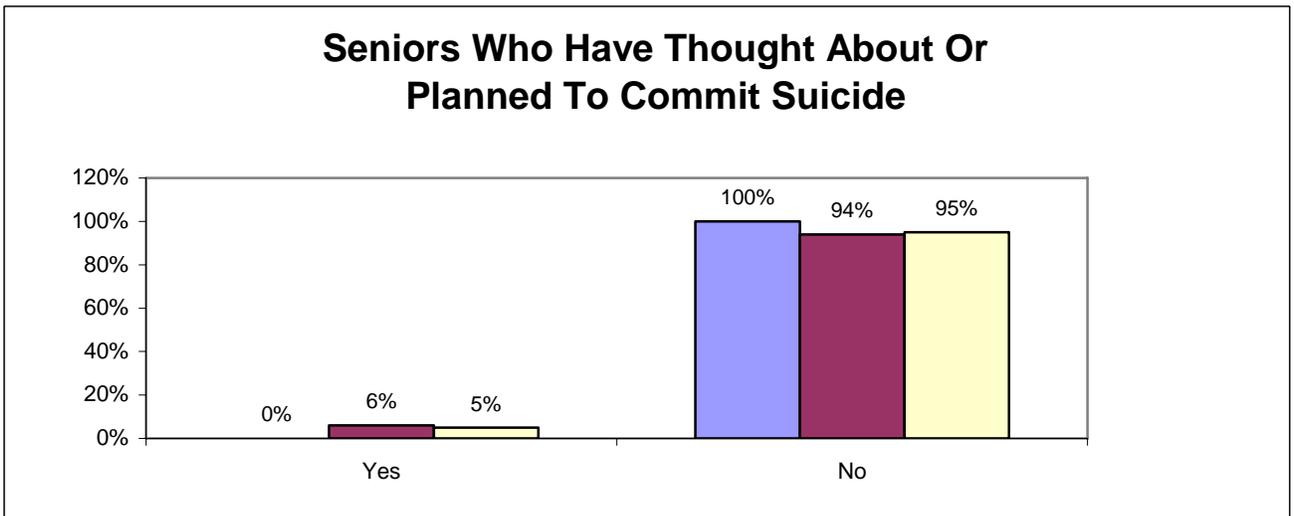
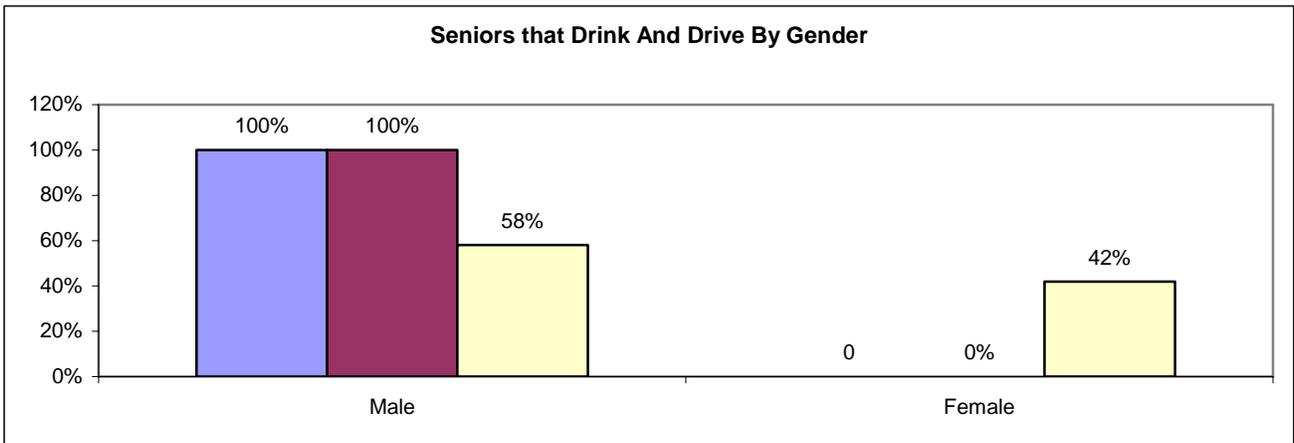
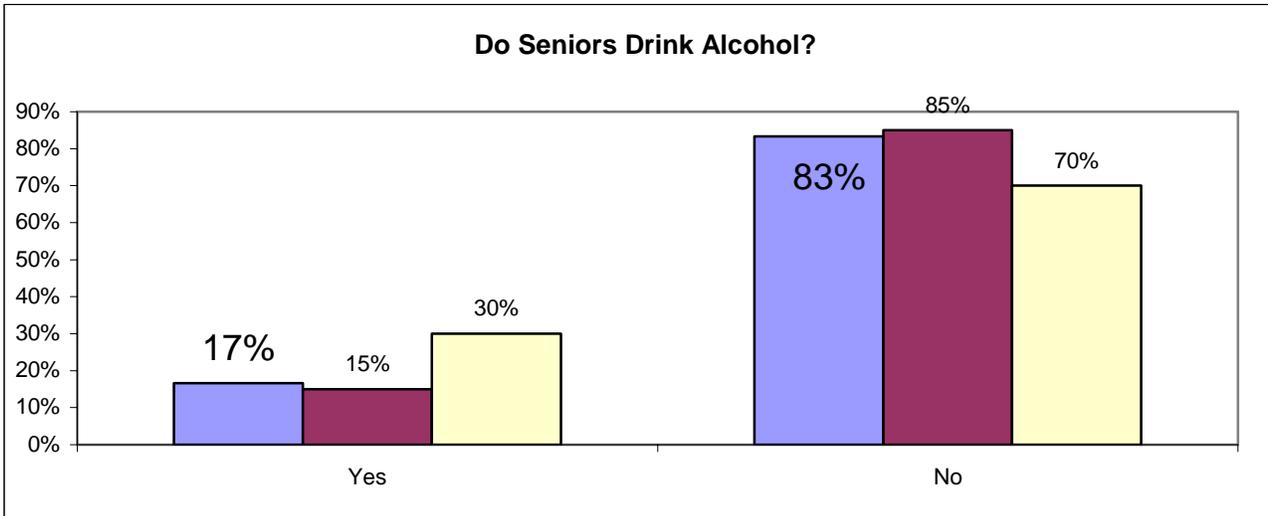


Do Seniors Drive After Drinking?

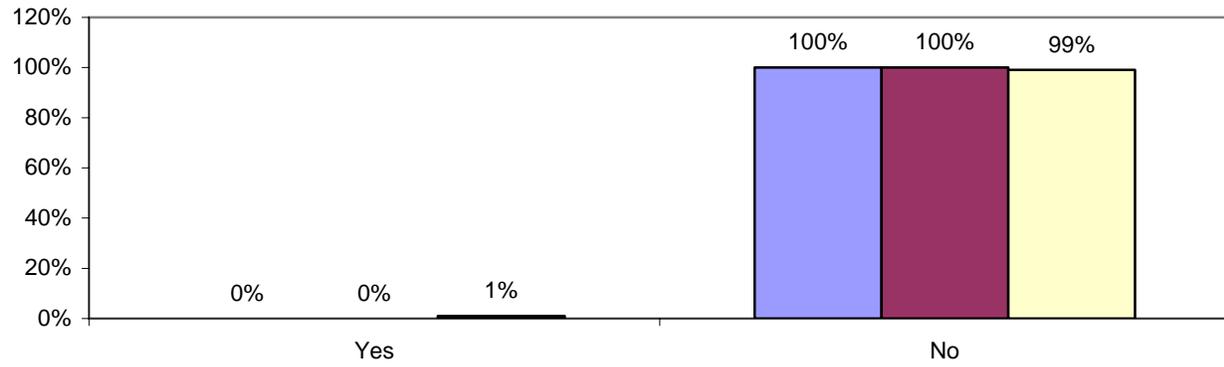


Would Seniors Like to See More Smoke Free Restaurants?

