UNION COUNTY

2012 COMMUNITY HEALTH ASSESSMENT

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INTRODUCTION

The state requires all Public Health departments that receive state funding to conduct a Community Health Assessment every four years. Union County completed the first in depth assessment in 2008 and began working on the 2012 Community Health Assessment (CHA) in the fall of 2011. The Department is assisting CMC Union in the completion of their first collaborative Public Health Community Assessment.

A kick off meeting and planning session was held in September 2011 at the Health Department. The agenda ranged from defining a Community Health Assessment, to development, review, and approval of the 2012 CHA survey plan and tools. The 2008 survey tool provided the base document for the discussion. Agencies and organizations at the meeting: Union County Health Department, Union County Board of Health, Health Quest, NC Cooperative Extension, City of Monroe Economic Development, Union County Public Schools Nutrition Department, Union County Public Works, Union County Emergency Management, Union County Environmental Health, Daymark Mental Health and Substance Abuse Services, CMC Union Hospital, Hospice of Union County, Union County Public Schools Latino Outreach, Brookdale Senior Living Communities, Council on Aging, Union County Department of Social Services, and Enterprise Fitness Center.

The Community Health Assessment provides Public Health and the local hospital, CMC Union with an opportunity to determine what is impacting the individual health outcomes of county residents. Population health is also assessed during the CHA process.

The Health Department conducted the first in depth CHA in Union County in 2008. The assessment process must be repeated every four years. The 2012 CHA will provide a current assessment of what residents feel is impacting their health, as well as what health and wellness resources are needed, and which ones are having positive effects on their health.

All information and data collected directly from residents is the primary data for the CHA. It is collected randomly, from County Jury Pool participants. This is done in collaboration with the Union County Clerk of Court. Convenience sampling is also done at community events and in partnership with county agencies, businesses, churches, schools and municipal governments.

Secondary data is a required component of the CHA. It is statistical data collected by outside agencies such as the State Center for Health Statistics, UNC Sheps Center, North Carolina Department of Commerce, Department of Environment and Natural Resources, etc. The secondary data provides factual information that either supports the primary data, or dispels what residents report as impacting health.

The objective of the assessment is to gain an understanding of health issues impacting county residents, determine what programs, services and facilities are available, and what is needed, or requires improvement. With the final result being a clear understanding of issues, a collaborative vision to prioritize the identified needs and joint plans to work toward solutions.

The assessment was planned in phases, with the largest portion being a paper survey campaign. Surveys were divided into 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. Random respondents came from county jury pool participants (in cooperation with County Clerk of Court). Convenience sampling was done at county events and in collaboration with county and municipal agencies. Thousands of surveys were completed, which was the result of community collaboration and cooperation, see Appendix I and II.

Phase two of the CHA was focus groups. Specific niche groups were identified for participation. All groups, (except teens) were asked the same questions, with the premise that overlap in responses should occur regardless of participants within areas that are truly problematic. The niche groups were selected based upon demographics, occupation or elected position. The intent was to drill down into specific areas that are having an impact on the health and wellness of residents, while gaining insight and input from people in the most optimal positions to affect positive change.

Once all survey data was 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 final phase was a community meeting that included service providers, county officials and community members to discuss CHA results. It was up to attendees of the meeting to select options from the assessment results as health priorities. Areas selected were converted into a Survey Monkey Survey so that meeting attendees could prioritize issues by category as responses to survey questions. Survey Monkey Results were run and priorities were set based upon the preponderance of responses. The priorities will become the basis for action plans and will be used by the county Health Department and CMC in planning health and wellness programs and services.

EXECUTIVE SUMMARY AND CONCLUSIONS

The Community Health Assessment (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, 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 the 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 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. Statistics were included from numerous external sources and reports at both the state and local levels.

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 community discussion and priority setting meeting audience included representation from 21 county agencies and organizations. After a power point presentation and a discussion, each participant completed a survey prioritizing the focus areas. Results are listed below by categories of concern. At-risk populations were also prioritized.

Teen Priorities
Bullying / Peer Pressure
Baby Think it Over Curriculum
STD Education

Senior Priorities
Additional Senior Center
Mobile Medical Services
Long Term Care Planning

Chronic Disease
Cancer
Diabetes
Heart Disease
Alzheimer's

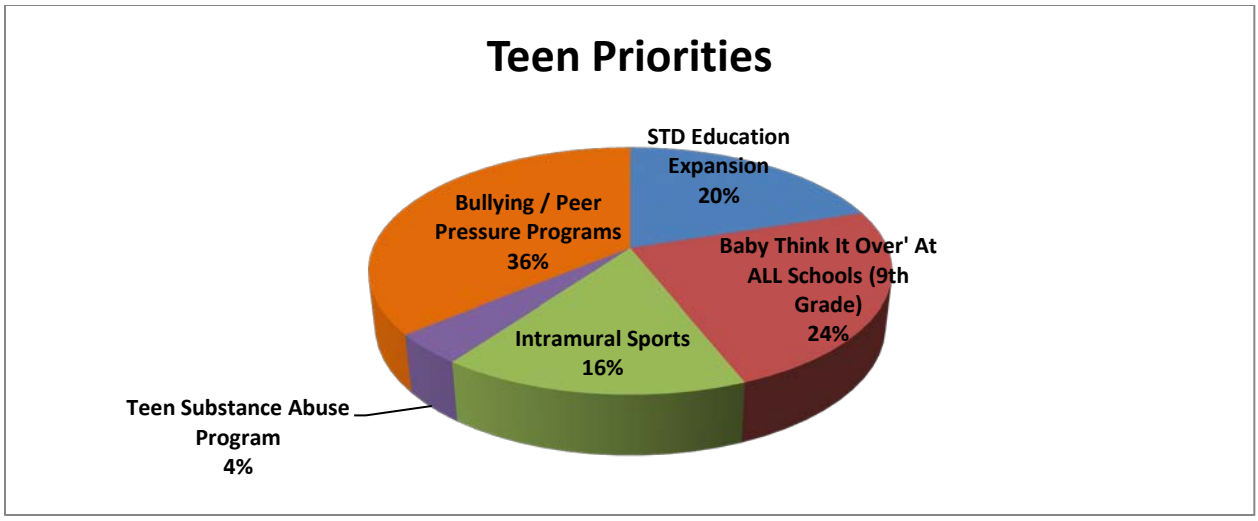
Nutrition
Public School Nutrition
Healthy Eating Education
Farmers Market

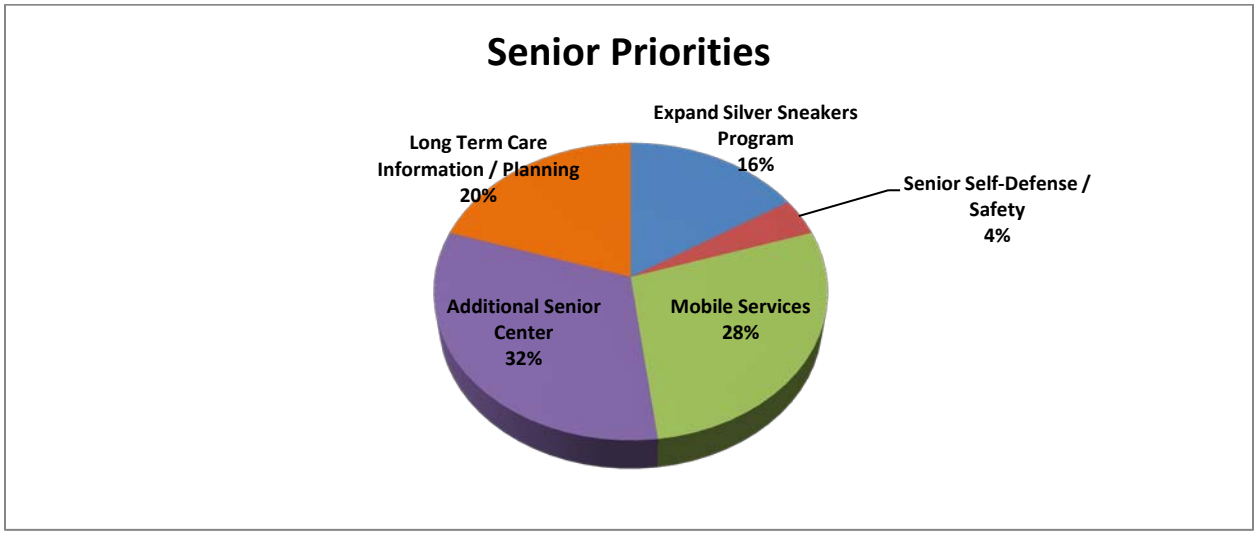
Medical
Indigent Care Mobile Unit
Expand Mental Health Services
Affordable Dental

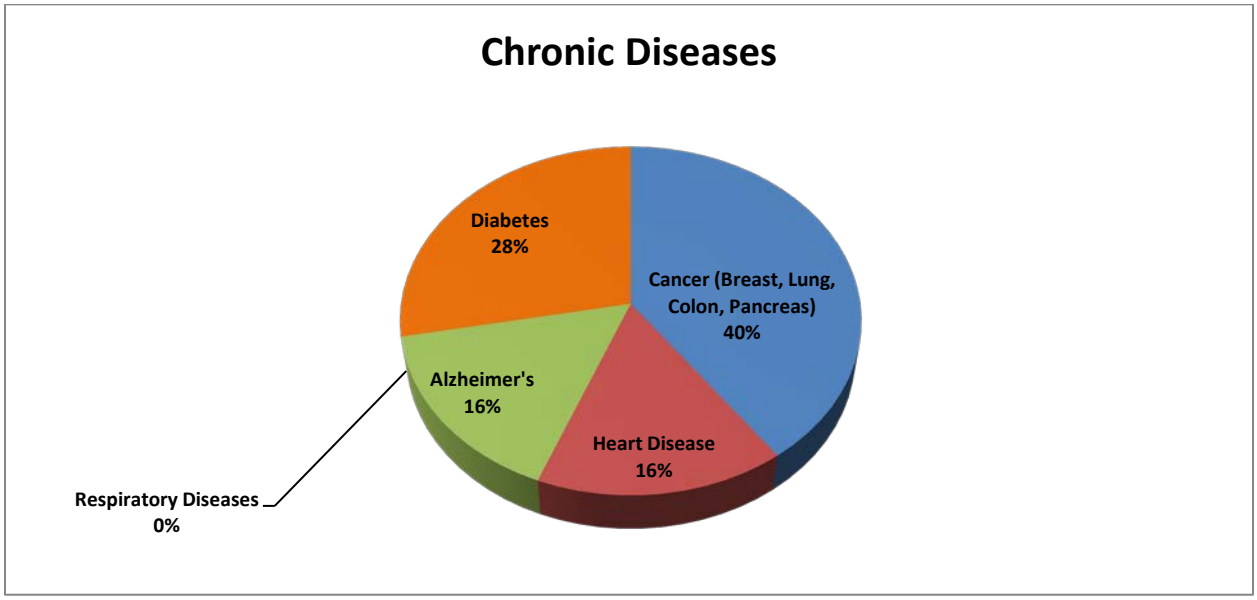
Fitness
Affordable Sports Leagues for Kids
Get Fit Union
Affordable Adult Fitness Facilities

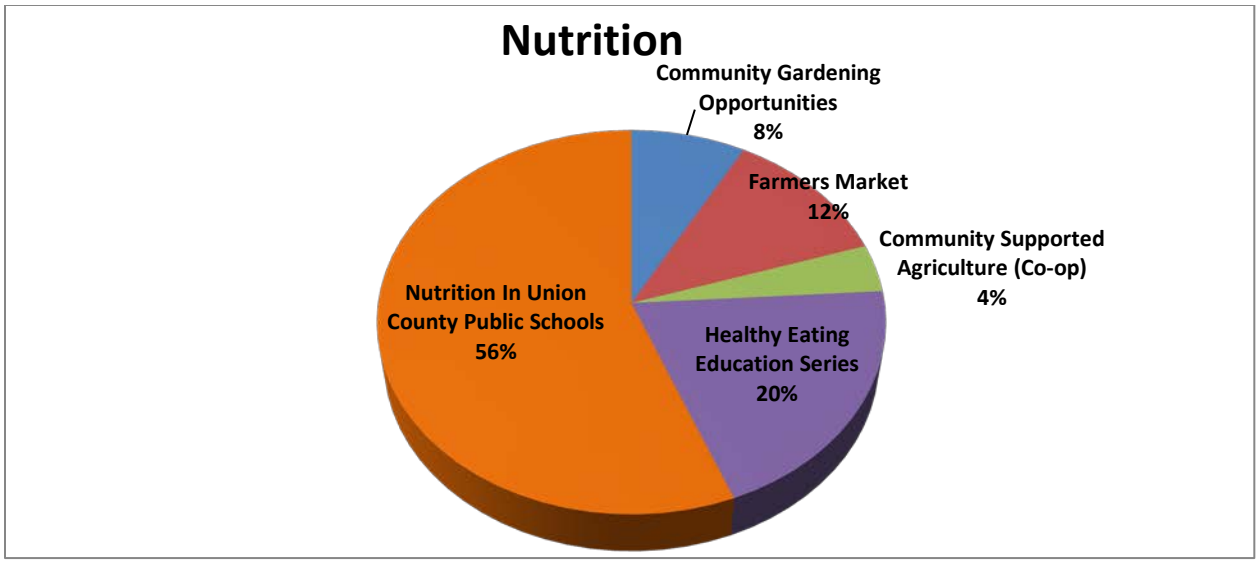
Built Environment
Access to Union County Public School Facilities
Additional parks / greenspace
Sidewalks

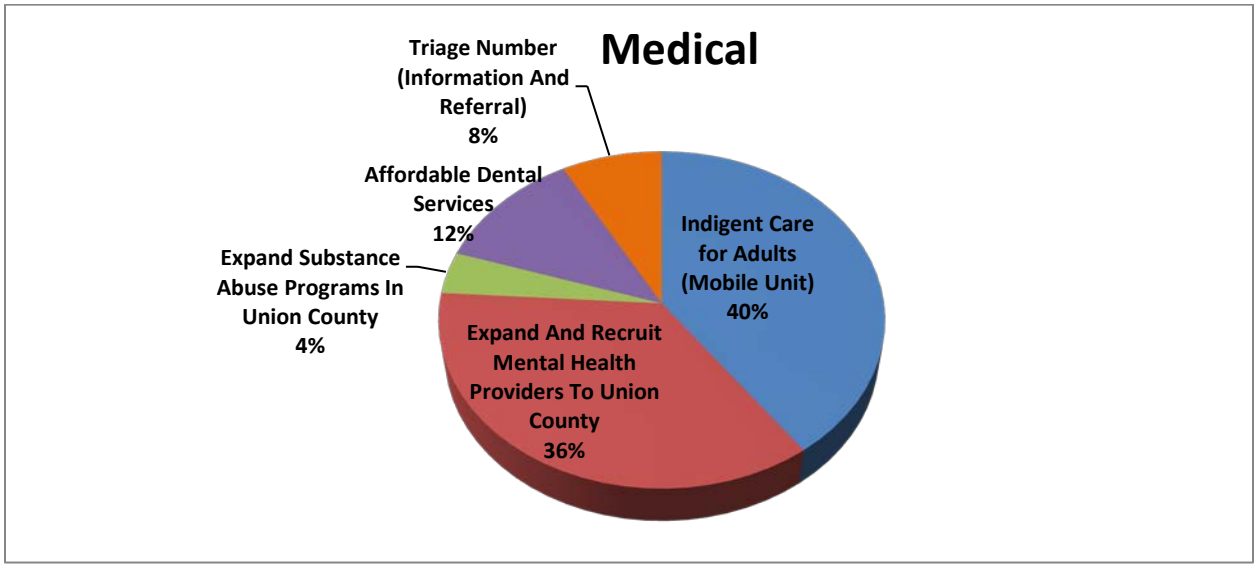
At-Risk Populations
Obese Residents
Mental Health Patients
Adults not receiving prevention services

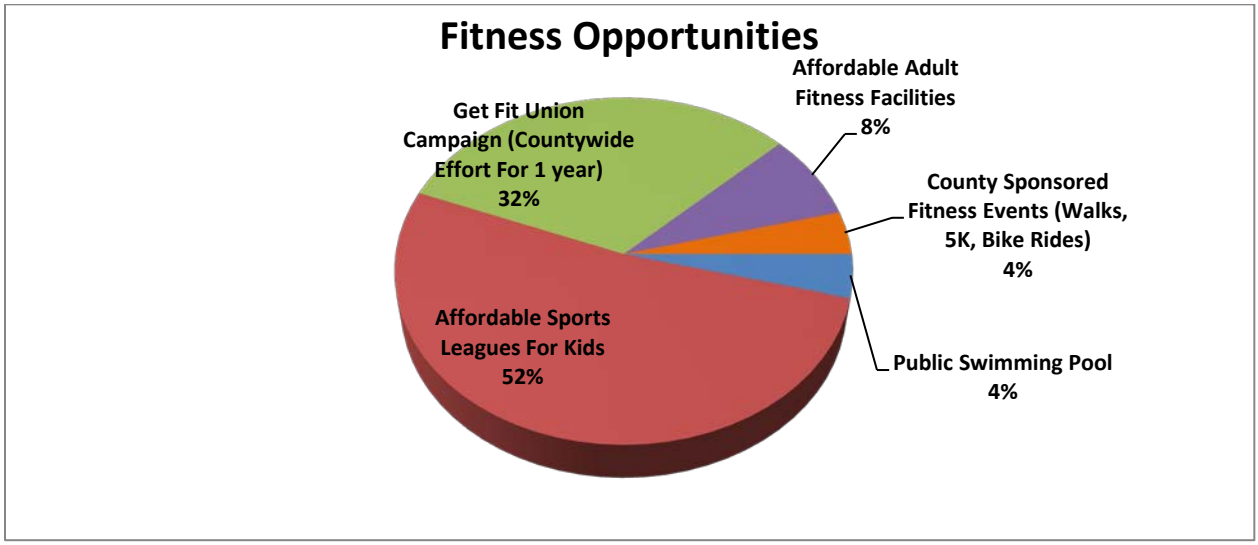

Teen Priorities
STD Education Expansion 20%
Baby Think It Over' At ALL Schools (9th Grade) 24%
Intramural Sports 16%
Teen Substance Abuse Program 4%
Bullying / Peer Pressure Programs 36%

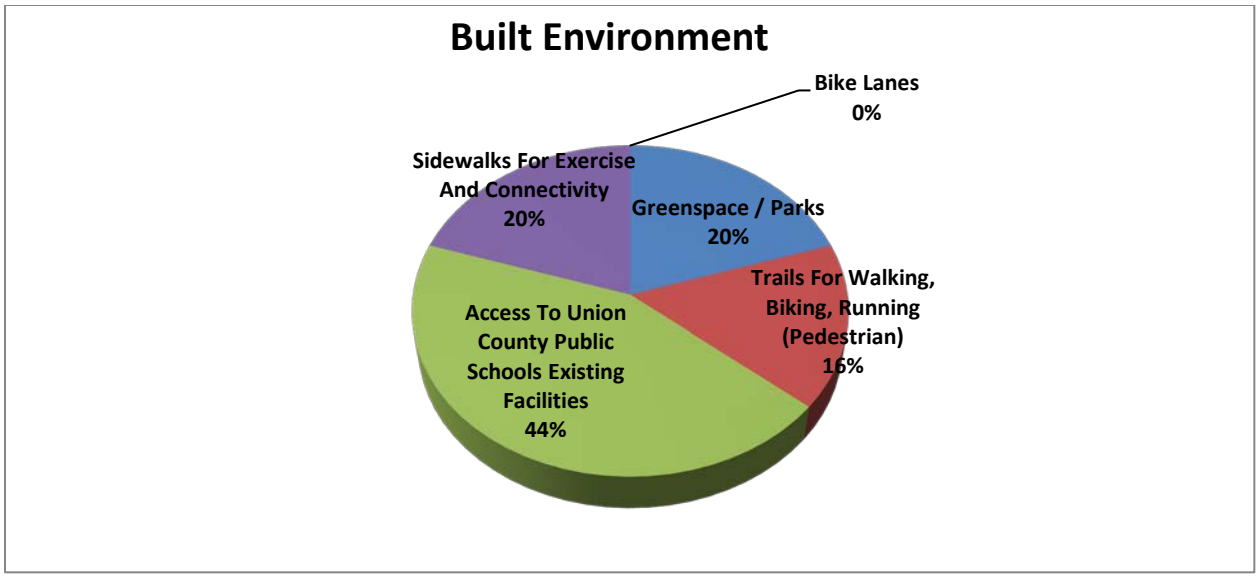

Senior Priorities
Expand Silver Sneakers Program 16%
Senior Self-Defense / Safety 4%
Mobile Services 28%
Additional Senior Center 32%
Long Term Care Information / Planning 20%

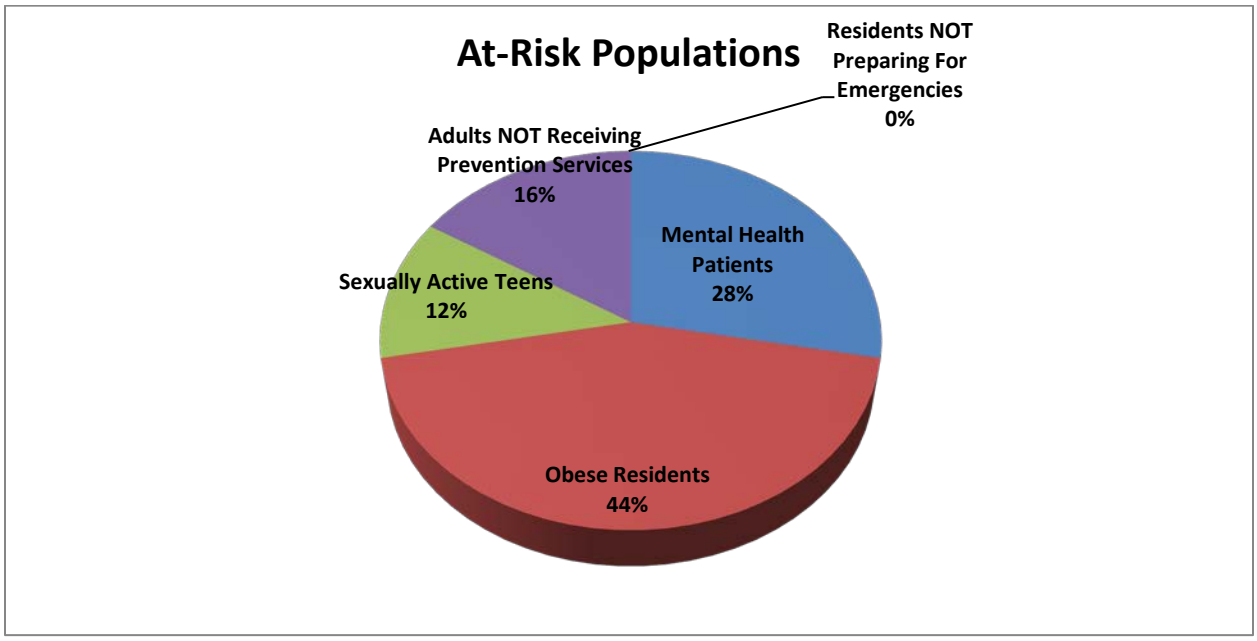

Chronic Diseases
Diabetes 28%
Cancer (Breast, Lung, Colon, Pancreas) 40%
Alzheimer's 16%
Heart Disease 16%
Respiratory Diseases 0%


Nutrition
Community Gardening Opportunities 8%
Farmers Market 12%
Community Supported Agriculture (Co-op) 4%
Healthy Eating Education Series 20%
Nutrition In Union County Public Schools 56%


Medical
Triage Number (Information And Referral) 8%
Affordable Dental Services 12%
Expand Substance Abuse Programs In Union County 4%
Indigent Care for Adults (Mobile Unit) 40%
Expand And Recruit Mental Health Providers To Union County 36%


Fitness Opportunities
Affordable Adult Fitness Facilities 8%
Get Fit Union Campaign (Countywide Effort For 1 year) 32%
County Sponsored Fitness Events (Walks, 5K, Bike Rides) 4%
Affordable Sports Leagues For Kids 52%
Public Swimming Pool 4%





The 2012 CHA primary data collected directly from county residents was very similar to the concerns that evolved from the 2008 CHA. Residents want to receive health care within the community that they live. They feel care should be affordable and accessible to all residents. The available care should cover all services: routine medical, prevention, emergency care, disease management, cancer treatment and therapy services.

The economy was impacting the fiscal situation for many families in Union County. Having less money equated to difficult choices. Since 2008 Union County has seen an increase in the number of residents needing assistance and public health services. The number of uninsured adult residents increased from 20% to 22%, (26,000 residents). The number of children on Medicaid increased to 10,472 in 2011, with 926 children enrolled in NC Health Choice. The monthly caseloads at the County WIC office have also increased.

CHA survey participants, (both adult and senior) indicated lack of money as the main reason they did not receive medical or dental services, or have a medically necessary prescription filled. Fifty-two percent of adults and fifty-seven percent of seniors indicated that they only see a doctor if they have an urgent medical need. Lack of funds that lead to delaying treatment, cancelling routine appointments, screenings and elective procedures can lead to chronic conditions, or emergent medical situations. Skipping prevention services or screenings that can uncover issues before they become emergencies is not cost effective if a more serious condition evolves. The reality is it can be life threatening to delay treatment, or miss routine exams.

In addition to the economy, CHA participants felt lifestyle choices and behaviors were negatively impacting the health of county residents regardless of gender, age, economic status, race or ethnicity. These lifestyle and behavior choices resulted in obesity numbers increasing across every demographic, most alarmingly with the youth population. Obesity is a gateway to more serious chronic conditions: heart disease, diabetes and hypertension.

County residents took ownership of health issues that could be connected to lifestyle and behavior: obesity, lack of exercise and poor eating. The consensus was behavior modification is needed, along with nutrition education. Respondents understood that lack of exercise and poor eating habits were the main issues causing the obesity epidemic. When asked what could be done to change the unhealthy culture, the overwhelming response was increasing access to affordable or free exercise venues. The lack of affordable fitness opportunities for county residents was seen as detrimental. Union County is not considered pedestrian friendly. The limited parks and recreation space in Union County is not convenient to most residents. All groups expressed an interest in having Union County Public School facilities open on weekends for public use: tracks, tennis courts and basketball courts. Walking trails, bike trails and sidewalks were at the top of the list of needed built environments for improving access to free exercise.

Changing dietary habits from a culture of convenience eating to positive nutrition choices would be necessary to improve the health of many residents. Busy families with many demands on budget and time stated that it can be easier and more expedient to go through a drive through for meals, rather than preparing healthy meals at home. While participants recognized the need to change behavior, they expressed interest in being educated on healthy eating. There was also an interest in increasing local access to healthy foods. Sixty-one percent of adult CHA survey respondents and seventy-one percent of senior respondents had shopped at a local farmer's markets for produce. Improving nutritional lunch options in the county schools by utilizing local produce was a repetitive theme. In order to make this a reality, local growers must achieve Good Agricultural Practices Certification (GAP) through the FDA. To date, none of the Union County growers have been through the GAP process.

Teen CHA participants concerns mirrored the adult concerns: obesity, lack of exercise and poor eating. However, they did discuss other issues that are specific to being teens. Peer pressure and bullying were problematic for the teens. They mentioned in the focus groups that the majority of bullying goes unreported because students are afraid it will escalate the bullying.

They also mentioned that bullying is difficult to prove and therefore, adults either don't react, or have a delayed reaction which is ineffective. Cyber bullying exists, but students do not view it as bullying because they are not directly interacting with the person. Twitter was mentioned as a "teen domain" because while most parents monitor texting and Facebook, very few monitor Twitter.

Fifty-eight percent of teens felt peer pressure was impacting their health. When asked what they were being pressured to do, the top five teen responses included: skipping school, bullying other kids, using alcohol, having sex, and using drugs. Eighteen percent of teen respondents said they drink alcohol, and twenty-four percent said they drive after drinking. Teens said drinking alcohol was common with high school students and was openly talked about. Drug use occurs, but is less socially accepted than drinking.

Teen sex has been a concern in Union County for the past few years due to historically high minority teen pregnancy rates. While the overall county teen pregnancy rate always remained below the state, the minority rate would equal or exceed the state rate. In 2009, the county teen pregnancy rate was 42.4 vs. NC rate of 56. However, the minority teen pregnancy rate in 2009 was 81.6 vs. NC rate 74.3. The county has seen a decrease in the pregnancy rates, but the abortion rates have increased. When discussing sex in the teen focus group, students stated that teen pregnancy is a concern, but sexually transmitted diseases are not. Teens felt that if they did not personally know anyone with an STD than it was just something discussed and not a reality.

Teens also listed motor vehicle injuries as a health concern. In 2009 there were 267 motor vehicle crashes involving teen drivers, with one crash involving alcohol and one crash ending with a fatality.

CHA participants set mental health as a priority, with the determination that mental health services were seen as the most challenging to access. The fact that mental health often has an immediacy associated with it, added to the concern. The limited number of mental health providers in Union County was the first hurdle and the cumbersome process of actually being seen increased frustrations. These are issues that can escalate in a down economy. The emergency services focus group emphasized the increase in emergency response calls that involved violence or erratic behavior (domestic violence, substance abuse, mental health issues) goes up in a poor economy. Without local resources to assist people that are already in crisis, situations can be very bleak.

Focus group participants expressed a need for the expansion of local mental health services and a less involved process to access appointments. The UNC Sheps Center 2011 Medical Professionals County Report shows 0.4 practicing psychologists in Union County per 10,000 residents.

A minimal number of adult and senior residents reported using drugs or alcohol. However, both alcohol and drugs were ranked high by CHA participants as behavioral factors negatively impacting health of residents. Union County has limited resources to deal with substance abuse. The majority of available care and treatment has an adult focus.

The factors residents identified during the CHA process negatively impacting health were access to local affordable health care services spanning the range of medical services, the poor economy and poor lifestyle choices. A lack of knowledge about existing health and wellness resources further complicates the concern about access and affordability. Many quality programs and services already exist. However residents are unaware of what those service options are, or how to access them.

The CHA survey revealed that the majority of adult and senior residents do not have any emergency plan for their families. They are not keeping a supply of non-perishable food or water, nor are they keeping a supply of prescription medications. In an emergency, having a large percentage of the population unprepared will create chaos and safety issues as people seek resources. People that need prescription medications could create a medically unstable situation for themselves.

Environmental concerns remained the same since the 2008 CHA. Residents pointed to air quality issues and water quality issues as their concerns. Residents expressed a sense of helplessness in dealing with either situation. Air quality was understood to be a by-product of the decade of growth experienced in Union County, and the proximity to Charlotte. The high volume of vehicles on the roads that move through the county are major contributors to the poor air quality. The unhealthy air was seen as a factor in the increasing number of asthmatics in Union County.

The well water in Union County is known to have high concentrations of arsenic due to the presence of the underground slate belt that stretches across the entire county. Many rural residents and residents in older subdivisions remain on wells for their drinking water. The county has not extended water lines across the entire county, leaving some residents reliant on well water which is a concern. Filtration systems are available, but are financially out of reach for many families.

Duke University was working collaboratively in Union County on a well water study. The research was looking into the effects of well water with high arsenic trace metal content on birth outcomes. The Health Department was interested in pursuing any potential linkage between the arsenic in well water with high Alzheimer's rates, or cancer incidence. The study has started and stopped multiple times due to available funding.

The primary data revealed the need for education and information for residents, on existing services, and assistance with behavior modifications that can lead to healthier choices. Expansion of fitness opportunities, across the county may not lead to all residents exercising, but it does provide the opportunity to make a healthy choice that can lead to better health outcomes.

The secondary data from the external sources, such as the State Center for Health statistics illustrates the actual statistical health of residents. The top ten leading causes of death in Union County have largely remained the same, but have switched rankings within the top ten. For years heart disease was the main killer, it has been replaced by cancer (all cancers) as the leading cause of death. Alzheimer's Disease has been in the top ten causes of death for many

years, and unfortunately the rate for this disease has continued to be troublesome for Union County. The 2005 -2009 Alzheimer's Rate for Union County was 57.5 per 100,000 versus a North Carolina rate of 28.3. Alzheimer's is now the third leading cause of death in Union County.

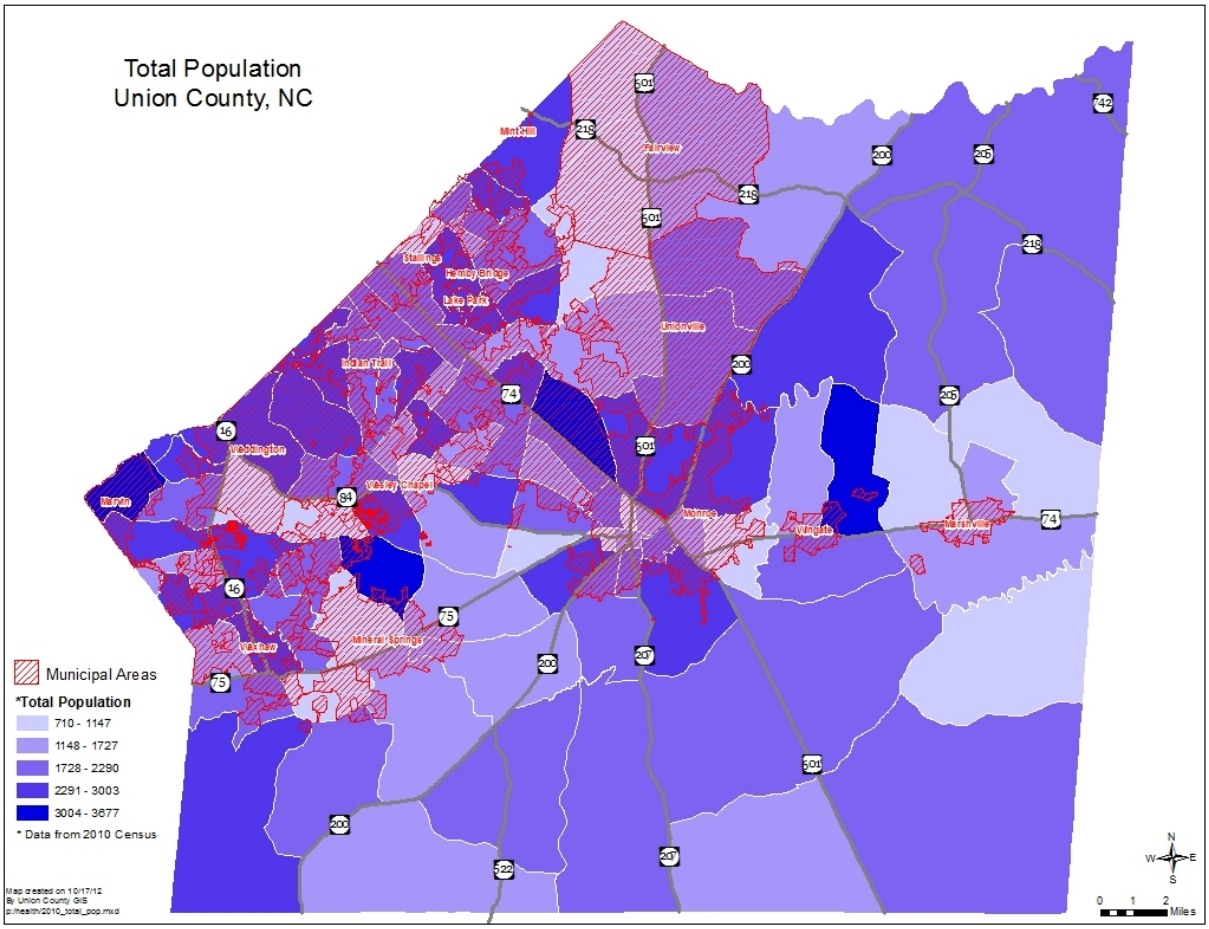
While all cancer is a concern, certain cancer is more prevalent in Union County: colon cancer, prostate cancer and lung cancer have been on the rise, while breast cancer has declined. In responding to a survey question about prevention services, only 22.3% of seniors and 7.9% of adults had a colonoscopy within the past year. If more people sought screening, this rate could be lowered.

Union County has a wide range of medical practices and health and wellness resources. Most residents are seeking care locally, with fifty-four percent of adult residents and sixty-three percent of senior respondents seeing a Union County doctor for medical services. While they are going to a local doctor, many reported having to go into Charlotte for specialized services and medical referrals. The auxiliary services and resources in Union County are not well known. Transportation service had the highest awareness level, with the remainder of services being relatively unknown: gun safety classes, Healthy Homes, Diabetes Self-Management, Nutrition Classes, Project Lifesaver, Special Needs Registry, and Healthquest. In order for county residents to improve their health outcomes, there must be an increase in awareness of local programs and services.

In order to meet the broad range of needs, and provide health services and program delivery, Public Health must be reintroduced into the county. Public Health is everyone, everywhere, every day. As the Health Department implements the agency's 2012 Strategic Plan, the intent will be to expand the scope of work to include priorities set forth in the 2012 CHA. These priorities will require new community partners, program plans to meet the needs and encourage residents to take a proactive role in improving their health. Public Health will look at ways to increase community outreach and education, with a population health approach.

With community collaboration, resource allocation and innovation, Union County can provide residents with the knowledge, awareness, tools, medical services, and built environments to be a healthy, fit community.

UNION COUNTY NC PROFILE



643 Square Miles

205, 428 Total population 2011

36 Median Age 2011

$ 63,386 Median Household Income

72,870 Households

53 Public Schools / 40,359 Total Enrollment

$0.6650 FY 2011-2012 Property Tax Rate per $100 Value

91,716 Civilian Labor Force

$690 Average Weekly Wage

8.2% Unemployment Rate (1st Quarter 2012)

85% Residential, 15% Industrial / Commercial Tax Base

PAST, PRESENT, AND FUTURE

Union County was established in 1842 and is located southeast of Charlotte within the Charlotte Metropolitan Statistical Area. The county is 643 square miles, with 14 municipalities. Monroe is the county seat. The county is governed by a Board of Commissioner / Manager form of Government, with a five member Commissioner Board elected countywide and an appointed county manager.

The median age is 36, with the majority of households being married couples with children. These demographics have created the 6th largest school system in the state, with an enrollment of 40,539 students in 53 schools. Young families require schools, healthcare, law enforcement, fire departments, parks, childcares, and employment opportunities.

The decade of growth that Union County experienced between 2000 and 2010 has been on the decline. Union County dropped from first in population growth in the state to ninth in 2012. According to the 2010 Census, Union County had 202,595 residents, living in 72,870 households. While residential growth slowed, industrial growth never started. The county continues to have an unbalanced tax base, 85% residential, 15% industrial / commercial. A lopsided tax base factors into county government's financial struggle to provide needed infrastructure and services for residents.

In 2011, the County and Carolinas Health Care Systems reached a financial settlement on the CMC Union Hospital in Monroe. The county received $54 million dollars for the Hospital property. The deal provided county government a much needed influx of dollars to offset accumulated debt and on-going capital improvement needs.

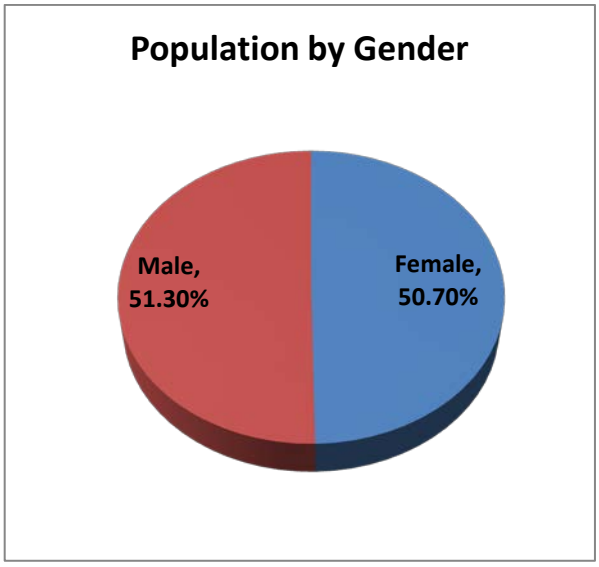
Despite an unbalanced tax base and school debt, the county's overall economic climate did not experience the catastrophic losses experienced elsewhere in the state and nation. The diversity of the existing business and industry helped to maintain stability in a weak economy. Union County's employer base includes strong clusters: Aerospace / Aviation, Automotive, Medical, Specialty Metals / Super Alloys, Life Safety, Plastics and Food Processing. The industries offer a broad range of employment opportunities from entry level, skilled to unskilled, business executives to engineers.

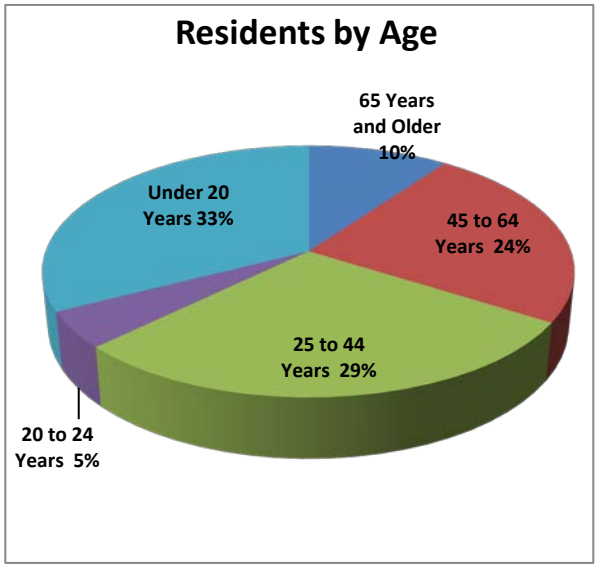
As residential growth slows, the county is changing their approach to economic development. The county and city of Monroe are entering into a contract to provide countywide economic development services and avoid duplication of effort and staffing. The combined efforts will focus on recruitment of new investment while working to retain and expand existing industry.

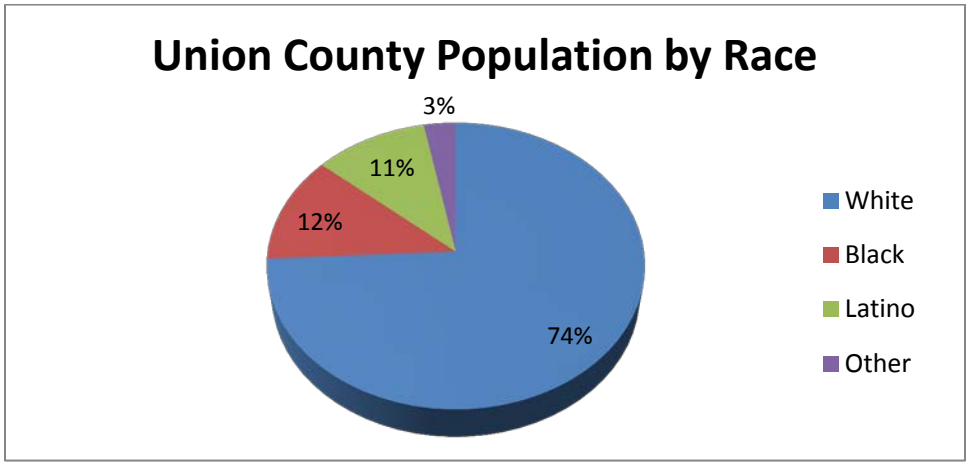
While growth was the theme of the decade, stability and balance are the aim of the future. Union County grew based upon a reputation for low taxes, strong schools and an overall strong quality of life. The tax rates in the county have remained low, schools have remained strong and quality of life is still a reality. Stabilizing the cost associated with sustaining this quality of life will require a balanced approach to future development.

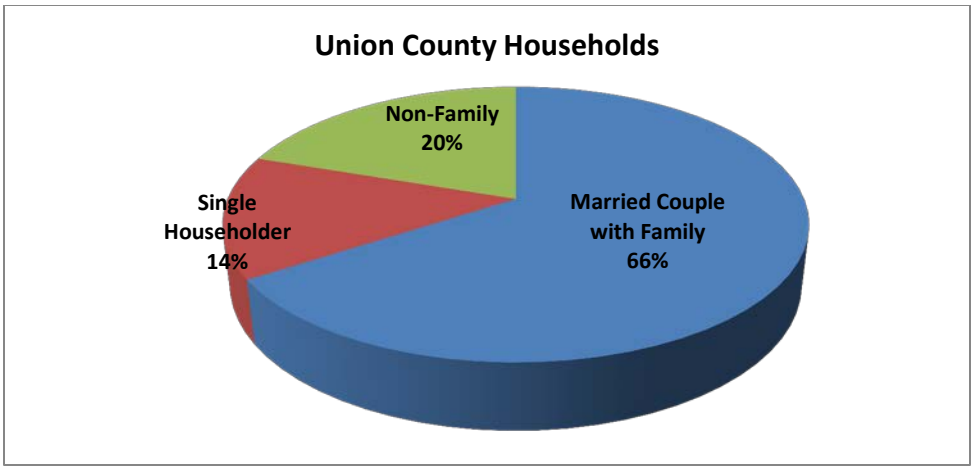
FACES IN THE CROWD / IMPACTS ON POPULATION HEALTH

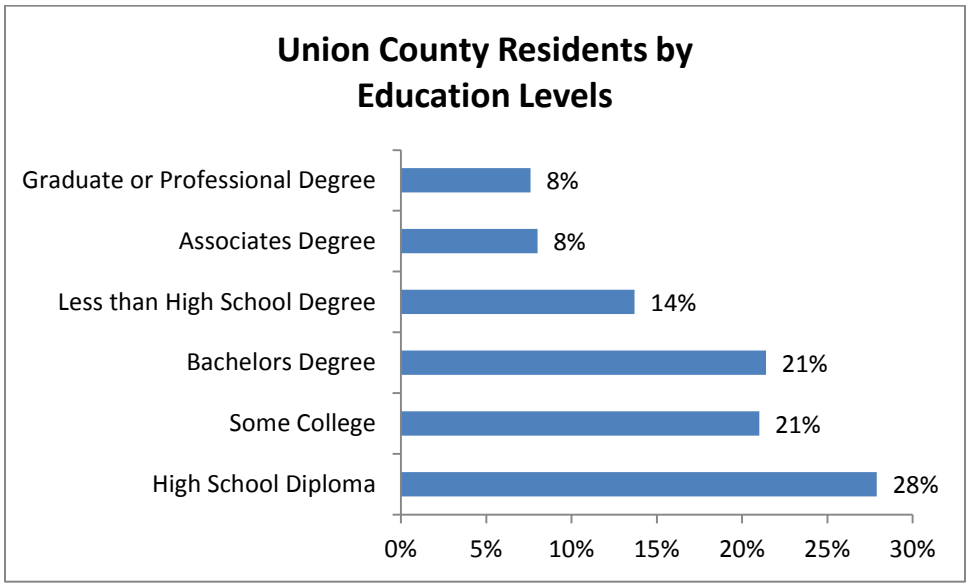
The 2010 Census showed that the general population data for Union County looked much the same as it had in previous years. However, the residential population growth slowed down considerably. The gender split remains half male, half female, with the majority of residents falling into the 25 to 44 year old range, with a median age of 36. Minority population numbers showed slight increases. The majority of households are married couples with families. The elderly population also showed a slight increase.