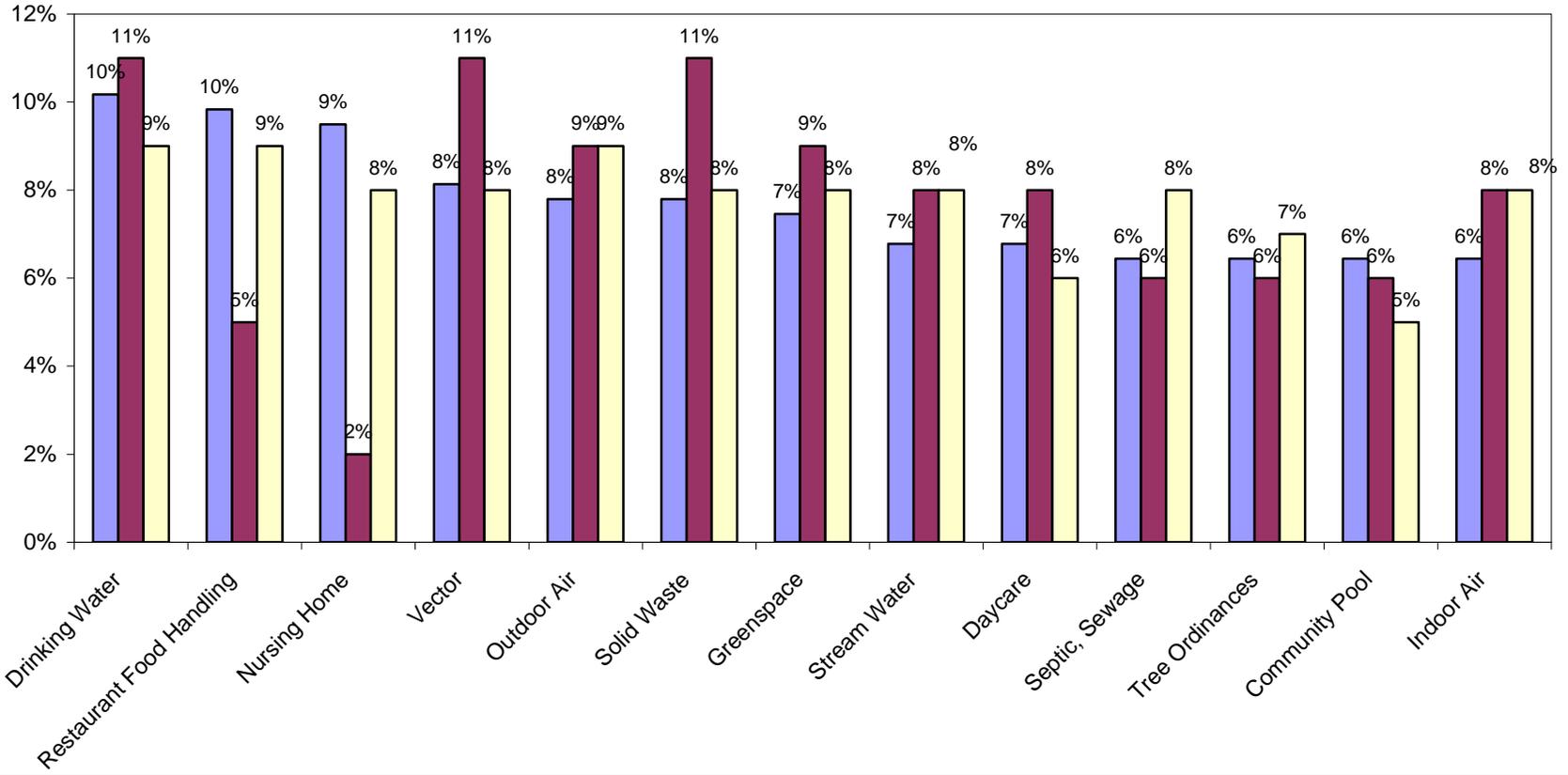




Seniors Who Have Attempted Suicide



Seniors Environmental Health Concerns



Appendix C Focus Group Summary

Summary of Focus Groups For Union County Health Department Health Assessment

Focus Groups Held

Mayors

School Health Advisory Council

Emergency Service Providers

Health Care Providers and Public Health Professionals

Environmental Professionals

Clergy and Mental Health Professionals

Senior Citizens

Teens

Hispanic Citizens

Opportunities for Fitness and Recreation

The overall opinion is that there are not enough opportunities for Fitness and Recreation in Union County. Below is a table summarizing the specific fitness and recreation concerns and issues. Note: The Teen Focus Group was not asked about recreation and fitness.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Very little <u>affordable</u> recreation opportunities for families and seniors. There is a disparity between the higher income citizens and the middle/lower income citizens.	X	X	X	X	X	X	X		X
Athletic Associations are available but too expensive for many. (Cost per participant ranges from \$100 to \$300 per season)	X	X	X	X					
More Recreation & Fitness opportunities are available on the West side of the County than on the East side		X	X	X	X				
Existing Recreation & Fitness opportunities are not easily accessible, especially for youth and seniors who do not have transportation.	X	X				X			X
Need more after school and summer activities. The lack of these opportunities contributes to problems with youth.		X	X						X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Need more <u>safe</u> places to walk. This includes more sidewalks, walking trails, connectivity between retail areas, lighted tracks, etc.	X	X	X	X	X	X	X	X	X
Need more <u>safe</u> places to ride bicycles. Current situation of bikers on “back roads” is not safe. Bikers on main roads cause accidents.	X	X	X	X					
Need more parks. Also, existing parks need to offer more diversified activities. Activity charges need to be free or at least affordable.	X	X		X	X	X			X
Need more affordable and accessible fitness opportunities specifically for Seniors.	X	X					X		
Schools and some parks and other places have fitness and recreation facilities but are limited in availability. (It is understood by the participants that this is because of possibilities of vandalism, injury, lawsuit, etc.)			X	X		X	X		

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Many municipalities and communities are reluctant (even adamant) about not providing public recreation facilities (skate parks, basketball courts, etc.) because of cost, vandalism, gangs, drug abuse, injury and other related negative things.	X	X	X						
Need more affordable and accessible swimming facilities. (Monroe Aquatic Center does not and cannot serve everyone. The only other swimming facility is at Wingate University)		X	X		X		X		X
There is a lack of awareness that fitness is important to overall physical and mental health.	X	X		X	X		X		X
There is not enough physical fitness activity or education in schools.	X			X	X				

The following obstacles for more Recreation and Fitness facilities and opportunities were mentioned in at least one of the Focus Group session:

- Cost/Funding
- Prioritization by citizens and therefore elected officials/decision makers
- Control issues and risk factors for use of existing facilities
- Lack of volunteers to execute and maintain
- Lack of planning
- Not good source of information about what does exist; i.e. a list of bike and walking trails.

The following plans for Recreation and Fitness facilities and opportunities were shared:

- Plan to expand Jesse Helms Park has been in existence since 2004, but little action has occurred; some ball fields are being added
- Stallings has a park plan
- Weddington, Marvin and Wesley Chapel are developing a transportation plan that will include a bike path
- A regional plan has been developed to connect communities with trails; it is called the “Thread Trail”
- The Help Crisis Center has created a vision to establish a recreation center – they have purchased the land
- More churches are offering recreational programs and opening them to non-members

Health Concern About Air Quality

The overall opinion was that although the air quality in the County is deteriorating it is not a major concern. The following was shared.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Charlotte/Mecklenburg pollution is adversely affecting Union County’s air quality. A regional approach is necessary.	X		X		X	X			
Traffic is the primary cause of air pollution.	X	X			X	X	X		
More public transportation would help improve air quality.	X					X			

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Number and severity of asthma and COPD victims is increasing, especially children, because of the deteriorating air quality.	X	X	X	X	X				X
Need more public awareness of importance of air quality to health and economic development. The Health Department provides alerts; environmental, emergency, school and government personnel use this; but many citizens are not aware of the alerts.					X	X	X		X
Building and industry contribute to air pollution.	X						X		X
Loss of trees and green space is contributing to and compounding air quality deterioration.		X				X			
Smell of chicken farms in some areas is very offensive.			X			X			

Health Concern About Stream & Drinking Water Quality and Access

This was considered a major issue by all the Focus Groups. Note: Teen Focus Group did not specifically address this issue.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Elected Officials can impact environmental issues more than any other group. Appropriate regulations must be enacted, implemented and enforced.	X						X		
Most of the problems with access to quality water are due to the high pace of growth.	X	X	X		X	X			
The public needs to be made more aware of things they can do to help improve and maintain water quality; i.e. care of wells, stripped vegetation, uncontrolled growth, irrigation wells, runoff or fertilizer and other pollutants.	X								X
Growth has adversely affected the water table, resulting in lack of water, lack of pressure and reduced quality. It has also overloaded the waste treatment infrastructure; causing a moratorium on new industry.	X	X	X	X	X	X			

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Water (especially wells) is causing health concerns and reportedly “making people sick”. One common factor is arsenic. Much of the water has a bad taste. Hispanic Focus Group compared the water taste and quality to Miami, San Diego and New Jersey.		X	X	X	X	X	X		X
Irrigation wells are causing some health problems because they are built too close to drinking wells and they do not have to meet health regulations.				X	X				
Lack of fluoridation in wells is contributing to low dental health. The cost to add fluoride to wells or test for natural occurrence is often prohibitive.			X						X
Local streams need to be better cared for. Many people with streams on their land are not aware they can and should keep them free of blocking debris.	X				X	X			

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
It is almost impossible for many long-time residents to get access to County water. The infrastructure to connect is too expensive and not subsidized by the County. Some new developments are able to get water because the developer pays for the infrastructure.		X	X		X				
The “Self Help Program” for access to County water is not adequate.	X		X						
Loss of trees and green space is contributing to water quality deterioration. The environment affects the water quality.					X	X	X		

The groups shared some obstacles to water quality:

- County does not have it’s own natural source of drinking water.
 - The drought
 - Historic and current lack of a comprehensive plan
 - Lack of understanding that all environmental factors are interrelated (air, water, trees, green space, etc.), no focus on conservation
 - Cost of infrastructure improvements and additions is prohibitive
- Note: The growth is almost all residential because the infrastructure will not support new industry. For every residential tax dollar received there is \$1.42 expense; for every industrial/business tax dollar received there is \$.25 expense.