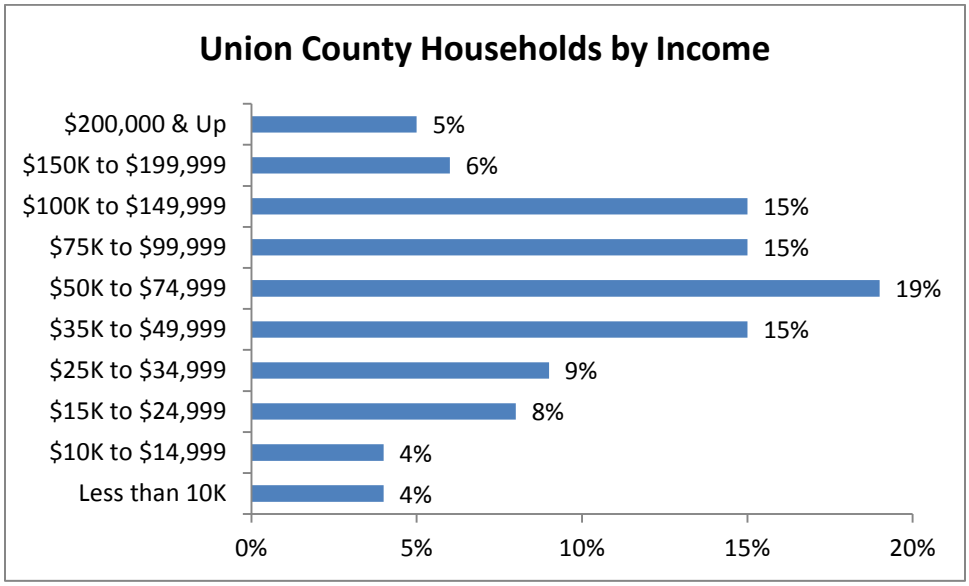


With the majority of Union County households consisting of married couples with children, the Union County Schools have been a priority of county residents. The UCPS web page states school bonds taken out to provide infrastructure for the decade of expanding student enrollment, totaled $501.7 million dollars, approved by Union County citizens between 1998 and 2006. The school debt now consumes approximately 69% of Union County tax dollars.

Union County Public Schools (UCPS) has grown into the 6th largest school system in the state, with an enrollment of 40,359 students in 53 schools. The school population is made up of 68% white, 13% African American, 14% Hispanic and 5% other race students. The school system employs 4,456 people. 2010-2011 test scores reflect a strong showing, with Union County ranking number one among the state's largest school districts for the no child left behind adequate yearly progress goals. The SAT scores out performed both the state and the national averages, coming at 1027 locally, 1001 for the state and 1011 nationally. The graduation rate of 89.1% put UCPS in the top five for all school systems in the state. The test scores and graduation rates earned Union County graduating seniors $75.7 million dollars in scholarship money in 2011. While the academic numbers are strong, other statistics remain challenging, 31% of UCPS students are on free and reduced lunch.

SOCIOECONOMICS

The 2010 median household income of Union County is $63,386. While the household incomes reflect 11% of the population earning $150,000 or more per year, there is still 8% of household incomes of $14,999 or less. Union County has 21,846 residents on Medicaid, which equates to 11% of the county population. The Union County geography aligns closely with income level, with more affluent residents living on the western side of the county and lower incomes in the middle of the county and eastward. The county unemployment rate did increase during the height of the economic downturn, it has recently shown improvements, landing at 8.2%, 2012Q1. According to the NC Department of Commerce, Union County lost only 116 jobs, with two facility closings through June 2012.



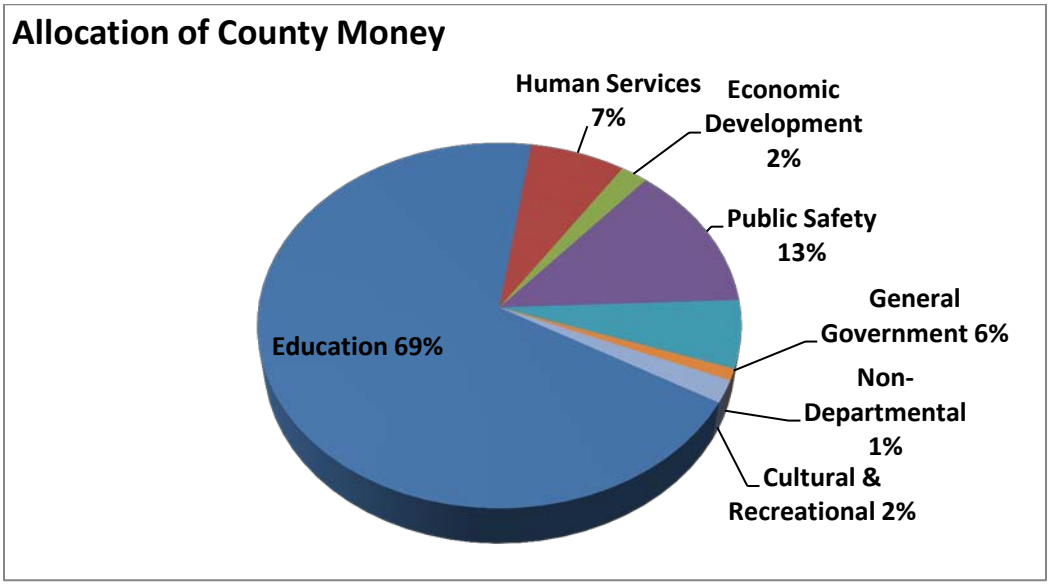
County vs State Medicaid Data

Medicaid Data	Union County	North Carolina
% of population less than 100% of poverty	10.9	16.2
% of population Medicaid Eligible	11	17
% of eligible dually enrolled in Medicaid and Medicare in Union County	10.2	14.5

Despite appearing economically healthy on paper, with a strong median household income, a workforce of 92,443 and few job losses in the down economy, many residents in Union County still have issues that stem from economic situations. Public assistance and health services are being sought by more residents than in previous years. Medicaid numbers increased, the number of children on free and reduced lunches has increased as well. As unemployment rates fluctuated the number of uninsured residents saw increase. The average monthly caseload for the Women Infant and Children (WIC) average monthly caseload has been increasing annually.

Many factors are influencing the local economy. The tax rate for Union County held fast at $.66 per $100 assessed value. According to an economic development study completed by the Union County Chamber of Commerce and the Economic Leadership Council in 2010, the reported tax values of Union County homes were not generating enough tax revenue to sustain services required by residents. In order for the county to break even, the average value of a residential property would have to increase from $212,132 up to $292,340. The study reported that the higher valuation would provide enough tax revenue to cover the county's expenses, including public school operation and debt.

When examining impacts on health, two factors that must be considered include the availability of care in the county and the economic ability to pay for care. The county dollars coming in must be divided across governmental services and infrastructure needs. In Union County the schools utilize a large majority of funds, with only 31% of ALL remaining dollars further divided. Human Services was allocated 7% of the county funds for FY 2011-2012. Public Health receives a portion of the 7% for program and service delivery. Local government, as well as local Public Health is challenged to sustain service delivery with fewer resources.



The ability to access medical care locally is a priority for residents. People want to receive care in the community that they reside. Increasing access to local services promotes better health outcomes for residents, as they are more likely to receive prevention based services, or routine screenings.

Regardless of the economy, the mission of Public Health remains to promote health, prevent the spread of disease, and protect the health of the community. With fewer fiscal resources available from the federal government, state government and local government, collaboration with community partners, grants, and a Public Health Foundation have become a reality in meeting the demand for services.

As residential numbers climbed, CMC Union worked to broaden the scope of local services to meet needs. The Emergency Department expanded, Edwards Cancer Center, Jesse Helms Nursing Facility and a Rehab Center were added. Most recently, an Emergency Department and medical offices were built in Waxhaw, expanding the reach of CMC Union into the western end of Union County.

ACCESS TO MEDICAL CARE

Uninsured Residents	2009 - 2010	
	Total Number	Percent
Adults 19-64	26,000	22%
Children 0-18	6,000	9.8%

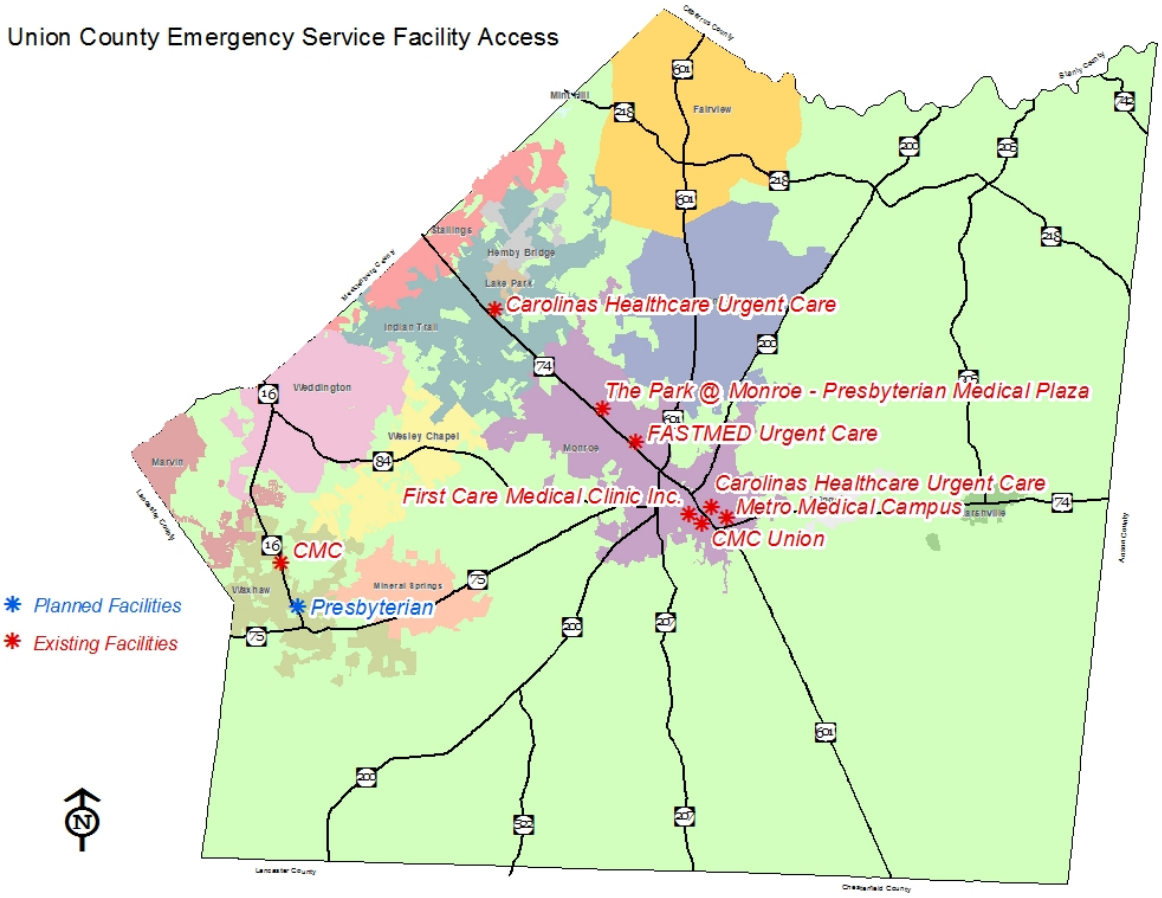
Data Source: NCIOM

Adult Health Indicators	County Rate (per 100,000)	NC Rate (per 100,000)
Diabetes Short-term Complication	184.7	223.7
Diabetes Long-term Complication	298.3	297.5
Congestive Heart Failure	468.8	429.7
Chronic Obstructive Pulmonary Disease	397.8	577.2
Adult Asthma	108.0	117.1

When assessing Health and Wellness Resources available to Union County residents, access to health care professionals must be considered. The UNC Sheps Center provides the following data regarding health professionals currently available in Union County and the state:

Health Professionals in Union County vs. NC, per 10,000 population

	Union County 2010	Union County 2011	NC 2011
Dentists	**2.5**	**2.6**	**4.3**
Physicians	***8.3***	***8.1***	***22.1***
Primary Care Physician	***4.6***	***4.0***	***7.0***
Pharmacists	**7.9**	**7.9**	**9.5**
Registered Nurses	**42.4**	**44.8**	**98.6**
Nurse Practitioners	**1.2**	**1.4**	**4.1**
Certified Nurse Midwives	**0.2**	**2.2**	**1.6**
Physician Assistants	**1.3**	**1.7**	**4.0**
Psychologists	**0.4**	**0.4**	**2.1**
Chiropractors	***1.5***	***1.3***	***1.6***
Occupational Therapist	**2.0**	**2.0**	**2.8**
Optometrist	**0.5**	**0.6**	**1.1**
Podiatrist	**0.0**	**0.1**	**0.3**
Physical Therapist	**2.4**	**3.0**	**5.4**
Respiratory Therapist	**1.5**	**1.6**	**4.3**



- 8,595 General Hospital Discharges (2010)
- 157 CMC Union General Hospital Beds (2010)
- 607 Nursing Home Facility Beds in 6 facilities (2010)
- 18,174 Union EMS Responses resulting in 12,345 Transports
- 60% of transports went to CMC Union
- 40% of transports went out of county

2008 COMMUNITY ASSESSMENT PROGRESS REVIEW

The 2008 Assessment results and statistics highlighted below were determined to be problematic or of concern for County residents in achieving positive health outcomes. These issues were identified and were used in strategic planning and action plans at the department level.

Adult	**Senior**	**Teen**
Lack of Exercise / Poor Eating	Concerns over Long Term Care	Teen Pregnancy
Alcohol Abuse	Prescription Drug Costs	Sex Education
Obesity	Medical Problems / Indigent Issues	Peer Pressure
	Lack of Adult Daycare	Soft Drink Consumption

Chronic Diseases	**Environmental Health**	**General Concerns**
Cancer	Restaurant Safe Food Handling	Affordable Healthcare
Heart Disease	Drinking Water Access / Quality	Stress related to Money
Alzheimer's	Outdoor Air Quality	Mental Health Services
Diabetes	Smoke Free Restaurants	

At the conclusion of the 2008 Community Assessment the results illustrated the fact that common threads existed across gender, race, ethnicity and generation regarding specific impacts on health and well-being for the community. The commonalities included 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.

Since the 2008 CHA the Health Department was awarded Accreditation and a new course was set to expand the scope and reach of the department by going out into the community itself. It was a concerted effort to reintroduce Public Health to residents, agencies, schools, business and industry. The outreach has increased immunization program numbers by providing on-site immunizations. It provided educational opportunities on hand washing, breast health, dental health and healthy eating. This initiative correlates to both the agency Strategic Plan and the Community Action Plans, focused on improving access to health services.

Several priority areas were worked on in depth. Since 2008 new partners came on board, donations were sought and secured, and elements of action plans were activated. The teen health interventions were started. The state legislation on smoke free restaurants was enacted and has improved indoor air quality for both restaurant workers and patrons. The water quality concerns were also addressed through new partnerships and research efforts.

The Health Department has strengthened and expanded its partnership with the Union County Public Schools and has increased the number of students and families it serves by virtue of the partnership. The prevention based curriculum has core focus areas to bolster teen health and wellness knowledge, and encourage healthy, safe decision making. A pilot teen health educational program was held at East

Union Middle School. As part of an on-going teen pregnancy prevention strategy, Baby Think it Over computerized dolls were loaned to UCPS for use with the Baby Think it Over Curriculum in high schools. An obesity intervention is planned for 2013 with the Union County Boys and Girls Club at Monroe Middle. It is a collaborative initiative between the Health Department, CMC, Enterprise Fitness, Union County Nutritionists, and the Union County Public Schools.

The county teen pregnancy rates, specifically the minority teen pregnancy rates have gone down since 2008.

The Environmental Health Department worked collaboratively with Duke University and UNC Chapel Hill on a well water study to determine levels and impacts of trace metals, specifically arsenic in Union County well water. The Universities focus was on birth outcomes, with the Health Department Action Plan focusing on any potential links between the high Union County Alzheimer's rates and arsenic. The study has started, progressed, stopped, restarted and stopped again, based upon available funds and University student involvement. The Health Department remains committed to studying the quality of well water in Union County and the impact of the quality of drinking water wells on personal health.

The 2012 Health Department Strategic Planning goals were set based upon population health and are a continuation of the 2008 CHA priorities. The internal 2012 Public Health Department Strategic Plan will need to be expanded upon as the community sets new priorities resulting from the 2012 assessment.

Union County Health Department 2012 Strategic Plan Goals for Population Health

Environmental Health GOAL: *Decrease respiratory illnesses affecting health in Union County*

Child Health GOAL: *Decrease child obesity rates through improved nutrition and increased physical activity*

Adult Health GOAL: *Reduce diabetes rates in County residents through education, prevention and self-management.*

Chronic Disease GOAL: *Determine potential linkage between Alzheimer's rates in County residents that consumed well water with high concentrations of arsenic*

Health Awareness GOAL: I*ncrease patient count in the Health Department Dental Clinic by adding a dental outreach in adult care settings and expanding marketing and referral efforts*

Population Health GOAL: *Establish a community health and wellness center campus at the location of the new Health and Human Services building.*

The message and mission of the Health Department directly reflect the NC Division of Public Health's message, "Working for a healthier and safer NC, Everywhere, Every Day, Everybody". The Health Department serves the entire community and the department is taking the message, as well as programs and services, directly to the residents.

A main concern and priority of the 2008 CHA was local access to health care and the ability to pay for care. Uninsured Adult (19-64) resident numbers have increased since the completion of the 2008 CHA, moving from 20% to 22%.

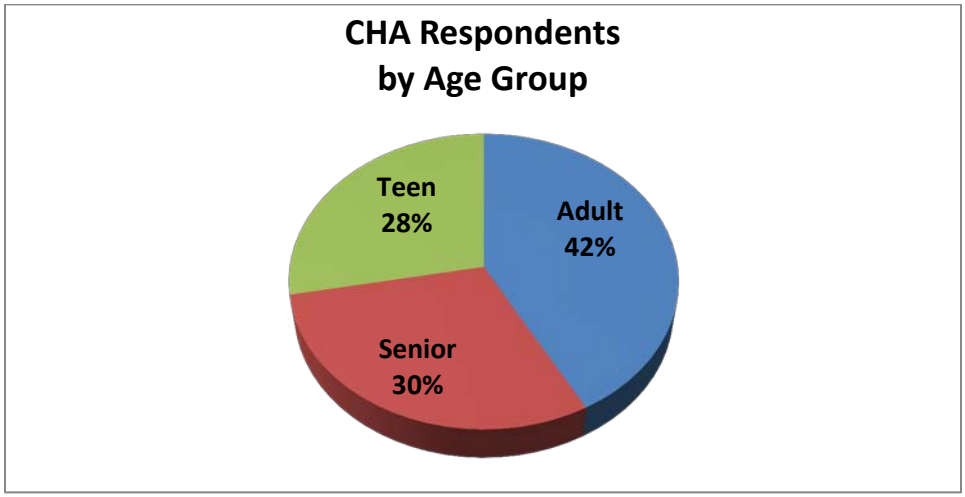
Total 2012 Community Health Assessment Survey Respondents

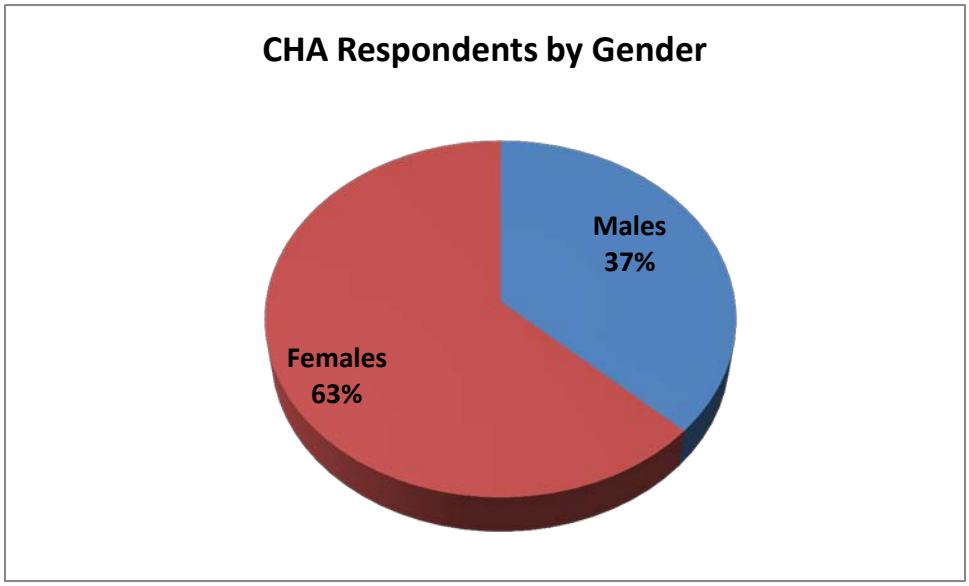
Total Number of Community Health Assessment Survey Respondents - 2054

586 Teens (13 to 18)

862 Adults (19 to 54 years old)

606 Seniors (55 and older)

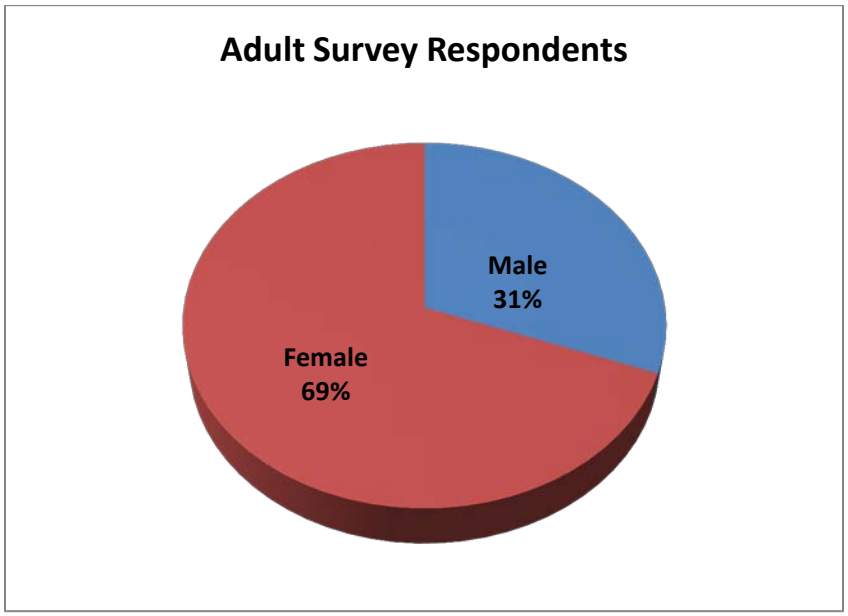


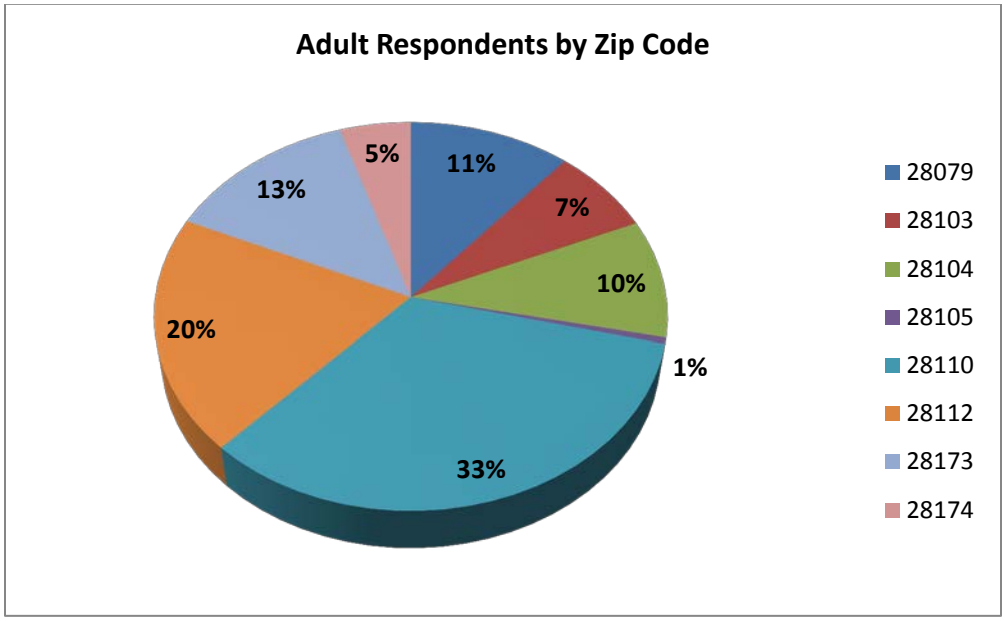


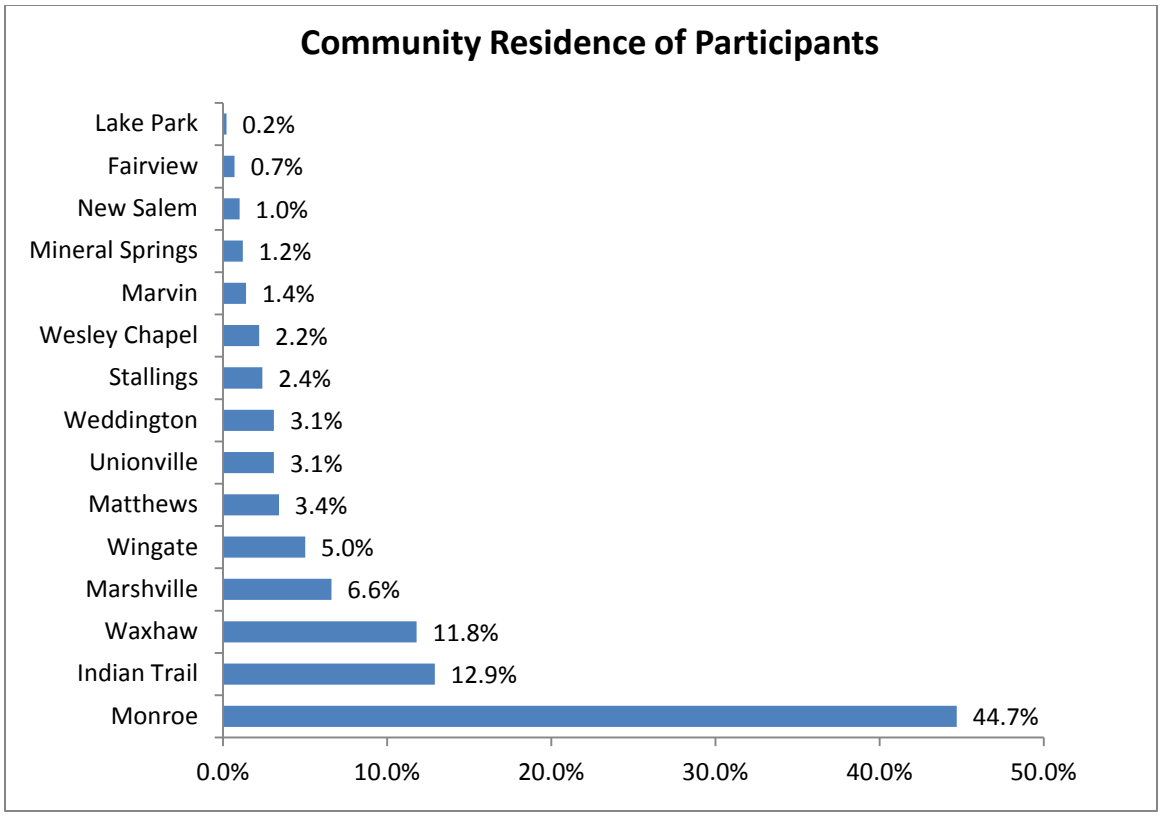
Adult Survey Results

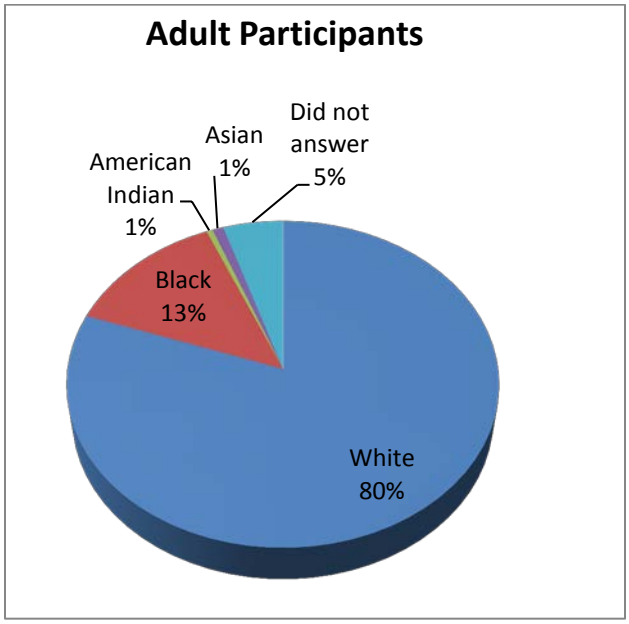
Adult Survey Respondents by Demographic Breakdown (Ages 19-54)

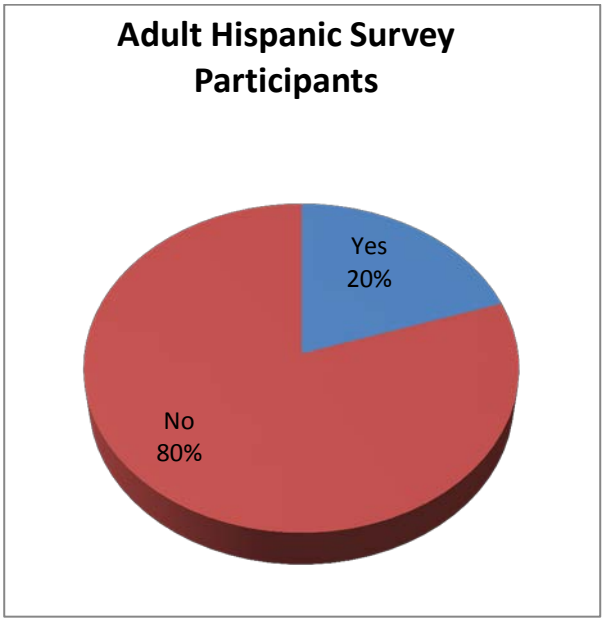
862 Total Adult Survey Respondents **42% Adult Respondents Overall**

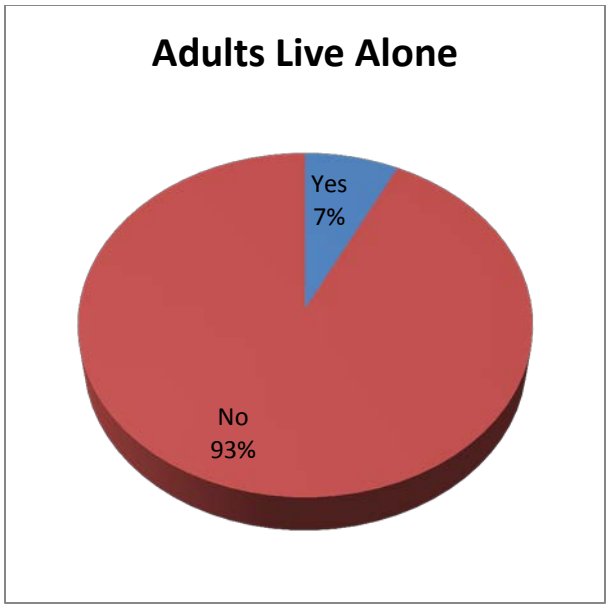


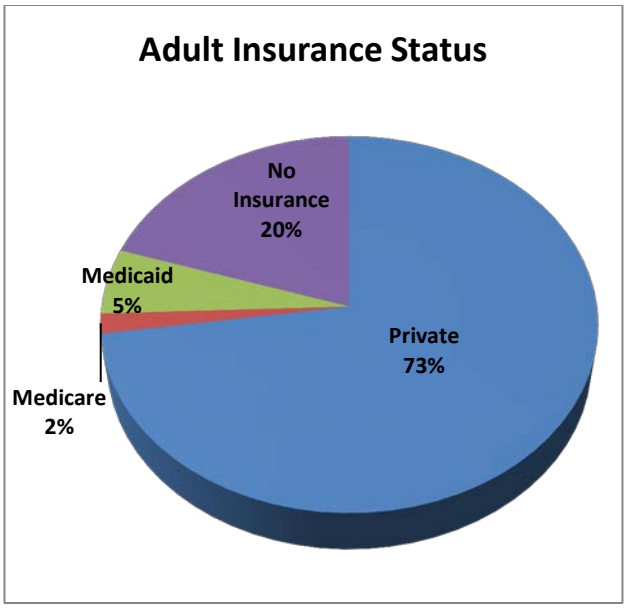


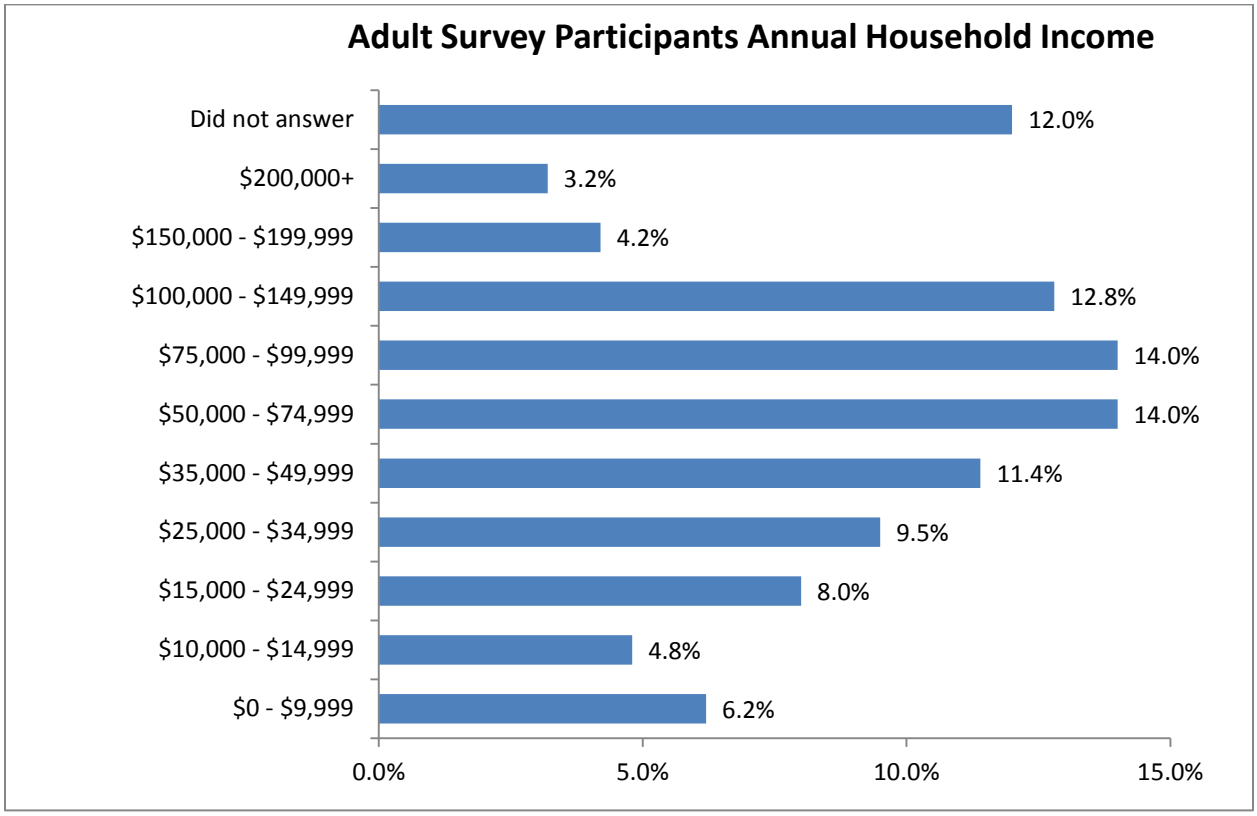

Community Residence of Participants
Lake Park 0.2%
Fairview 0.7%
New Salem 1.0%
Mineral Springs 1.2%
Marvin 1.4%
Wesley Chapel 2.2%
Stallings 2.4%
Weddington 3.1%
Unionville 3.1%
Matthews 3.4%
Wingate 5.0%
Marshville 6.6%
Waxhaw 11.8%
Indian Trail 12.9%
Monroe 44.7%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%

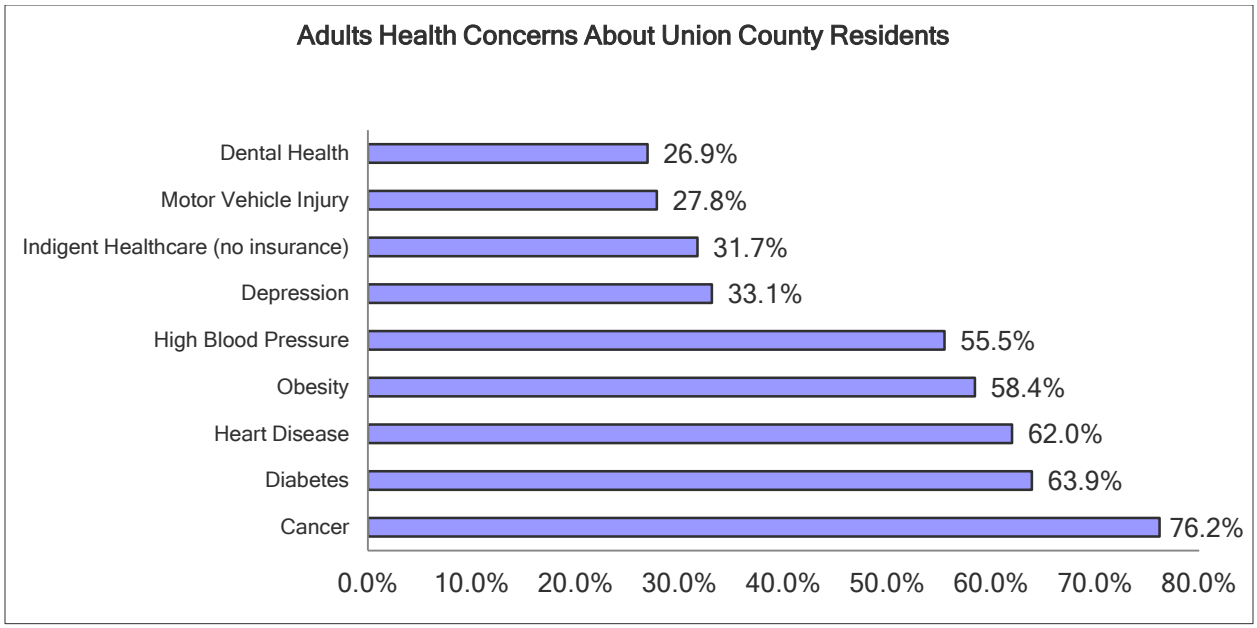

Adult Participants
American Indian 1%
Asian 1%
Did not answer 5%
Black 13%
White 80%

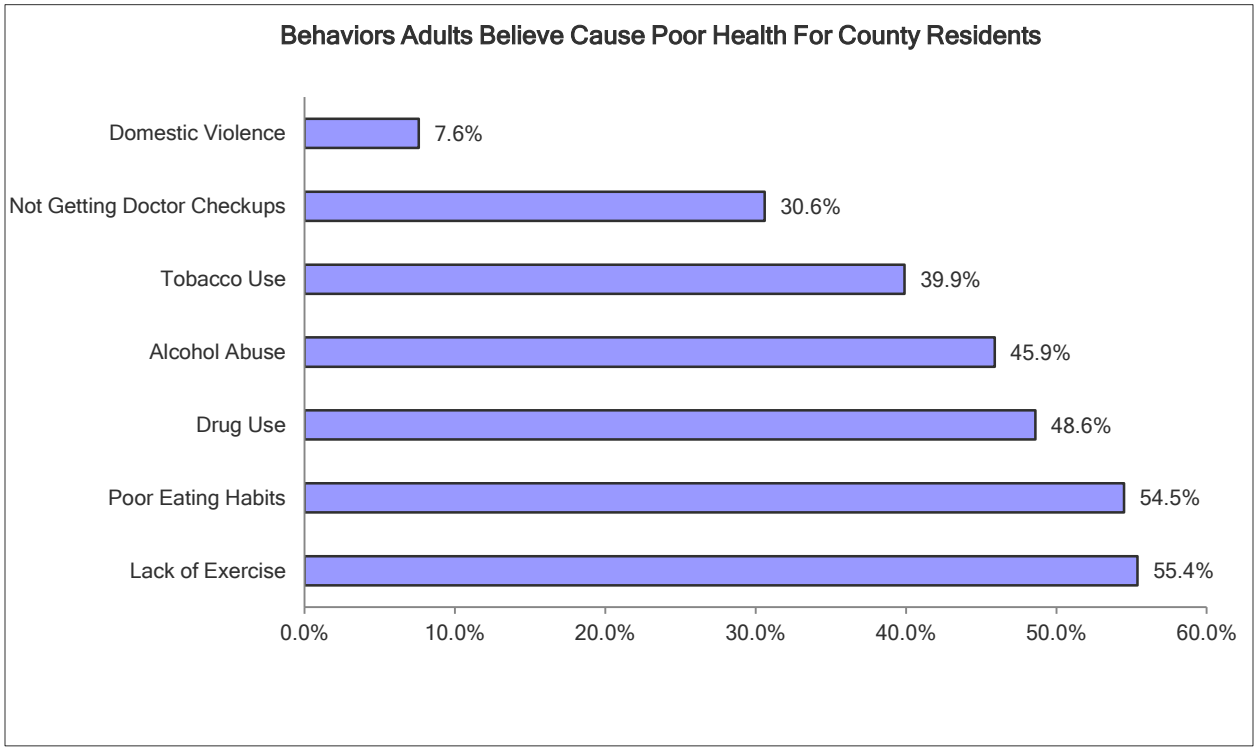

Adult Hispanic Survey Participants
Yes 20%
No 80%

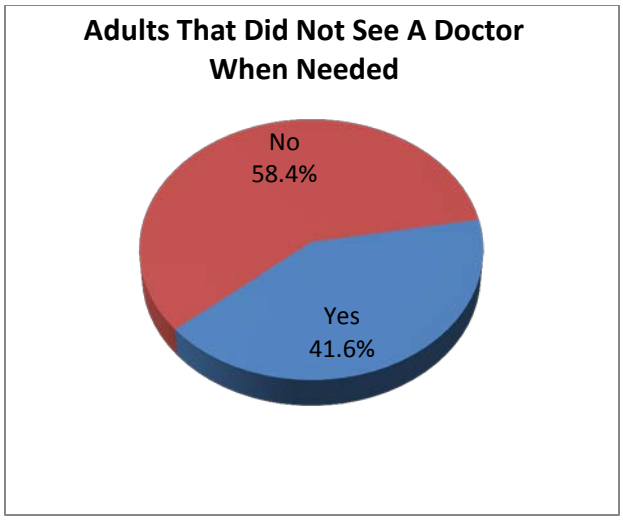

Adults Live Alone
Yes
7%
No
93%

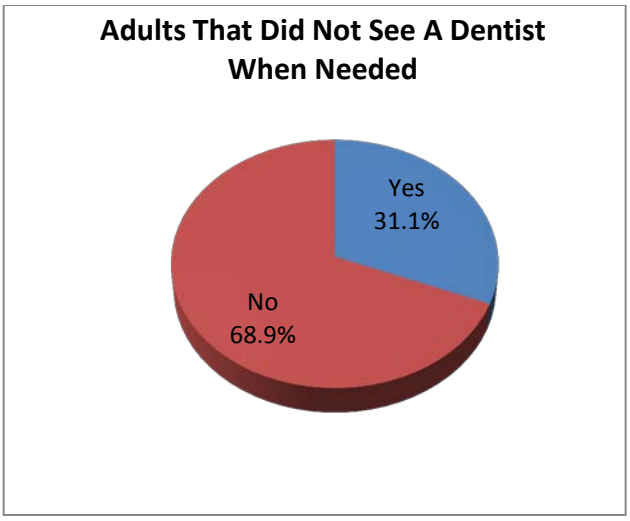

Adult Insurance Status
No
Insurance
20%
Medicaid
5%
Private
73%
Medicare
2%

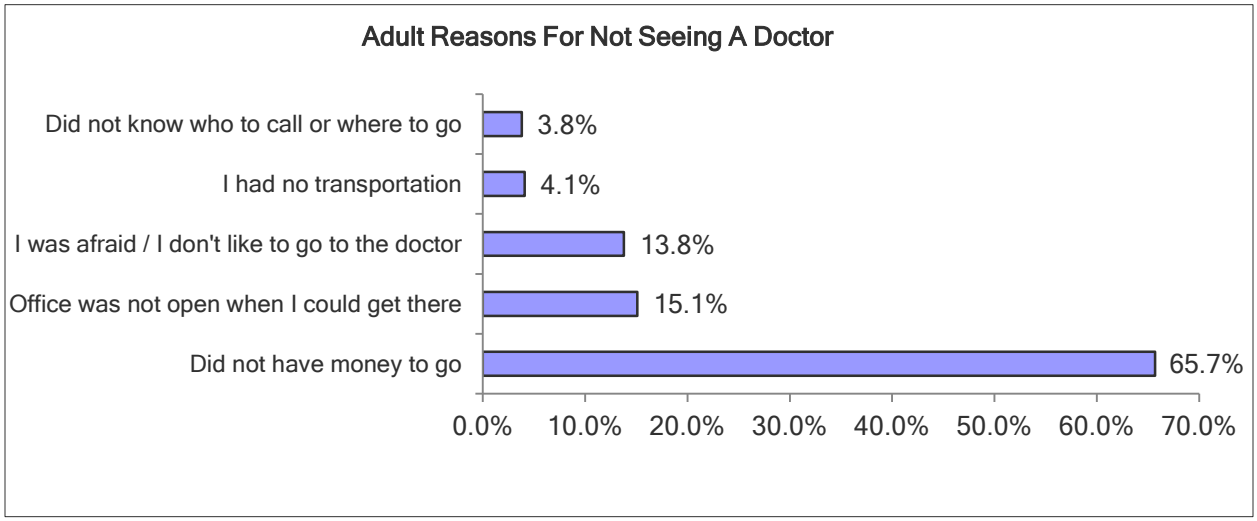

Adult Survey Participants Annual Household Income
Did not answer
12.0%
$200,000+
3.2%
$150,000 - $199,999
4.2%
$100,000 - $149,999
12.8%
$75,000 - $99,999
14.0%
$50,000 - $74,999
14.0%
$35,000 - $49,999
11.4%
$25,000 - $34,999
9.5%
$15,000 - $24,999
8.0%
$10,000 - $14,999
4.8%
$0 - $9,999
6.2%
0.0%
5.0%
10.0%
15.0%