- Regional water problems are out of Union County’s control

Health Concern About Preservation or Loss of Trees and Green Space

The loss of trees and green spaces was considered a concern by most of the Focus Groups, but opinions on how it is being handled and how it should be handled differ according to the groups’ direct involvement in or impact by this issue. Note: Teen Focus Group did not specifically address this issue.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Awareness of the need to preserve trees and green space is increasing, but understanding of its impact is still lacking.	X								
Most towns/villages have or are enacting ordinances to require preservation of trees and green space. There is a mixture of effectiveness and enforcement. Most towns/villages are working with the Forestry representative.	X		X		X	X			X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The perception is that the County is not doing anything to preserve trees and green space because it does not have a law specifically labeled “tree ordinance” and because people do not know what areas are incorporated which are not. (Explanation about County laws follows this table)		X		X	X				
Growth is one of the primary reasons trees and green spaces are disappearing.	X	X	X			X			X
Loss of trees and green space is contributing to air and water pollution.	X		X		X	X			
Additional green space would provide more opportunities for fitness and recreation (walking, biking, sports, etc.) and increase sense of community. This would decrease the need for formalized recreation and fitness facilities and activities.			X			X			
Majority of tree loss is due to farmers clearing land for agri-products.	X				X				
Loss of trees and green space is long term. It affects the future and it is extremely difficult to reclaim.	X				X	X			

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The Forestry Service offers trees for planting at low prices, but most people are not aware of this. Need a public citizen program for replanting.					X	X			X
Green space is fragmented and this reduces its impact on people and the environment.					X	X			

- The County has included preservation of trees and green space in its planning and development requirements, but it does not specifically have a tree ordinance:
 - Most of the County is acre zoning
 - Developers try to preserve trees because it increases the value of the lot, usually removal is done to accommodate infrastructure
 - There is concern that land rehabilitation and tree replacement is not done to compensate for removal
 - The County allows Cluster Development (less than acre lots) and requires the developer to plant trees on right-of-ways but not on lots
 - People sometimes criticize development that destroys green space and trees and assume it is in the County but may be within an incorporated area. The County is approximately 60% unincorporated.

Opinions About Access to Health Care

The overall opinion of access to Health Care in Union County was that it has improved greatly over the last several years, but it is still not what it needs to be. Note: The Teen Focus Group did not specifically address this issue.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Some people prefer to go to Charlotte for some or most of their Health Care.	X				X				
The East side of the County has no specialists and very little general/basic care.	X	X			X				
Specialists, whose primary practice is in Charlotte, are opening satellite offices in Union County and see patients a few days a week. Most of these satellites are in Monroe or on the West side of the County. This has helped, but the limited availability causes scheduling complications.	X		X	X	X	X			
There is still a lack of Pediatric Specialists, i.e.: Endocrinology, Neurology, Diabetes, Cardiac, Mental Health.		X		X					
There is a growing number of people who cannot afford health insurance and/or appropriate health care.	X	X	X	X		X			X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Lack of insurance results in an increasing number of people using the CMC – Union Emergency Department as their primary care provider. This causes long waits for people who need actual emergency care. Also, illegal aliens cannot obtain health insurance, but can receive care at the Emergency Department.	X	X	X	X	X	X			X
Lack of insurance resulting in people not getting preventive care and/or not getting early treatment. This results in crisis medical conditions and hospitalization; which is not only a bad situation for the patient, but likely results in cost for the hospitals and Tax Payers.	X	X	X	X		X			X
There is a lack of Mental Health Care in the County.	X	X	X	X	X	X		X	X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The process for committing a person to the State Mental Health system is cumbersome and time-consuming; it ties up Law Enforcement and Emergency Department personnel for 24, 48, even 78 hours.	X		X			X			
The Health Department facility and Staff are almost at capacity.	X		X	X					
There are no providers in Union County that are part of the US Military network.	<i>Although this was only mentioned in one group, it is likely a problem for a large number of people because there is a significant number of Veterans in Union County. It is happenstance that only one group had a retired Veteran participating.</i>								
The Immigrant population has drastically increased the demand on the Health Department. (Example: There is a large number of pregnant women that get their only care from the Health Department, they wait until the last trimester because they can then qualify for Medicaid under intervention coverage.)		X							X
There is a lack of dermatologists in the County.					X				

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The cost of Dental Care is prohibitive to many people even to some who have dental insurance coverage. There does not seem to be an understanding by most people that improper dental care affects overall health.	X	X		X	X	X			X
There is a lack of Oral Surgeons in the County.		X							
A free and/or subsidized Health Care Clinic is desperately needed in the County. Comments on the current situation and plans to address are provided following this table.		X		X					X
There is a severe lack of Substance Abuse Treatment Services of all types for all ages.		X	X			X			X
The competition between CMC-Union and Presbyterian Health System causes problems for patients; i.e. delays in care, loss of choice of provider, no transfer of health/treatment information, cost of seeing 2 providers for same service because they had to start over.	X	X	X	X					

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
No Elder Care or Alzheimer Specialists, not even at Nursing Homes/Assisted Living facilities.		X				X	X		
Although there is public, affordable transportation it is not adequate to handle the needs of Seniors and people with special needs.	X	X	X	X		X	XX		
Need more awareness and education about the need for preventative health and dental care.	X	X		X		X			X
There is a lack of cardiac intervention care in the County.				X					
People relocating here from Urban areas expect the same medical services as they had in their previous area.	X						X		
The new Medicare prescription is complicated and difficult for Seniors to deal with.				X			X		

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The complexity of the health care system, the competition between hospitals, HIPPA and other factors cause the need of a “patient advocate” for many people. People who are very ill, Seniors and Immigrants are not able to obtain the best, most efficient care because of their situation/circumstances.	X	X		X		X	X		X

Summary of Comments on Free Clinic

- There is no Free or reduced rate Clinic in Union County
- Many people use the Emergency Department for all health care services because they know they will receive service regardless of their ability to pay
- The Immigration population has dramatically increased the use of the Emergency Department for primary care
- More emergency facilities are being built; several participants suggested that some of that money be redirected to a Free/Reduced Rate Clinic
- There is a Free Clinic in Matthews
 - Over 35% of the patients are Union County citizens
 - More Union County people would use this clinic if they had transportation
 - Clinic hours are limited
- Presbyterian Hospital in Matthews is going to bring a bus to Union County once a month and transport persons 0-17 years of age to Matthews for a free clinic
- The Affordable Health Care Committee is having discussions to establish a model for free health care in Union County. Factors about the committee:
 - CMC-Union and Presbyterian Hospital are participating in the committee

- The committee is trying to determine if the best model is an actual facility or a network of providers using existing providers and facilities
- Physicians must be involved in the discussions
- Community Health Services is doing research for the committee. According to the needs assessment – access to affordable health care is the number one unmet need in Union County.
- If a Free/Reduced Rate Clinic is established in Union County it will take time to retrain people to use it instead of the Emergency Department at CMC-Union
- A Free/Reduced Rate Clinic could off load the Health Department for some services, particularly maternity patients who wait until the last trimester to seek care so that they can get Medicare coverage under the Intervention rule. These patients could get care earlier and reduce risks and associated Tax Payer costs caused by not getting early care
- Free Dental Care is also needed
- There are a number of individuals and families, especially Seniors and lower income, that would be put into bankruptcy with one major medical situation

Comments on Mental Health and Substance Abuse care

- Mental Health care is not adequate
 - No psychiatric hospital in the County (there is “talk” about a facility)
 - Day Mark and hospital Emergency Department are overrun
 - Assessment process is a “disaster”
 - Some people do not get treatment because they are not willing to seek it and family is reluctant to have them committed
 - Need increases as population increases
 - The only service for youth is offered by Day Mark and it is very limited
 - There is no preventive care for mental health
 - Existing available mental health care cannot adequately handle current level of mental health crises and certainly cannot address those with mental health issues but not yet in crisis therefore they end up in crisis. The problem is self-perpetuating.
 - Need is dramatically increasing
 - Huge lack of psychiatrists
 - Pastors are overworked trying to provide counseling to people who actually need mental health care
 - National average of money spent by states on mental health care per person is \$95 –average in North Carolina is \$16 per person

- Some mental health issues are cultural and need to be better addressed as such
 - A recent change in funding methods eliminates free mental health treatment for victims of sexual abuse and domestic violence. The remaining options cause people not to get enough, or in some cases any, treatment
 - The existing mobile crisis line handled by Day Mark is effective but not adequate to handle the growing problems
 - There is no grief counseling in the County. A new organization is being developed to provide the service – Journey to Hope. Grief is not just loss from death but any loss or sorrow-inducing situation. Grief is often the cause of a mental health crisis
 - Typically people who need Mental Health Care do not have insurance
- Substance abuse treatment and awareness needs to be better addressed
 - Medicaid does not adequately cover
 - Private treatment is expensive
 - If do not have insurance often get no treatment because it's too expensive
 - If someone ends up in the State system because they cannot afford private treatment, they only get 2 weeks treatment which is usually not enough
 - There is a lack of affordable residential treatment
 - No women's halfway house in the County, there are 2 for men (Friendship & Restoration House)
 - People don't want to leave the County for treatment
 - No substance abuse treatment for youth. Day Mark is trying to develop a program.
 - Need more drug abuse awareness
 - Lack of treatment means more people revert or never get help
 - State system has a waiting list, typical wait is 6 weeks and person must stay sober during that time, but they need help to stay sober. Often results in no help.