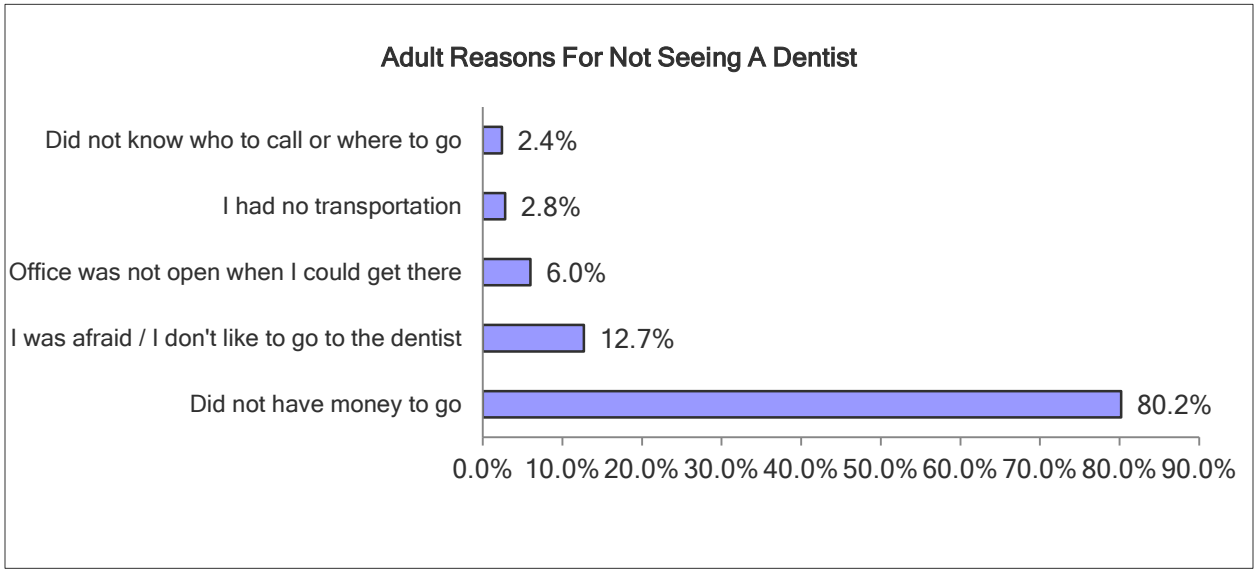

Adults Health Concerns About Union County Residents
Dental Health
26.9%
Motor Vehicle Injury
27.8%
Indigent Healthcare (no insurance)
31.7%
Depression
33.1%
High Blood Pressure
55.5%
Obesity
58.4%
Heart Disease
62.0%
Diabetes
63.9%
Cancer
76.2%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%

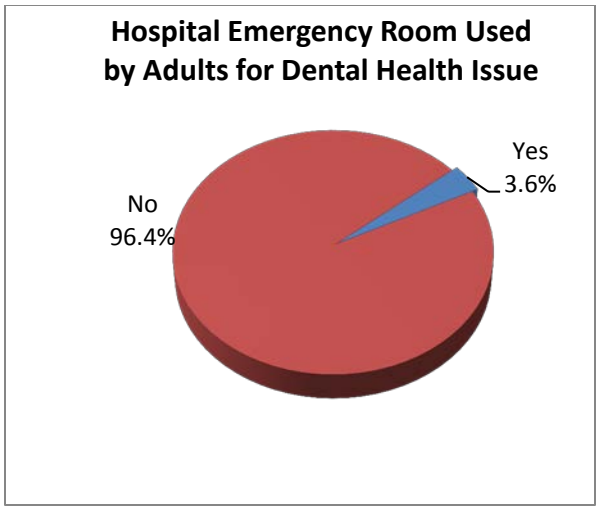

Behaviors Adults Believe Cause Poor Health For County Residents
Domestic Violence
7.6%
Not Getting Doctor Checkups
30.6%
Tobacco Use
39.9%
Alcohol Abuse
45.9%
Drug Use
48.6%
Poor Eating Habits
54.5%
Lack of Exercise
55.4%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%

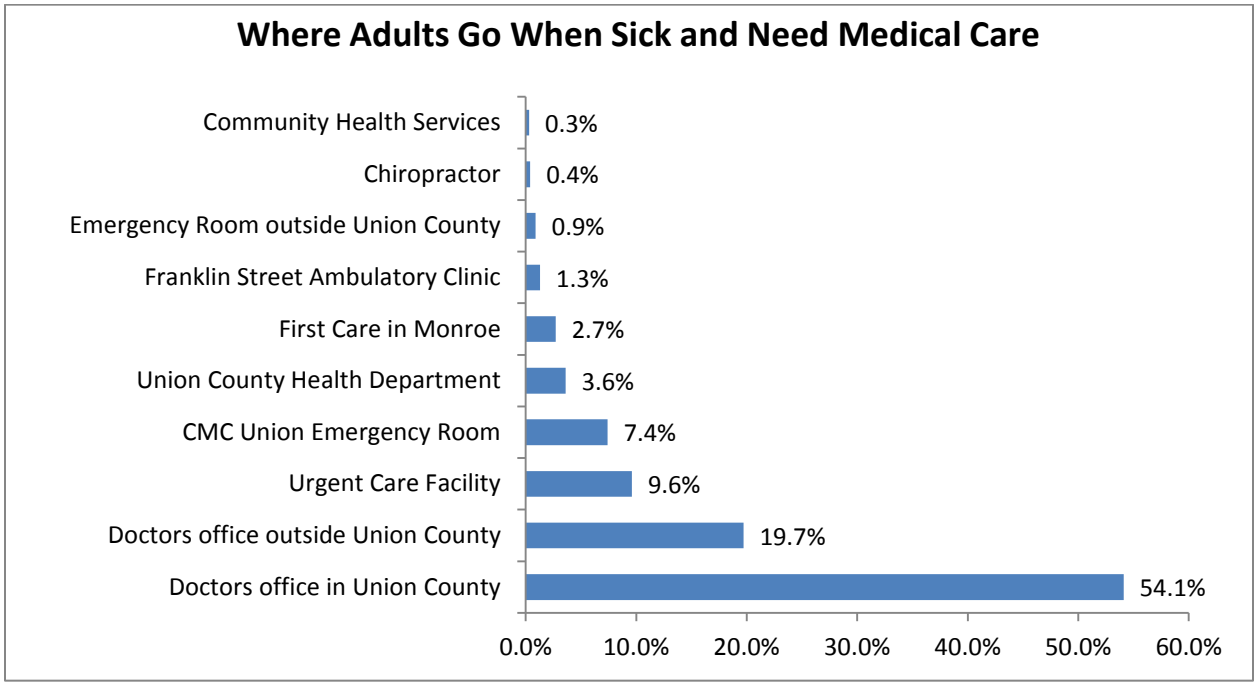

Adults That Did Not See A Doctor When Needed
No
58.4%
Yes
41.6%

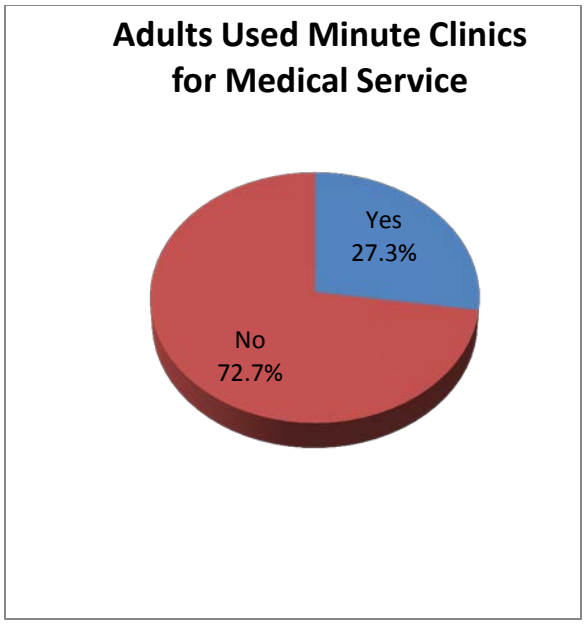

Adults That Did Not See A Dentist When Needed
Yes
31.1%
No
68.9%

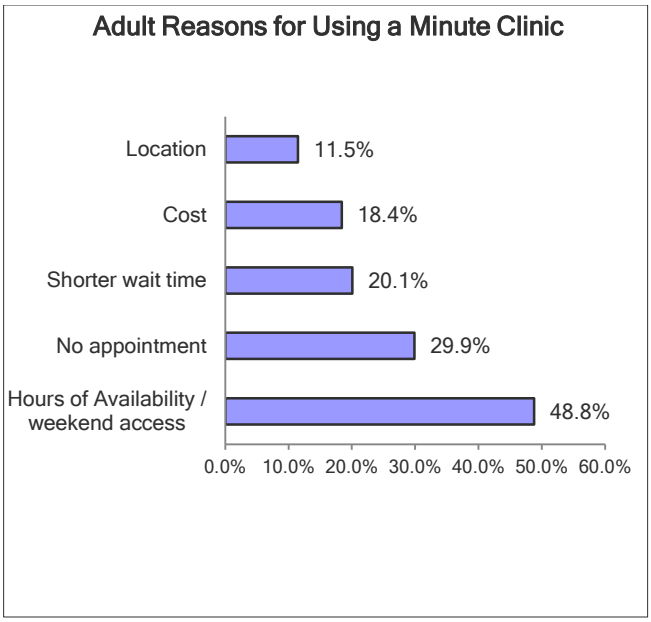

Adult Reasons For Not Seeing A Doctor
Did not know who to call or where to go
3.8%
I had no transportation
4.1%
I was afraid / I don't like to go to the doctor
13.8%
Office was not open when I could get there
15.1%
Did not have money to go
65.7%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%

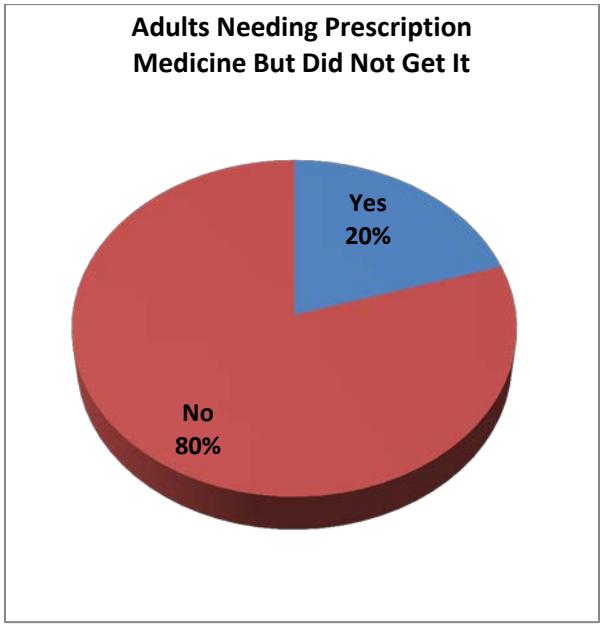

Adult Reasons For Not Seeing A Dentist
Did not know who to call or where to go
2.4%
I had no transportation
2.8%
Office was not open when I could get there
6.0%
I was afraid / I don't like to go to the dentist
12.7%
Did not have money to go
80.2%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%
90.0%

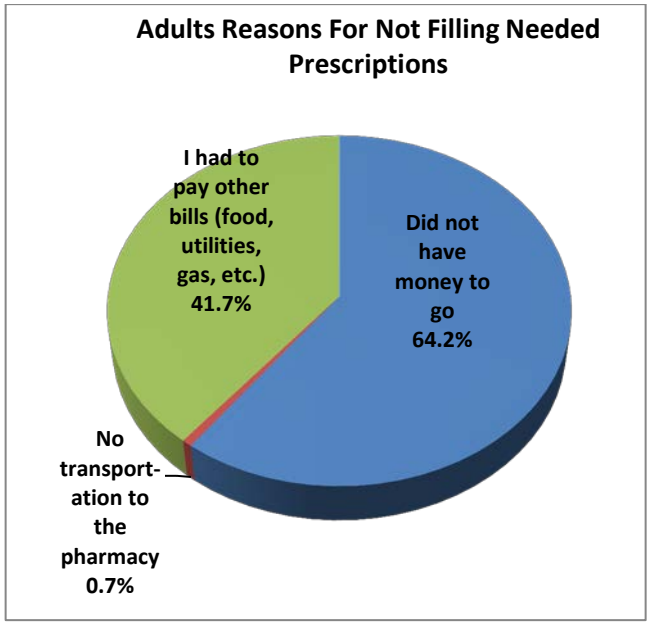

Hospital Emergency Room Used by Adults for Dental Health Issue
Yes
3.6%
No
96.4%


Where Adults Go When Sick and Need Medical Care
Community Health Services
0.3%
Chiropractor
0.4%
Emergency Room outside Union County
0.9%
Franklin Street Ambulatory Clinic
1.3%
First Care in Monroe
2.7%
Union County Health Department
3.6%
CMC Union Emergency Room
7.4%
Urgent Care Facility
9.6%
Doctors office outside Union County
19.7%
Doctors office in Union County
54.1%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%

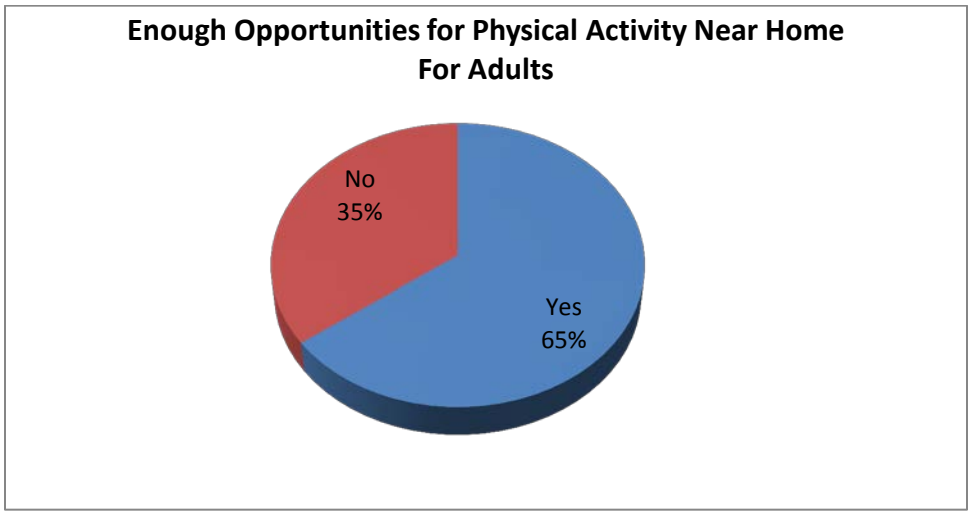

Adults Used Minute Clinics for Medical Service
Yes 27.3%
No 72.7%

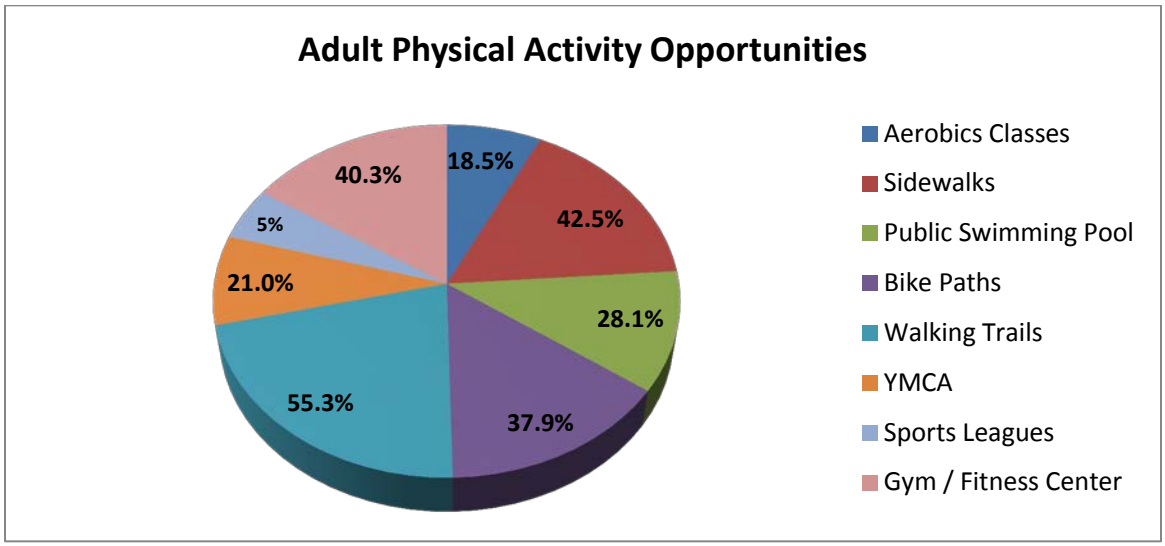

Adult Reasons for Using a Minute Clinic
Location 11.5%
Cost 18.4%
Shorter wait time 20.1%
No appointment 29.9%
Hours of Availability / weekend access 48.8%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0%

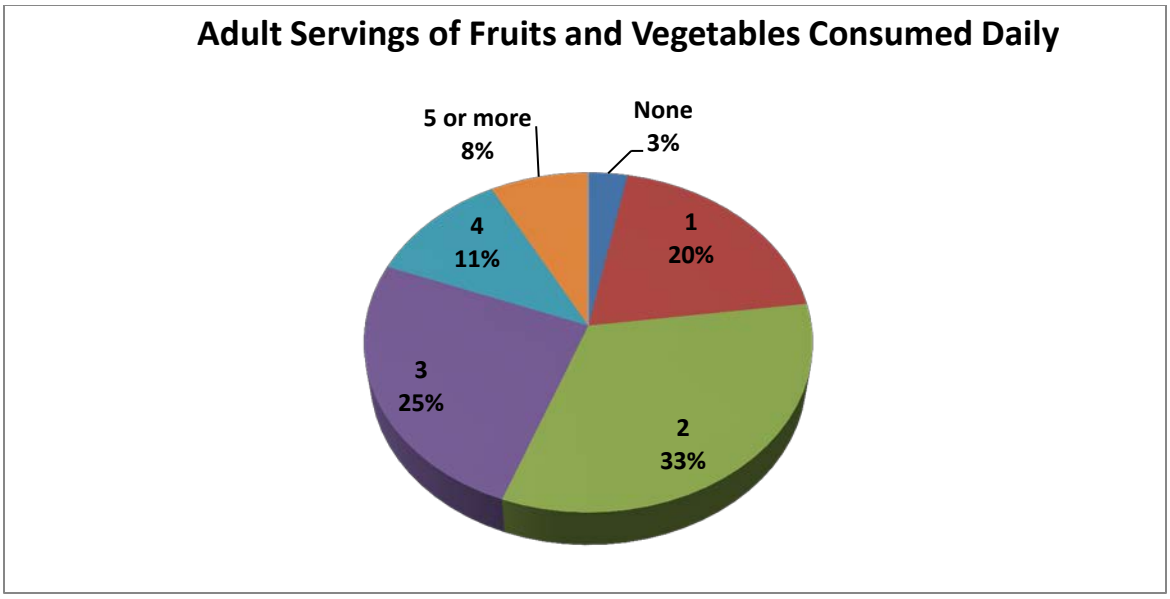

Adults Needing Prescription Medicine But Did Not Get It
Yes 20%
No 80%

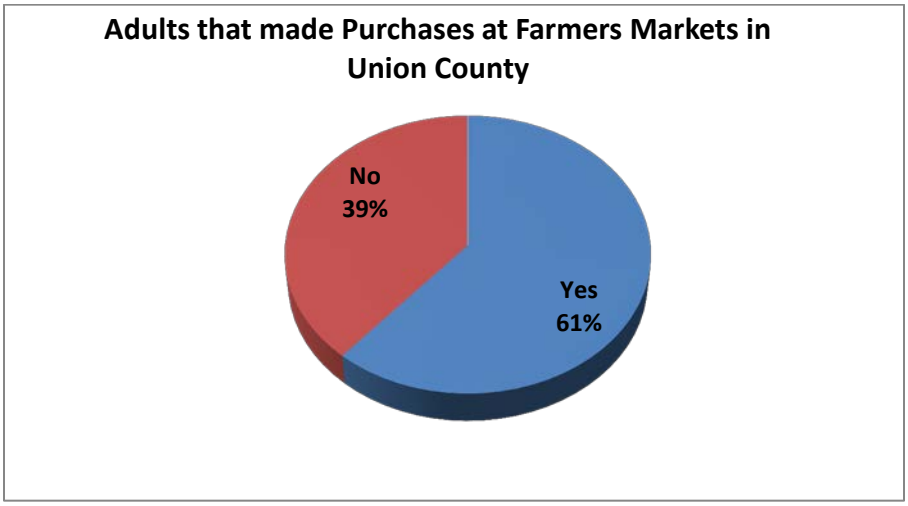

Adults Reasons For Not Filling Needed Prescriptions
I had to pay other bills (food, utilities, gas, etc.) 41.7%
Did not have money to go 64.2%
No transport-ation to the pharmacy 0.7%

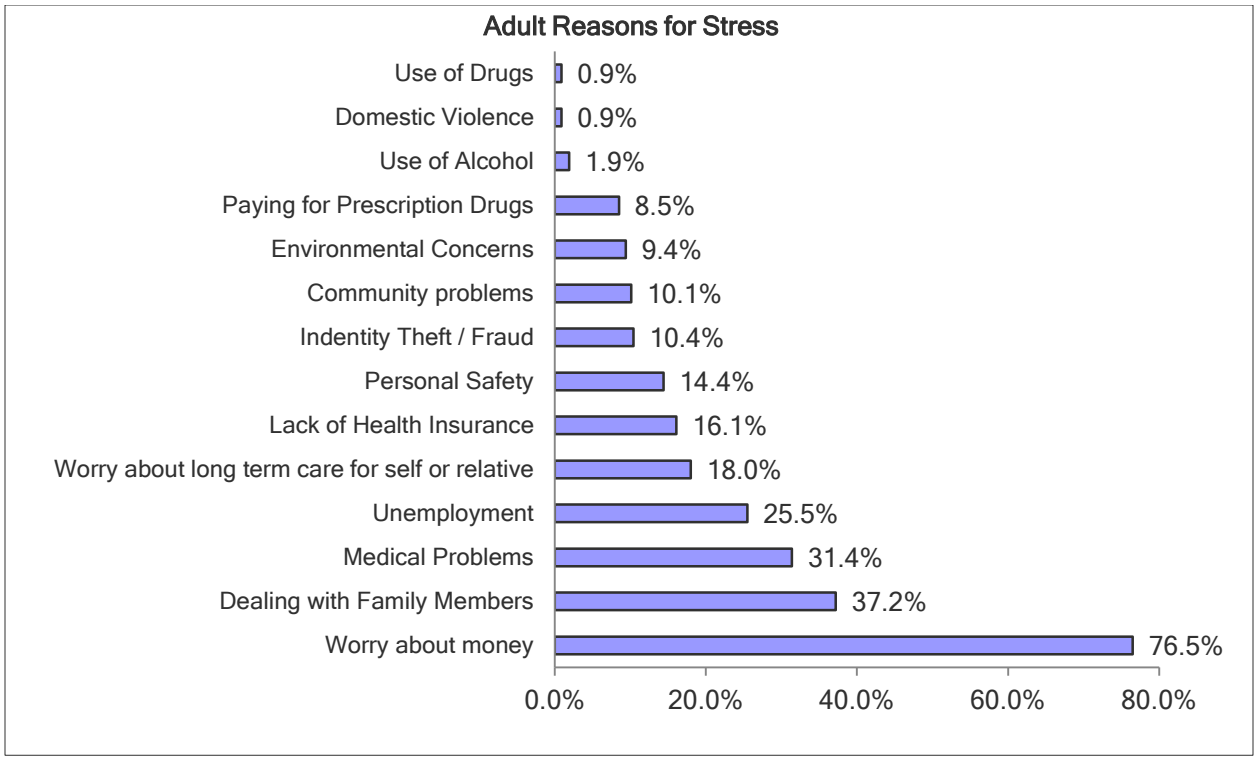
Number of Days Per Week Adults Get at Least 30 Minutes of Exercise
None 13%
One 13%
Two 17%
Three 23%
Four 16%
Five or more 18%

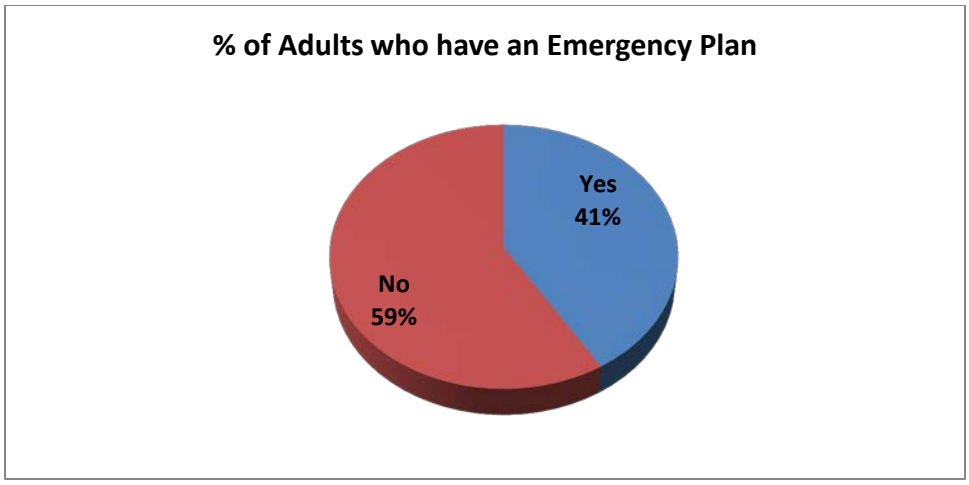

Enough Opportunities for Physical Activity Near Home For Adults
No 35%
Yes 65%

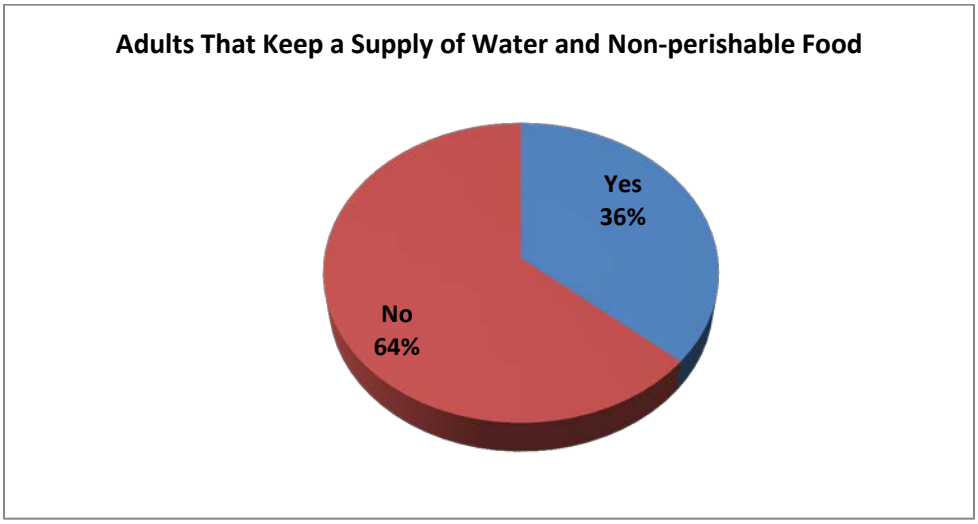

Adult Physical Activity Opportunities
18.5%
42.5%
28.1%
37.9%
55.3%
21.0%
5%
40.3%
Aerobics Classes
Sidewalks
Public Swimming Pool
Bike Paths
Walking Trails
YMCA
Sports Leagues
Gym / Fitness Center

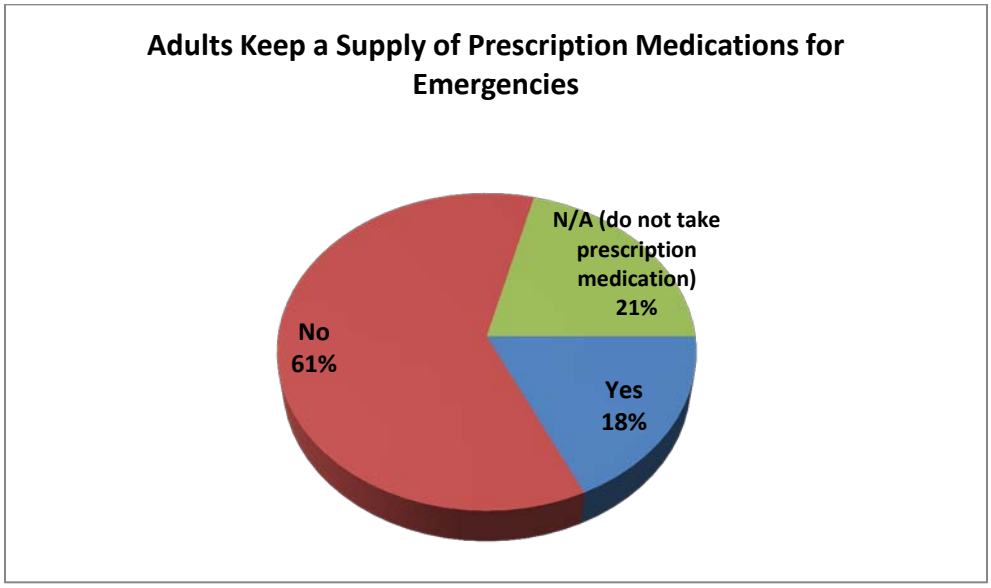

Adult Servings of Fruits and Vegetables Consumed Daily
5 or more
8%
None
3%
1
20%
4
11%
3
25%
2
33%

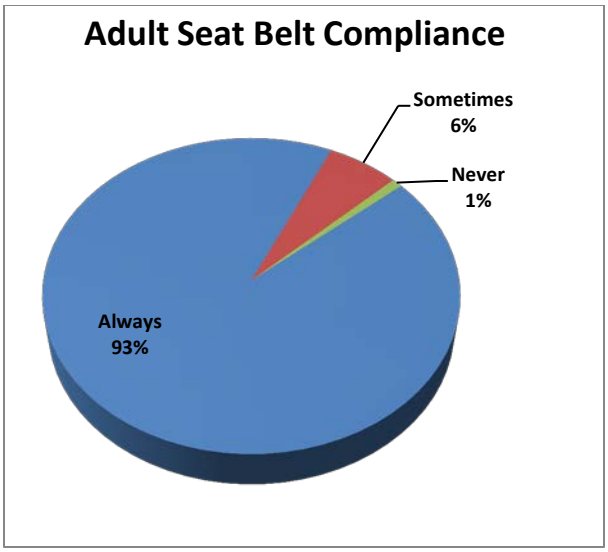

Adults that made Purchases at Farmers Markets in Union County
No
39%
Yes
61%

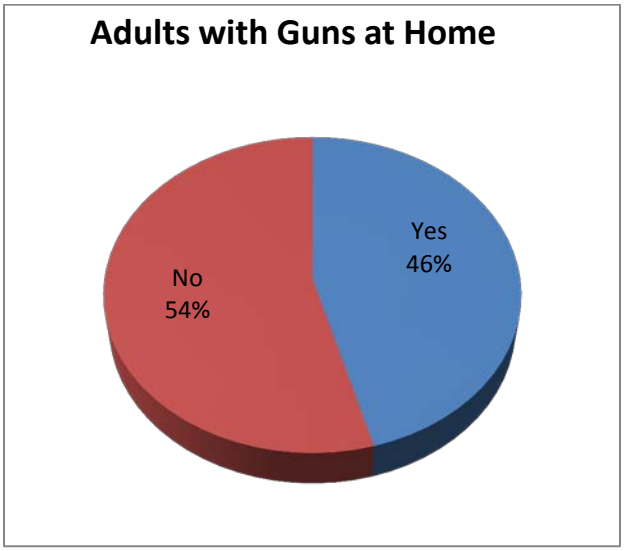

Adult Reasons for Stress
Use of Drugs
0.9%
Domestic Violence
0.9%
Use of Alcohol
1.9%
Paying for Prescription Drugs
8.5%
Environmental Concerns
9.4%
Community problems
10.1%
Indentity Theft / Fraud
10.4%
Personal Safety
14.4%
Lack of Health Insurance
16.1%
Worry about long term care for self or relative
18.0%
Unemployment
25.5%
Medical Problems
31.4%
Dealing with Family Members
37.2%
Worry about money
76.5%
0.0%
20.0%
40.0%
60.0%
80.0%

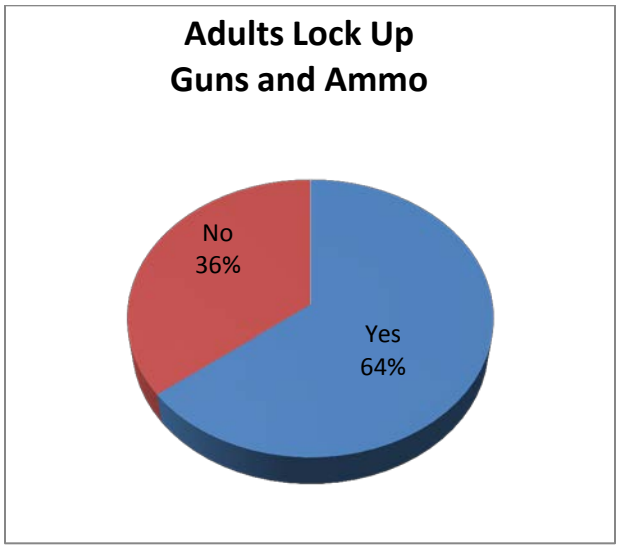

% of Adults who have an Emergency Plan
Yes
41%
No
59%

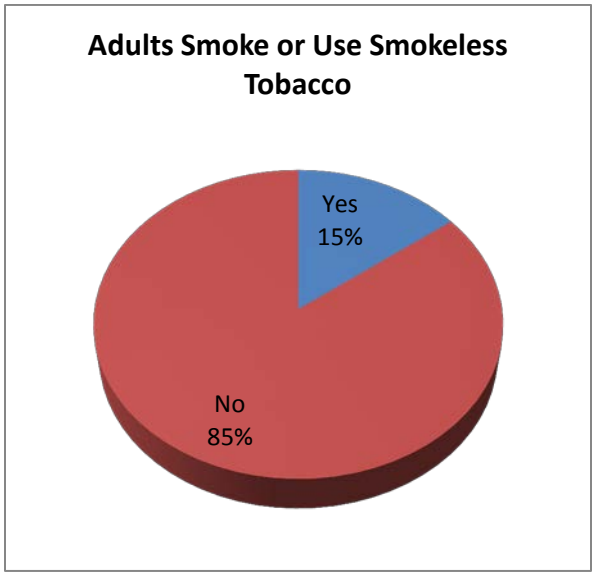

Adults That Keep a Supply of Water and Non-perishable Food
Yes
36%
No
64%

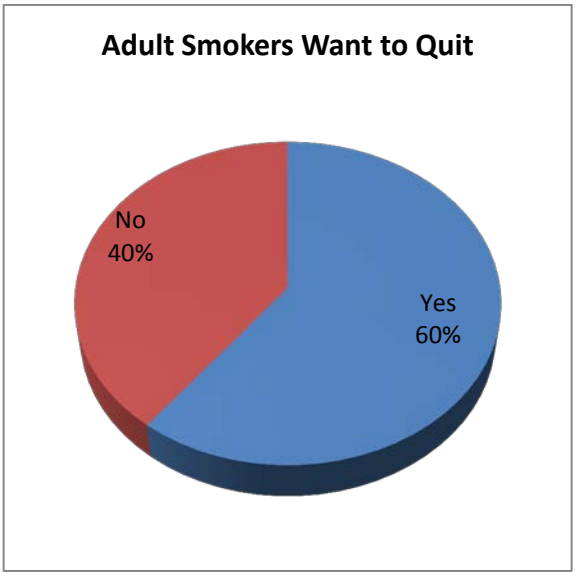

Adults Keep a Supply of Prescription Medications for Emergencies
N/A (do not take prescription medication)
21%
No
61%
Yes
18%