Opinions About Cost and Quality of Health Care

The overall opinions and comments of the Focus Groups was that the Quality of Health Care in the County has improved greatly, but that increasing cost and decreasing insurance coverage have put care out of the reach of and growing number of people.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Rising cost of Health Care and decreasing insurance coverage are causing more people not to get preventive or early care/treatment resulting in more emergency situations and higher cost for Tax Payers.	X	X	X	X	X	X	X		X
The policy of the State to pass on most Medicaid cost to the Counties causes Union County's Medicaid cost to be high because of the large number of people on Medicaid. The large Immigration population has intensified this. The expectation is that this situation will continue and likely increase.			X	X		X			
Rising cost of Health Care and Health Insurance are causing more people to use the Health Department or CMC-Union Emergency Department as their primary provider.	X	X		X		X			X
Cost and Time for Travel outside the County to Specialists causes some people not to get proper care.		X	X		X	X	X		

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
A Free/Reduced Rate Clinic is desperately needed. (Additional comments on this are included in the previous section)			X	X					X
Health Care quality overall is being sacrificed for revenue. Many felt this was due to the shift of practices from Physician Owned to large Health Care System owned.	X		X	X	X		X		
Many people make choices of Health Care facilities or providers based on the “customer service” and/or perception of treatment they or their family/friends receive.			X	X	X	X	X		
Some people forgo Health Care treatment because they cannot afford it, but do not want to use Medicaid (pride) or just barely do not qualify.				X		X			
The quality of care received is directly related to the patient’s ability to pay – self or insurance.			X	X					X
There is an Affordable Health Care Committee and affordable health care has been an important issue for many years, but not much has actually been done to address it.			X	X	X				

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
The competition between CMC-Union and Presbyterian Hospital often translates to the community as lack of quality and/or concern for patients.	X	X	X	X		X			
Free Screenings offered by such organizations as the Red Cross are helpful and should be done more.	X			X			X		

Other Existing Health Care Concerns

Input for this category varied by Focus Group. Comments on this category are incorporated in the two previous sections where appropriate. This section only includes input that did not fit elsewhere.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Need more safety training for young people and Seniors.	X						X		

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
A major issue is Obesity and the related health conditions: cardiac, diabetes, juvenile diabetes. The resulting conditions are more pronounced in the African/American and Hispanic populations. Contributing factors: Lack of awareness, lack of accessible/affordable fitness opportunities (particularly walking opportunities), culture.	X	X		X	X			X	
Poor nutrition, especially for children and pregnant women		X		X	X			X	
Rise in Mental Health issues	X								X
Illegal drug and alcohol abuse is rising in Teens.		X	X	X	X			X	
Increased abuse of over-the-counter drugs by Teens			X	X				X	
Alcoholism, especially as associated with culture acceptance and hopelessness of economic condition					X				X
Gangs and associated dangers – drugs, violence, vandalism, classroom disturbance, mental stress on youth due to fear and pressure.		X	X	X	X				X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Dangerous road situations caused by growth; i.e.: roads that were built for access to one or two houses are now serving one or more developments with high density of homes resulting in vehicle accidents, vehicle vs bicycle accidents, hazards or road deterioration.			X	X					
Density of houses in developments increases fire risk and loss of water pressure			X		X				
Preparation for catastrophic situation: pandemic, HazMat, train derailment of cars with toxic or nuclear material.		X	X	X					
Low standard of construction on new homes creates fire and safety hazard. Need to educate individual and builders on benefits of residential sprinkler systems.			X						
Vehicle accidents caused by young drivers because: driving under the influence, disregard age related restrictions, don't obey laws, parents don't supervise appropriately.			X						
Lack of outreach, training and coordination by care providers.		X				X	X		X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Vehicle accidents caused by Immigration population because: lack of ability to understand the laws due to language difference, disregard rules because of culture difference, drinking and driving.					X				X
Domestic Violence incident report increase, partially due to: recent legislation that provides stronger laws for eviction and prosecution, culture differences of immigration population. Victims still do not necessarily take advantage of assistance		X	X	X	X	X			X
Need more treatment for sexual abuse and domestic violence offenders. Statistics show that young offenders can be rehabilitated						X			X
Teen Pregnancy			X		X			X	
Sexual abuse of children				X		X			
Prostitution arrests are increasing					X				
Health complications of Seniors caused by lack of heat.						X			
Growing need for adult day care, extended care, assisted living, nursing homes and long-term care.							X		
In-home care for Parkinson's Disease victims							X		
Respite care for Care Givers							X		
General Safety							X		X

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Lack of sleep, fatigue								X	
Sexual activity, multiple partners, unprotected sex in Teens								X	
STDs in Teens								XX	
Depression, suicide								X	X
Grade, sports performance pressure								X	

Emerging Health Care Concerns

Input for this category varied by Focus Group. This section only includes input that did not fit elsewhere.

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Food Safety, problems caused by hormones in meat and pesticides on produce	X			X					
Cost of gas depleting available monies for Health Care	X								
Lack of affordable Housing is a stressor for families and causes other problems		X							
Homelessness		X							

ISSUE/CONCERN/OPINION	Mayors	School Health Advisory	Emergency Service Providers	Health Care/Public Health	Environmental Professionals	Clergy & Mental Health	Senior Citizens	Teens	Hispanic Citizens
Increase in TB and other vaccine preventable and communicable diseases. Concern that immigration population is bringing these diseases to the area.			X						
Increase in MRSA treatment; may be due to increased awareness, not increase incidence			X	X				X	
Overload of Health Department and Emergency Department			X						
Increase in Diabetes			X						
Increasing number of young smokers				X				X	
Need more education and awareness for Latino community of laws, services and other factors affecting health			X						X

Appendix D – USDA Project

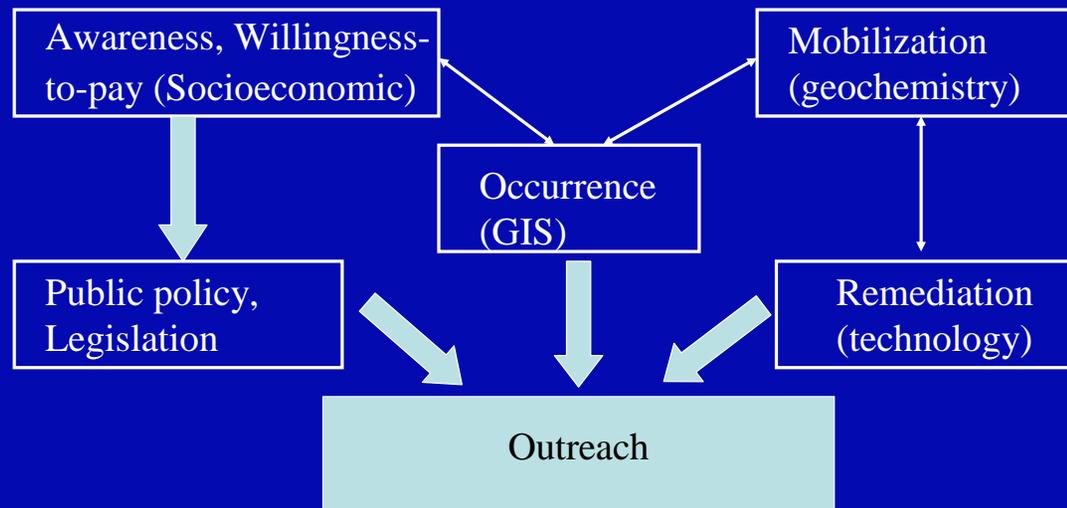
*What's in Your Water?
Groundwater Contamination of Private
Wells in North Carolina*



An integrative investigation of the sources and effects of groundwater contamination for local communities and homeowners in North Carolina

- Avner Vengosh, Erika Weinthal, Lori Snyder Benneer, Emily Klein, and Marie Lynn Miranda: Nicholas School of Environment and Earth Sciences, *Duke University*
- Mark Wiesner: Pratt School of Engineering, *Duke University*
- Hope Taylor-Guevara: *Clean Water for North Carolina*
- Ted Campbell , Rick Bolich, *North Carolina Dept. of Environment and Natural Resources*, Division of Water Quality - Groundwater Section

An integrative investigation of the sources and effects of groundwater contamination for local communities and homeowners in North Carolina