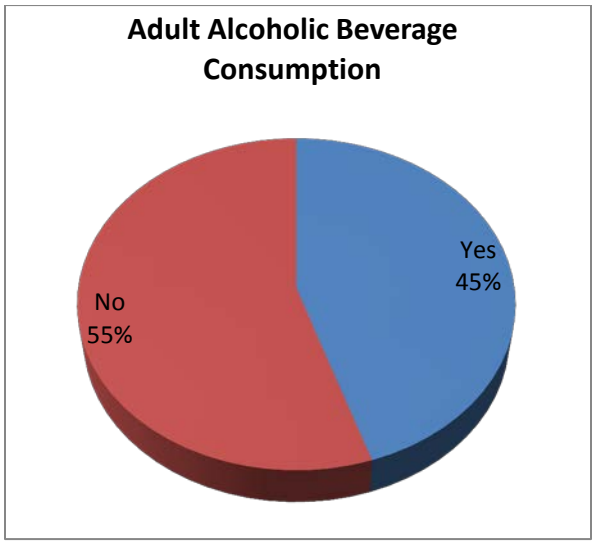

Adult Seat Belt Compliance
Sometimes
6%
Never
1%
Always
93%

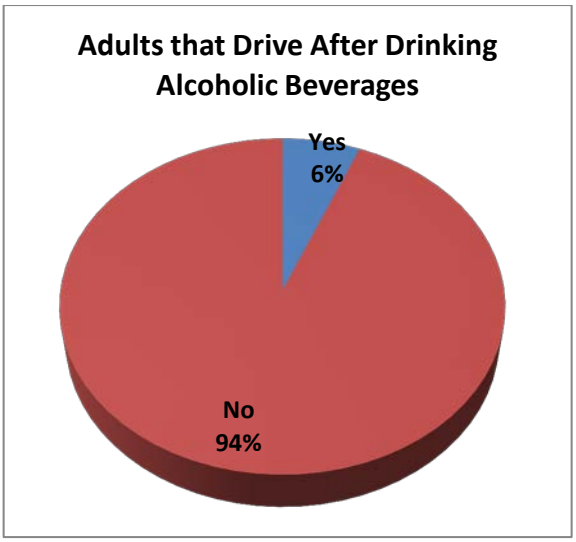

Adults with Guns at Home
Yes
46%
No
54%

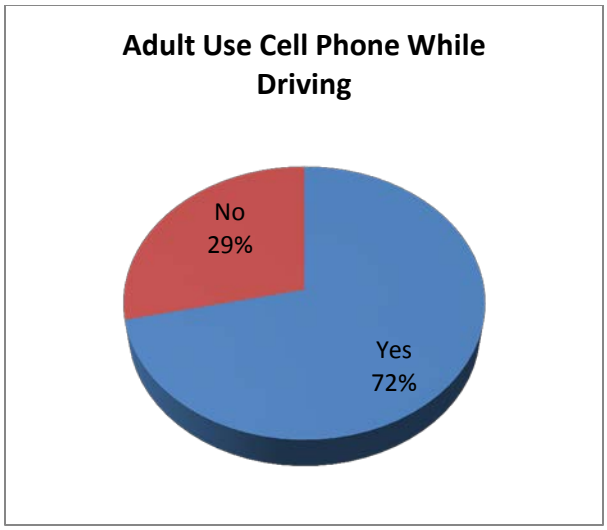

Adults Lock Up
Guns and Ammo
No
36%
Yes
64%

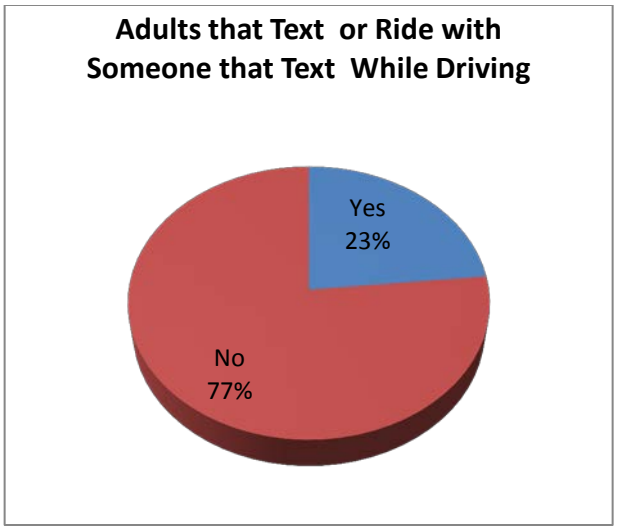

Adults Smoke or Use Smokeless Tobacco
Yes
15%
No
85%

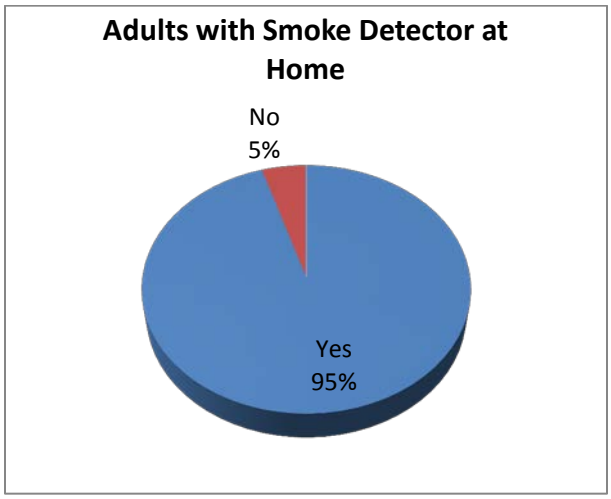

Adult Smokers Want to Quit
No
40%
Yes
60%

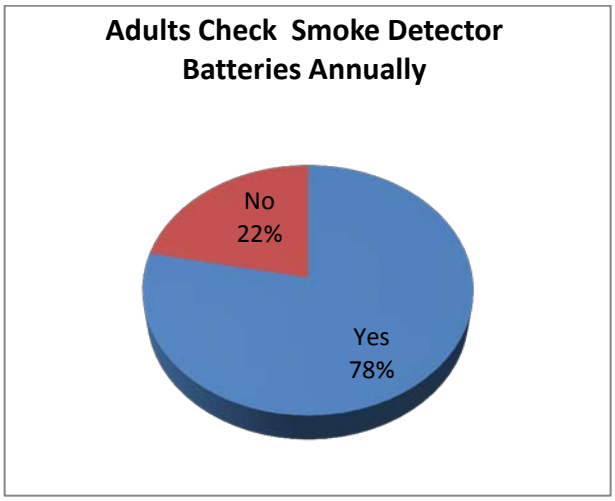

Adult Alcoholic Beverage Consumption
Yes
45%
No
55%

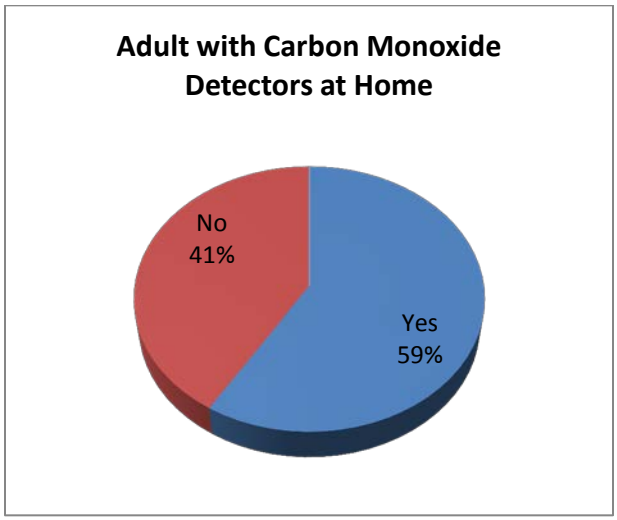

Adults that Drive After Drinking Alcoholic Beverages
Yes
6%
No
94%

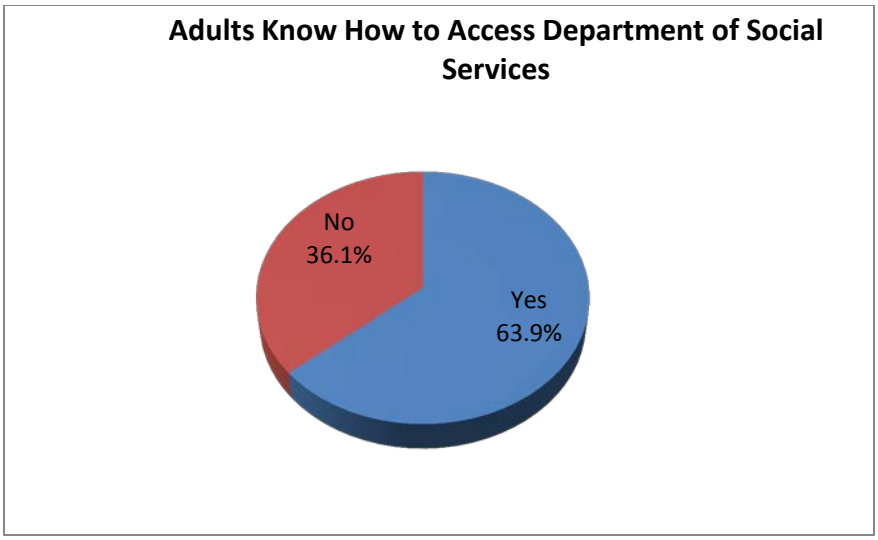

Adult Use Cell Phone While Driving
No
29%
Yes
72%

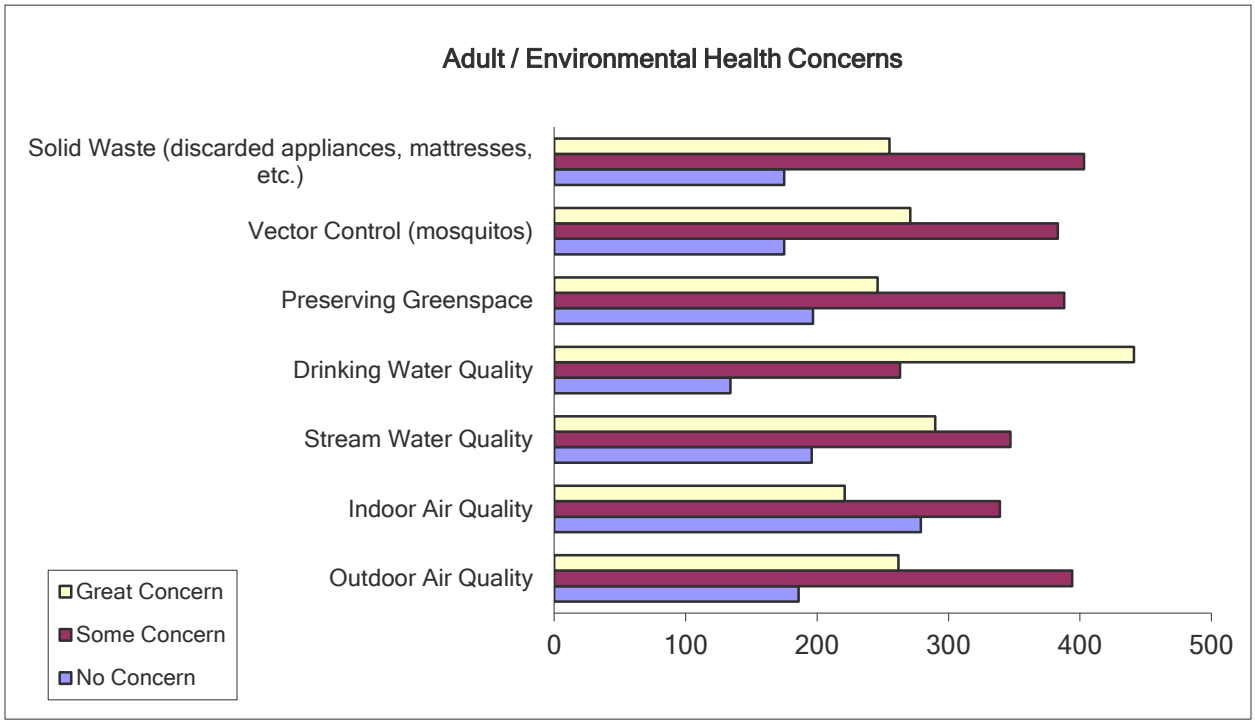

Adults that Text or Ride with Someone that Text While Driving
Yes
23%
No
77%

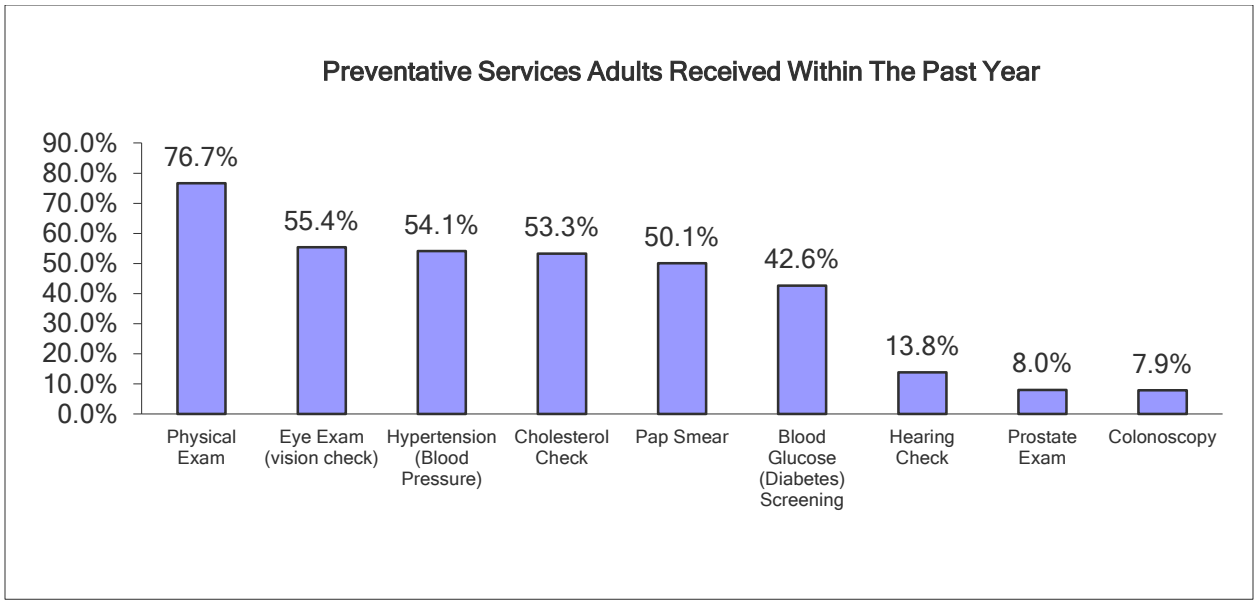

Adults with Smoke Detector at Home
No
5%
Yes
95%

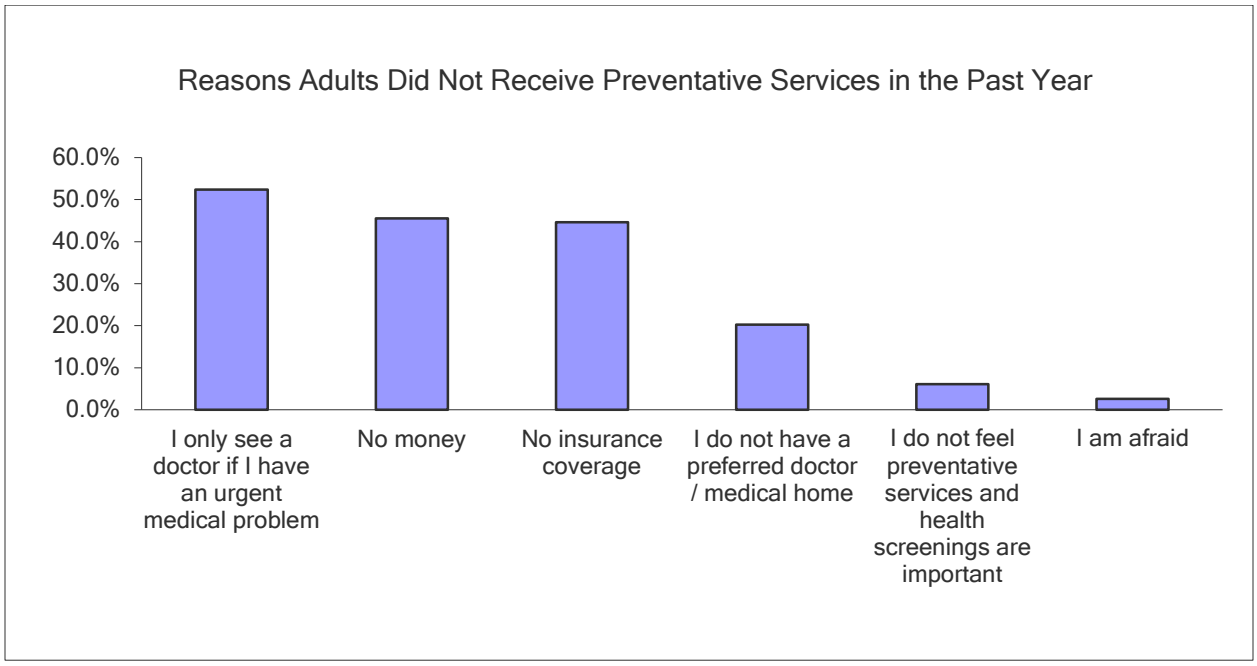

Adults Check Smoke Detector Batteries Annually
No
22%
Yes
78%

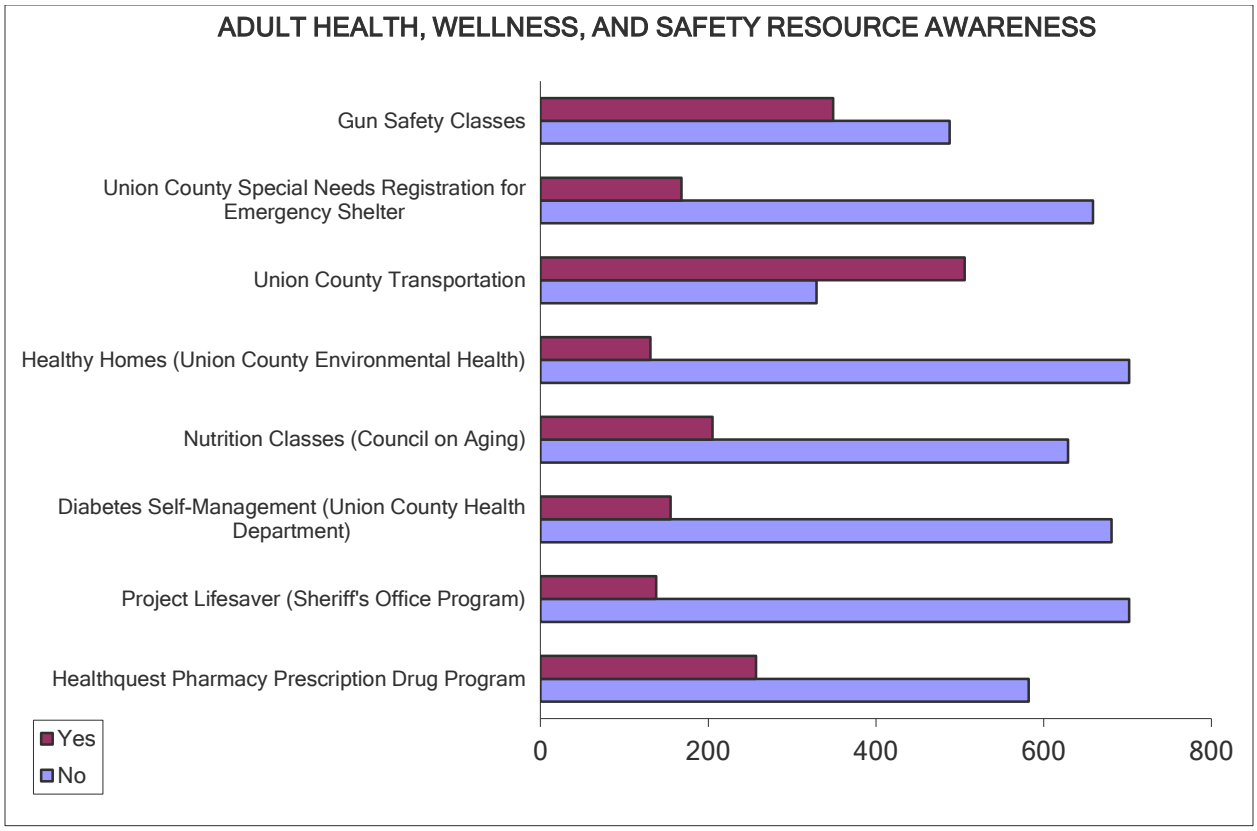

Adult with Carbon Monoxide Detectors at Home
No
41%
Yes
59%


Adults Know How to Access Department of Social Services
No
36.1%
Yes
63.9%


Adult / Environmental Health Concerns
Solid Waste (discarded appliances, mattresses, etc.)
Vector Control (mosquitos)
Preserving Greenspace
Drinking Water Quality
Stream Water Quality
Indoor Air Quality
Outdoor Air Quality
0
100
200
300
400
500
Great Concern
Some Concern
No Concern


Preventative Services Adults Received Within The Past Year
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
76.7%
55.4%
54.1%
53.3%
50.1%
42.6%
13.8%
8.0%
7.9%
Physical Exam
Eye Exam (vision check)
Hypertension (Blood Pressure)
Cholesterol Check
Pap Smear
Blood Glucose (Diabetes) Screening
Hearing Check
Prostate Exam
Colonoscopy

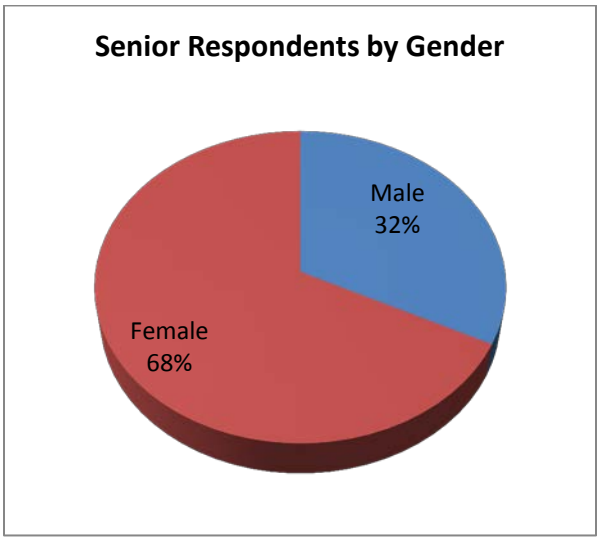

Reasons Adults Did Not Receive Preventative Services in the Past Year
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
I only see a doctor if I have an urgent medical problem
No money
No insurance coverage
I do not have a preferred doctor / medical home
I do not feel preventative services and health screenings are important
I am afraid

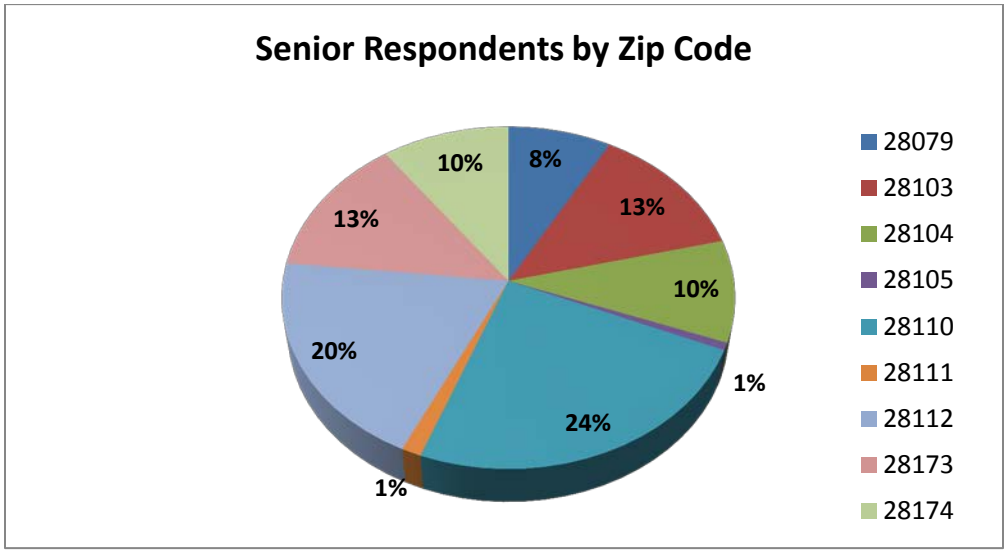

ADULT HEALTH, WELLNESS, AND SAFETY RESOURCE AWARENESS
Gun Safety Classes
Union County Special Needs Registration for Emergency Shelter
Union County Transportation
Healthy Homes (Union County Environmental Health)
Nutrition Classes (Council on Aging)
Diabetes Self-Management (Union County Health Department)
Project Lifesaver (Sheriff's Office Program)
Healthquest Pharmacy Prescription Drug Program
0
200
400
600
800
Yes
No

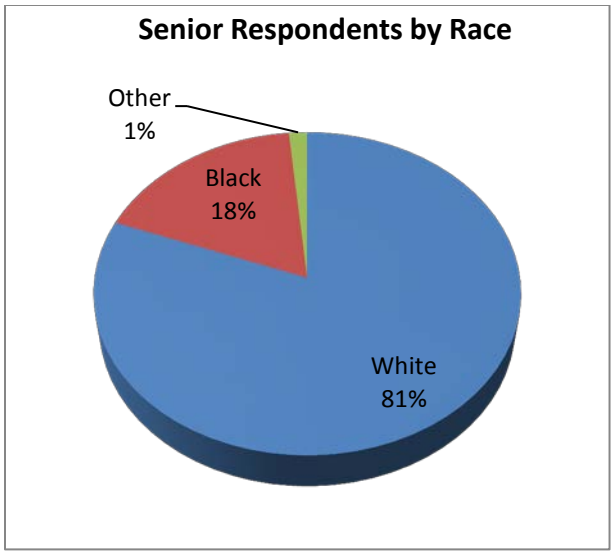
Senior Adult Survey Results

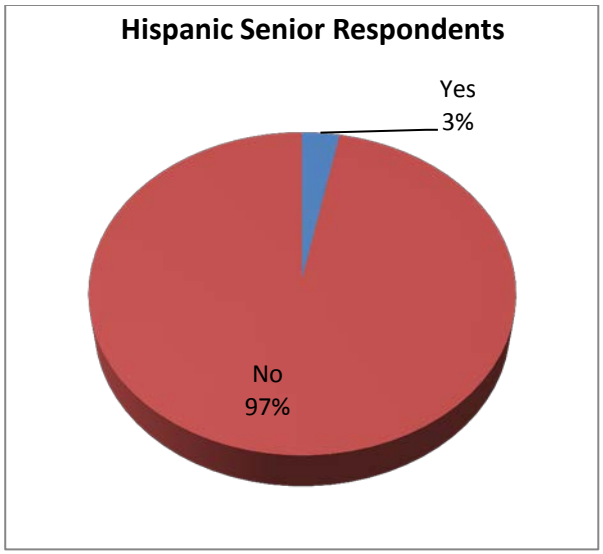
Senior Survey Respondents by Demographic Breakdown (Ages 55 +)

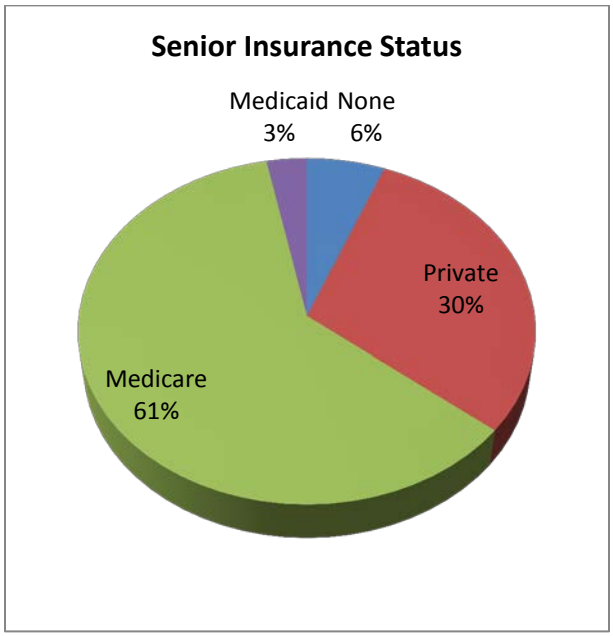
606 Total Senior Survey Respondents **30% Senior Respondents Overall**

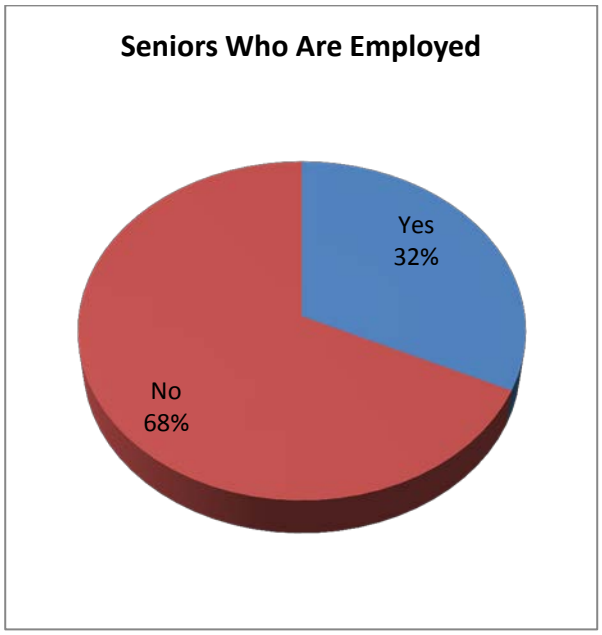


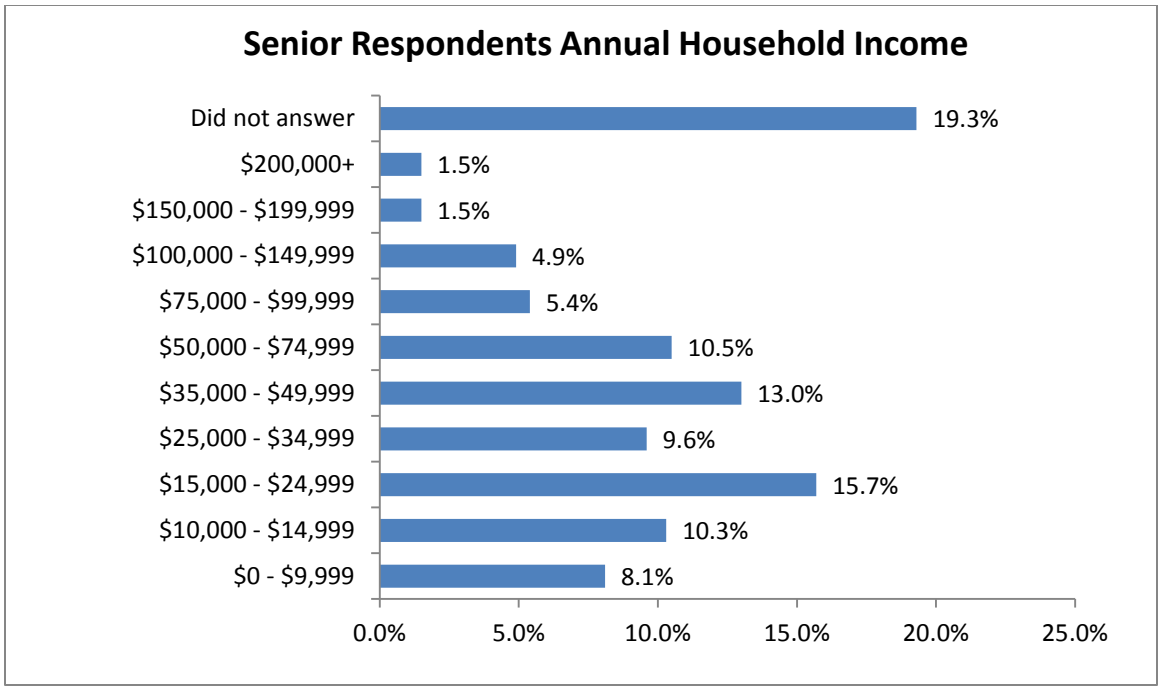


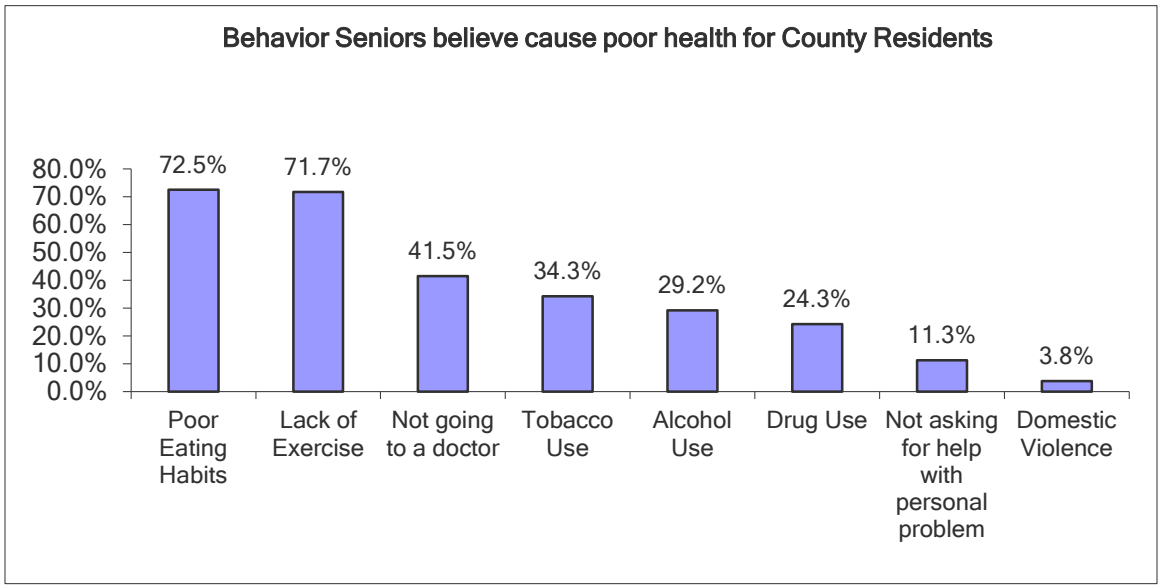

Senior Respondents by Race
Other
1%
Black
18%
White
81%

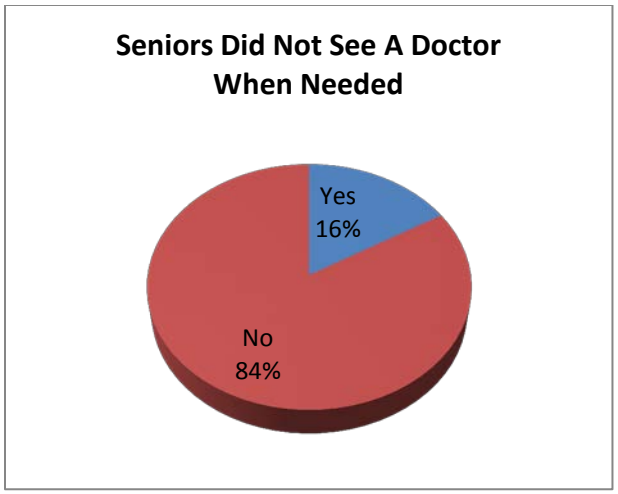

Hispanic Senior Respondents
Yes
3%
No
97%

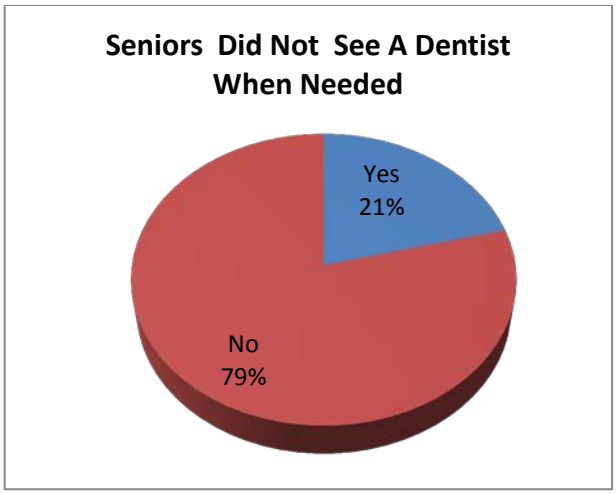

Senior Insurance Status
Medicaid
3%
None
6%
Private
30%
Medicare
61%

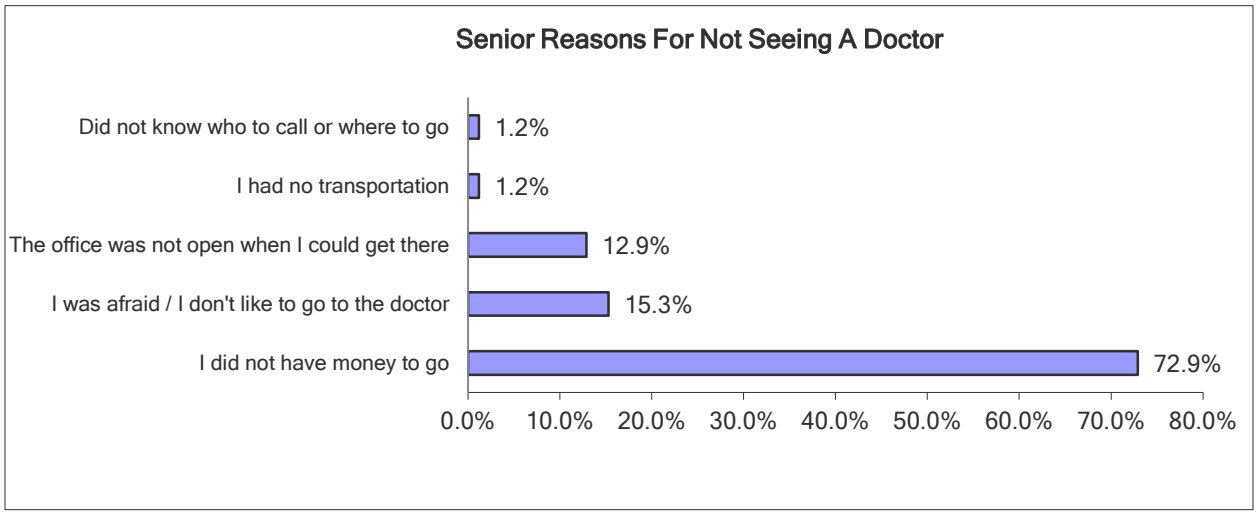

Seniors Who Are Employed
Yes
32%
No
68%

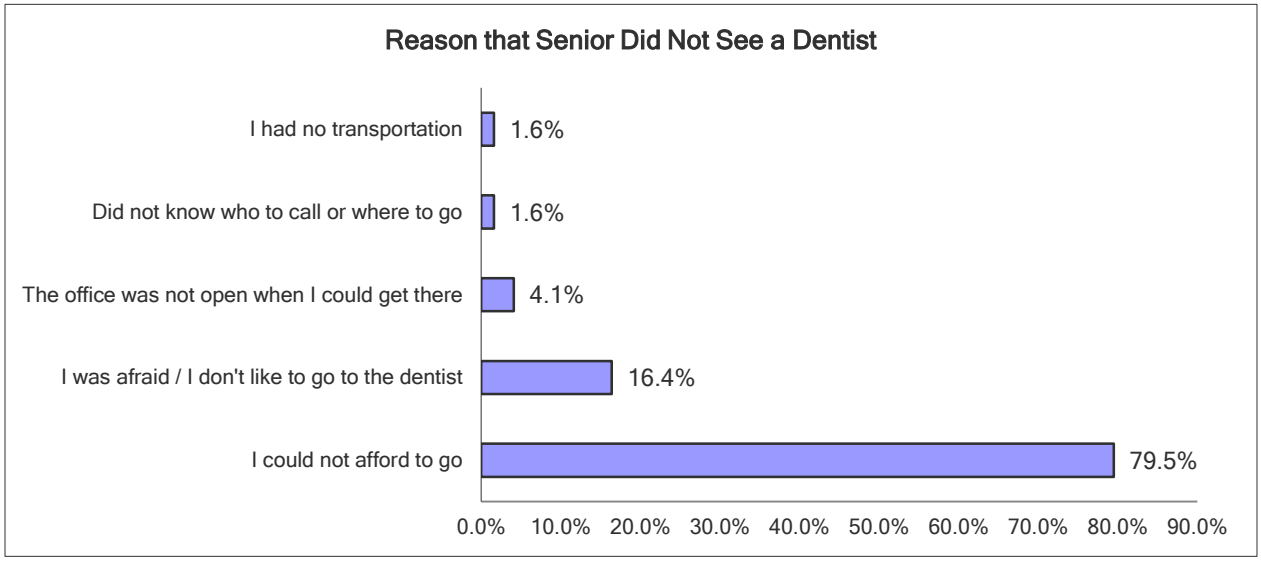

Senior Respondents Annual Household Income
Did not answer
$200,000+
$150,000 - $199,999
$100,000 - $149,999
$75,000 - $99,999
$50,000 - $74,999
$35,000 - $49,999
$25,000 - $34,999
$15,000 - $24,999
$10,000 - $14,999
$0 - $9,999
19.3%
1.5%
1.5%
4.9%
5.4%
10.5%
13.0%
9.6%
15.7%
10.3%
8.1%
0.0%
5.0%
10.0%
15.0%
20.0%
25.0%

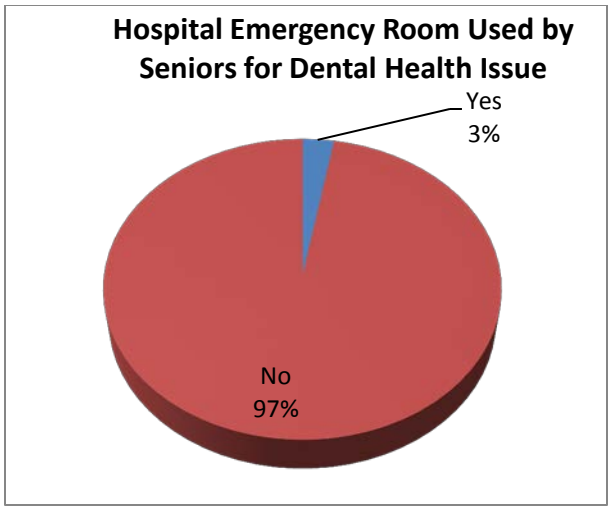

Behavior Seniors believe cause poor health for County Residents
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
72.5%
71.7%
41.5%
34.3%
29.2%
24.3%
11.3%
3.8%
Poor Eating Habits
Lack of Exercise
Not going to a doctor
Tobacco Use
Alcohol Use
Drug Use
Not asking for help with personal problem
Domestic Violence

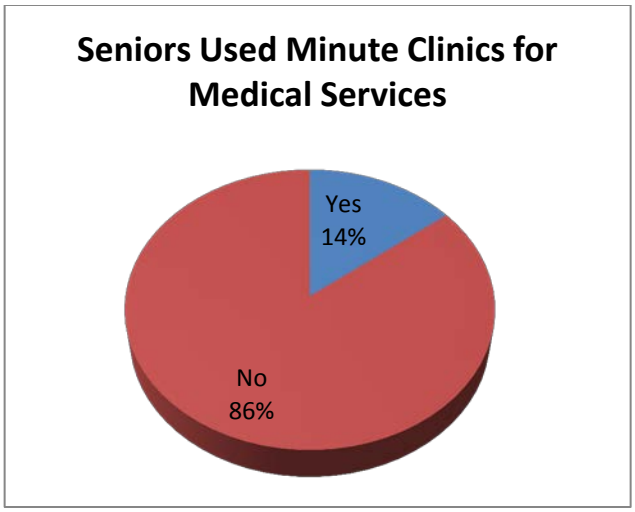

Seniors Did Not See A Doctor When Needed
Yes 16%
No 84%

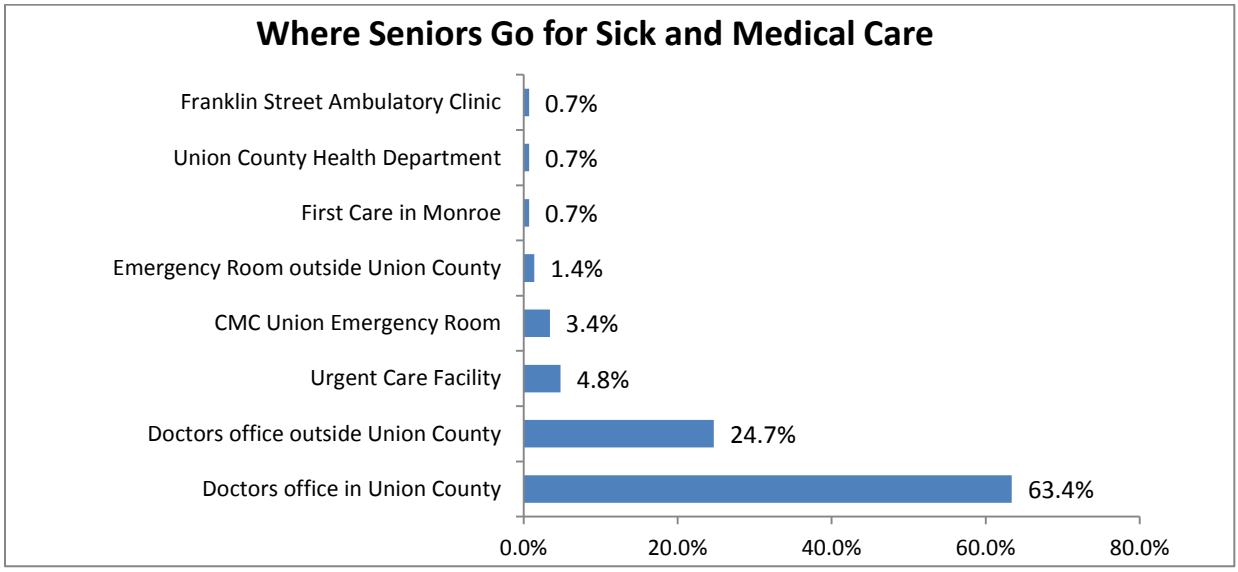

Seniors Did Not See A Dentist When Needed
Yes 21%
No 79%

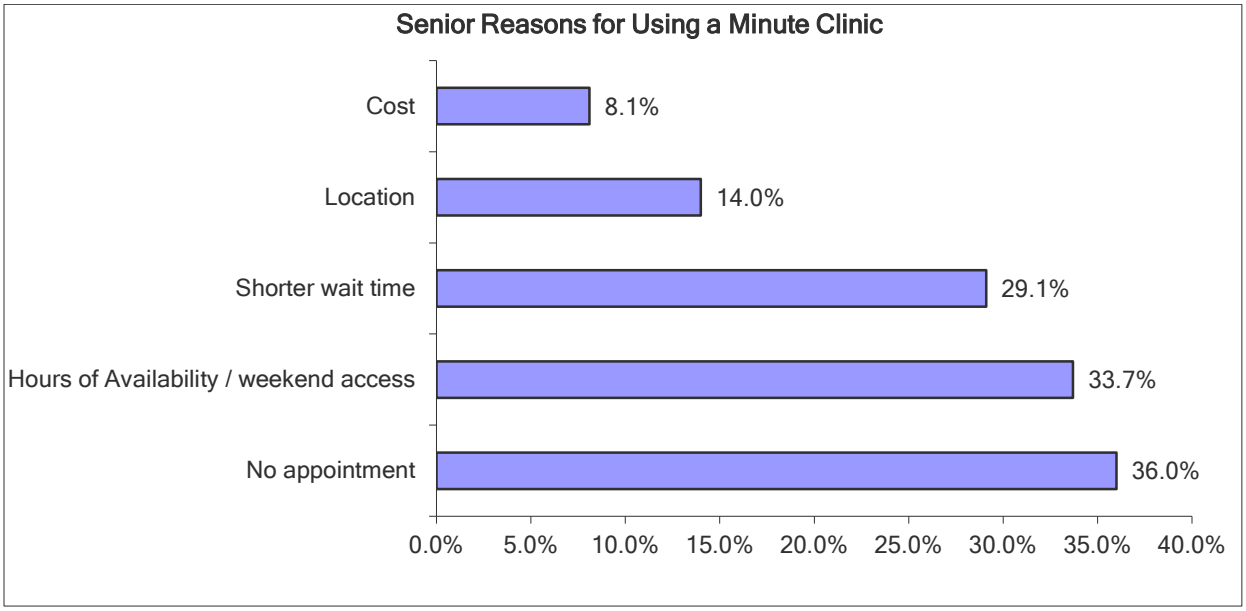

Senior Reasons For Not Seeing A Doctor
Did not know who to call or where to go 1.2%
I had no transportation 1.2%
The office was not open when I could get there 12.9%
I was afraid / I don't like to go to the doctor 15.3%
I did not have money to go 72.9%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0%

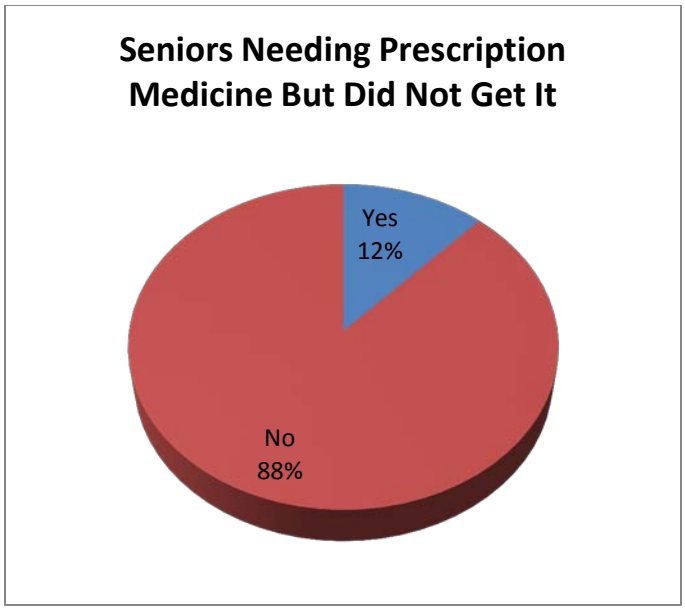

Reason that Senior Did Not See a Dentist
I had no transportation 1.6%
Did not know who to call or where to go 1.6%
The office was not open when I could get there 4.1%
I was afraid / I don't like to go to the dentist 16.4%
I could not afford to go 79.5%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0% 90.0%

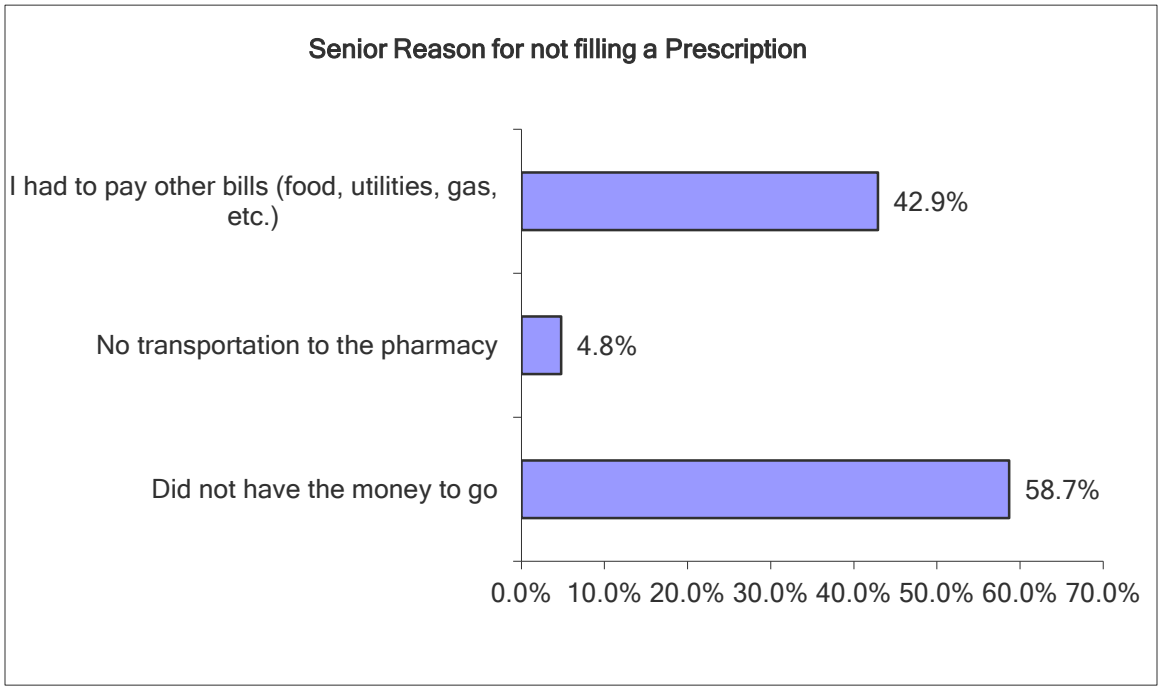

Hospital Emergency Room Used by Seniors for Dental Health Issue
Yes
3%
No
97%

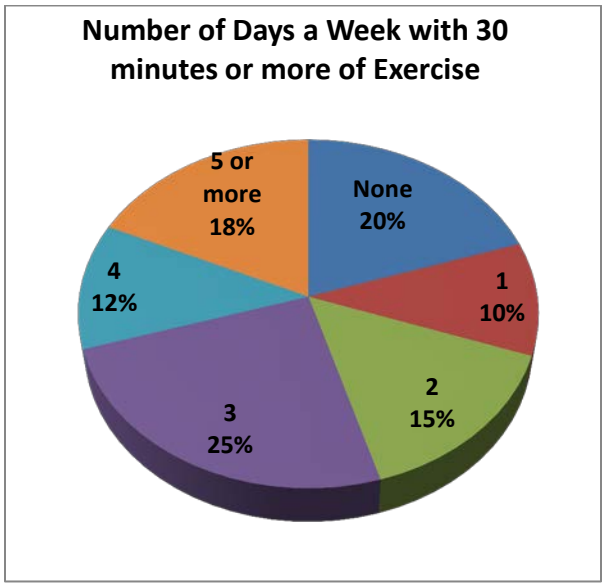

Seniors Used Minute Clinics for Medical Services
Yes
14%
No
86%

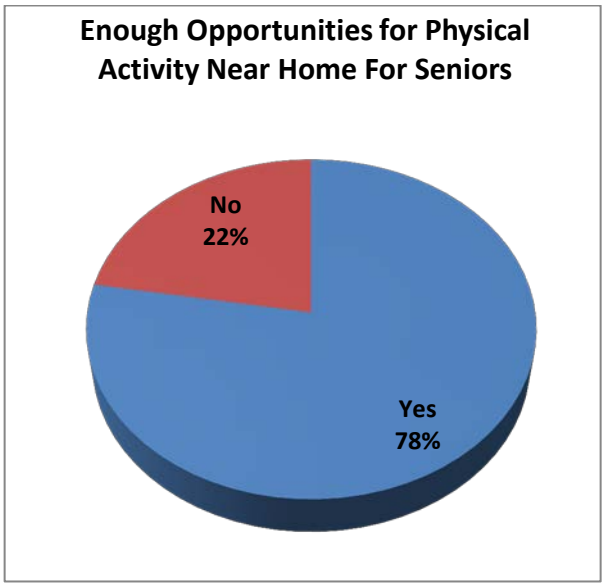

Where Seniors Go for Sick and Medical Care
Franklin Street Ambulatory Clinic
0.7%
Union County Health Department
0.7%
First Care in Monroe
0.7%
Emergency Room outside Union County
1.4%
CMC Union Emergency Room
3.4%
Urgent Care Facility
4.8%
Doctors office outside Union County
24.7%
Doctors office in Union County
63.4%
0.0%
20.0%
40.0%
60.0%
80.0%

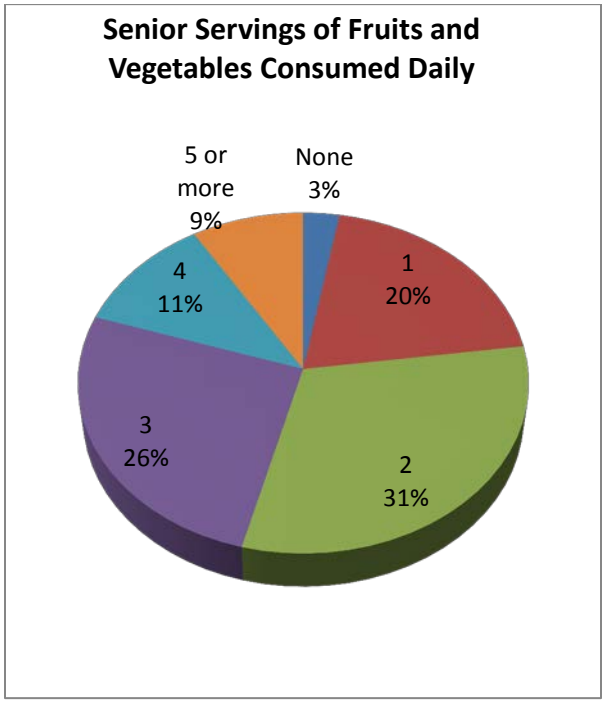

Senior Reasons for Using a Minute Clinic
Cost
8.1%
Location
14.0%
Shorter wait time
29.1%
Hours of Availability / weekend access
33.7%
No appointment
36.0%
0.0%
5.0%
10.0%
15.0%
20.0%
25.0%
30.0%
35.0%
40.0%

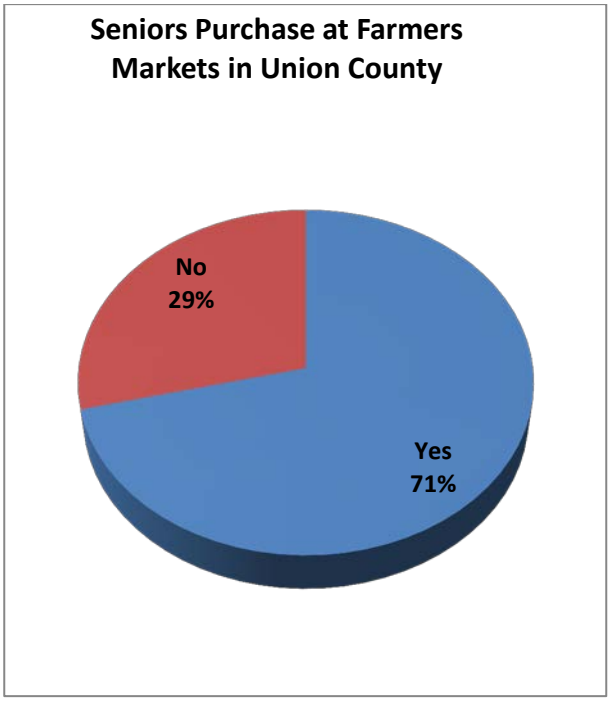

Seniors Needing Prescription Medicine But Did Not Get It
Yes
12%
No
88%

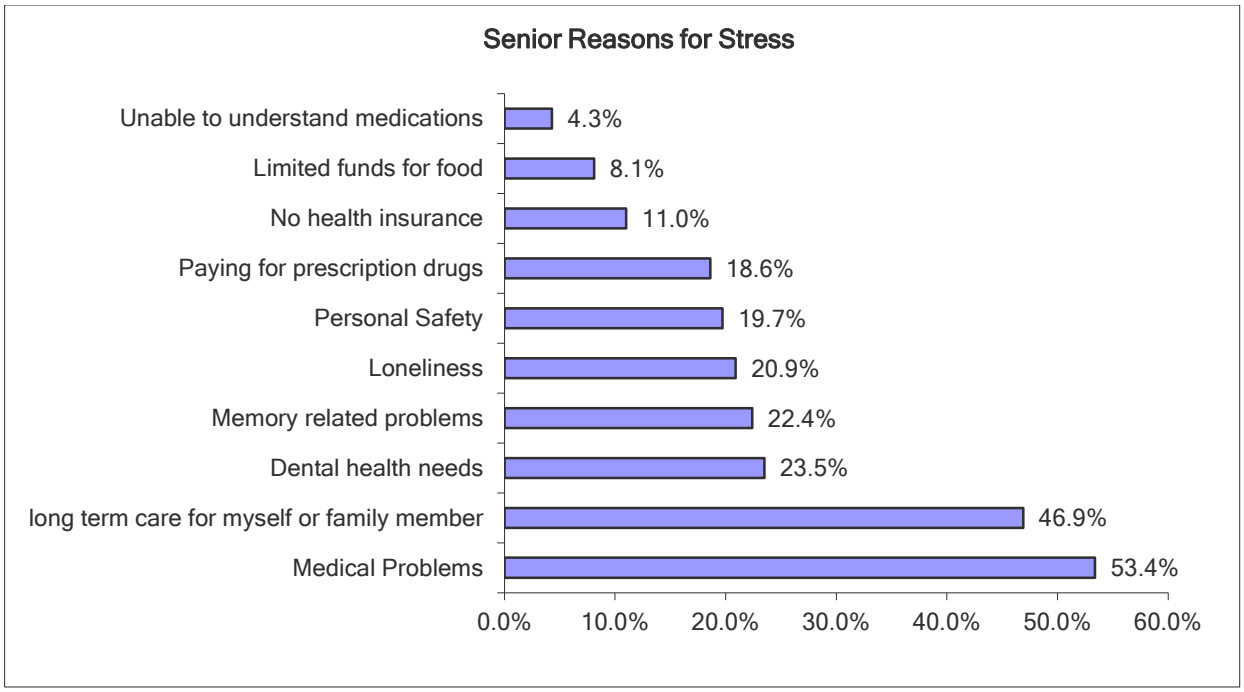

Senior Reason for not filling a Prescription
I had to pay other bills (food, utilities, gas, etc.)
42.9%
No transportation to the pharmacy
4.8%
Did not have the money to go
58.7%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0%

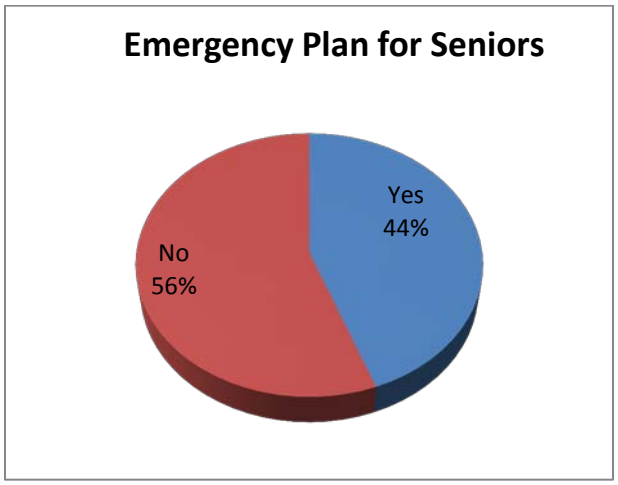

Number of Days a Week with 30 minutes or more of Exercise
None 20%
1 10%
2 15%
3 25%
4 12%
5 or more 18%

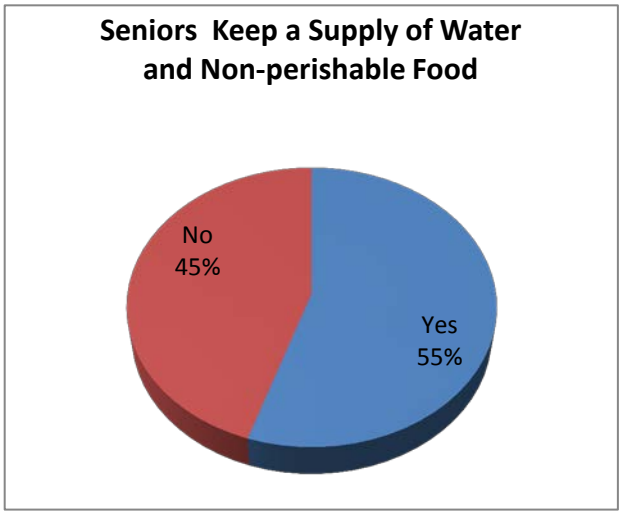

Enough Opportunities for Physical Activity Near Home For Seniors
No 22%
Yes 78%

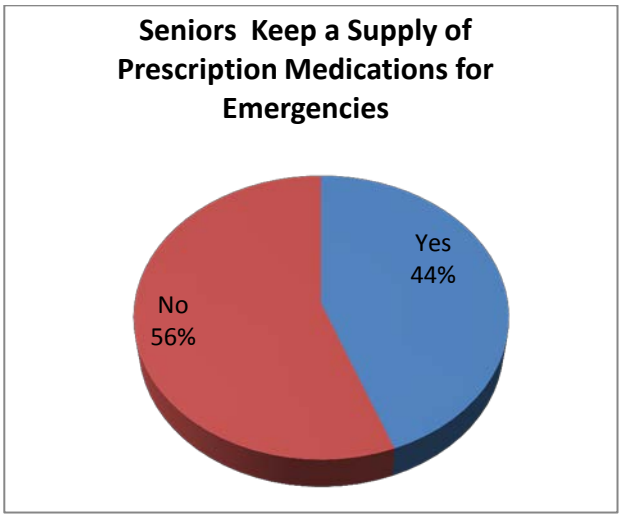

Senior Servings of Fruits and Vegetables Consumed Daily
None 3%
1 20%
2 31%
3 26%
4 11%
5 or more 9%

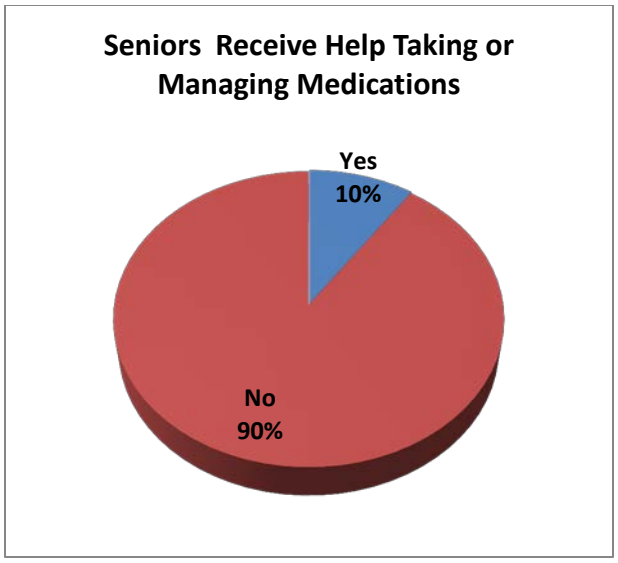

Seniors Purchase at Farmers Markets in Union County
No 29%
Yes 71%

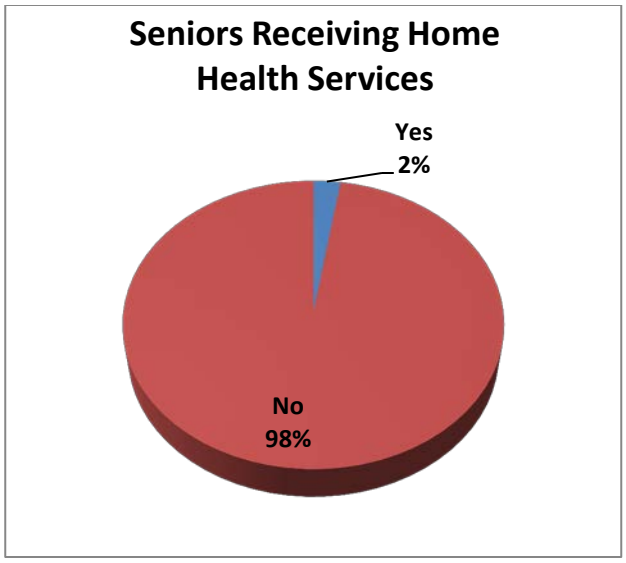

Senior Reasons for Stress
Unable to understand medications
4.3%
Limited funds for food
8.1%
No health insurance
11.0%
Paying for prescription drugs
18.6%
Personal Safety
19.7%
Loneliness
20.9%
Memory related problems
22.4%
Dental health needs
23.5%
long term care for myself or family member
46.9%
Medical Problems
53.4%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%

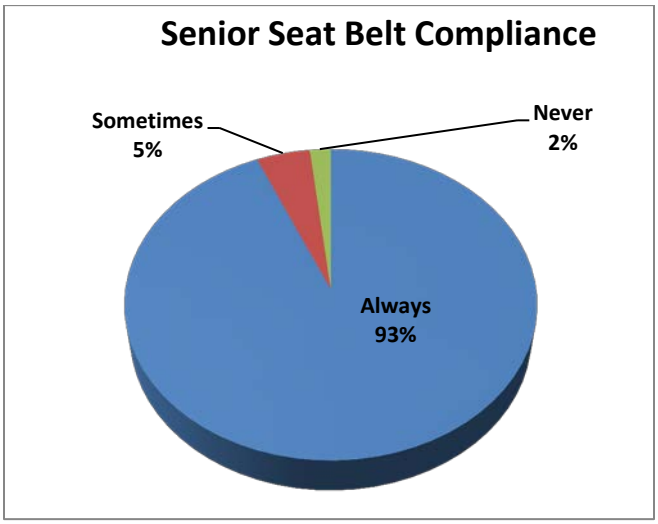

Emergency Plan for Seniors
Yes
44%
No
56%

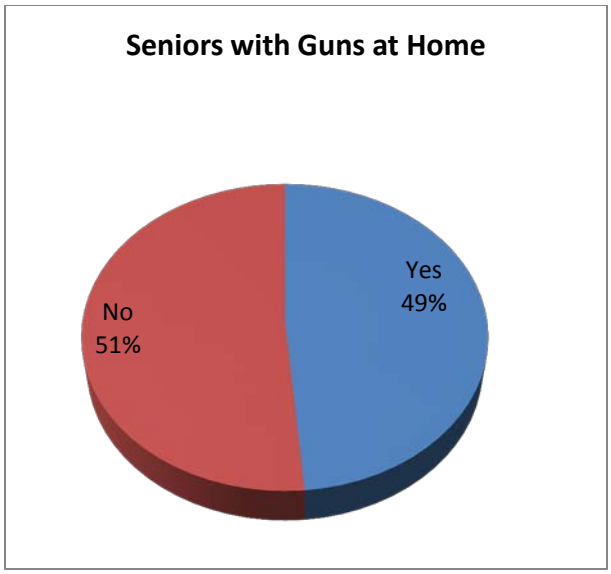

Seniors Keep a Supply of Water and Non-perishable Food
No
45%
Yes
55%

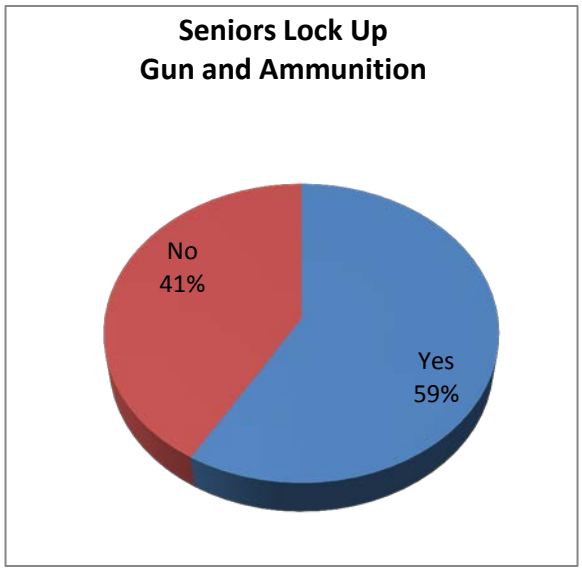

Seniors Keep a Supply of Prescription Medications for Emergencies
Yes
44%
No
56%

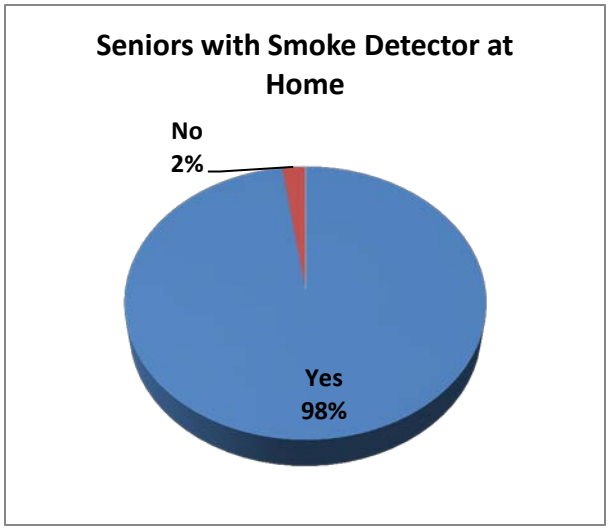

Seniors Receive Help Taking or Managing Medications
Yes
10%
No
90%

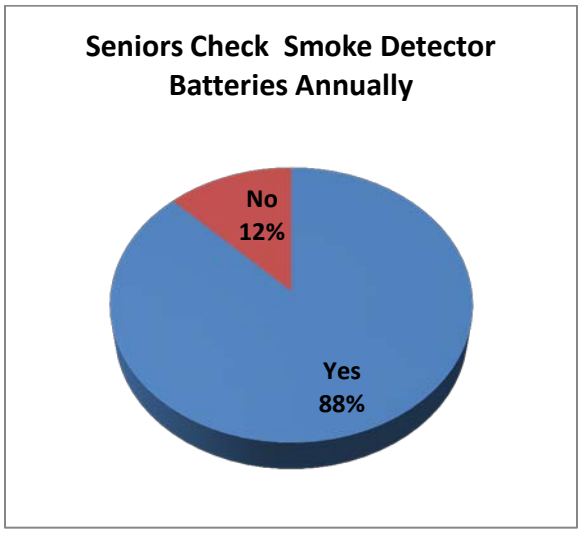

Seniors Receiving Home Health Services
Yes
2%
No
98%

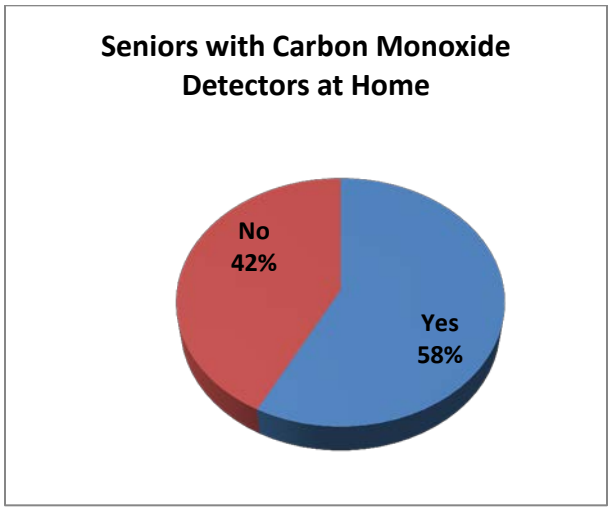

Senior Seat Belt Compliance
Sometimes
5%
Never
2%
Always
93%

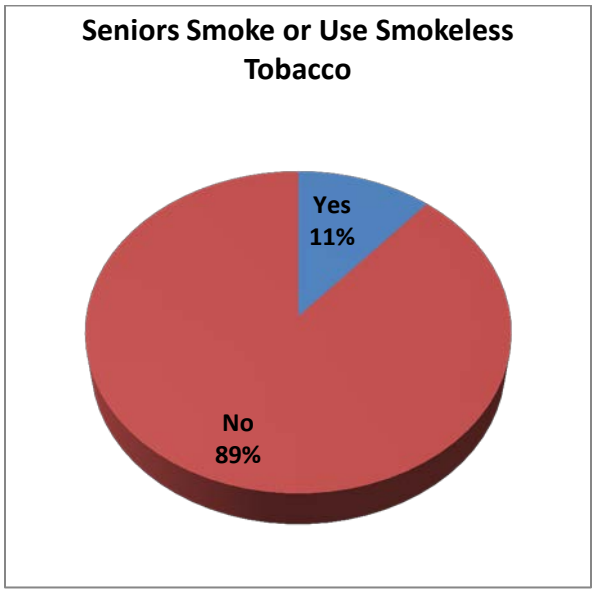

Seniors with Guns at Home
Yes
49%
No
51%

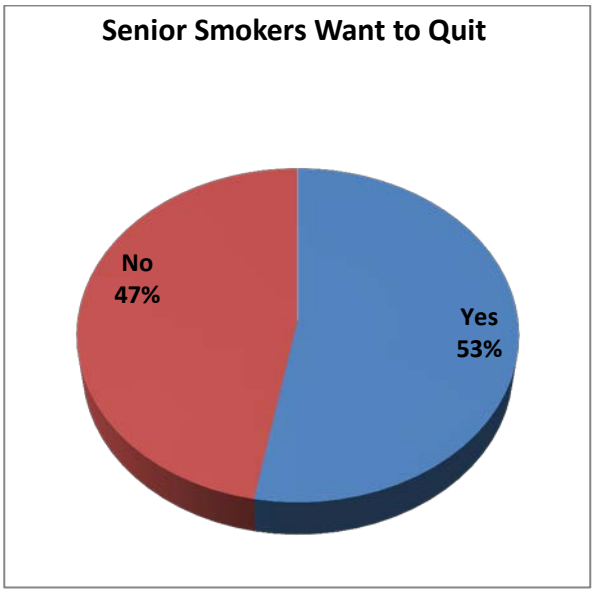

Seniors Lock Up
Gun and Ammunition
No
41%
Yes
59%

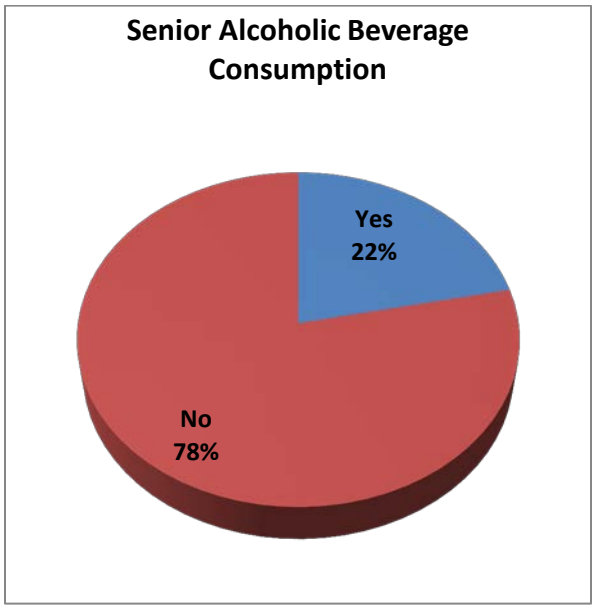

Seniors with Smoke Detector at Home
No
2%
Yes
98%

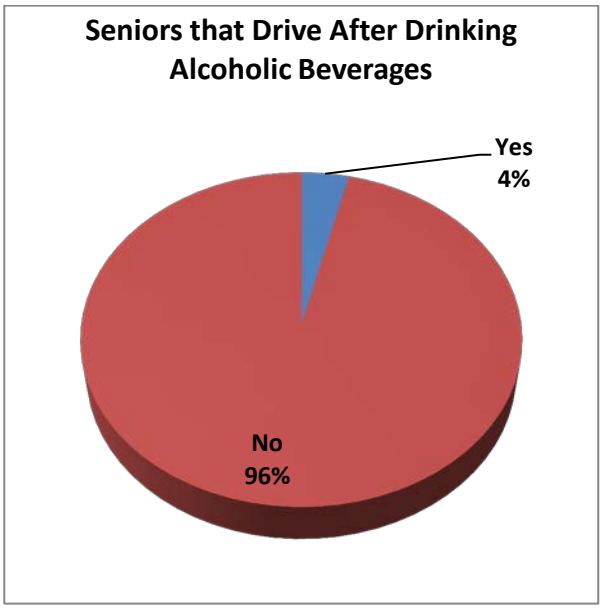

Seniors Check Smoke Detector Batteries Annually
No
12%
Yes
88%

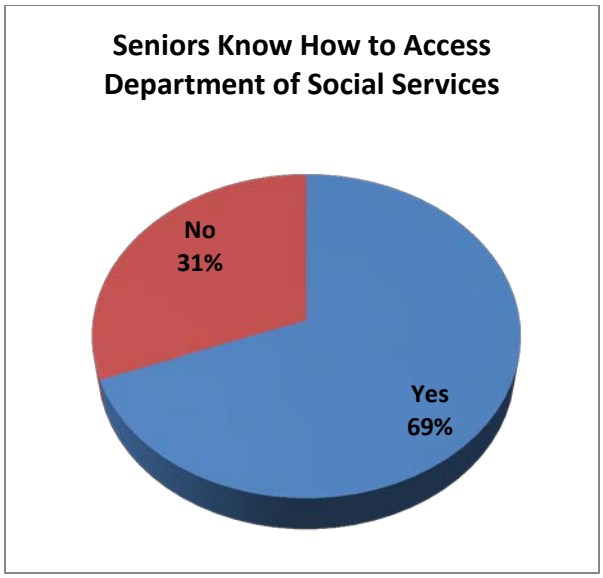

Seniors with Carbon Monoxide Detectors at Home
No
42%
Yes
58%

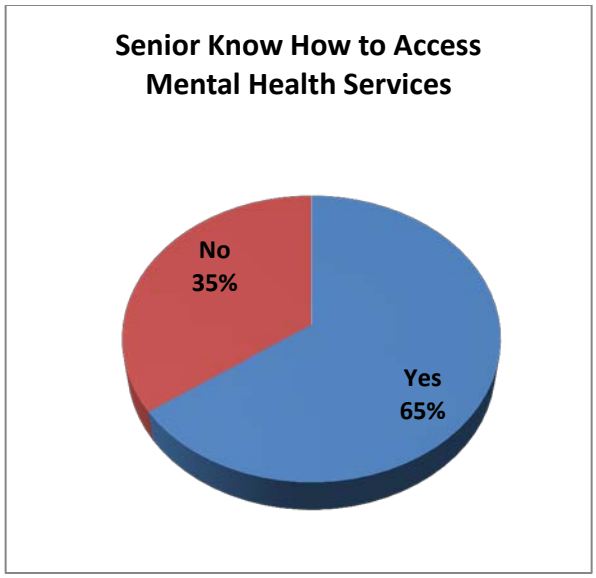

Seniors Smoke or Use Smokeless Tobacco
Yes
11%
No
89%

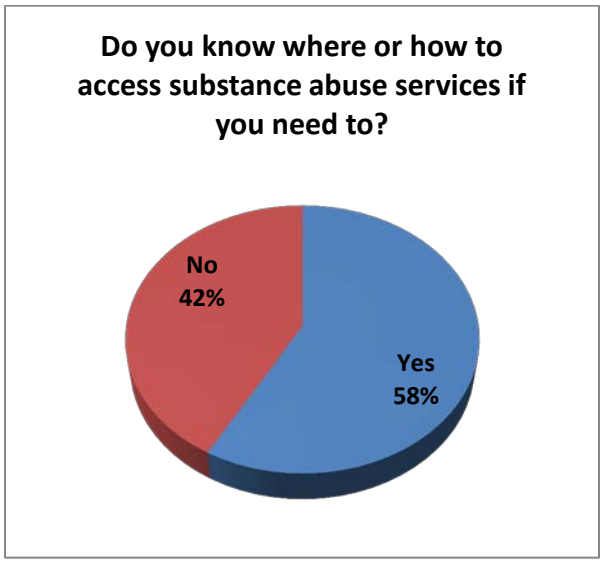

Senior Smokers Want to Quit
No
47%
Yes
53%

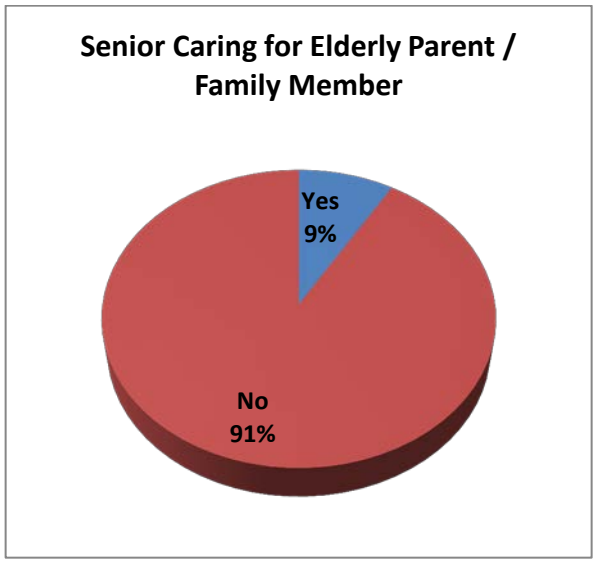

Senior Alcoholic Beverage Consumption
Yes
22%
No
78%

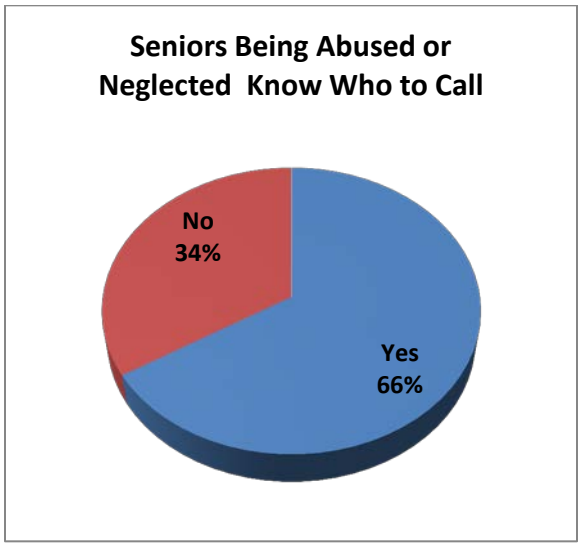

Seniors that Drive After Drinking Alcoholic Beverages
Yes
4%
No
96%

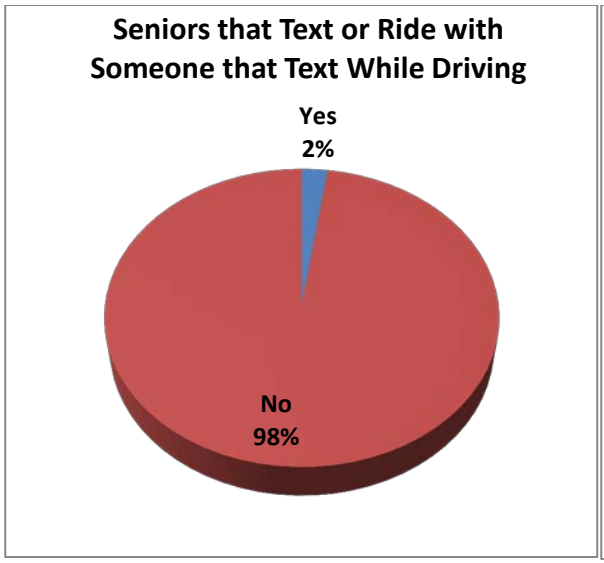

Seniors Know How to Access Department of Social Services
No
31%
Yes
69%

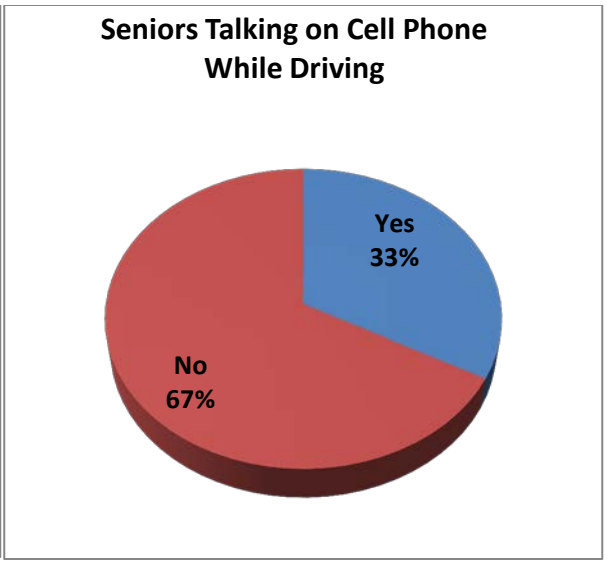

Senior Know How to Access Mental Health Services
No
35%
Yes
65%

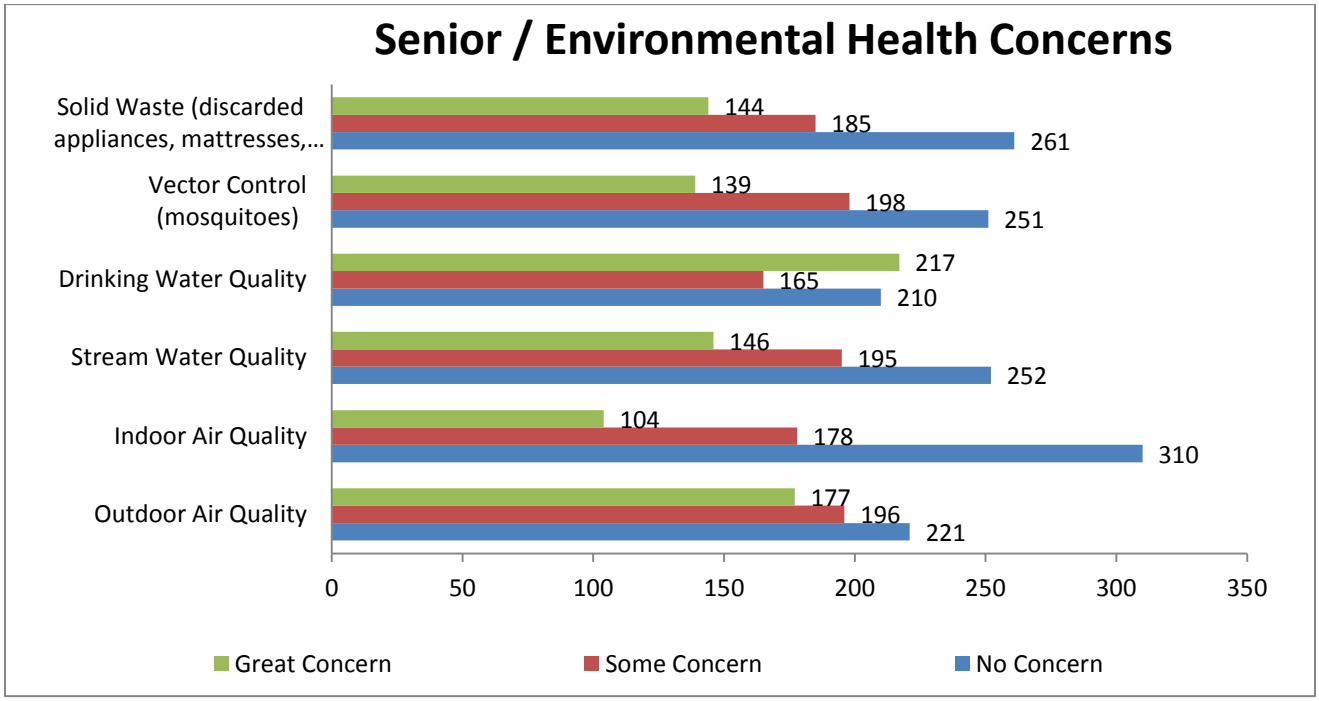

Do you know where or how to access substance abuse services if you need to?
No
42%
Yes
58%

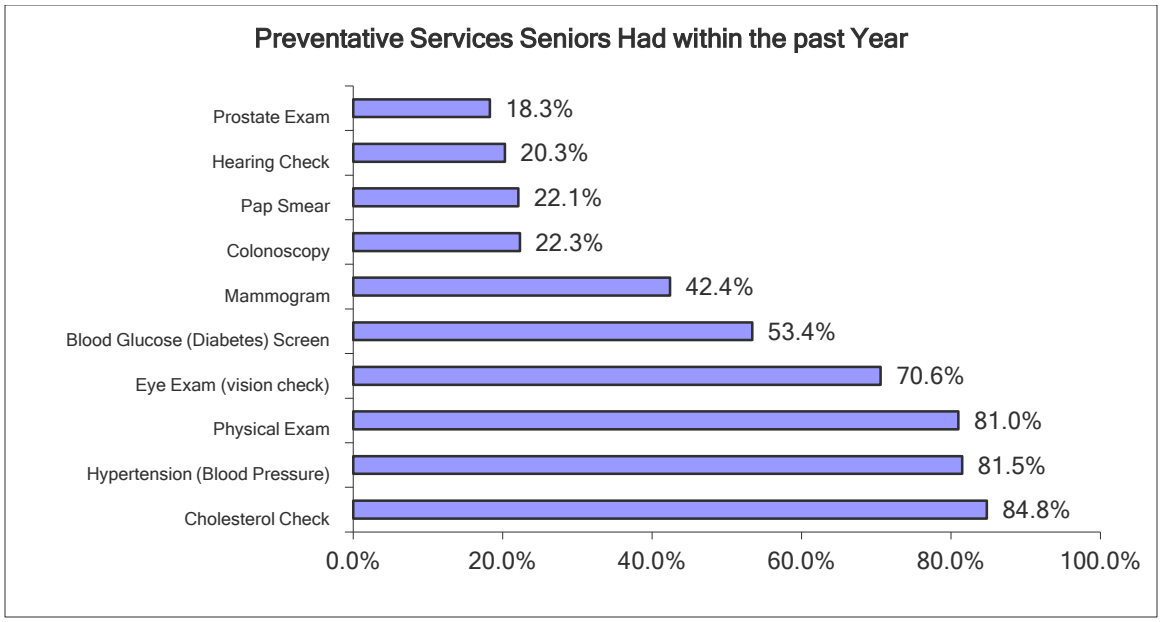

Senior Caring for Elderly Parent / Family Member
Yes
9%
No
91%

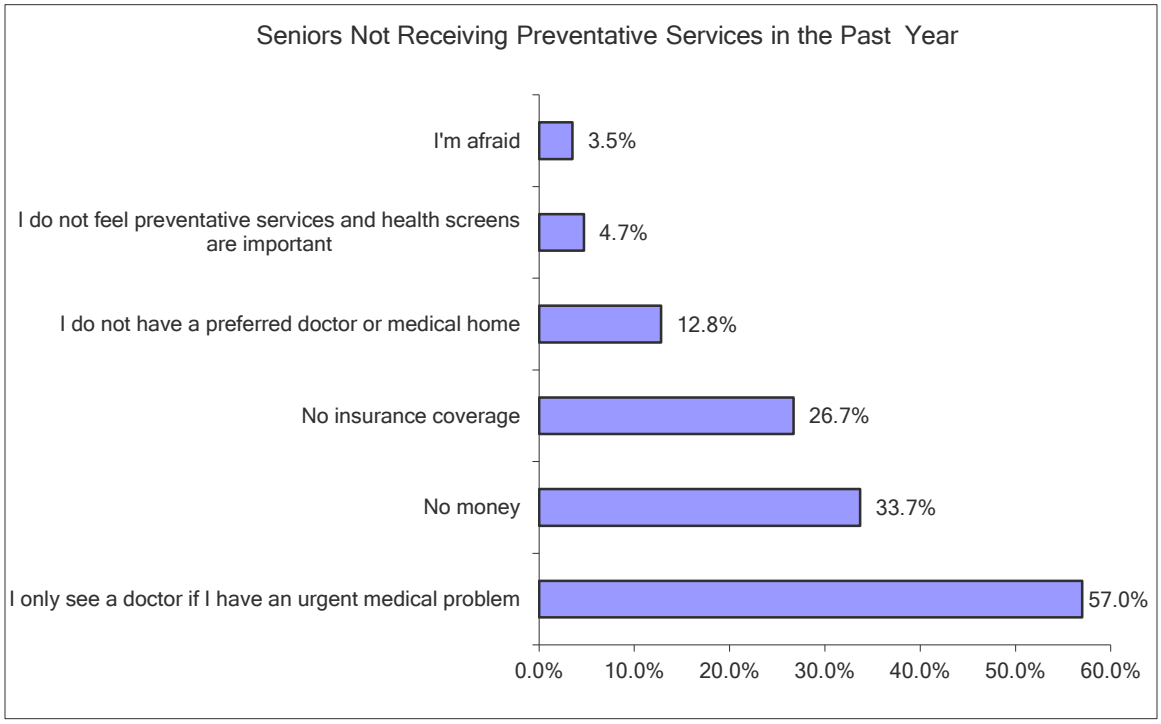

Seniors Being Abused or Neglected Know Who to Call
No
34%
Yes
66%

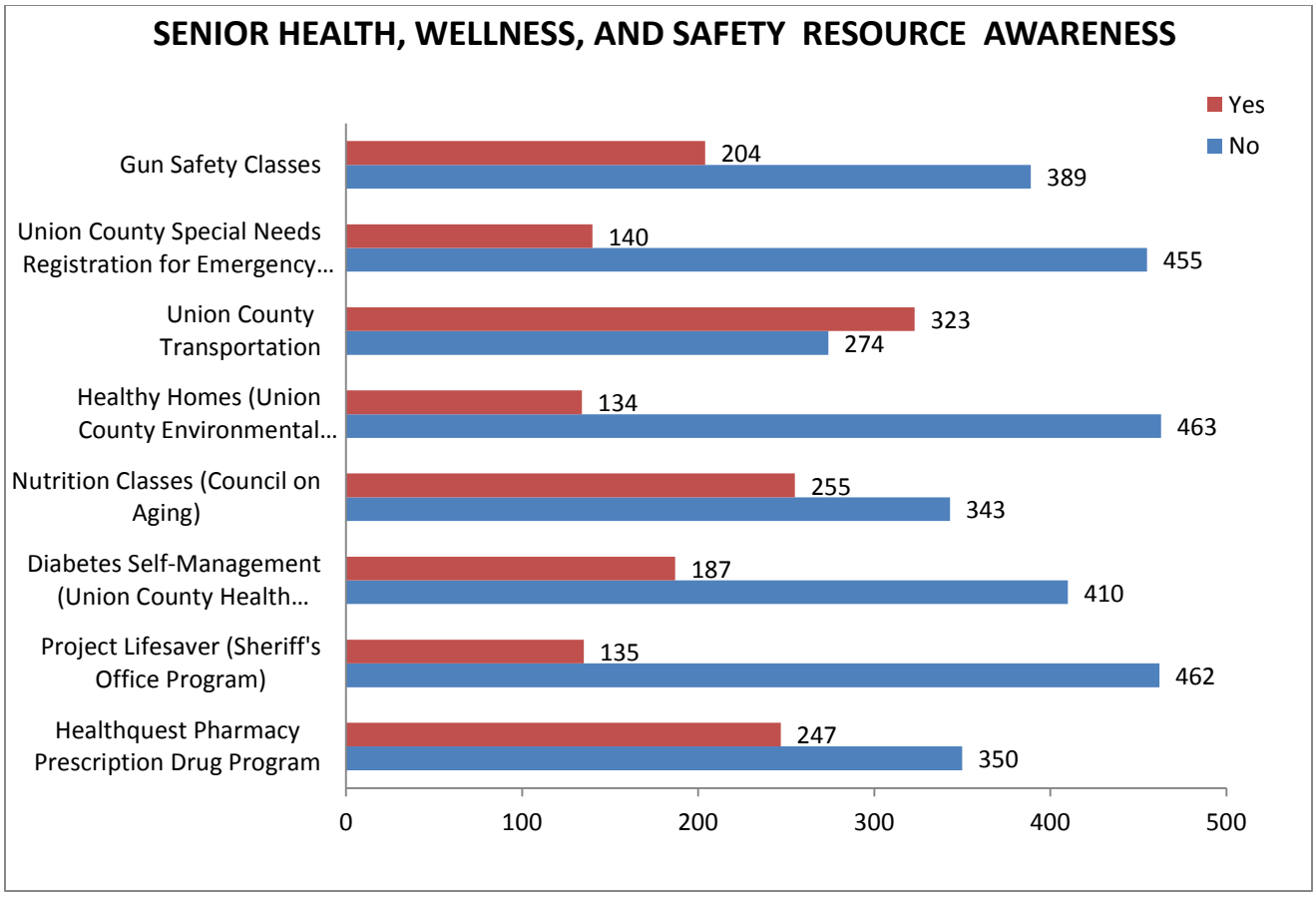

Seniors that Text or Ride with Someone that Text While Driving
Yes
2%
No
98%


Seniors Talking on Cell Phone While Driving
Yes
33%
No
67%


Senior / Environmental Health Concerns
Solid Waste (discarded appliances, mattresses,...
144
185
261
Vector Control (mosquitoes)
139
198
251
Drinking Water Quality
217
165
210
Stream Water Quality
146
195
252
Indoor Air Quality
104
178
310
Outdoor Air Quality
177
196
221
0
50
100
150
200
250
300
350
Great Concern
Some Concern
No Concern