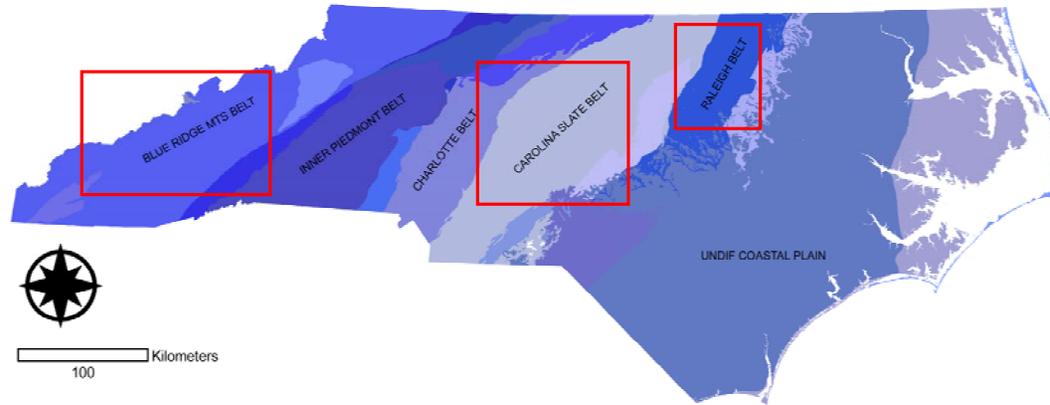


USDA project 2006-03956

Statement of the Problem

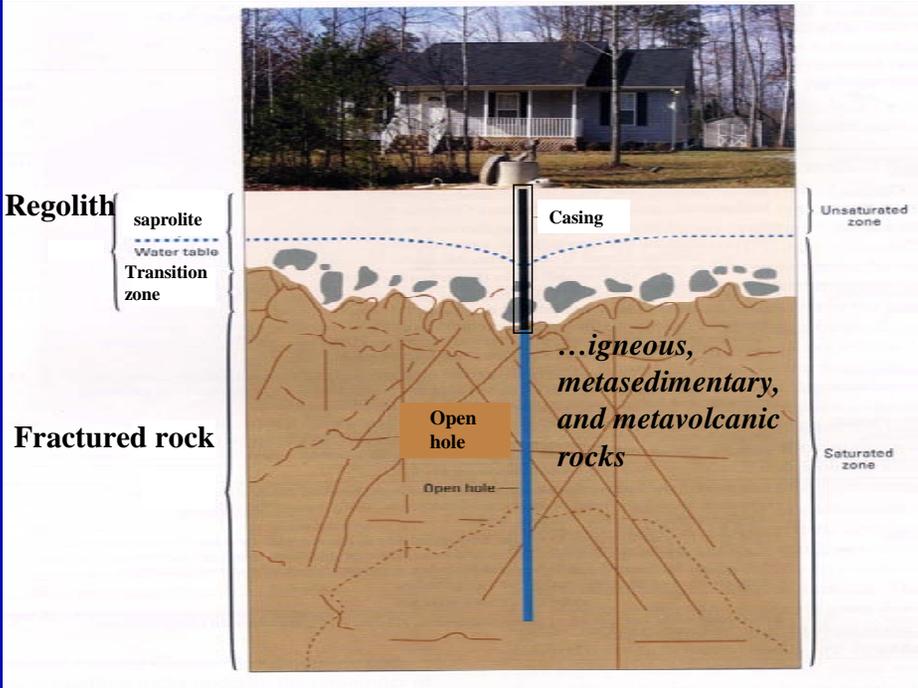
- More than two million residents in North Carolina use groundwater as a sole source for drinking water. Increase in population is associated with drilling new wells (5,000 to 6,000 per year).
- In several areas, the levels of natural contaminants, radon, arsenic, and radium exceed drinking water regulations.
- Wells of private homeowners are not regulated.

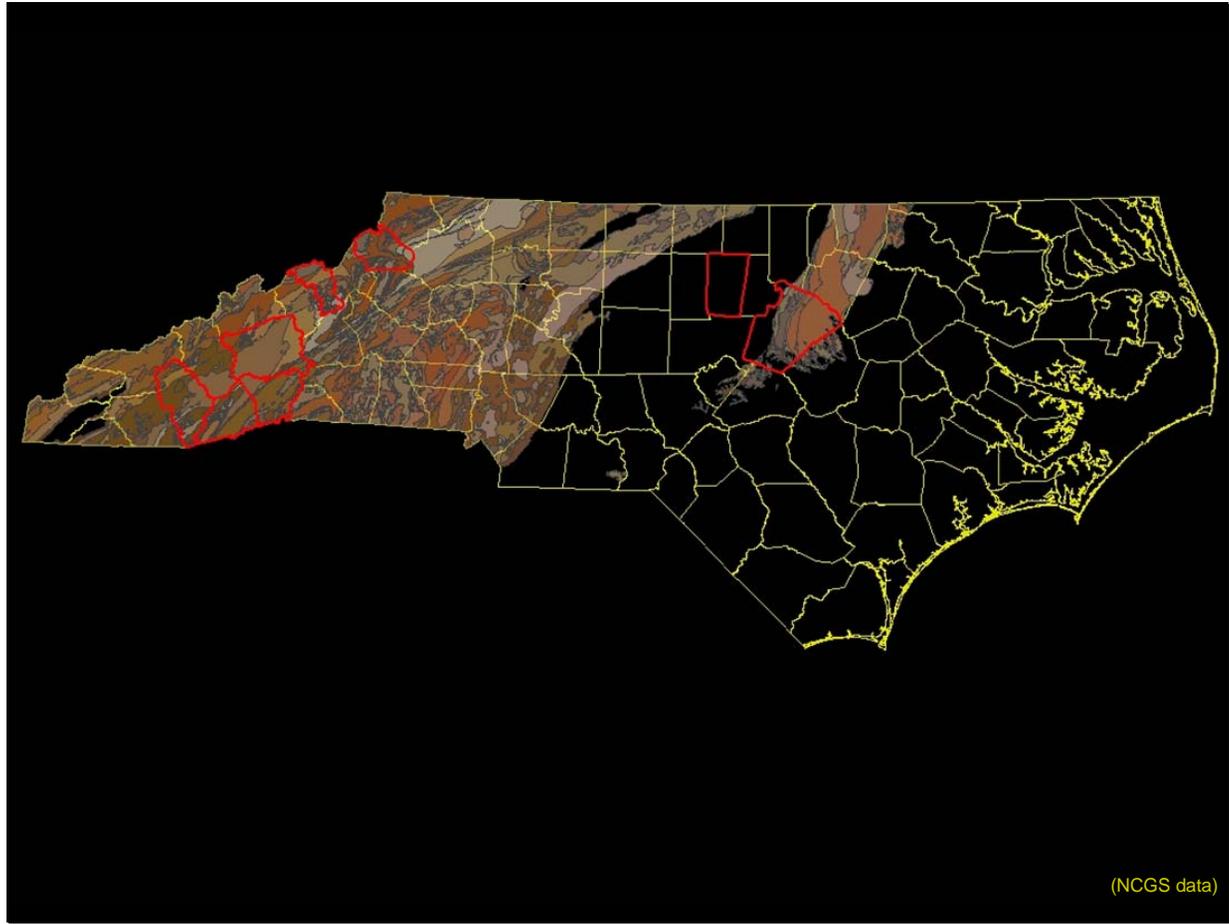
Major hydrogeological units of North Carolina