Preventative Services Seniors Had within the past Year
Prostate Exam
18.3%
Hearing Check
20.3%
Pap Smear
22.1%
Colonoscopy
22.3%
Mammogram
42.4%
Blood Glucose (Diabetes) Screen
53.4%
Eye Exam (vision check)
70.6%
Physical Exam
81.0%
Hypertension (Blood Pressure)
81.5%
Cholesterol Check
84.8%
0.0%
20.0%
40.0%
60.0%
80.0%
100.0%

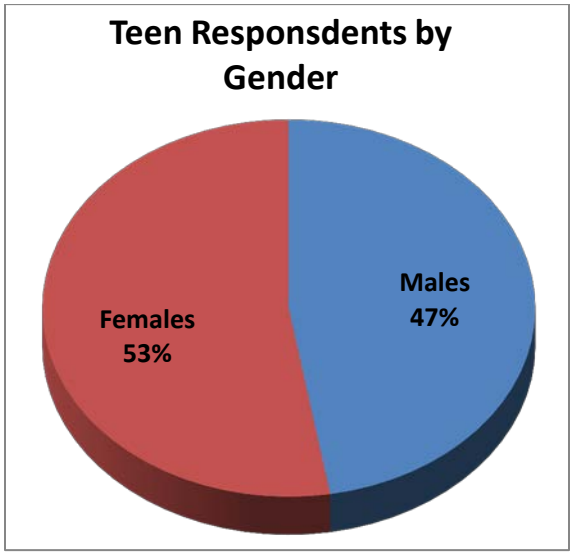

Seniors Not Receiving Preventative Services in the Past Year
I'm afraid
3.5%
I do not feel preventative services and health screens are important
4.7%
I do not have a preferred doctor or medical home
12.8%
No insurance coverage
26.7%
No money
33.7%
I only see a doctor if I have an urgent medical problem
57.0%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%

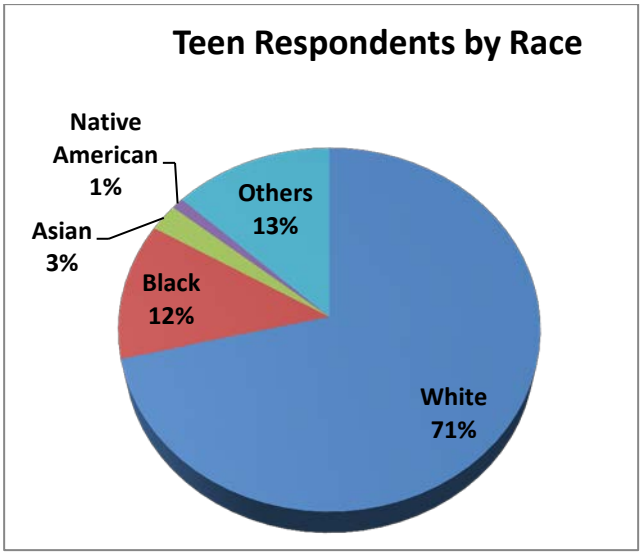

SENIOR HEALTH, WELLNESS, AND SAFETY RESOURCE AWARENESS
Yes
No
Gun Safety Classes
204
389
Union County Special Needs Registration for Emergency…
140
455
Union County Transportation
323
274
Healthy Homes (Union County Environmental…
134
463
Nutrition Classes (Council on Aging)
255
343
Diabetes Self-Management (Union County Health…
187
410
Project Lifesaver (Sheriff's Office Program)
135
462
Healthquest Pharmacy Prescription Drug Program
247
350
0
100
200
300
400
500

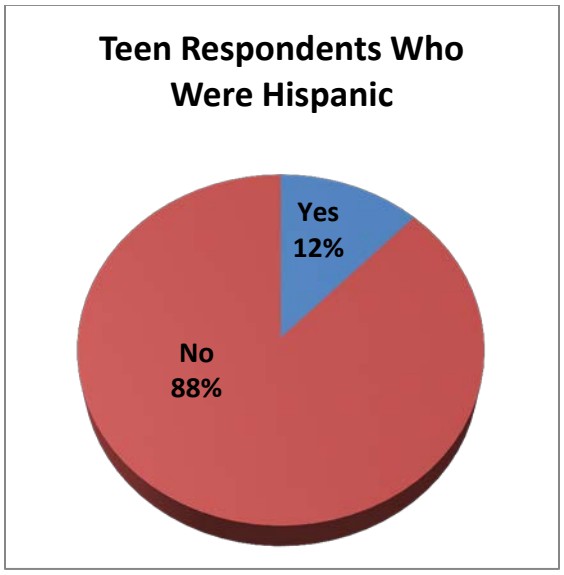
Teen Survey Results

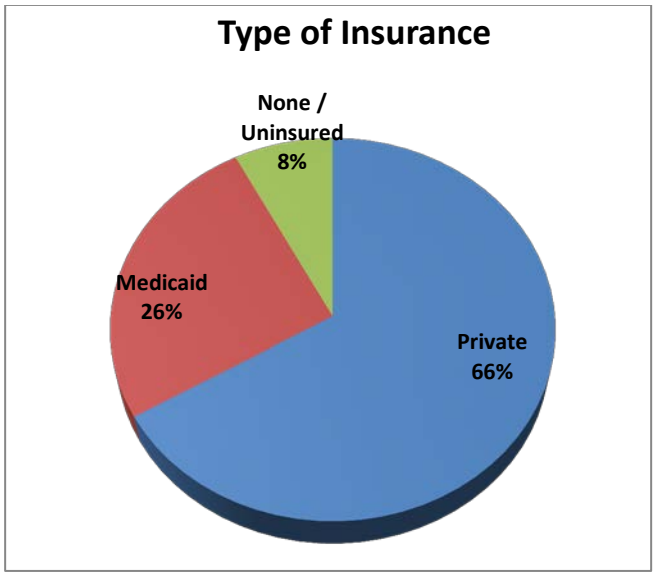
Teen Survey Respondents by Demographic Breakdown (Ages 13 to 18)

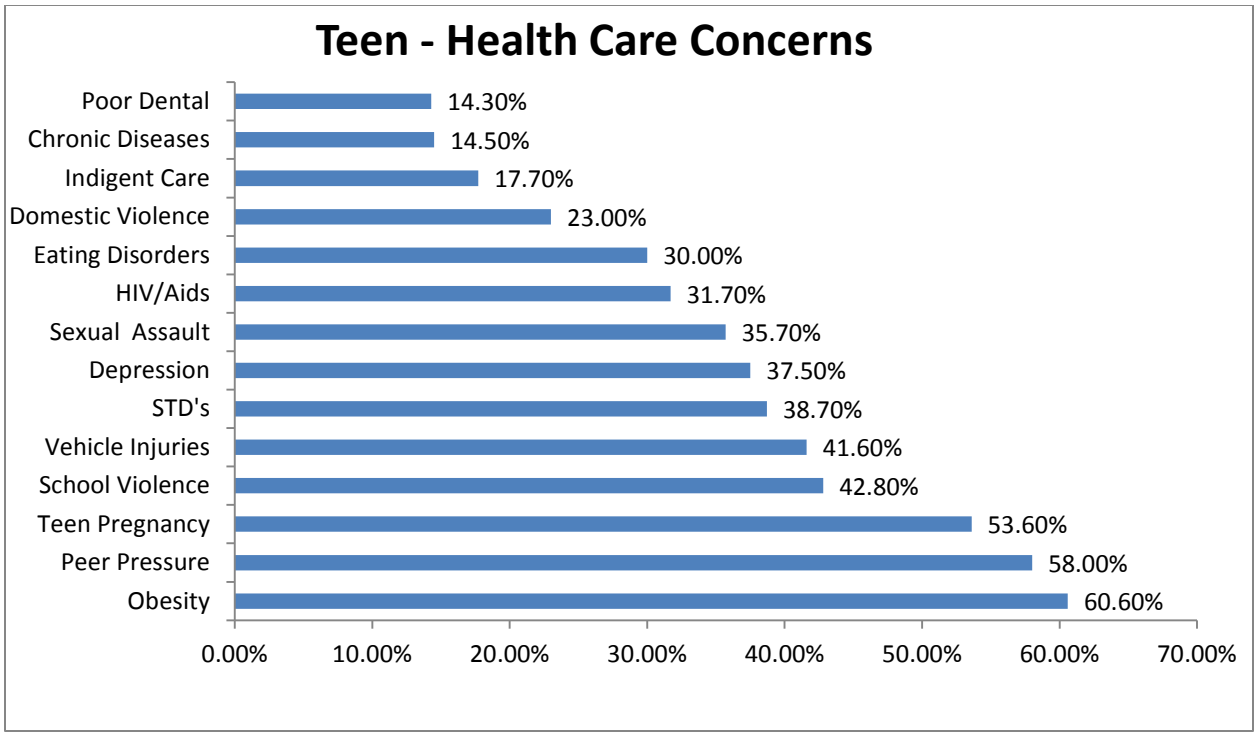
586 Total Teen Survey Respondents 28% Teen Respondents Overall

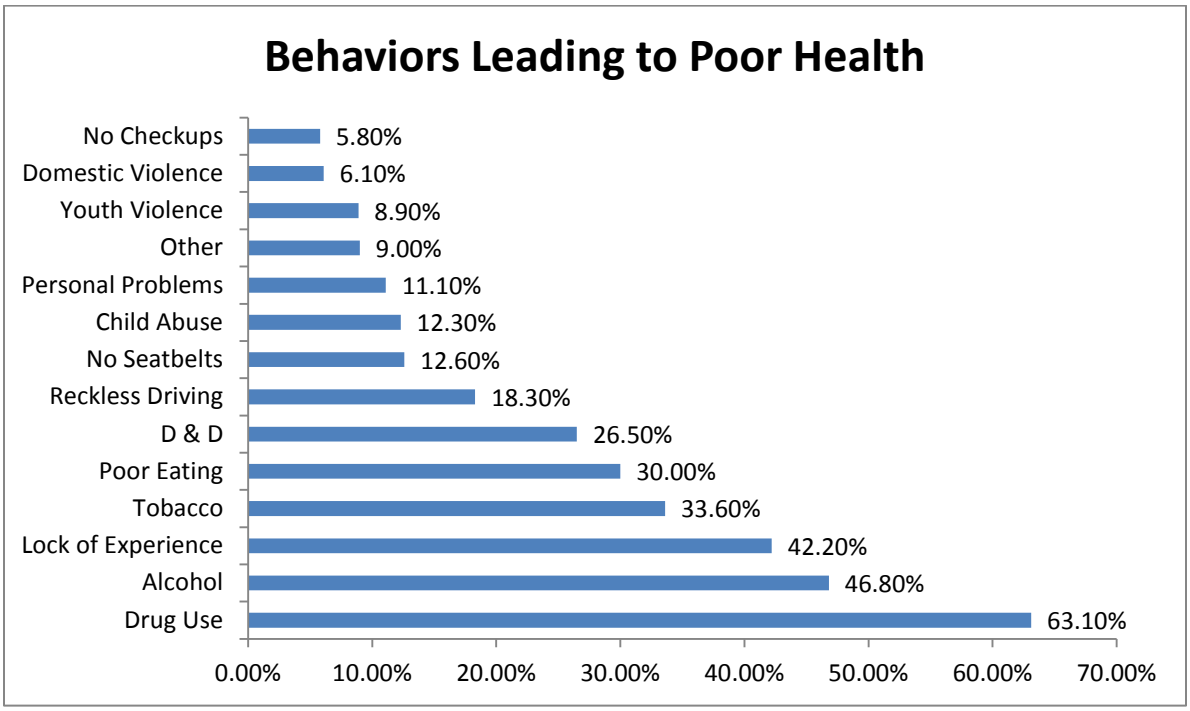


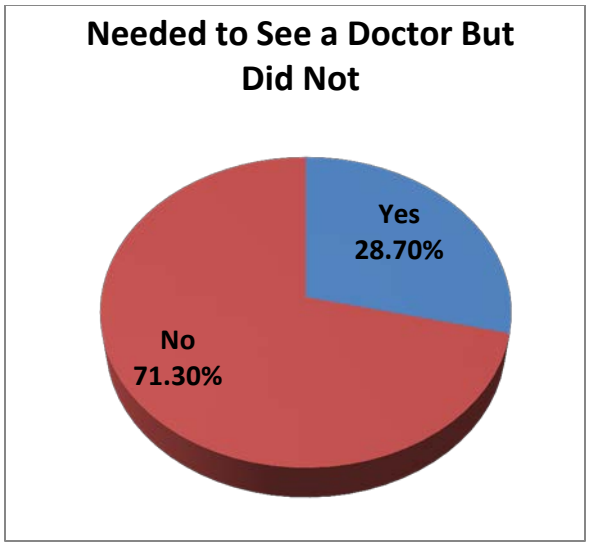


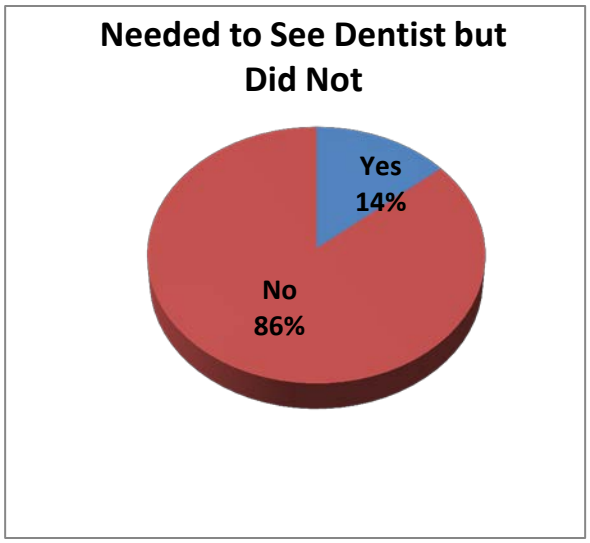


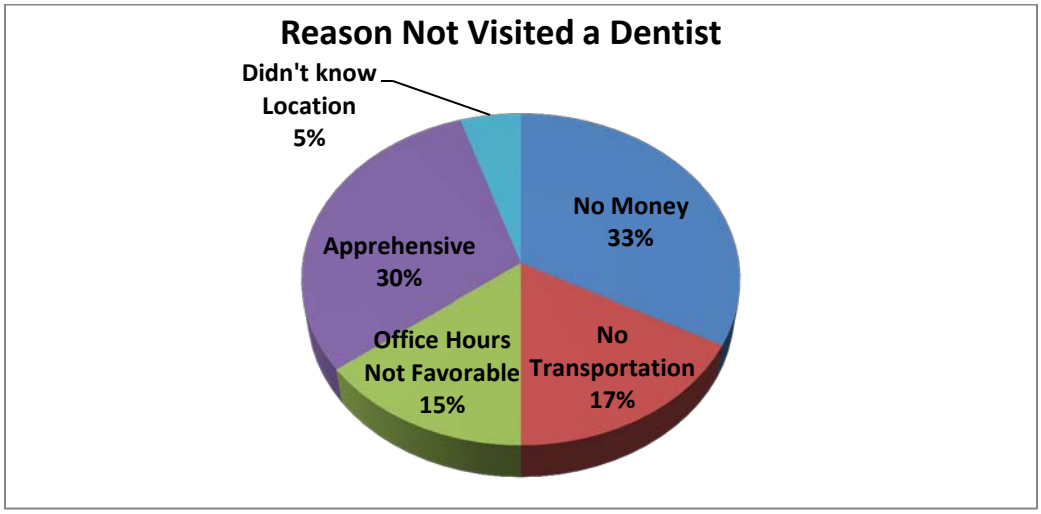


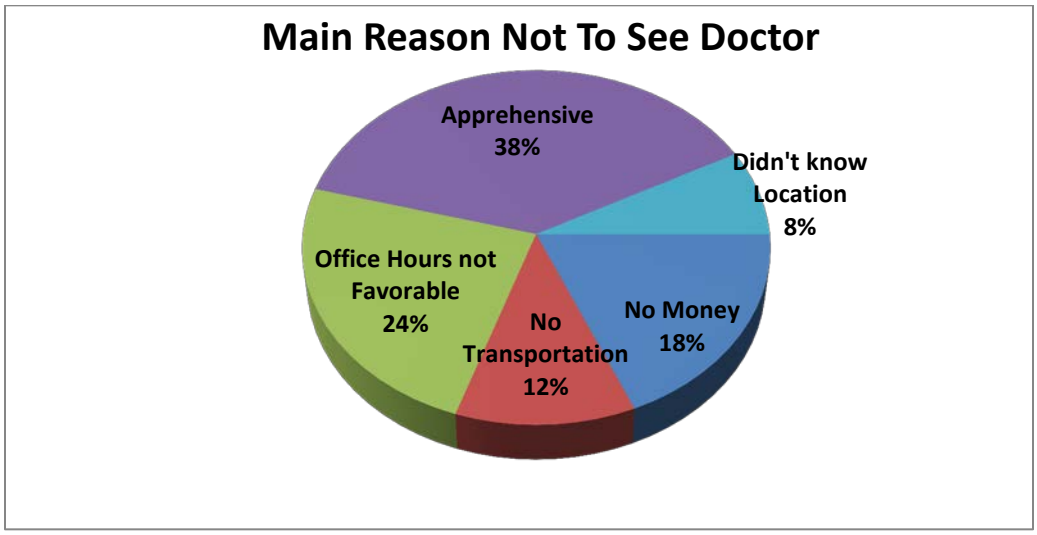

Teen - Health Care Concerns
Poor Dental
14.30%
Chronic Diseases
14.50%
Indigent Care
17.70%
Domestic Violence
23.00%
Eating Disorders
30.00%
HIV/Aids
31.70%
Sexual Assault
35.70%
Depression
37.50%
STD's
38.70%
Vehicle Injuries
41.60%
School Violence
42.80%
Teen Pregnancy
53.60%
Peer Pressure
58.00%
Obesity
60.60%
0.00%
10.00%
20.00%
30.00%
40.00%
50.00%
60.00%
70.00%

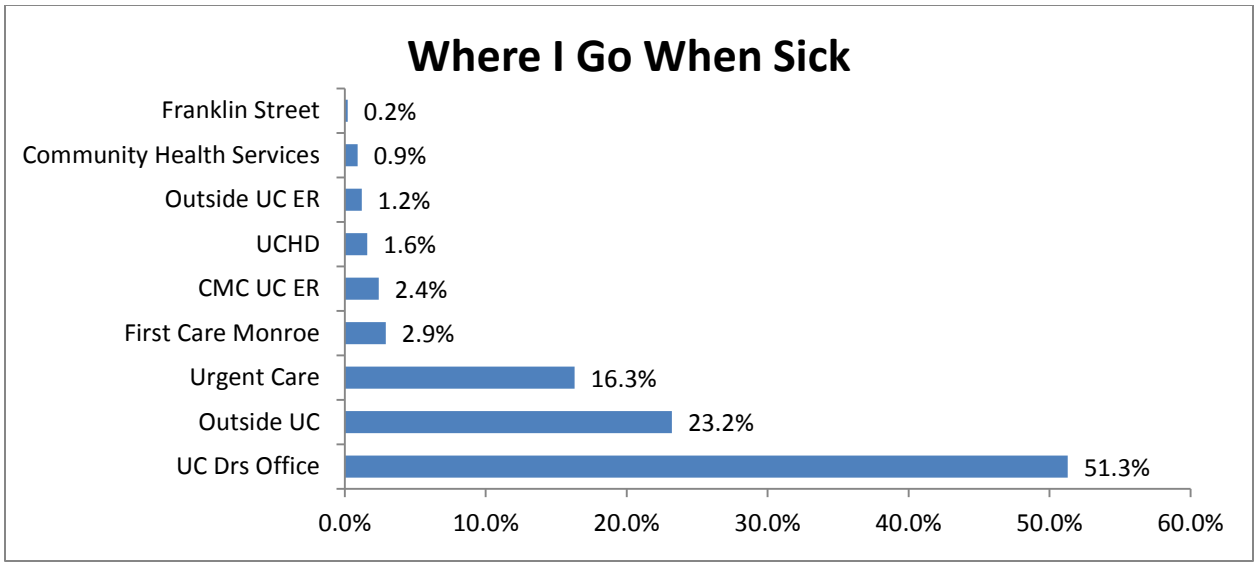

Behaviors Leading to Poor Health
No Checkups
5.80%
Domestic Violence
6.10%
Youth Violence
8.90%
Other
9.00%
Personal Problems
11.10%
Child Abuse
12.30%
No Seatbelts
12.60%
Reckless Driving
18.30%
D & D
26.50%
Poor Eating
30.00%
Tobacco
33.60%
Lock of Experience
42.20%
Alcohol
46.80%
Drug Use
63.10%
0.00%
10.00%
20.00%
30.00%
40.00%
50.00%
60.00%
70.00%

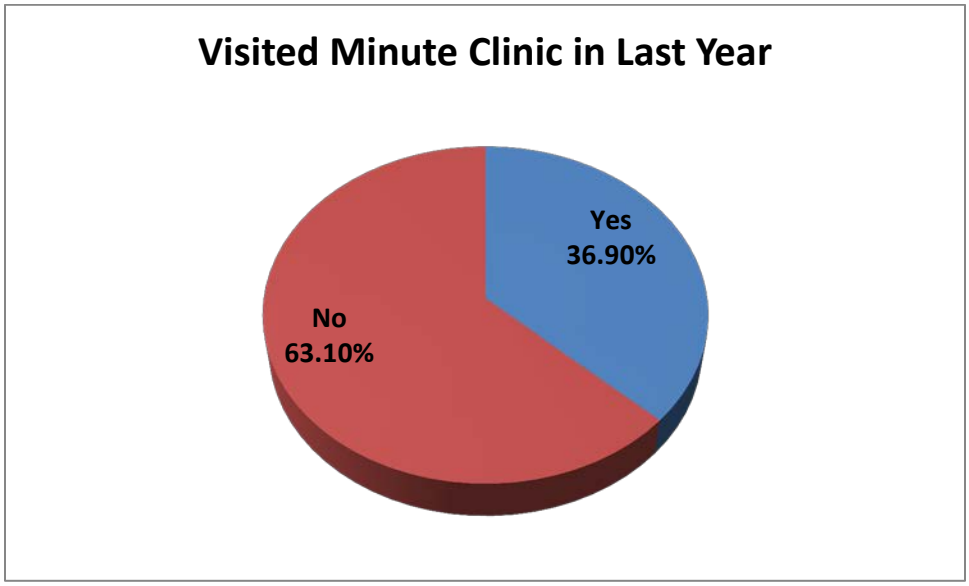

Needed to See a Doctor But Did Not
Yes
28.70%
No
71.30%

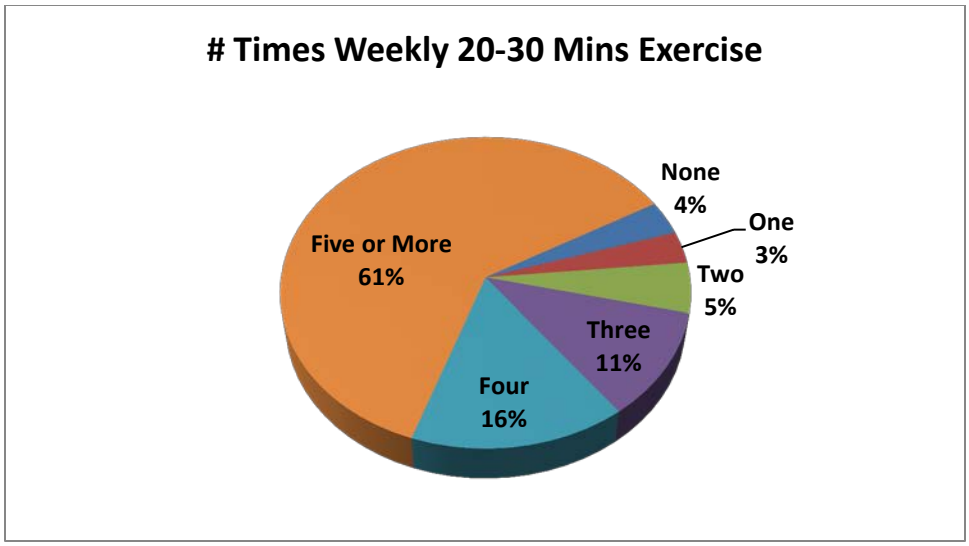

Needed to See Dentist but Did Not
Yes
14%
No
86%

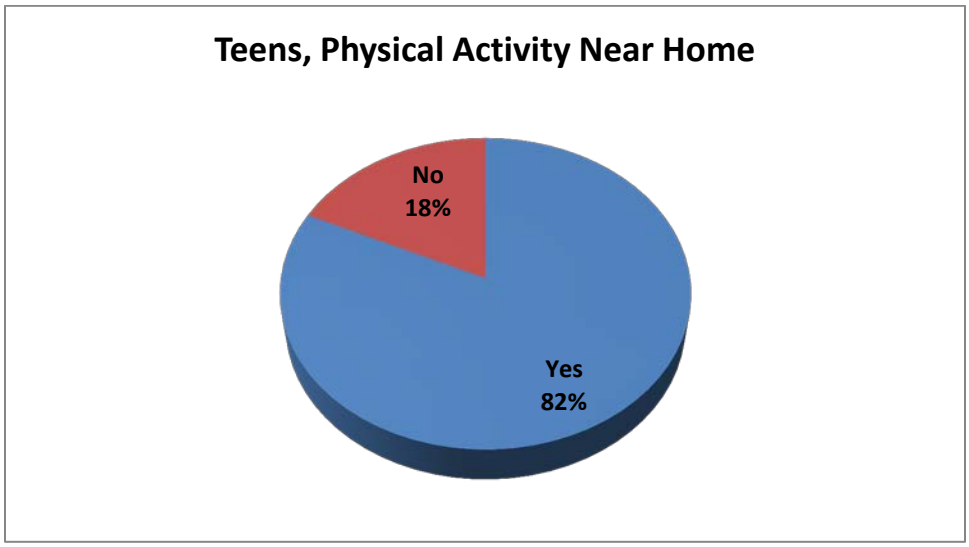

Reason Not Visited a Dentist
Didn't know Location 5%
No Money 33%
Apprehensive 30%
Office Hours Not Favorable 15%
No Transportation 17%

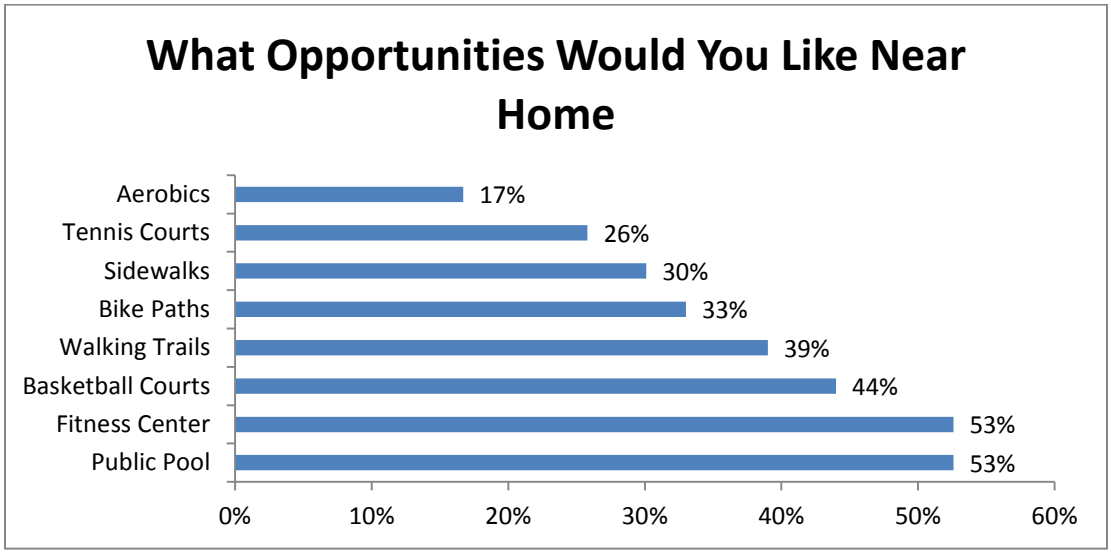

Main Reason Not To See Doctor
Apprehensive 38%
Didn't know Location 8%
Office Hours not Favorable 24%
No Transportation 12%
No Money 18%

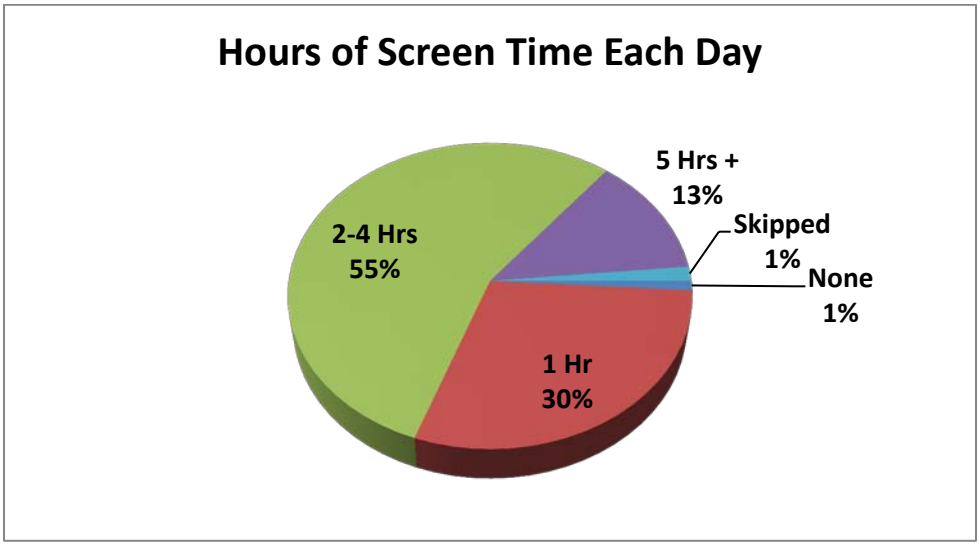

Where I Go When Sick
Franklin Street
Community Health Services
Outside UC ER
UCHD
CMC UC ER
First Care Monroe
Urgent Care
Outside UC
UC Drs Office
0.2%
0.9%
1.2%
1.6%
2.4%
2.9%
16.3%
23.2%
51.3%
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%

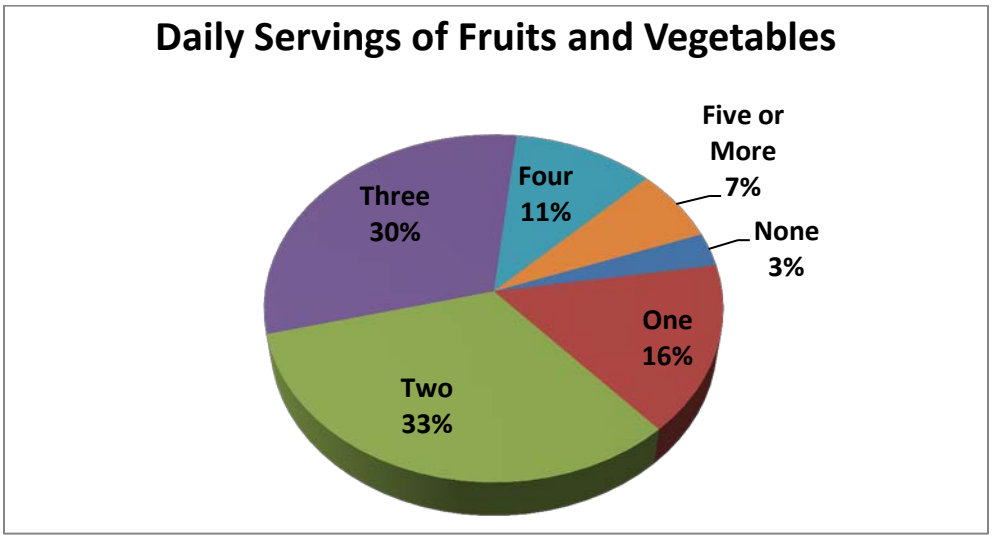

Visited Minute Clinic in Last Year
Yes
36.90%
No
63.10%

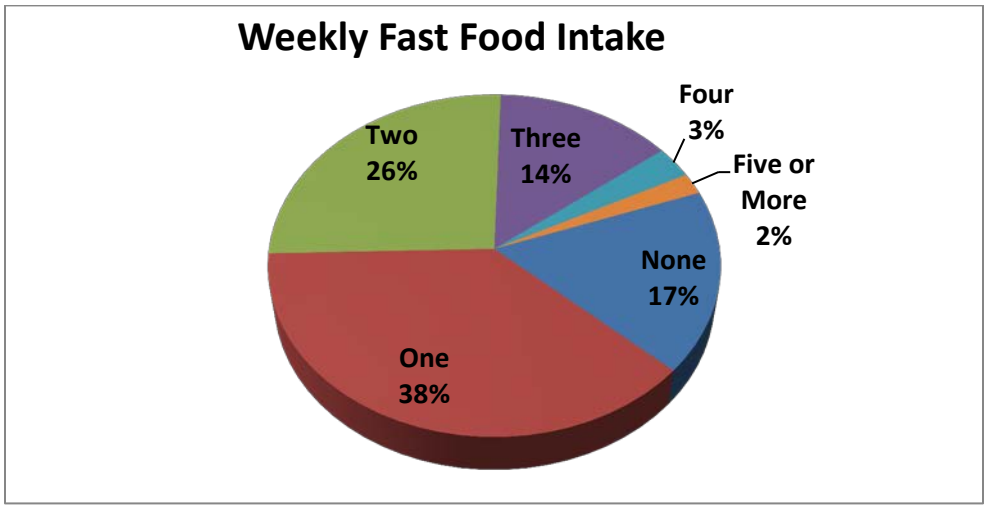

Times Weekly 20-30 Mins Exercise
None
4%
One
3%
Two
5%
Three
11%
Four
16%
Five or More
61%

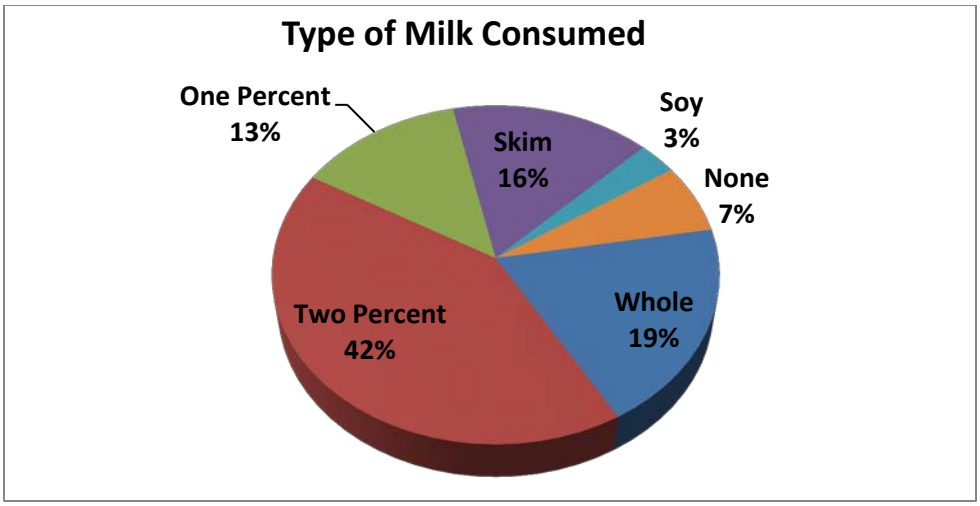

Teens, Physical Activity Near Home
No
18%
Yes
82%

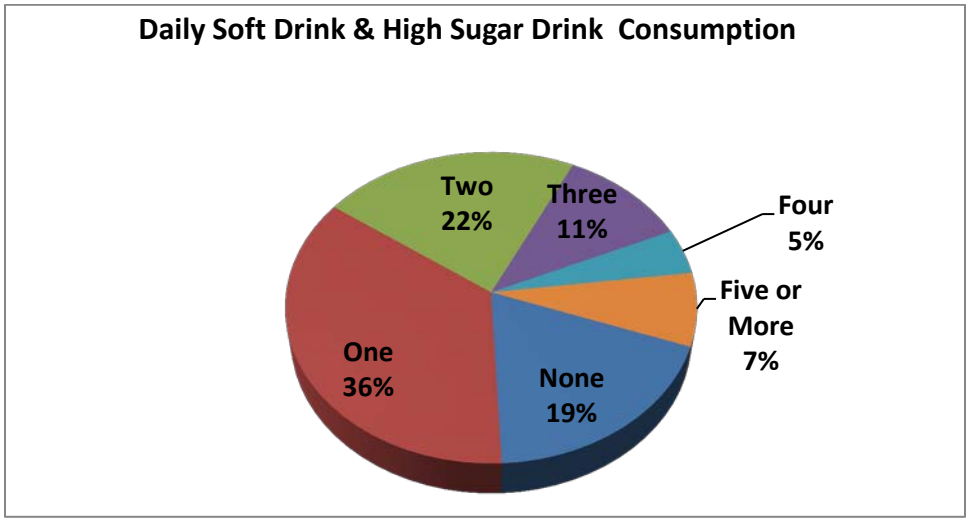

What Opportunities Would You Like Near Home
Aerobics
17%
Tennis Courts
26%
Sidewalks
30%
Bike Paths
33%
Walking Trails
39%
Basketball Courts
44%
Fitness Center
53%
Public Pool
53%
0%
10%
20%
30%
40%
50%
60%

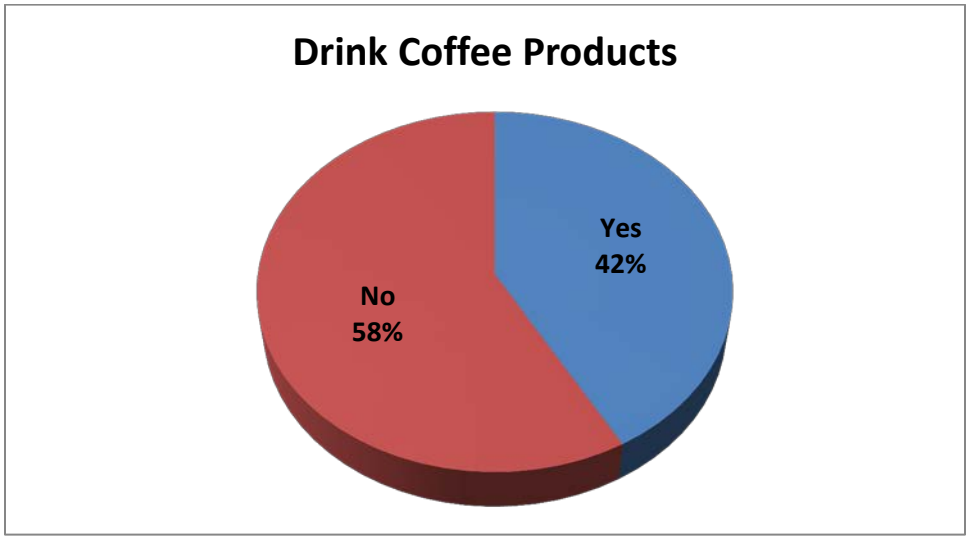

Hours of Screen Time Each Day
5 Hrs +
13%
Skipped
1%
None
1%
2-4 Hrs
55%
1 Hr
30%

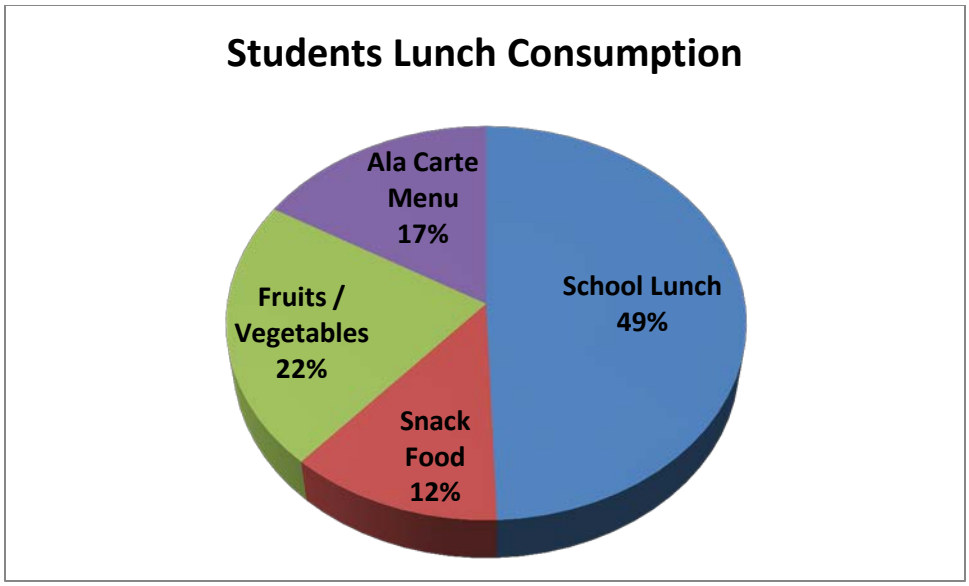

Daily Servings of Fruits and Vegetables
Five or
More
7%
None
3%
Four
11%
Three
30%
One
16%
Two
33%

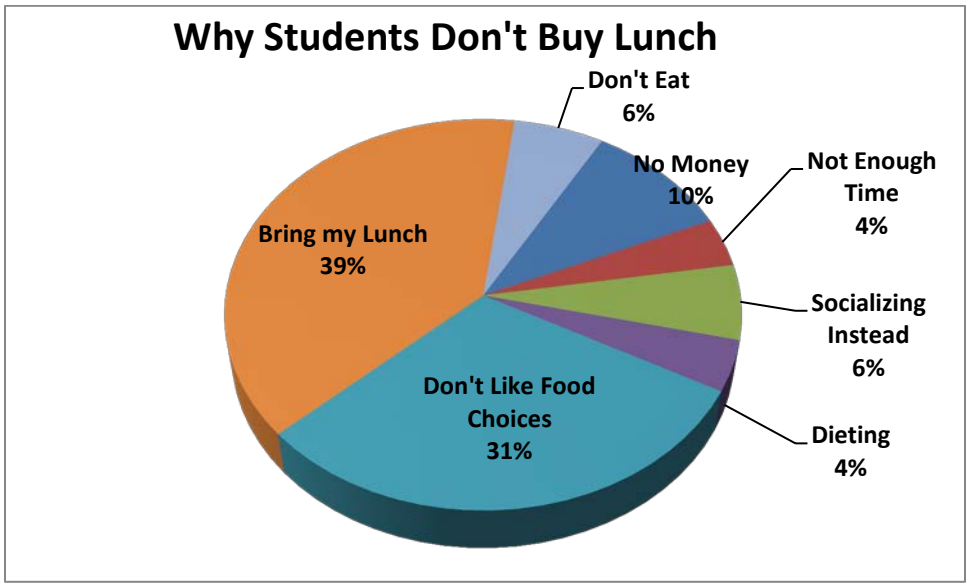

Weekly Fast Food Intake
Four
3%
Five or
More
2%
Two
26%
Three
14%
None
17%
One
38%

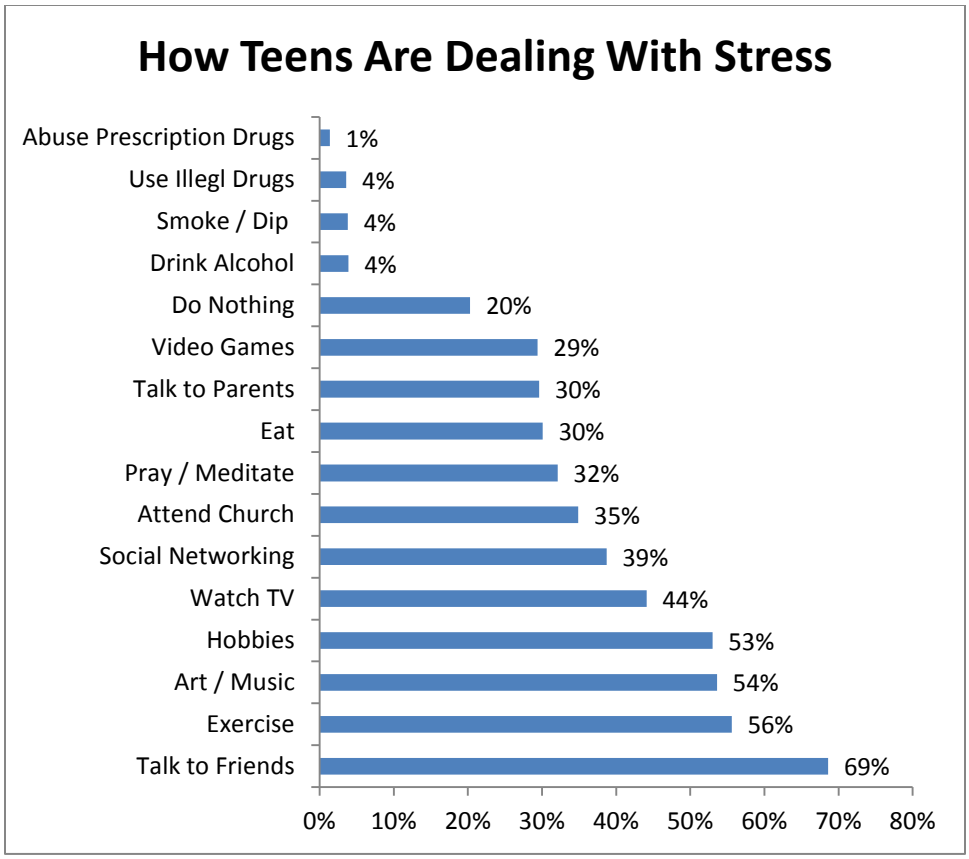

Type of Milk Consumed
One Percent
13%
Skim
16%
Soy
3%
None
7%
Whole
19%
Two Percent
42%