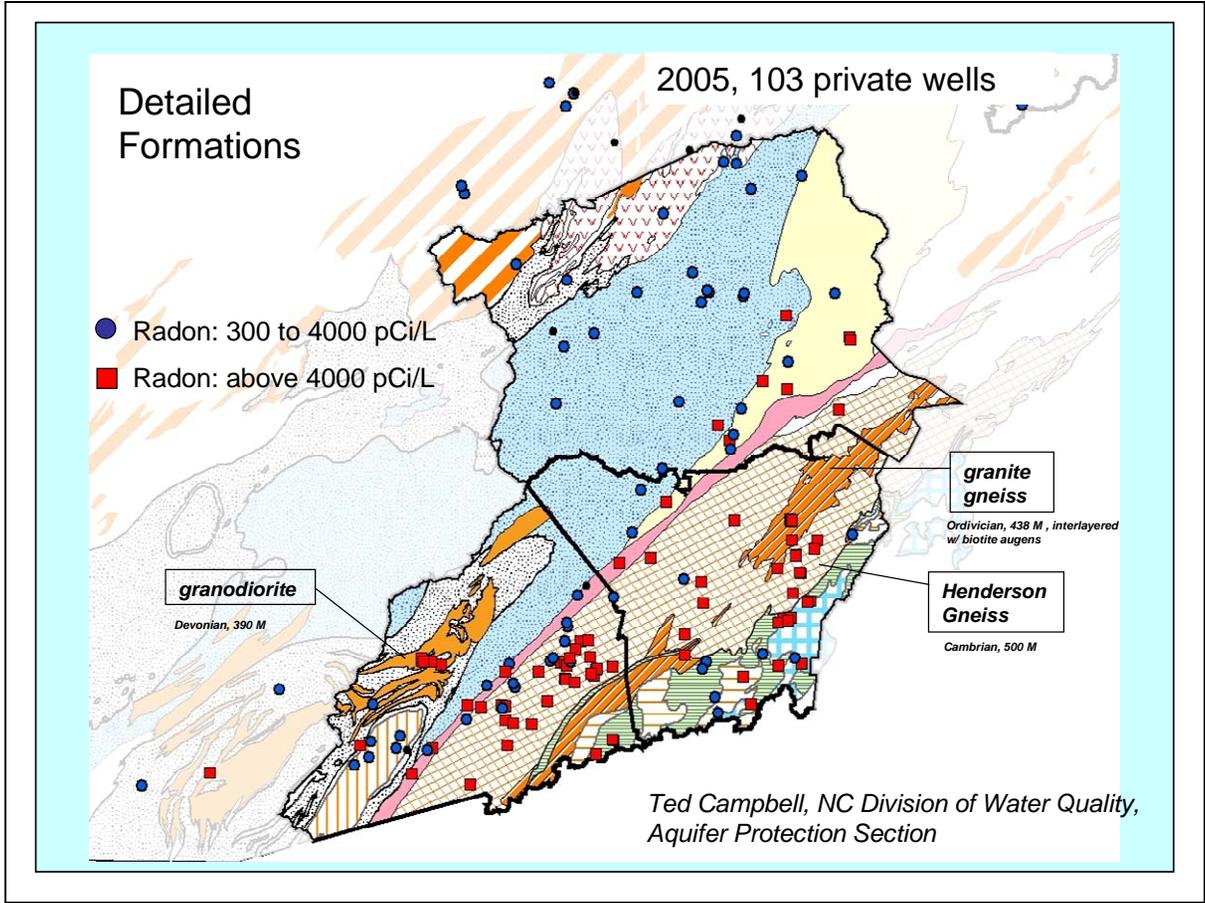


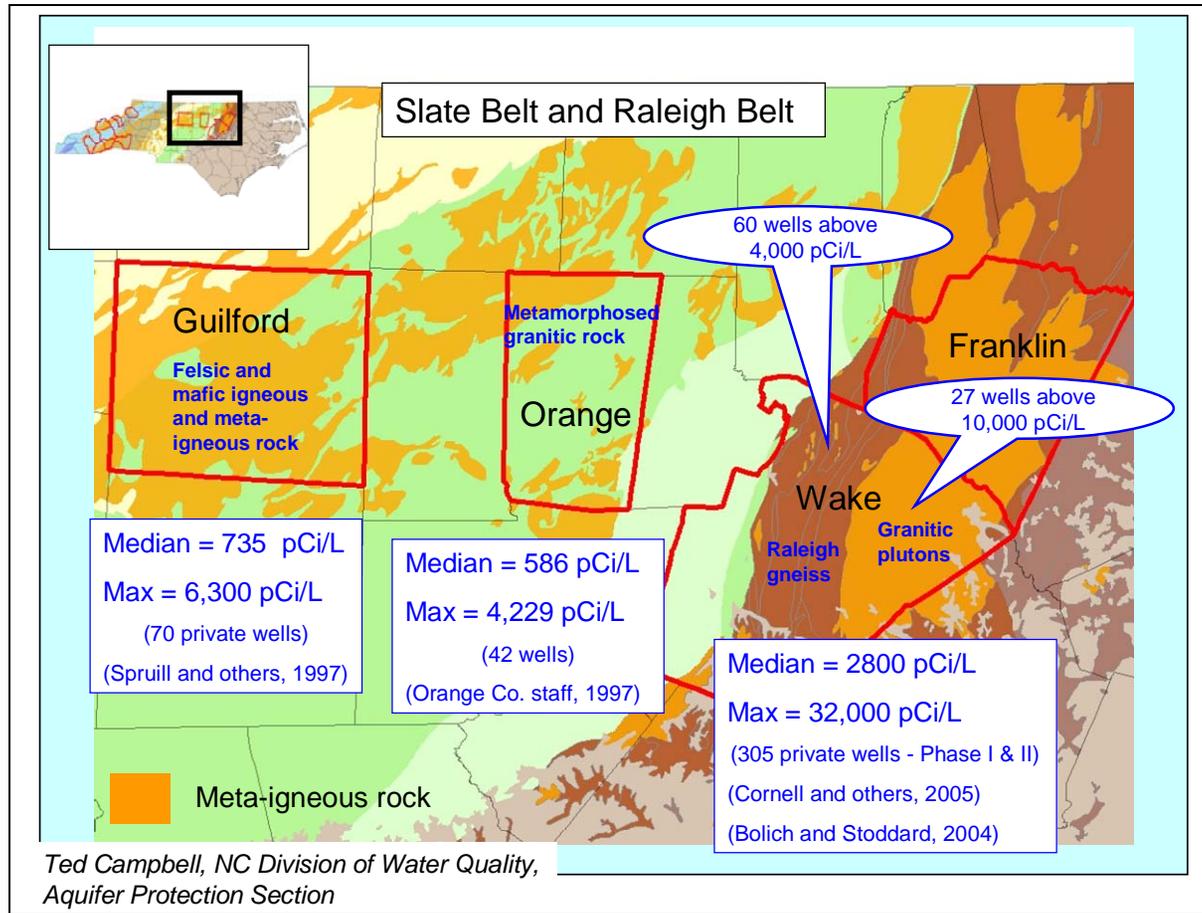
Hot spots

Typical private well and geology in the Piedmont, NC

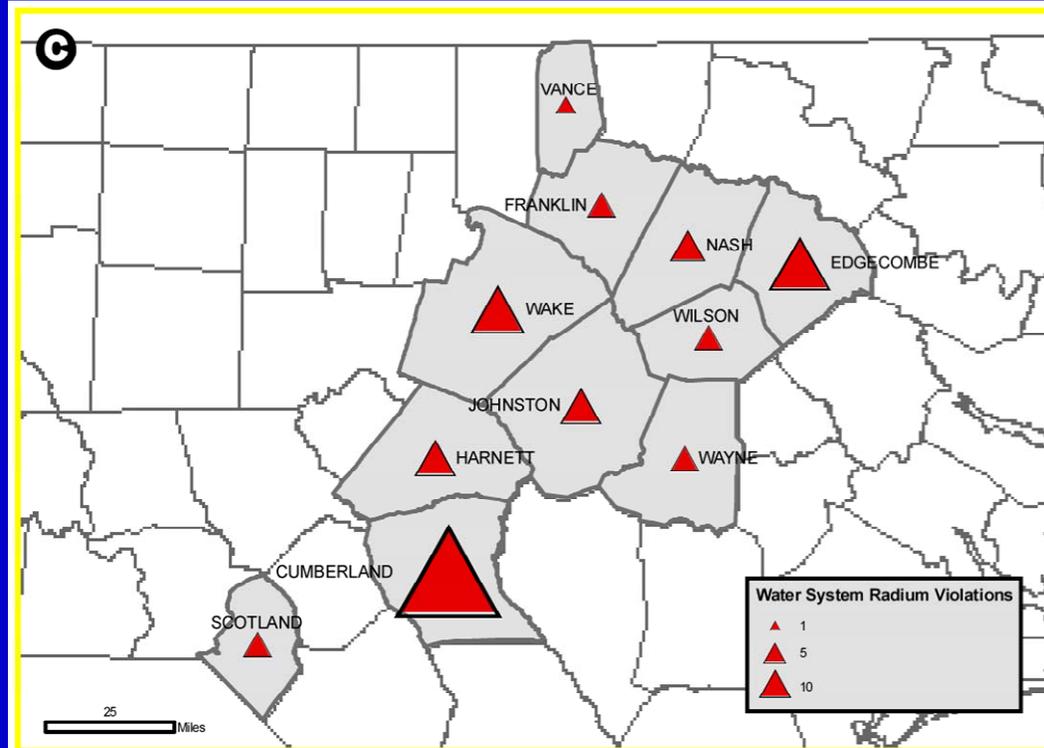








Radium violations (>5 pCi/L) in public water systems



Modified after Menetrez and Watson, 1983. Natural radioactivity in North Carolina groundwater supplies. University of North Carolina, Water Resources Research Institution, Report 208, 30p.