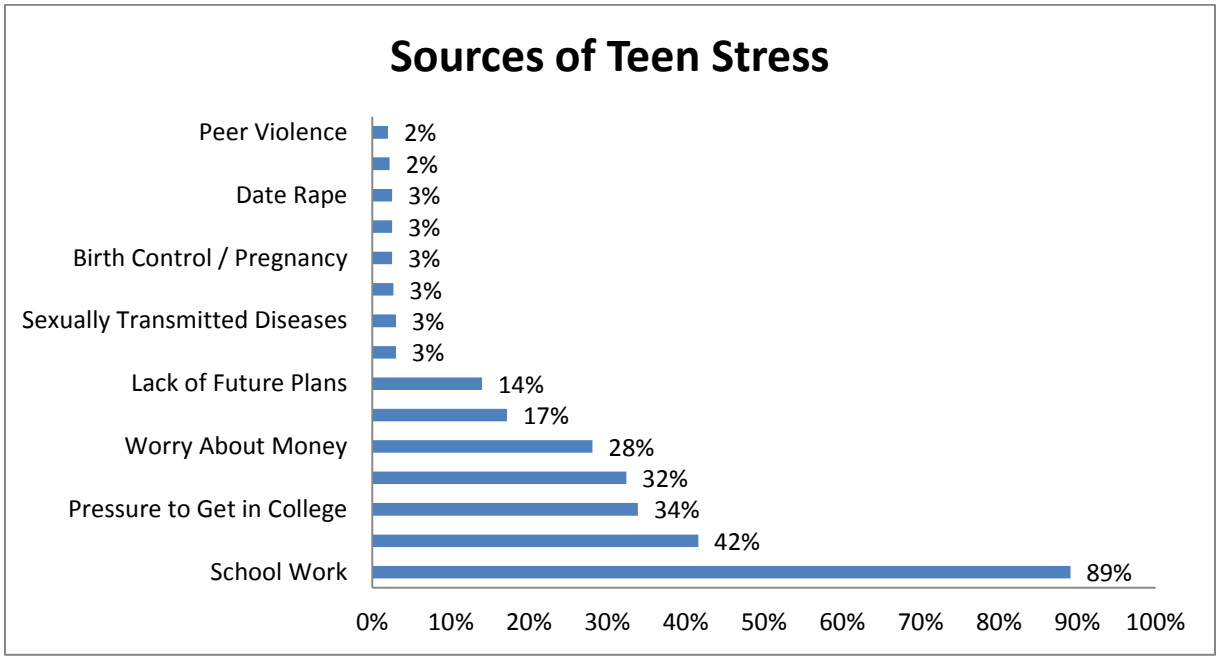

Daily Soft Drink & High Sugar Drink Consumption
Two
22%
Three
11%
Four
5%
Five or
More
7%
None
19%
One
36%

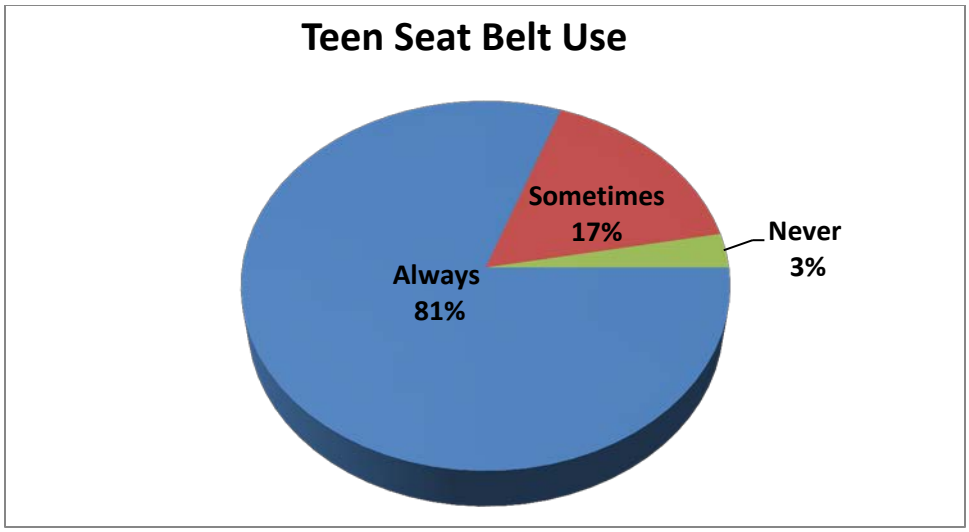

Drink Coffee Products
Yes
42%
No
58%

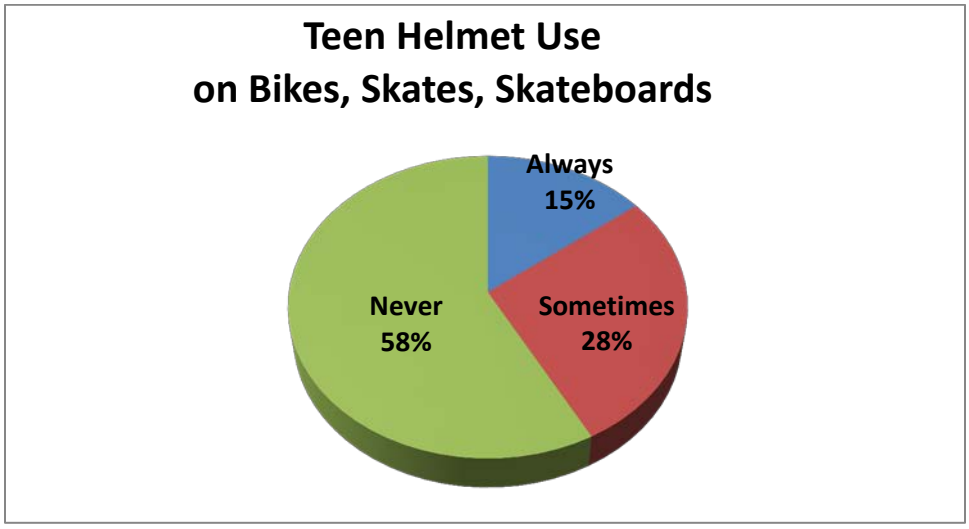

Students Lunch Consumption
Ala Carte Menu 17%
School Lunch 49%
Fruits / Vegetables 22%
Snack Food 12%

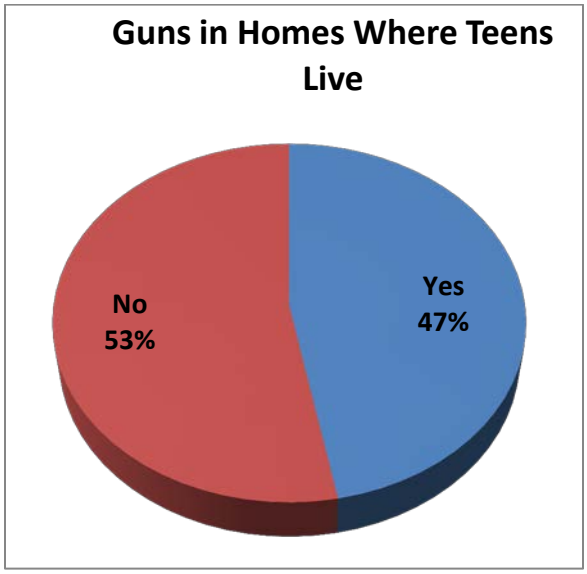

Why Students Don't Buy Lunch
Don't Eat 6%
No Money 10%
Not Enough Time 4%
Bring my Lunch 39%
Socializing Instead 6%
Don't Like Food Choices 31%
Dieting 4%

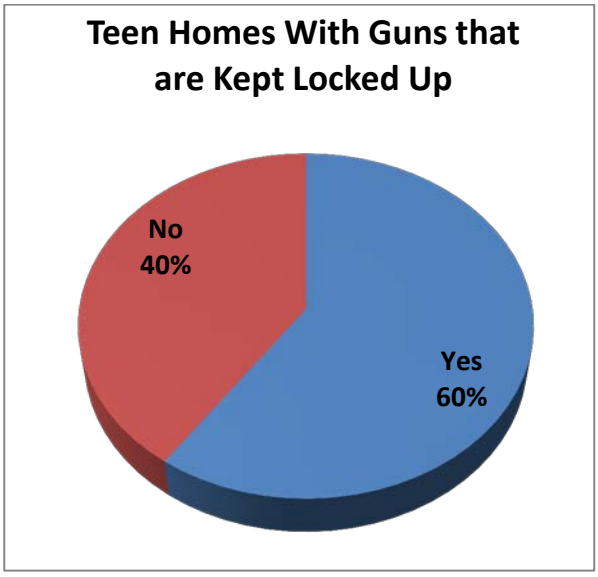

How Teens Are Dealing With Stress
Abuse Prescription Drugs 1%
Use Illegl Drugs 4%
Smoke / Dip 4%
Drink Alcohol 4%
Do Nothing 20%
Video Games 29%
Talk to Parents 30%
Eat 30%
Pray / Meditate 32%
Attend Church 35%
Social Networking 39%
Watch TV 44%
Hobbies 53%
Art / Music 54%
Exercise 56%
Talk to Friends 69%
0% 10% 20% 30% 40% 50% 60% 70% 80%

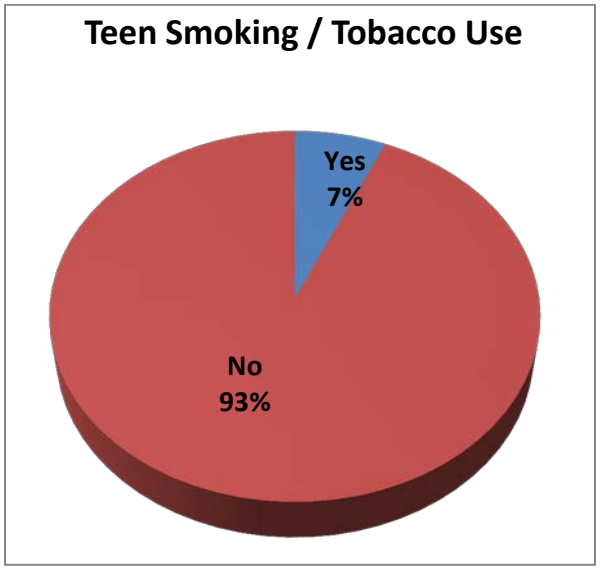

Sources of Teen Stress
Peer Violence 2%
2%
Date Rape 3%
3%
Birth Control / Pregnancy 3%
3%
Sexually Transmitted Diseases 3%
3%
Lack of Future Plans 14%
17%
Worry About Money 28%
32%
Pressure to Get in College 34%
42%
School Work 89%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

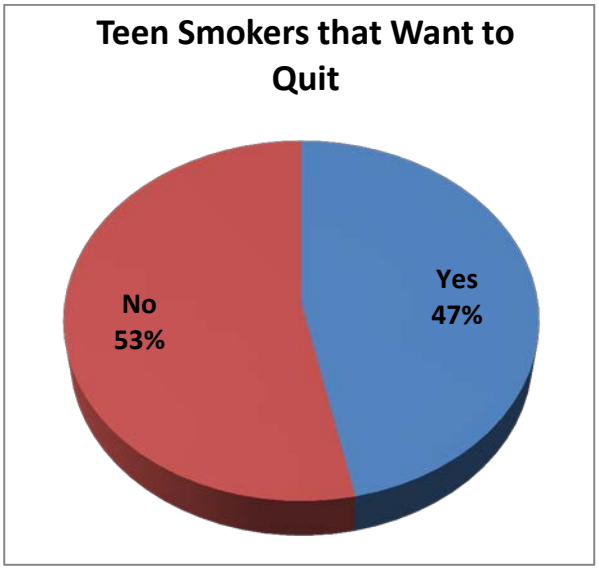

Teen Seat Belt Use
Sometimes
17%
Never
3%
Always
81%

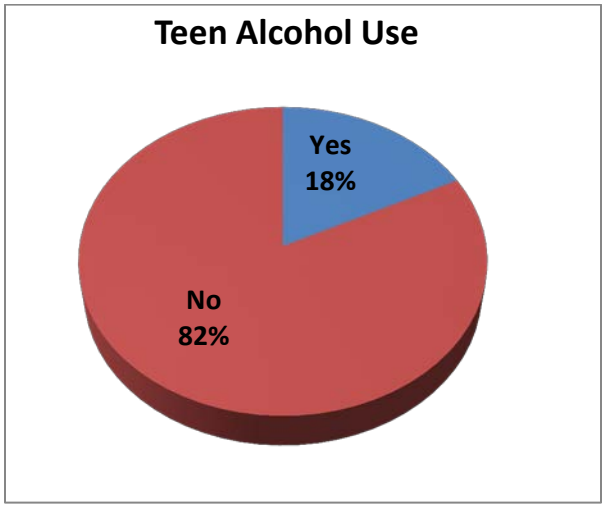

Teen Helmet Use
on Bikes, Skates, Skateboards
Always
15%
Never
58%
Sometimes
28%

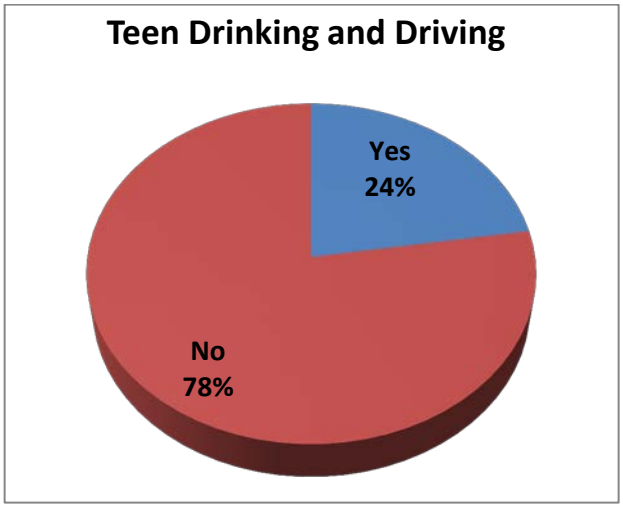

Guns in Homes Where Teens Live
No
53%
Yes
47%

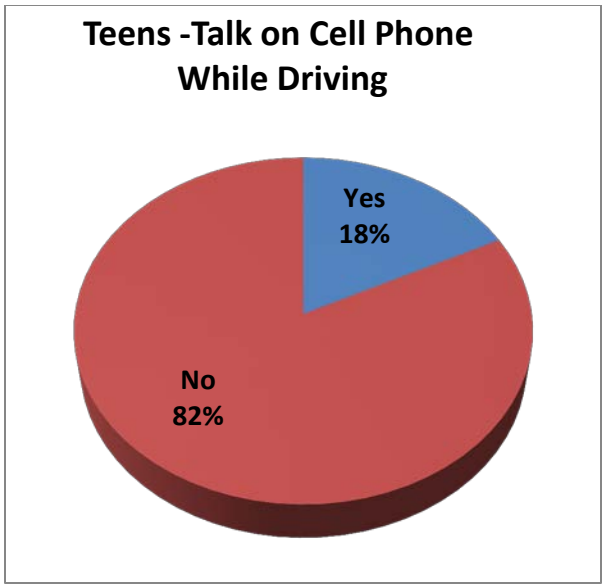

Teen Homes With Guns that are Kept Locked Up
No
40%
Yes
60%

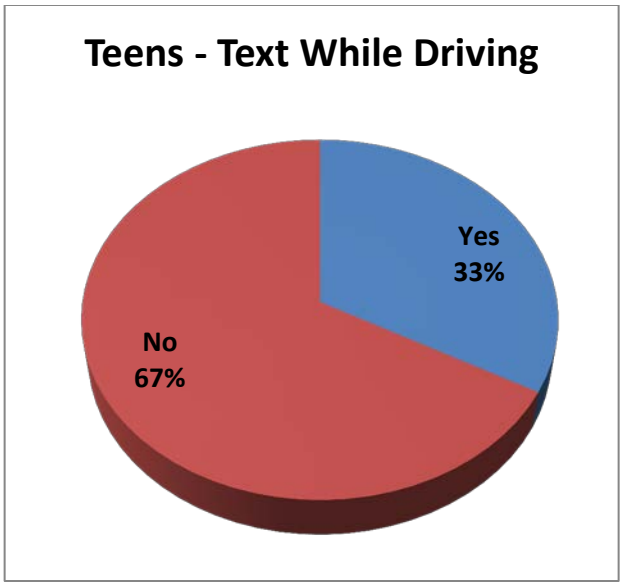

Teen Smoking / Tobacco Use
Yes
7%
No
93%

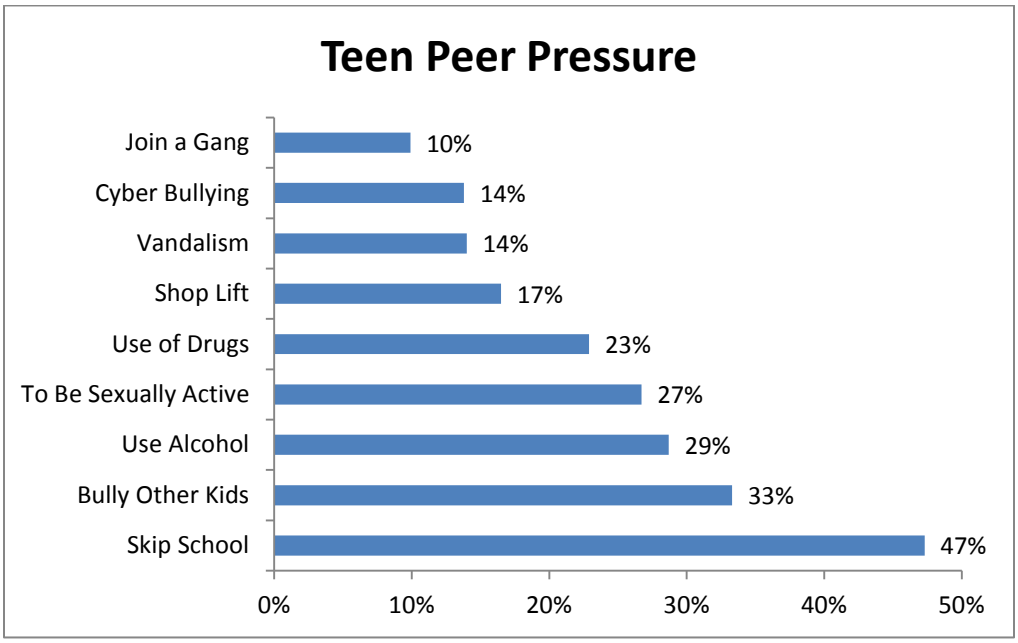

Teen Smokers that Want to Quit
No
53%
Yes
47%

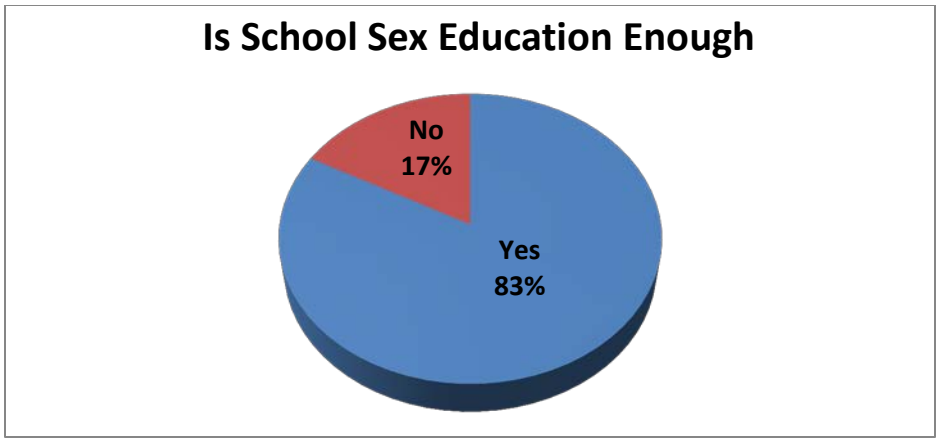

Teen Alcohol Use
Yes
18%
No
82%

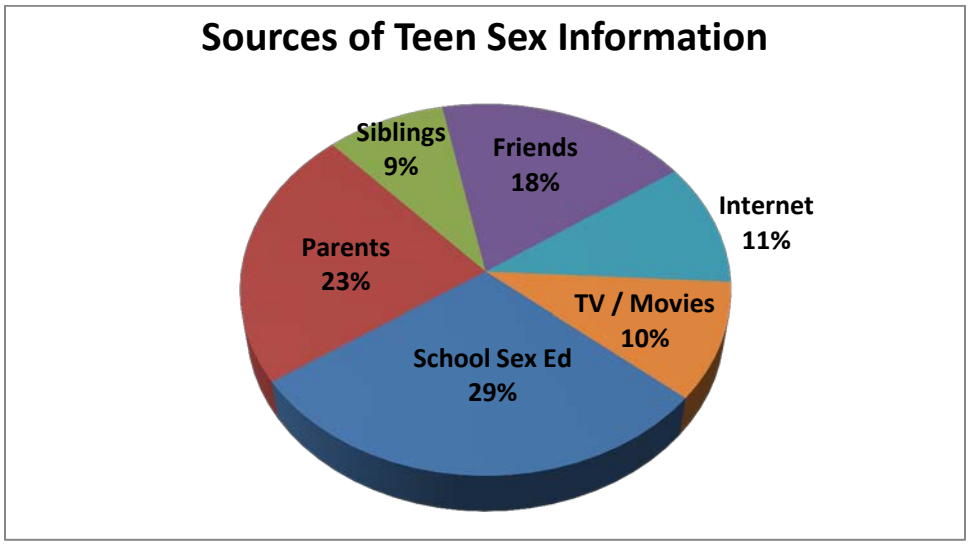

Teen Drinking and Driving
Yes
24%
No
78%


Teens -Talk on Cell Phone While Driving
Yes 18%
No 82%


Teens - Text While Driving
Yes 33%
No 67%


Teen Peer Pressure
Join a Gang 10%
Cyber Bullying 14%
Vandalism 14%
Shop Lift 17%
Use of Drugs 23%
To Be Sexually Active 27%
Use Alcohol 29%
Bully Other Kids 33%
Skip School 47%
0%
10%
20%
30%
40%
50%


Is School Sex Education Enough
No
17%
Yes
83%


Sources of Teen Sex Information
Siblings
9%
Friends
18%
Internet
11%
Parents
23%
TV / Movies
10%
School Sex Ed
29%

Summary of 2012 Focus Groups

During the Community Assessment focus groups were conducted with nine (9) specific niche groups.

Teens	Senior Citizens	Latino
Mental Health & Clergy	Health Care Providers	Environmental Health
Emergency Services	CMC Physicians	Elected Officials

Eight group sessions were held and a ninth telephone session was individually held with elected county officials. Three demographic groups were selected due to the 2008 CHA identifying them as At-Risk populations: Seniors, Latinos and Teens. The remaining groups were selected based upon profession or elected position within the community. A total of 75 individuals participated, representing 40 separate entities: county departments, agencies, organizations, non-profits, Union County Schools, Environmental agents and elected officials. Everyone that participated is either directly impacted by health and human services, or is in a position through appointment, electoral result or employment, to impact the health, wellness and safety of county residents.

All groups were asked similar questions (except teens). All groups held dialogues on what factors in the community were impacting their health and wellness. Built environments that could improve residents health were discussed. Participants were asked to comment on the behavioral changes that are needed to improve health outcomes and overall health of residents. Teen questions were centered around traditional teen issues: peer pressure, sex, drug and alcohol use, physical activity and nutrition.

SYNOPSIS OF FOCUS GROUPS

Question #1 ***What is impacting the health and wellness of the residents of Union County?***

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
Need better communication about and more promotion of services at Union County Health Department and other agencies and organizations.	X		X			X	X		
Since the last assessment in 2008 improvements have been made in health care in the County.	X	X	X		X	X	X		
Seniors need more affordable access to physical activity and socialization and to transportation to these.	X								X
Not enough affordable adult day care, assisted living and retirement residences (rental and owner residences).	X	X			X				
Affordable, accessible transportation for seniors, mentally ill, learning disabled and low income patients is inadequate, especially to care only available outside Union County.	X	X	X						
Need more community urgent care centers and free/scaled	X	X	X		X	X	X		

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
clinics to off load Emergency Room and be convenient throughout the County.									
Union County's rate for Alzheimer's is twice that of the State (UC – 57.5, State 28.3). There are several resources and screenings in the County, but dealing with it this condition is expensive and hard on families. There is concern that the arsenic in the wells is contributing.	X						X		X
Substance Abuse is an issue in the County. This includes: • A lot of older people and teens heavily use alcohol • Seniors take too much medication • Lack of coordination on medication between doctors • Teens steal prescription meds from their homes and other adults	X	X			X	X	X	X	
The economic situation* has caused people to not get proper health care, especially preventative and mental health		X	X		X				X

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
care. (*Loss of job and/or insurance, inability to afford co-pay or elective procedures, etc.)									
Economy has caused people not to live healthy life styles – work more hours, cannot afford cost of fitness and healthy eating.				X	X				X
There is a lack of Dental care for low income families – few Dentists accept Medicaid, no free or subsidized Dental Clinics.		X							
There is insufficient Mental Health care and support systems for adults and youths.		X	X		X	X	X		
The process to access mental health care under Medicaid is confusing and complicated and hampers people getting the care they need.		X	X		X	X	X		
People need to take personal responsibility for their own health and fitness.			X	X	X		X	X	X
Need for more education on and promotion of the benefits of healthy eating and fitness.	X		X	X	X	X	X	X	X
Need for more education on and promotion of preventative health care such as vaccines, screenings and early prenatal		X	X		X		X		

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
care.									
Need more effort to help teens deal with risky behavior, especially STD screening and social media.		X			X	X	X	X	X
Need for more sharing of information between entities involved in or related to health and wellness.	X	X	X	X	X	X			
There is inadequate access to affordable healthy food even though Union County is the 3rd largest County for agriculture in the State.	X	X		X			X		
Reduced tax revenue has caused budget cuts and the discontinuance of services at a time when demand is up.	X	X	X	X	X				
Obesity is a big problem because of all the health problems it causes.			X	X		X	X		X

Question #2 ***What built environments would improve fitness and wellness opportunities in Union County?***

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
Need for more free/affordable and accessible exercise programs/facilities for seniors (centers, classes, walking trails, sidewalks).	X	X			X				X
Need for more outdoor safe, accessible exercise spaces/facilities (parks, trails, green areas) for walking and bicycling.	X	X	X	X	X	X	X	X	X
Amount of free/affordable indoor fitness facilities and structured programs (recreation leagues, girls' sports, summer camps, etc.) is inadequate.	X	X			X	X			
Need more sidewalks.	X	X	X	X	X	X	X	X	
Need to fund/implement the Union County portions of the Carolina Thread Trail.		X	X						X
Need to find a way to use the facilities that exist; for example: open school facilities to the public in non-school hours, make parks and trails safer.	X		X		X				X
Need more affordable/easily accessible healthy food (farmer's markets, healthy fast food with drive through, etc.)		X		X			X		

Question #3 ***What environmental issues are impacting the health of residents?***

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
Poor Air Quality is a big concern – contributors include: surrounding counties and Highway 74 traffic.	X	X		X	X				X
The high rate of asthma sufferers and others with respiratory problems are adversely affected by the poor air quality.				X	X				
There is a high level of concern about pollution in wells serving many homes in the rural parts of the County. People fear there is a link between the high amount of arsenic and diseases, particularly cancer.	X	X	X	X	X		X		X
It is too costly or not possible for many rural County residents and businesses to connect to public water.		X	X	X	X				X
The loss of green space and natural filters are contributing to the air and water pollution. Better planning and stricter policies are needed.			X	X					
Need for more access to and education on recycling.						X	X		
Several families living in many one family residences are over taxing wells and septic tanks.			X	X	X				

Question #4 ***What do you believe is the most critical behavioral change to improve the health of County residents?***

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
Break culture of tobacco use.	X		X	X			X		
Eat healthier.	X		X	X	X	X	X	X	X
Pay more attention to medication miss use, improper medication disposal and substance abuse.	X	X			X				
Increase fitness/physical activities	X			X				X	X
Take responsibility for own health and wellness.				X	X		X		
Increase health and fitness awareness and education in schools.				X	X		X		X
Need for better, less complicated access to first point of contact for major service providers.	X	X	X			X			
Businesses need to be more proactive in promoting healthy living.			X		X				

SECONDARY DATA/HEALTH INDICATORS

Presented By: Rusti Collins, B.S. Health Promotion Intern

This section covers the leading causes of death from 2001-2005 and 2006-2010 in Union County and North Carolina. Comparisons between age groups, health indicators and ethnicity/gender groups are distinguished. Secondary data was obtained from the following websites:
North Carolina State Center for Health Statistics (SCHS) @
http://www.schs.state.nc.us/schs/
(The North Carolina Statewide and County Trends in Key Health Indicators for Union County is included at the end of the LCD section and will be referred to throughout the secondary data report).

Healthy People 2020 @ http://www.healthypeople.gov/2020/default.aspx
(The HP2020 Objectives are included at the end)

Healthy North Carolina 2020 @ http://publichealth.nc.gov/hnc2020/
(The HNC2020 Objectives are included at the)

Leading Causes of Death: All Ages
See LCD Figures 1-4 on following pages

Cancer, Heart Disease, Alzheimer's, Respiratory Disease and Cerebrovascular Disease continue to be the top leading causes of death for all ages in Union County from 2001-2010 (see Figures 1 & 2 on following page). Union County has decreased its mortality rates in the following areas: Heart Disease, Cancer, Cerebrovascular Disease, Motor Vehicle Injuries, Diabetes and Nephritis/Nephritic Syndrome/Nephrosis. Cancer, Heart Disease, Cerebrovascular Disease and Respiratory Disease continue to be the top four leading causes of death for all ages in North Carolina from 2001-2010. Areas in which Union County exceeded the State death rate included Alzheimer's disease.

Leading Causes of Death 0-19 Years
See LCD Figures 5-8 on following pages

From 2001-2010, conditions originating in the perinatal period, motor vehicle injuries and congenital anomalies (birth defects) continue to be the top leading causes of death for this age group in both Union County and North Carolina. From 2001-2005 to 2006-2010, Union County death rates decreased in each of these areas as well as cancer, SIDS and suicide. Death rates increased in homicide, septicemia, disease of the heart and other unintentional injuries. From 2006-2010, Union County did not exceed the State death rate in any area.

Leading Causes of Death 20-39 Years
See LCD Figures 9-12 on following pages

From 2001-2010, motor vehicle injuries, other unintentional injuries, and suicide continue to be the top leading causes of death for this age group in both Union County and North Carolina. From 2001-2005 to 2006-2010, Union County death rates decreased in cancer, HIV disease, congenital anomalies (birth defects) and diabetes mellitus. Death rates increased in motor vehicle injuries, other unintentional injuries, suicide, homicide, diseases of the heart

and cerebrovascular disease. From 2006-2010, Union County exceeded the State death rates in motor vehicle injuries, suicide and cerebrovascular disease.

Leading Causes of Death 40-64 Years
See LCD Figures 13-16 on following pages

From 2001-2010, cancer, diseases of the heart and other unintentional injuries continue to be the top leading causes of death for this age group in both Union County and North Carolina. From 2001-2005 to 2006-2010, Union County death rates decreased in cancer, disease of the heart, chronic lower respiratory disease, motor vehicle injuries, other unintentional areas and diabetes mellitus, nephritis/nephritic syndrome/nephrosis. Death rates increased in suicide, cerebrovascular disease and chronic liver disease/cirrhosis. From 2006-2010, Union County did not exceed the State death rates in any areas.

Leading Causes of Death 65-84 Years
See LCD Figures 17-20 on following pages

From 2001-2010, cancer, heart disease and chronic lower respiratory disease continue to be the top leading causes of death for this age group in both Union County and North Carolina. From 2001-2005 to 2006-2010, Union County death rates decreased in cancer, disease of the heart, cerebrovascular disease, diabetes mellitus, nephritis/nephritic syndrome/nephrosis and pneumonia/influenza. Death rates increased in chronic lower respiratory disease, Alzheimer's disease and septicemia. From 2006-2010, Union County exceeded the State death rates in Alzheimer's disease and septicemia.

Leading Causes of Death 85+ Years
See LCD Figures 21-24 on following pages

From 2001-2010, cancer, heart disease and Alzheimer's disease continue to be the top leading causes of death for this age group in both Union County and North Carolina. From 2001 -2005 to 2006-2010, Union County death rates decreased in heart disease, cerebrovascular disease and pneumonia/influenza. Death rates increased in Alzheimer's disease, cancer, chronic lower respiratory disease, pneumonitis due to solids & liquids, nephritis/nephritic syndrome/nephrosis and hypertension. From 2006-2010, Union County exceeded the State death rates in heart disease, Alzheimer's disease, cancer, chronic lower respiratory disease, nephritis/nephritic syndrome/nephrosis, other unintentional injuries and septicemia.

LCD: Figure 1

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

Union County			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES		TOTAL DEATHS --- ALL CAUSES	4,547	624.0
	1	Diseases of the heart	1,156	158.6
	2	Cancer - All Sites	1,059	145.3
	3	Cerebrovascular disease	292	40.1
	4	Alzheimer's disease	224	30.7
	5	Chronic lower respiratory diseases	219	30.1
	6	Motor vehicle injuries	142	19.5
	7	Diabetes mellitus	136	18.7
	8	Other Unintentional injuries	114	15.6
	9	Nephritis, nephrotic syndrome, & nephrosis	102	14.0
	10	Pneumonia & influenza	82	11.3

*Data Source: http://www.s chs.state.nc.us/schs/data/databook/2007/

LCD: Figure 2

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

Union County			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES	0	TOTAL DEATHS --- ALL CAUSES	5,490	577.9
	1	Cancer - All Sites	1,250	131.6
	2	Diseases of the heart	1,165	122.6
	3	Alzheimer's disease	339	35.7
	4	Chronic lower respiratory diseases	298	31.4
	5	Cerebrovascular disease	296	31.2
	6	Other Unintentional injuries	176	18.5
	7	Diabetes mellitus	133	14.0
	8	Motor vehicle injuries	130	13.7
	9	Nephritis, nephrotic syndrome, & nephrosis	112	11.8
	10	Suicide	101	10.6

Data Source: http://www.s chs.state.nc.us/schs/data/databook/

LCD: Figure 3

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

North Carolina State Total			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES		TOTAL DEATHS --- ALL CAUSES	362,315	859.2
	1	Diseases of the heart	91,056	215.9
	2	Cancer - All Sites	81,428	193.1
	3	Cerebrovascular disease	25,615	60.7
	4	Chronic lower respiratory diseases	18,800	44.6
	5	Diabetes mellitus	11,273	26.7
	6	Other Unintentional injuries	10,670	25.3
	7	Alzheimer's disease	10,486	24.9
	8	Pneumonia & influenza	9,163	21.7
	9	Motor vehicle injuries	8,188	19.4
	10	Nephritis, nephrotic syndrome, & nephrosis	7,161	17.0

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 4

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

North Carolina State Total			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES	0	TOTAL DEATHS --- ALL CAUSES	382,831	830.5
	1	Cancer - All Sites	87,584	190.0
	2	Diseases of the heart	86,329	187.3
	3	Cerebrovascular disease	22,035	47.8
	4	Chronic lower respiratory diseases	21,573	46.8
	5	Other Unintentional injuries	13,210	28.7
	6	Alzheimer's disease	12,785	27.7
	7	Diabetes mellitus	10,687	23.2
	8	Nephritis, nephrotic syndrome, & nephrosis	8,786	19.1
	9	Pneumonia & influenza	8,538	18.5
	10	Motor vehicle injuries	7,759	16.8

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 5

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

00-19 YEARS		UNION COUNTY		
		TOTAL DEATHS --- ALL CAUSES	149	65.8
	1	Conditions originating in the perinatal period	40	17.7
	2	Motor vehicle injuries	31	13.7
	3	Congenital anomalies (birth defects)	25	11.0
	4	Cancer - All Sites	9	4.0
	5	Other Unintentional injuries	7	3.1
		SIDS	7	3.1
	7	Suicide	5	2.2
	8	Homicide	4	1.8
	9	Septicemia	2	0.9
		Diseases of the heart	2	0.9
		Cerebrovascular disease	2	0.9

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 6

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

00-19 YEARS	0	UNION COUNTY		
		TOTAL DEATHS --- ALL CAUSES	151	48.8
	1	Conditions originating in the perinatal period	41	13.2
	2	Congenital anomalies (birth defects)	24	7.7
	3	Motor vehicle injuries	16	5.2
	4	Other Unintentional injuries	12	3.9
	5	Homicide	9	2.9
	6	SIDS	8	2.6
	7	Cancer - All Sites	7	2.3
	8	Diseases of the heart	4	1.3
	9	Septicemia	3	1.0
	10	In-situ/benign neoplasms	2	0.6
		Pneumonia & influenza	2	0.6
		Suicide	2	0.6

LCD: Figure 7

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

00-19 YEARS		NORTH CAROLINA		
		TOTAL DEATHS --- ALL CAUSES	8,887	77.2
	1	Conditions originating in the perinatal period	2,766	24.0
	2	Motor vehicle injuries	1,401	12.2
	3	Congenital anomalies (birth defects)	1,061	9.2
	4	Other Unintentional injuries	648	5.6
	5	SIDS	491	4.3
	6	Homicide	416	3.6
	7	Cancer - All Sites	278	2.4
	8	Suicide	241	2.1
	9	Diseases of the heart	221	1.9
	10	Septicemia	97	0.8

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 8

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

00-19 YEARS	0	NORTH CAROLINA		
		TOTAL DEATHS --- ALL CAUSES	8,748	69.8
	1	Conditions originating in the perinatal period	2,626	21.0
	2	Congenital anomalies (birth defects)	1,109	8.9
	3	Motor vehicle injuries	1,103	8.8
	4	Other Unintentional injuries	705	5.6
	5	SIDS	479	3.8
	6	Homicide	416	3.3
	7	Cancer - All Sites	269	2.1
	8	Suicide	263	2.1
	9	Diseases of the heart	235	1.9
	10	Pneumonia & influenza	100	0.8

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 9

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
20-39 YEARS		TOTAL DEATHS --- ALL CAUSES	193	90.9
	1	Motor vehicle injuries	52	24.5
	2	Cancer - All Sites	28	13.2
	3	Other Unintentional injuries	24	11.3
	4	Suicide	19	8.9
	5	Homicide	14	6.6
	6	Diseases of the heart	13	6.1
	7	HIV disease	6	2.8
		Congenital anomalies (birthdefects)	6	2.8
	9	Cerebrovascular disease	3	1.4
	10	Diabetes mellitus	2	0.9

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 10

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS --- ALL CAUSES	253	105.4
	1	Motor vehicle injuries	59	24.6
	2	Other Unintentional injuries	39	16.2
	3	Suicide	37	15.4
	4	Cancer - All Sites	25	10.4
	5	Homicide	23	9.6
	6	Diseases of the heart	16	6.7
	7	HIV disease	5	2.1
		Cerebrovascular disease	5	2.1
	9	Septicemia	2	0.8
		Diabetes mellitus	2	0.8
		Chronic lower respiratory diseases	2	0.8
		Congenital anomalies (birth defects)	2	0.8

LCD: Figure 11

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
20-39 YEARS		TOTAL DEATHS --- ALL CAUSES	15,596	126.5
	1	Motor vehicle injuries	3,070	24.9
	2	Other Unintentional injuries	2,171	17.6
	3	Homicide	1,677	13.6
	4	Suicide	1,671	13.6
	5	Cancer - All Sites	1,434	11.6
	6	Diseases of the heart	1,371	11.1
	7	HIV disease	744	6.0
	8	Cerebrovascular disease	275	2.2
	9	Diabetes mellitus	239	1.9
	10	Congenital anomalies (birth defects)	155	1.3

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 12

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS --- ALL CAUSES	15,453	122.1
	1	Motor vehicle injuries	2,853	22.6
	2	Other Unintentional injuries	2,621	20.7
	3	Suicide	1,792	14.2
	4	Homicide	1,617	12.8
	5	Cancer - All Sites	1,423	11.2
	6	Diseases of the heart	1,316	10.4
	7	HIV disease	428	3.4
	8	Diabetes mellitus	252	2.0
	9	Cerebrovascular disease	231	1.8
	10	Chronic liver disease & cirrhosis	154	1.2

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 13

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
40-64 YEARS		TOTAL DEATHS --- ALL CAUSES	1,036	459.9
	1	Cancer - All Sites	349	154.9
	2	Diseases of the heart	243	107.9
	3	Chronic lower respiratory diseases	45	20.0
	4	Motor vehicle injuries	40	17.8
	5	Other Unintentional injuries	39	17.3
	6	Diabetes mellitus	37	16.4
	7	Suicide	31	13.8
	8	Cerebrovascular disease	29	12.9
	9	Nephritis, nephrotic syndrome, & nephrosis	26	11.5
	10	Chronic liver disease & cirrhosis	25	11.1

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 14

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
40-64 YEARS	0	TOTAL DEATHS --- ALL CAUSES	1,260	399.7
	1	Cancer - All Sites	426	135.1
	2	Diseases of the heart	275	87.2
	3	Chronic lower respiratory diseases	54	17.1
		Other Unintentional injuries	54	17.1
	5	Suicide	48	15.2
	6	Cerebrovascular disease	44	14.0
	7	Diabetes mellitus	40	12.7
	8	Motor vehicle injuries	37	11.7
	9	Chronic liver disease & cirrhosis	36	11.4
	10	Nephritis, nephrotic syndrome, & nephrosis	20	6.3

LCD: Figure 15

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
40-64 YEARS		TOTAL DEATHS --- ALL CAUSES	79,212	595.3
	1	Cancer - All Sites	24,963	187.6
	2	Diseases of the heart	17,613	132.4
	3	Cerebrovascular disease	3,268	24.6
	4	Other Unintentional injuries	3,244	24.4
	5	Diabetes mellitus	2,952	22.2
	6	Chronic lower respiratory diseases	2,686	20.2
	7	Motor vehicle injuries	2,394	18.0
	8	Chronic liver disease & cirrhosis	2,195	16.5
	9	Suicide	2,149	16.1
	10	HIV disease	1,370	10.3

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 16

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
40-64 YEARS	0	TOTAL DEATHS --- ALL CAUSES	88,856	587.5
	1	Cancer - All Sites	27,292	180.5
	2	Diseases of the heart	18,586	122.9
	3	Other Unintentional injuries	4,392	29.0
	4	Chronic lower respiratory diseases	3,373	22.3
	5	Cerebrovascular disease	3,335	22.1
	6	Diabetes mellitus	3,146	20.8
	7	Suicide	2,714	17.9
	8	Chronic liver disease & cirrhosis	2,676	17.7
	9	Motor vehicle injuries	2,563	16.9
	10	Nephritis, nephrotic syndrome, & nephrosis	1,631	10.8

LCD: Figure 17

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
65-84 YEARS		TOTAL DEATHS --- ALL CAUSES	2,100	3621.5
	1	Cancer - All Sites	568	979.5
	2	Diseases of the heart	561	967.5
	3	Cerebrovascular disease	171	294.9
	4	Chronic lower respiratory diseases	129	222.5
	5	Alzheimer's disease	82	141.4
	6	Diabetes mellitus	75	129.3
	7	Nephritis, nephrotic syndrome, & nephrosis	50	86.2
	8	Pneumonia & influenza	39	67.3
	9	Septicemia	28	48.3
	10	Parkinson's disease	25	43.1
		Other Unintentional injuries	25	43.1

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 18

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
65-84 YEARS	0	TOTAL DEATHS --- ALL CAUSES	2,417	3159.1
	1	Cancer - All Sites	644	841.7
	2	Diseases of the heart	512	669.2
	3	Chronic lower respiratory diseases	178	232.7
	4	Cerebrovascular disease	151	197.4
	5	Alzheimer's disease	122	159.5
	6	Diabetes mellitus	66	86.3
	7	Nephritis, nephrotic syndrome, & nephrosis	54	70.6
	8	Septicemia	52	68.0
	9	Pneumonia & influenza	48	62.7
	10	Pneumoniais due to solids & liquids	35	45.7

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 19

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
65-84 YEARS		TOTAL DEATHS --- ALL CAUSES	169,145	3813.8
	1	Cancer - All Sites	44,965	1013.8
	2	Diseases of the heart	44,058	993.4
	3	Chronic lower respiratory diseases	12,320	277.8
	4	Cerebrovascular disease	12,286	277.0
	5	Diabetes mellitus	6,092	137.4
	6	Alzheimer's disease	4,447	100.3
	7	Pneumonia & influenza	3,866	87.2
	8	Nephritis, nephrotic syndrome, & nephrosis	3,786	85.4
	9	Septicemia	2,954	66.6
	10	Other Unintentional injuries	2,711	61.1