Distribution of radium in groundwater in Wake County

Combined Radium pCi/L

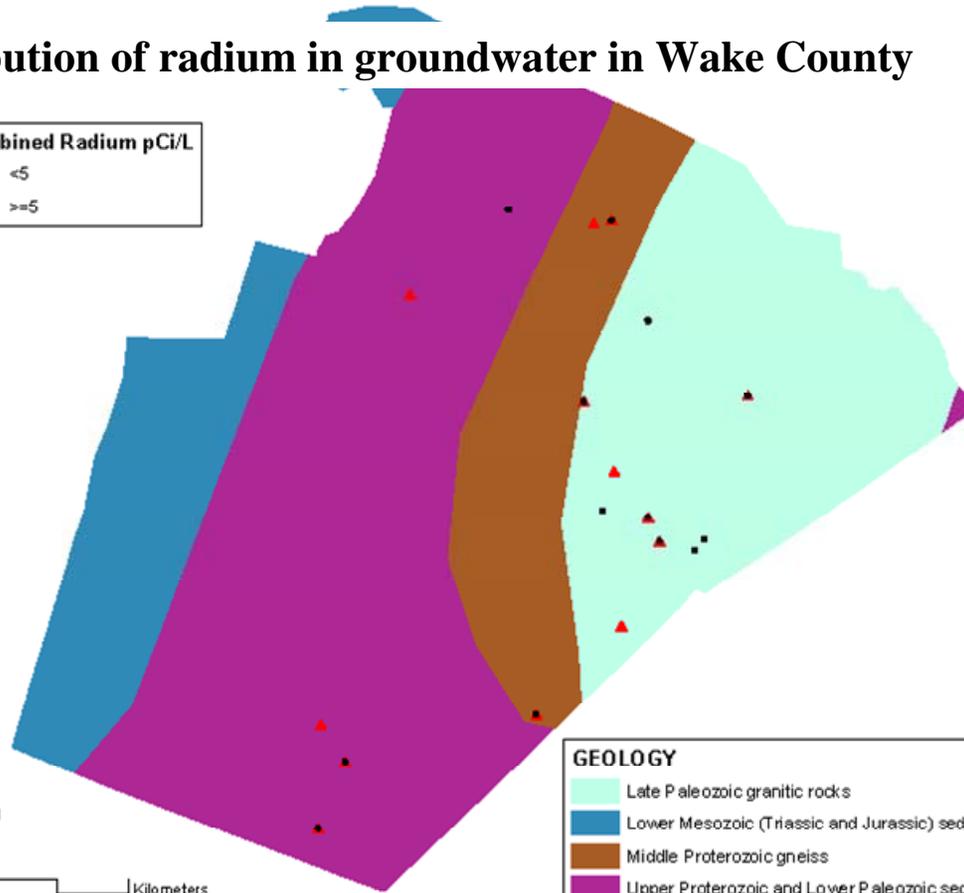
- <5
- ▲ >=5

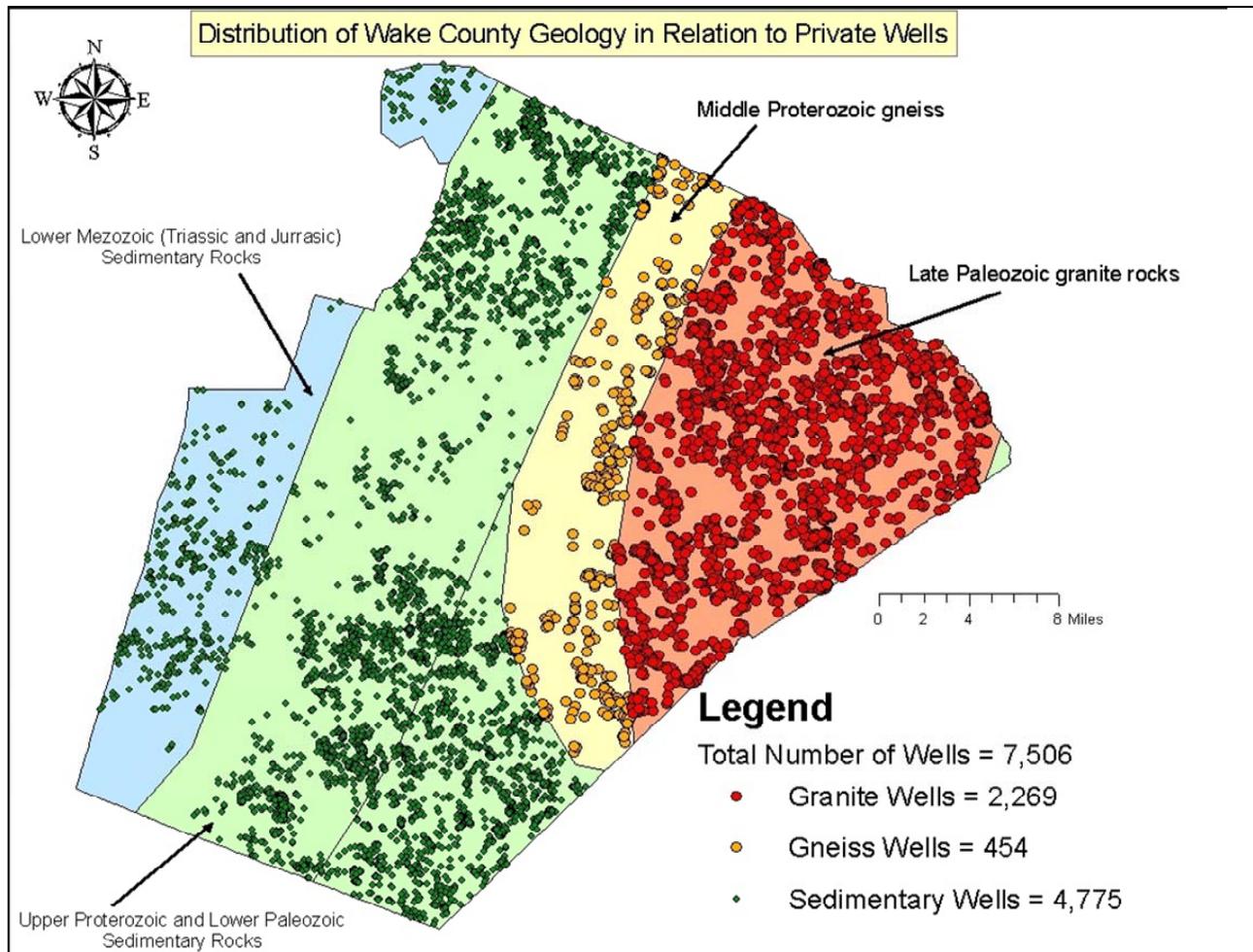


0 2.5 5 10 15 Kilometers

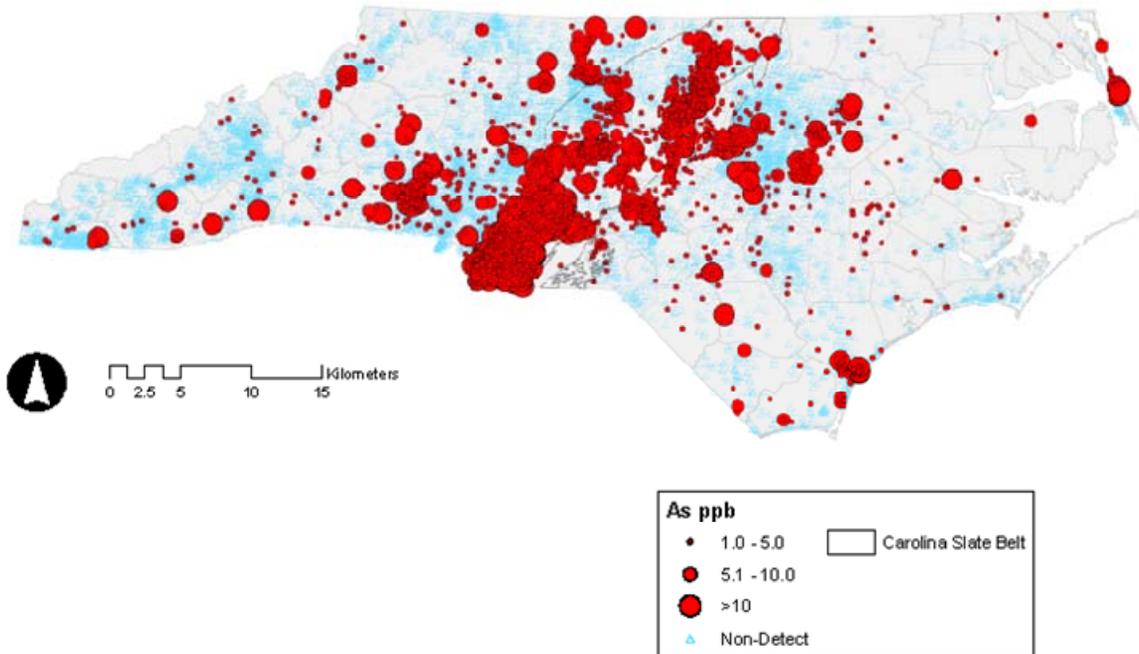
GEOLOGY

- Late Paleozoic granitic rocks
- Lower Mesozoic (Triassic and Jurassic) sedimentary rocks
- Middle Proterozoic gneiss
- Upper Proterozoic and Lower Paleozoic sedimentary rocks

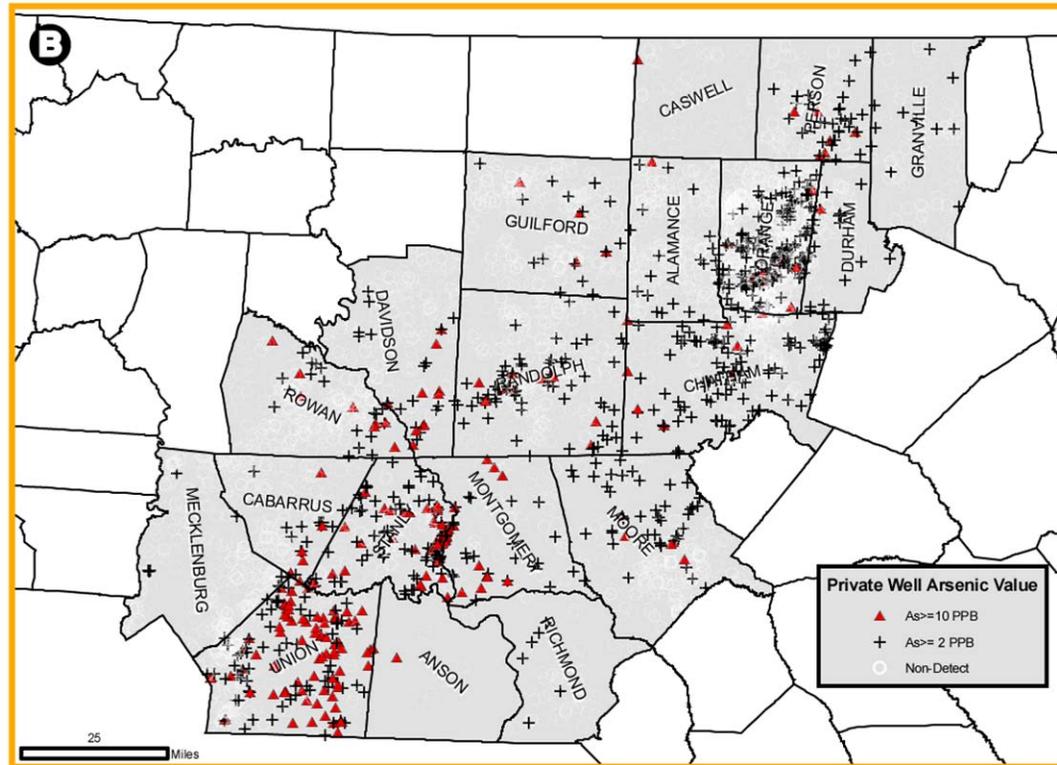




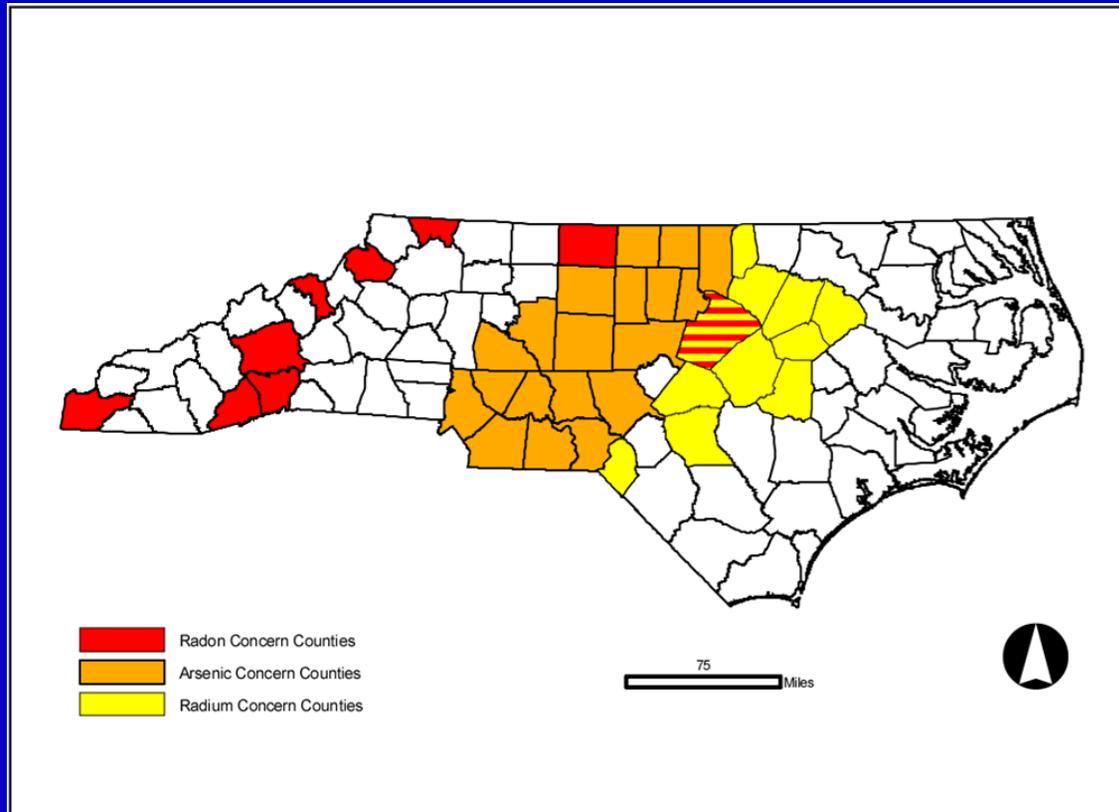
Distribution of Arsenic in Groundwater in North Carolina



High-arsenic Groundwater in the Slate Belt

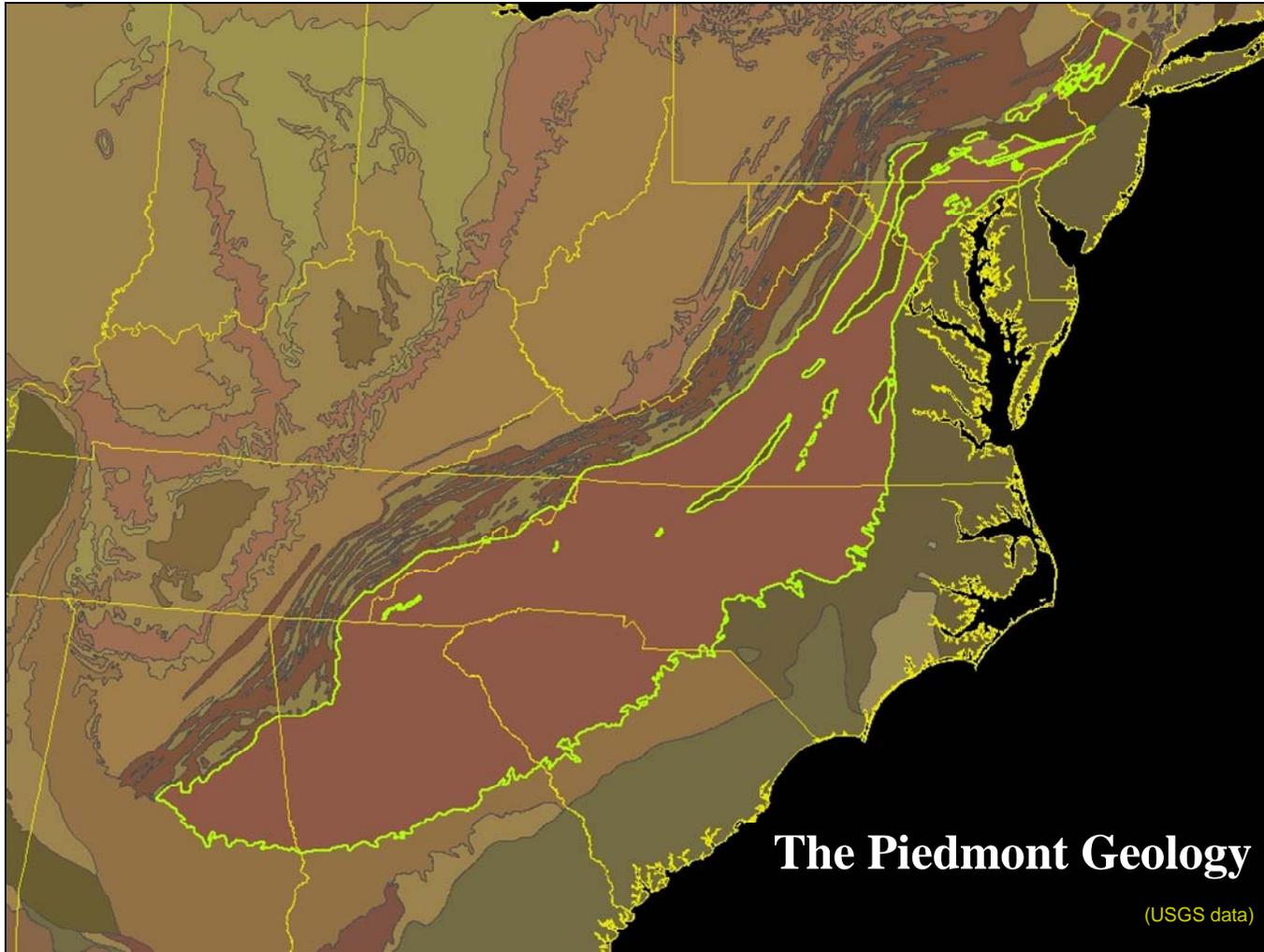


Distribution of natural contaminants in groundwater of North Carolina



Health effects of arsenic radium, and radon

- Epidemiological studies have shown that long-term utilization of drinking water with arsenic and radium levels exceeding the EPA MCL standards is associated with higher frequencies of lung and skin cancer (for arsenic) and leukemia and bone cancer (for radium).
- High radon in domestic waters could increase the exposure of users to airborne radon due to degassing of radon from showers and other water utilities in the house. High level of airborne radon is associated with higher frequency of lung cancer.



How to protect North Carolina's private wells

- **House Bill 2873 Safe Drinking Water/Private Wells:**
From 2008 all 100 counties establish permitting and inspection programs for new wells. Newly constructed private drinking water wells will be tested for inorganic contaminants (e.g., arsenic, barium, cadmium, lead, iron) and bacterial indicators.
- **Emergency Drinking Water Fund as part House Bill 2884:**
Providing funding to notify well users within 1,500 feet of known contaminated sites and assistance with testing
- **Outreach, education - is that enough?**

Appendix E – Access to Care Factors

Hospitalizations	Prevention Quality Indicators	NC 2005	Union County 2006	NC 2006
Diabetes short-term complication admission rate	171.851	182.852	none listed	232.3
Diabetes long-term complication admission rate	274.961	213.665	262.5	323.6
Chronic Obstructive Pulmonary Disease admission rate	171.851	268.521	262.5	458.3
Congestive Heart Failure admission rate	567.108	402.781	738.3	740.8
Adult Asthma Admission Rate	206.221	258.362	328.1	322.6
Pediatric Asthma Admission Rate	181.352	230.643	182.5	208.9

*SOURCE: HEALTHCARE AGENCY FOR RESEARCH QUALITY INDICATORS, WWW.ahrq.gov

These are considered to be avoidable hospitalizations and serve as an indicator of adequate access to primary care.

Access to Care / Practicing Health Professionals

Health Professionals in Union County vs. State (2006, per 10,000 population)			
	Union County 2005	Union County 2006	NC 2006
Dentists	2.2	2.1	4.4
Physicians	7.6	7.8	20.8
Primary Care Physicians	4.6	4.8	9.0
Pharmacists	5.0	6.1	8.9
Registered Nurses	45.3	43.1	92.9
Nurse Practitioners	0.89	0.9	3.0
Certified Nurse Midwives	0.13	0.6	1.1
Physicians Assistants	1.08	1.3	3.2

UNC SHEPS Center Medical Professionals Data