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 20

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
65-84 YEARS	0	TOTAL DEATHS --- ALL CAUSES	168,744	3317.2
	1	Cancer - All Sites	46,981	923.6
	2	Diseases of the heart	38,062	748.2
	3	Chronic lower respiratory diseases	13,443	264.3
	4	Cerebrovascular disease	10,044	197.4
	5	Diabetes mellitus	5,338	104.9
	6	Alzheimer's disease	5,011	98.5
	7	Nephritis, nephrotic syndrome, & nephrosis	4,364	85.8
	8	Pneumonia & influenza	3,486	68.5
	9	Septicemia	3,208	63.1
	10	Other Unintentional injuries	3,044	59.8

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 21

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
85+ YEARS		TOTAL DEATHS --- ALL CAUSES	1,069	16003.0
	1	Diseases of the heart	337	5044.9
	2	Alzheimer's disease	142	2125.7
	3	Cancer - All Sites	105	1571.9
	4	Cerebrovascular disease	87	1302.4
	5	Chronic lower respiratory diseases	43	643.7
	6	Pneumonia & influenza	32	479.0
	7	Pneumoniais due to solids & liquids	26	389.2
		Nephritis, nephrotic syndrome, & nephrosis	26	389.2
	9	Diabetes mellitus	21	314.4
	10	Hypertension	20	299.4

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

LCD: Figure 22

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=UNION			# OF DEATHS	DEATH RATE
85+ YEARS	0	TOTAL DEATHS --- ALL CAUSES	1,409	16483.4
	1	Diseases of the heart	358	4188.1
	2	Alzheimer's disease	212	2480.1
	3	Cancer - All Sites	148	1731.4
	4	Cerebrovascular disease	96	1123.1
	5	Chronic lower respiratory diseases	63	737.0
	6	Pneumonia & influenza	37	432.8
		Nephritis, nephrotic syndrome, & nephrosis	37	432.8
		Other Unintentional injuries	37	432.8
	9	Pneumonitis due to solids & liquids	36	421.2
	10	Septicemia	26	304.2
		Hypertension	26	304.2

Data Source: http://www.schs.state.nc.us/schs/data/databook/

LCD: Figure 23

2001-2005 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
85+ YEARS		TOTAL DEATHS --- ALL CAUSES	89,475	15006.2
	1	Diseases of the heart	27,793	4661.3
	2	Cancer - All Sites	9,788	1641.6
	3	Cerebrovascular disease	9,735	1632.7
	4	Alzheimer's disease	5,926	993.9
	5	Pneumonia & influenza	4,203	704.9
	6	Chronic lower respiratory diseases	3,654	612.8
	7	Nephritis, nephrotic syndrome, & nephrosis	2,009	336.9
	8	Diabetes mellitus	1,980	332.1
	9	Other Unintentional injuries	1,896	318.0
	10	Pneumonitis due to solids & liquids	1,603	268.8

*Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

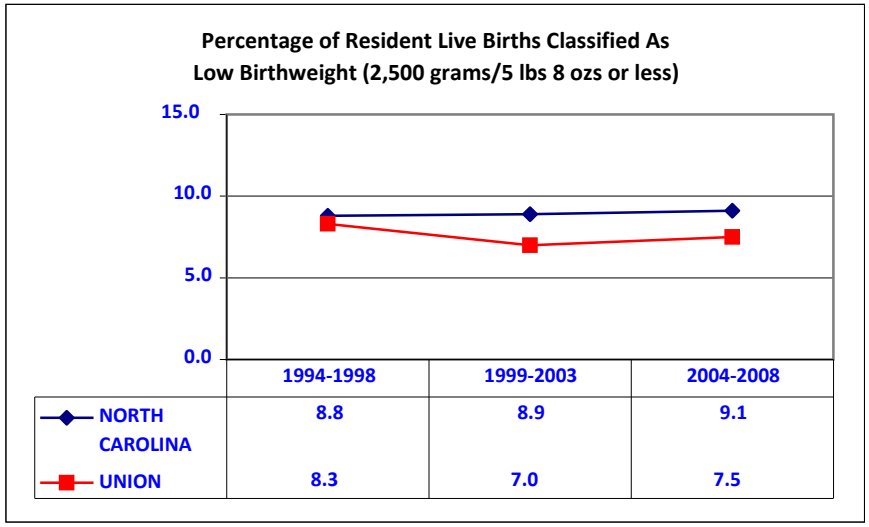
LCD: Figure 24

2006-2010 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population

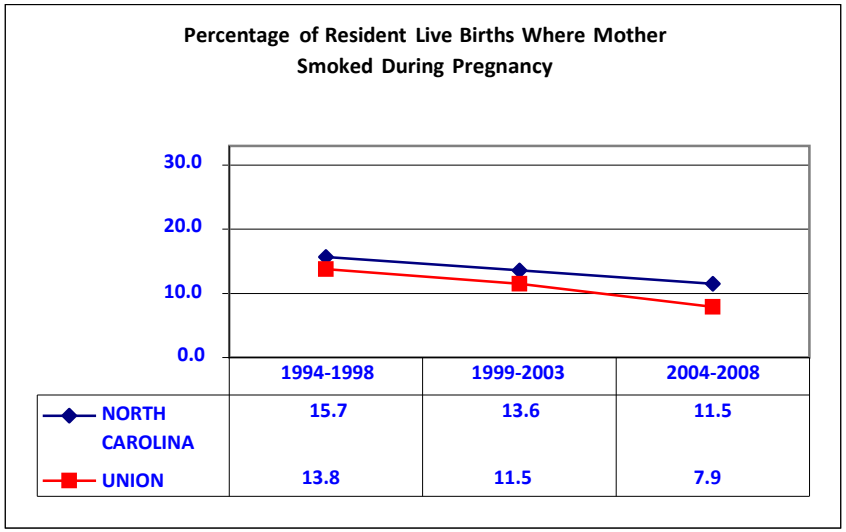
RESIDENCE=NORTH CAROLINA			# OF DEATHS	DEATH RATE
85+ YEARS	0	TOTAL DEATHS --- ALL CAUSES	101,030	14299.1
	1	Diseases of the heart	28,130	3981.3
	2	Cancer - All Sites	11,619	1644.5
	3	Cerebrovascular disease	8,374	1185.2
	4	Alzheimer's disease	7,617	1078.1
	5	Chronic lower respiratory diseases	4,618	653.6
	6	Pneumonia & influenza	3,732	528.2
	7	Nephritis, nephrotic syndrome, & nephrosis	2,621	371.0
	8	Other Unintentional injuries	2,448	346.5
	9	Diabetes mellitus	1,945	275.3
	10	Septicemia	1,575	222.9

Data Source: http://www.schs.state.nc.us/schs/data/databook/

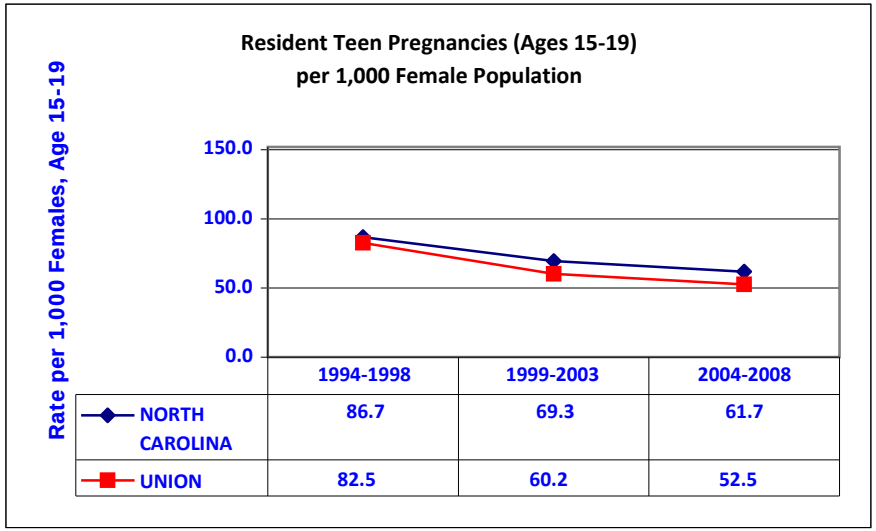
NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



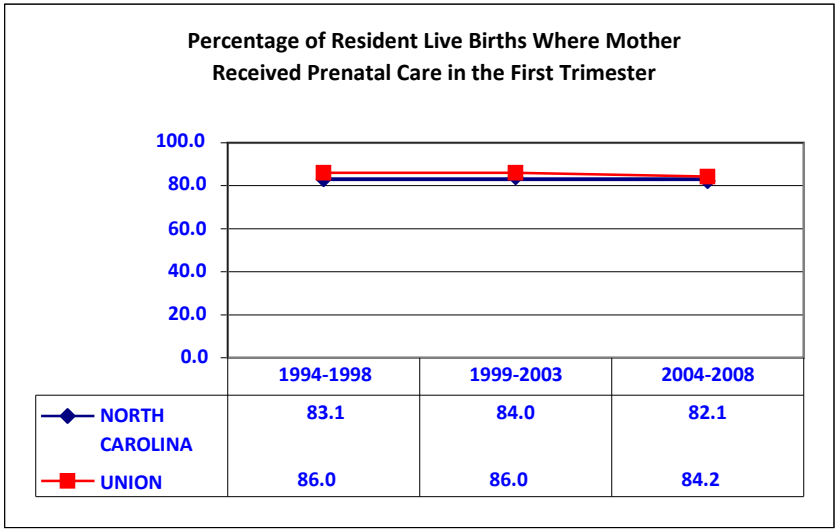
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	8.8	8.9	9.1
UNION	8.3	7.0	7.5



	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	15.7	13.6	11.5
UNION	13.8	11.5	7.9



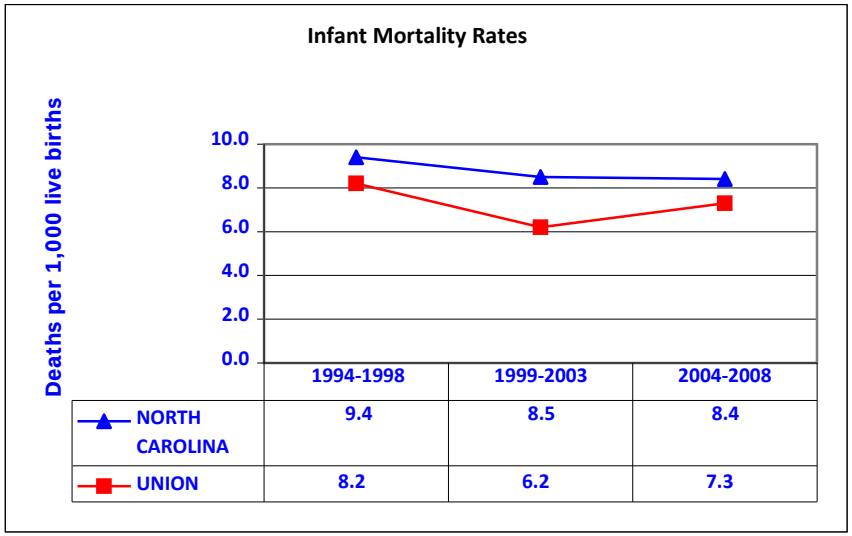
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	86.7	69.3	61.7
UNION	82.5	60.2	52.5



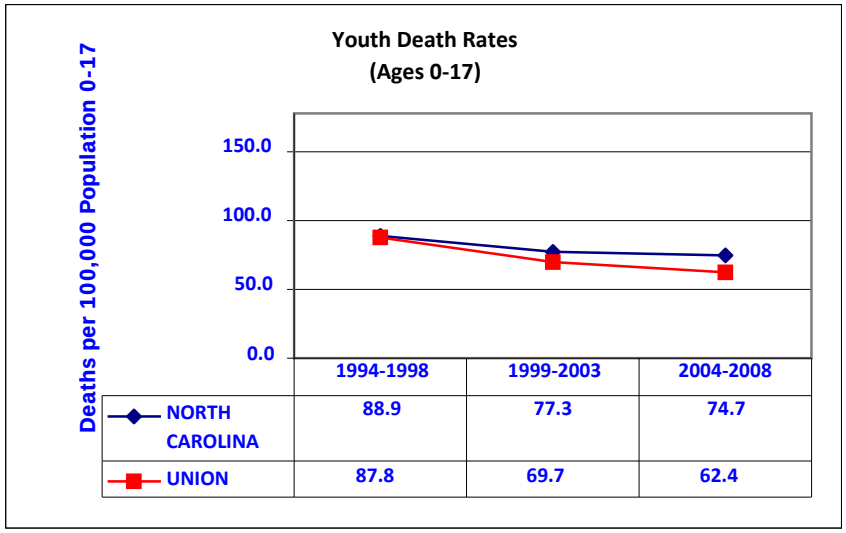
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	83.1	84.0	82.1
UNION	86.0	86.0	84.2

2008 Total Population: 191,108 **Percentage Population Ages 65+:** 9.5 **Percentage Population Minority:** 12.9

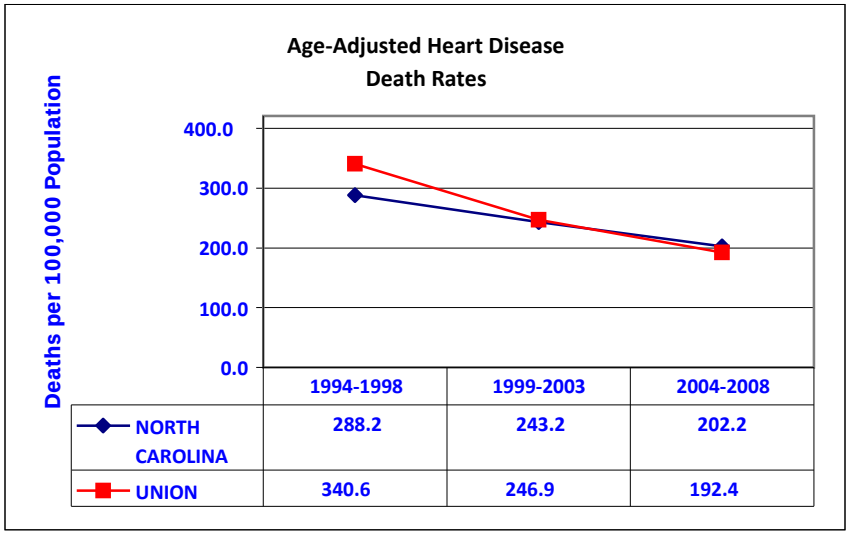
NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



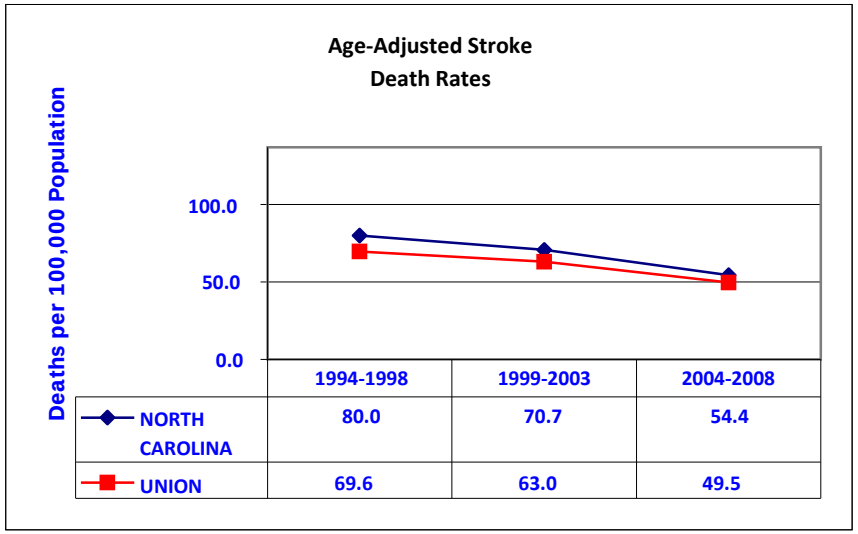
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	9.4	8.5	8.4
UNION	8.2	6.2	7.3



	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	88.9	77.3	74.7
UNION	87.8	69.7	62.4

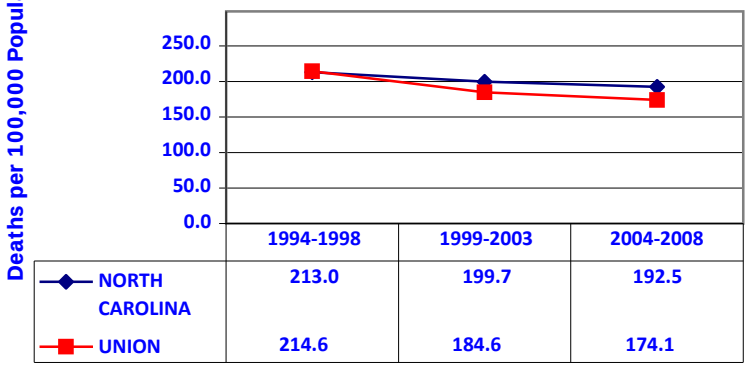


	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	288.2	243.2	202.2
UNION	340.6	246.9	192.4

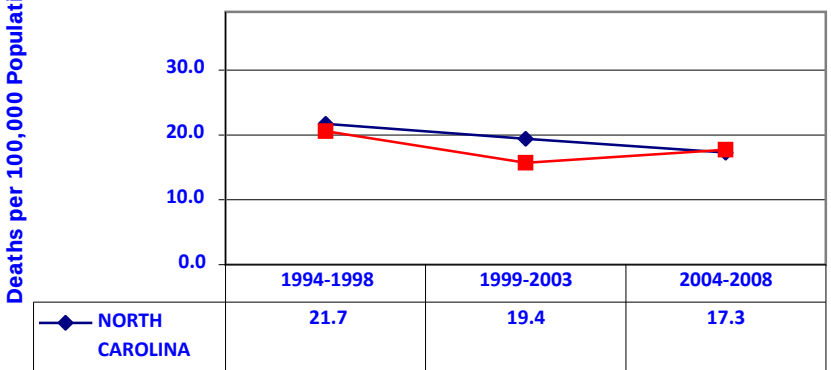


	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	80.0	70.7	54.4
UNION	69.6	63.0	49.5

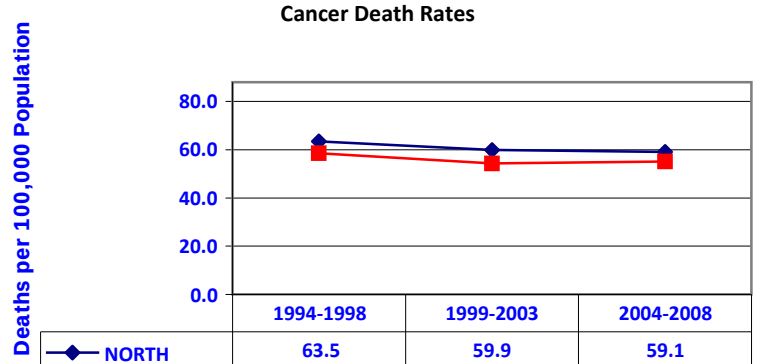
NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



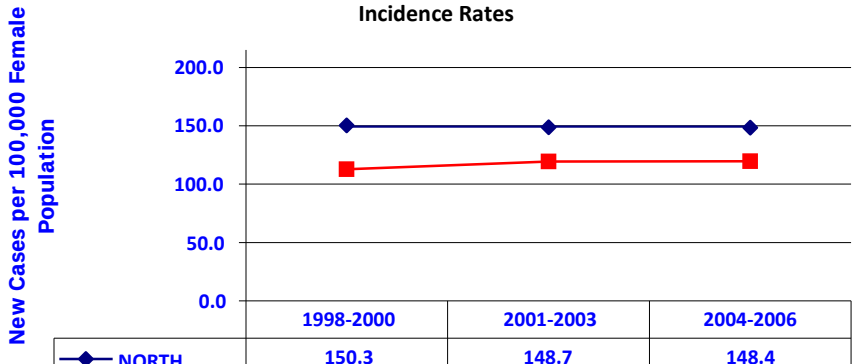
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	213.0	199.7	192.5
UNION	214.6	184.6	174.1



	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	21.7	19.4	17.3
UNION	20.6	15.7	17.7

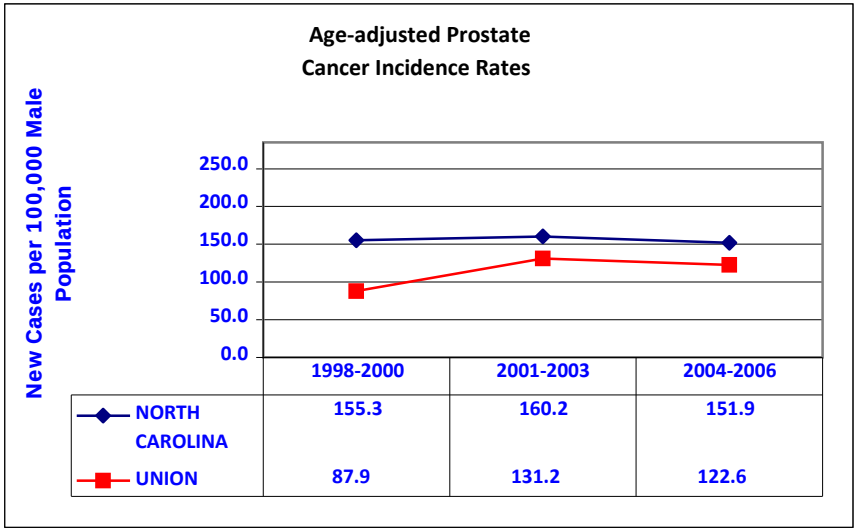


	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	63.5	59.9	59.1
UNION	58.6	54.3	55.1

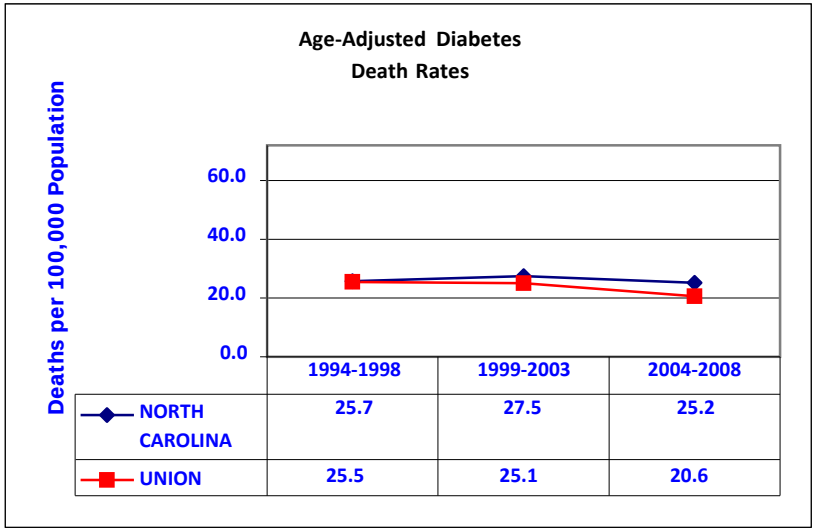


	1998-2000	2001-2003	2004-2006
NORTH CAROLINA	150.3	148.7	148.4
UNION	112.6	119.4	119.6

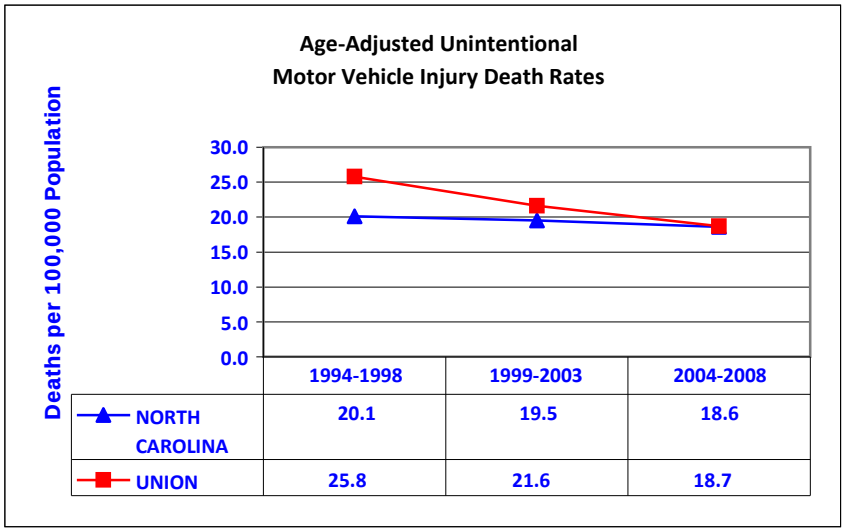
NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



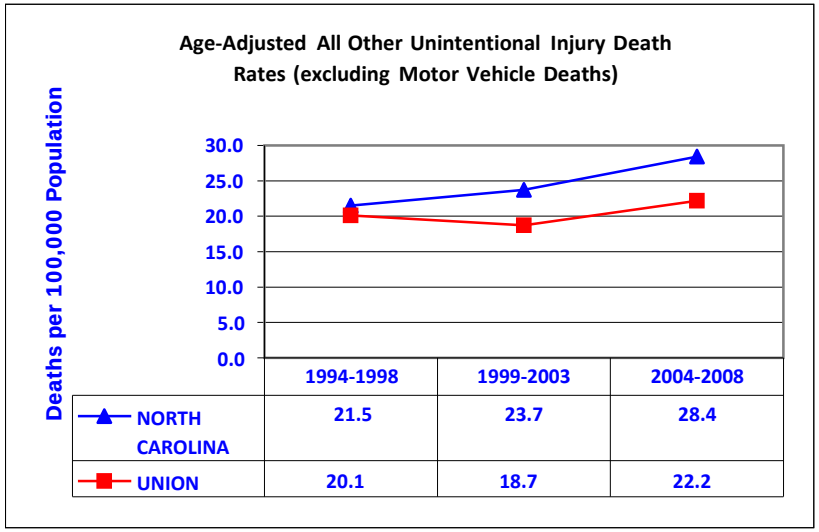
	1998-2000	2001-2003	2004-2006
NORTH CAROLINA	155.3	160.2	151.9
UNION	87.9	131.2	122.6



	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	25.7	27.5	25.2
UNION	25.5	25.1	20.6

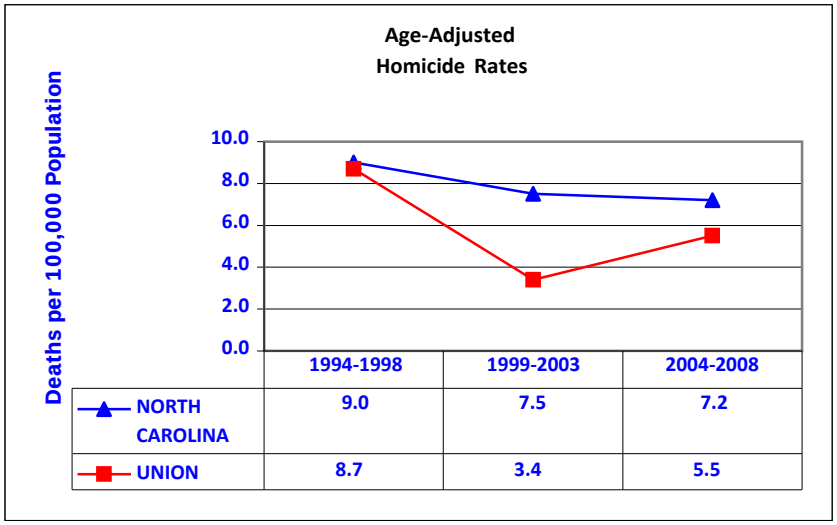


	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	20.1	19.5	18.6
UNION	25.8	21.6	18.7

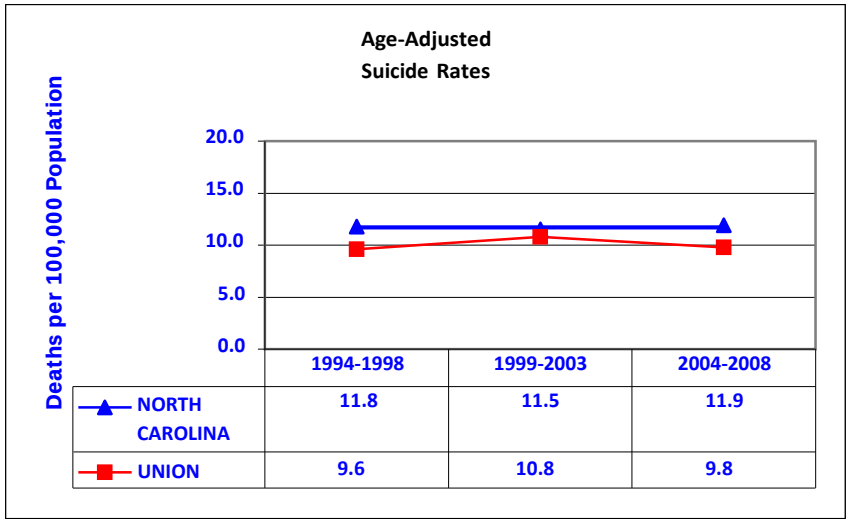


	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	21.5	23.7	28.4
UNION	20.1	18.7	22.2

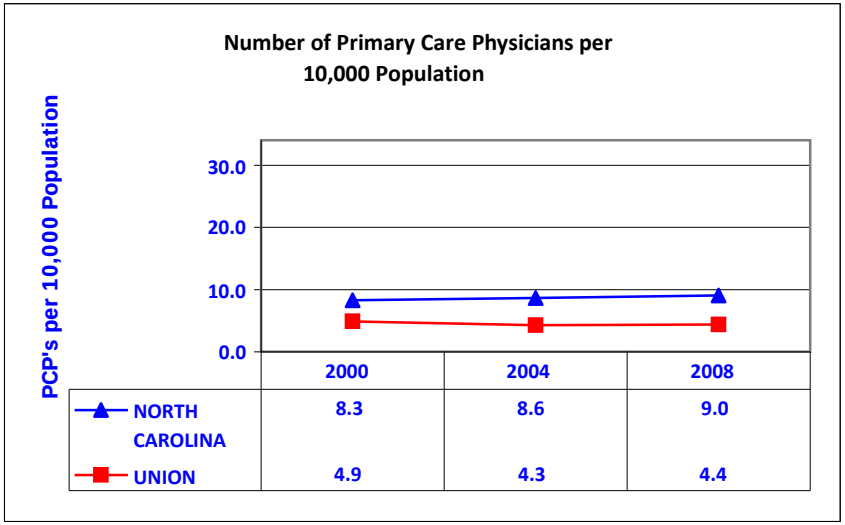
NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



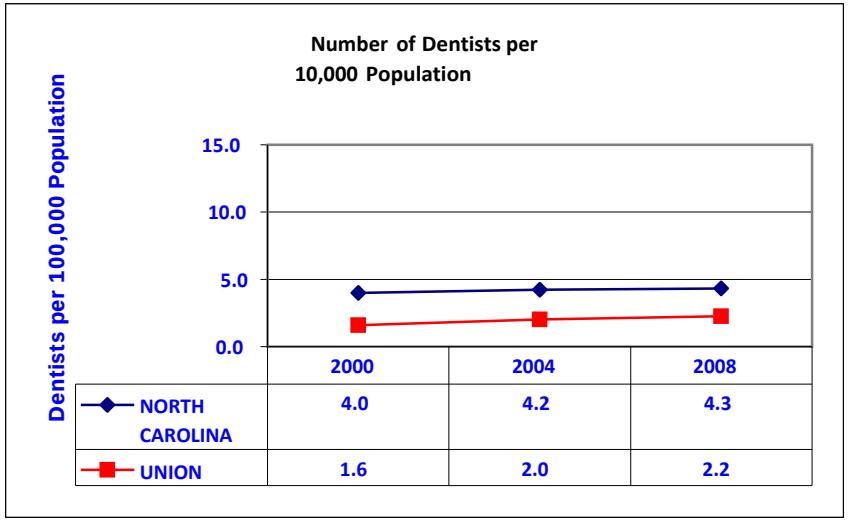
	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	9.0	7.5	7.2
UNION	8.7	3.4	5.5



	1994-1998	1999-2003	2004-2008
NORTH CAROLINA	11.8	11.5	11.9
UNION	9.6	10.8	9.8

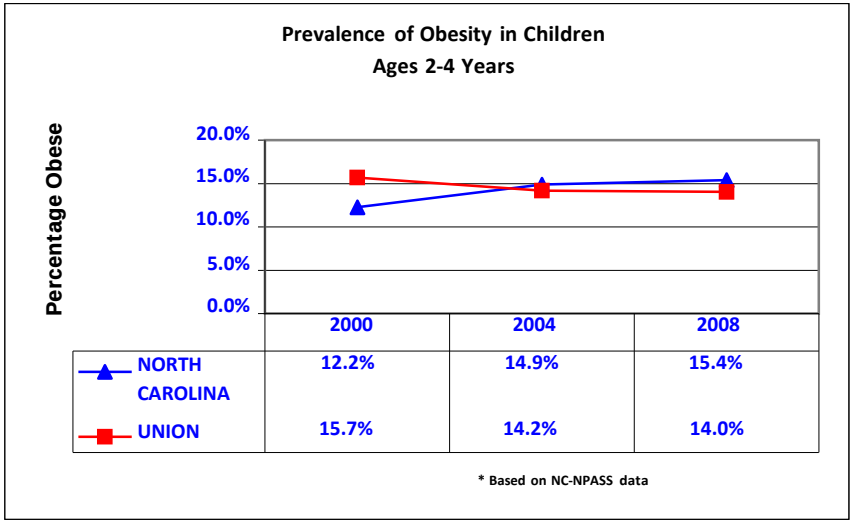


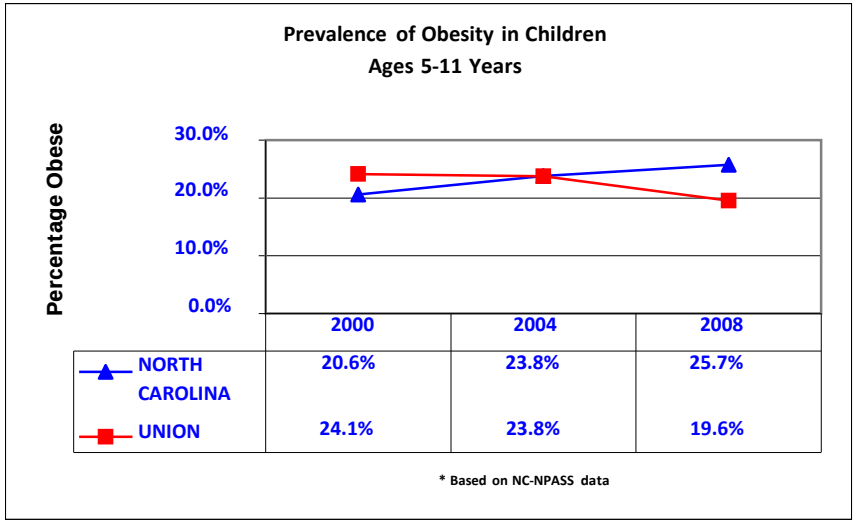
	2000	2004	2008
NORTH CAROLINA	8.3	8.6	9.0
UNION	4.9	4.3	4.4



	2000	2004	2008
NORTH CAROLINA	4.0	4.2	4.3
UNION	1.6	2.0	2.2

NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY





Chronic Disease

Cancer

Cancer is the leading cause of death in Union County and North Carolina from 2006-2010 (*see LCD: Figures 2 & 4*). It is also ranked the #1 leading cause of death in adults 40-84 years of age in both Union County and North Carolina from 2001-2010 (*see LCD: Figures 13-20*). Cancer rates are reported to be highest among white males and females in both Union County and North Carolina from 2001-2010 (*see Cancer: Figures 1-4*). From 2006-2010, Union County cancer death rate totals were 131.6, these did not exceed the State death rate totals which were 190.0 (*see LCD: Figures 2 & 4).*

Highest to lowest incidences of specific types of cancer from 2006-2010 are (*see Cancer: Figures 1-4*):

Trachea, Bronchus, and Lung Cancer (Death rates: 51.7 County - 55.9 State)

Prostate (Death Rates: 23.0 County – 25.5 State)

Breast (Death Rates: 17.8 County - 23.4 State)

Colon, Rectum, and Anus (Death Rates: 16.1 County - 16.0 State)

Pancreas (Death Rates: 12.7 County - 10.7 State)

From 2006-2010, Union County exceeded the State death rates in Colon, Rectum and Anus Cancer and Pancreas Cancer.
(See figures for North Carolina Statewide and County Trends in Key Health Indicators: Union County for further comparisons regarding cancer types).

Healthy North Carolina 2020 cancer objective:
Reduce the colorectal cancer mortality rate (per 100,000 population) to 10.1 target.

Cancer: Figure 1

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard U.S. Population ; *Rates Per 100,000 Population

UNION	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**
Cancer	483	230.3	428	151.2	69	254.4	79	210.7	1,059	187.3
----Colon, Rectum, and Anus	42	19.3	37	13.4	8	26.6	8	20.5	95	16.8
----Pancreas	32	14.7	16	5.6	3	8.9	4	11.1	55	9.7
----Trachea, Bronchus, and Lung	181	84.3	115	40.8	21	81.7	20	52.5	337	59.1
----Female Breast	1	0.6	67	22.9	0	0	12	29.9	80	24.1
----Prostate	33	20.8	0	0	11	47.4	0	0	44	23.0

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

Cancer: Figure 2

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates

Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Residence=Union County	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate		
Cancer	580	212.4	468	132.6	84	255.6	85	187.0	3	N/A	9	N/A	14	N/A	7	N/A	1,250	169.5
Colon, Rectum, and Anus	48	16.1	43	12.5	13	N/A	8	N/A	1	N/A	4	N/A	3	N/A	0	N/A	120	16.1
Pancreas	41	13.7	37	10.4	5	N/A	10	N/A	1	N/A	0	N/A	0	N/A	0	N/A	94	12.7
Trachea, Bronchus, and Lung	193	68.9	136	39.0	24	78.5	23	51.2	0	N/A	2	N/A	0	N/A	1	N/A	379	51.7
Breast	0	N/A	63	16.8	0	N/A	14	N/A	0	N/A	1	N/A	0	N/A	2	N/A	80	17.8
Prostate	48	23.9	0	N/A	5	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	53	23.0

Data Source: http://www.schs.state.nc.us/schs/data/databook/

Cancer: Figure 3

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard U.S. Population ; *Rates Per 100,000 Population

NORTH CAROLINA	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Cancer	33,778	240.6	30,315	158.3	9,174	309.6	8,161	174.1	81,428	197.7
----Colon, Rectum, and Anus	2,931	21	2,881	14.7	854	28.4	962	20.8	7,628	18.6
----Pancreas	1,759	12.3	1,705	8.7	478	15.3	541	11.9	4,483	10.9
----Trachea, Bronchus, and Lung	12,112	83.6	8,304	43.6	2,907	94.1	1,546	33.3	24,869	59.9
----Female Breast	49	0.4	4,458	23.7	16	0.5	1,568	32.3	6,091	26.0
----Prostate	2,854	23.7	0	0	1,487	62.7	0	0	4,341	29.9

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

Cancer: Figure 4

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates

Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Residence=North Carolina	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Cancer	36,085	224.6	31,933	149.3	9,499	302.9	8,228	166.6	615	145.7	570	103.2	348	66.0	306	61.2	87,584	183.1
Colon, Rectum, and Anus	2,956	18.4	2,702	12.4	918	29.0	909	18.5	42	9.0	52	9.9	34	7.4	24	5.4	7,637	16.0
Pancreas	1,927	11.7	1,943	8.9	524	16.1	645	13.4	23	4.8	34	6.9	10	N/A	22	5.0	5,128	10.7
Trachea, Bronchus, and Lung	12,582	76.1	9,340	43.7	2,973	90.9	1,614	32.7	202	47.2	135	24.6	54	12.7	38	8.6	26,938	55.9
Breast	39	N/A	4,607	21.9	11	N/A	1,559	30.7	1	N/A	75	11.7	0	N/A	46	6.7	6,338	23.4
Prostate	2,898	20.4	0	N/A	1,454	59.4	0	N/A	53	18.2	0	N/A	28	9.5	0	N/A	4,433	25.5

Data Source: http://www.schs.state.nc.us/schs/data/databook/

Chronic Health

Heart Disease

From 2006-2010, Heart Disease is the second leading cause of death in both Union County and North Carolina (*see LCD Figures 2 & 4*). Since 2001-2005, death rates have decreased in this area on both County and State level (*see LCD Figures 1-4*). From 2001-2010, heart disease is the second leading cause of death for people 40-84 years of age (*see LCD Figures 13-20*) and the first leading cause of death for people 85+ years of age (*see LCD Figures 21-24*). Union County's death rate was lower than the State death rate in all ages except 85+ years of age. From 2006-2010, the highest death rates for heart disease in Union County occurred in (highest to lowest): African American males, white males, African American females and white females.

Healthy North Carolina 2020 Objectives for Heart Disease:
Reduce the cardiovascular disease mortality rate (per 100,000 population)
2020 TARGET: 161.5
Union County (2006-2010): 122.6
North Carolina (2006-2010): 187.3

Cerebrovascular Disease/Stroke

Cerebrovascular Disease was ranked the third leading cause of death in Union County 2001-2005 and ranked the fifth leading cause of death in Union County 2006-2010 (*see LCD Figures 1 & 2*). From 2001-2010, cerebrovascular disease continues to be the third leading cause of death in North Carolina. From 2001-2010, it has been ranked the third and fourth leading cause of death for people 65+ years of age (*see LCD Figures 17-24*). Union County death rates did not exceed North Carolina death rate total (*see LCD Figures 3 & 4*). 2006-2010 stroke death rates appear to be the higher among African American men and women (see Stroke Figures 2 & 4).

Healthy People 2020 Objectives for Cerebrovascular Disease/Stroke
HDS-3 Reduce stroke deaths
Target: 33.8 deaths per 100,000 population
Union County (2006-2010): 31.2
North Carolina (2006-2010): 47.8

Heart Disease: Figure 1

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard U.S. Population ; *Rates Per 100,000 Population

UNION	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Diseases of Heart	476	257	516	190.7	80	335.8	84	234.2	1,156	226.9
----Acute Myocardial Infarction	138	68.3	108	40.3	16	65.4	27	72.3	289	54.6
----Other Ischemic Heart Disease	231	124.1	234	86.4	34	139.9	31	89	530	104.3

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

Heart Disease: Figure 2

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates
Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Union County Total	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
All Causes	2,352	943.6	2,267	676.5	369	1126.0	366	836.4	13	N/A	20	486.5	68	356.5	35	208.8	5,490	803.4
Diseases of Heart	566	229.5	448	135.5	66	216.7	71	169.3	3	N/A	3	N/A	5	N/A	3	N/A	1,165	175.5
Acute Myocardial Infarction	134	51.2	81	24.2	17	N/A	12	N/A	1	N/A	1	N/A	4	N/A	0	N/A	250	36.1
Other Ischemic Heart Disease	259	103.8	153	45.9	22	71.6	20	45.0	0	N/A	0	N/A	1	N/A	1	N/A	456	67.7

Heart Disease: Figure 3

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard U.S. Population ; *Rates Per 100,000 Population

NORTH CAROLINA	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Diseases of Heart	35,889	276.5	35,731	174.4	9,426	323.7	10,010	215	91,056	226.8
----Acute Myocardial Infarction	9,462	71.2	8,266	40.6	2,074	73	2,278	49.7	22,080	54.8
----Other Ischemic Heart Disease	17,440	133.4	14,761	71.9	4,028	139.9	3,827	82.5	40,056	99.7

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

Heart Disease: Figure 4

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates
Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

North Carolina Total	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
All Causes	144,589	954.5	149,747	674.3	39,705	1249.5	39,359	808.3	2,789	650.3	2,450	478.1	2,714	311.2	1,478	233.5	382,831	819.0
Diseases of Heart	35,016	233.0	32,615	140.9	8,746	285.8	8,472	175.7	580	148.7	471	102.7	275	55.7	154	36.9	86,329	184.9
Acute Myocardial Infarction	8,142	52.9	6,568	28.7	1,660	55.9	1,707	35.7	150	38.2	104	23.0	50	10.5	29	6.6	18,410	39.2
Other Ischemic Heart Disease	16,416	108.0	12,440	53.6	3,692	121.1	3,035	63.2	272	71.4	196	43.0	121	29.7	58	15.4	36,230	77.3

CD: Figure 1

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates

Standard U.S. Population ; *Rates Per 100,000 Population

Cerebrovascular Disease	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Union County	96	57.5	149	56.5	19	83.3	28	81.7	292	60.4
North Carolina	7,278	60.2	12,118	58.6	2,512	92	3,707	79.8	25,615	64.7

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

CD: Figure 2

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates

Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Cerebrovascular Disease	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Union County	96	42.8	137	41.5	34	112.7	25	60.7	0	N/A	1	N/A	2	N/A	1	N/A	296	46.1
North Carolina	6,455	44.9	10,161	43.6	2,113	71.4	2,882	60.1	144	39.6	141	30.0	65	13.1	74	15.2	22,035	47.8

Data Source: http://www.schs.state.nc.us/schs/data/databook/

Alzheimer'sDisease

Alzheimer's disease death rates increased in Union County from 30.7 during 2001-2005 to 35.7 during 2006-2010. It also increased in North Carolina from 24.9 during 2001-2005 to 27.7 during 2006-2010 (*see LCD Figures 1-4*). Alzheimer's disease is the third leading cause of death for residents in Union County from 2006-2010 (*see LCD Figure 2*).

From 2001-2010, in residents 65-84 years of age, Alzheimer's Disease is the fifth leading cause of death in Union County and the sixth leading cause of death in North Carolina (*see LCD Figures 17-20*). From 2001-2010, in residents 85+ years of age, Alzheimer's Disease is the second leading cause of death in Union County and the fourth leading cause of death in North Carolina (*see LCD Figures 21-24*).

From 2006-2010, Alzheimer's death rates were higher among African American females, white females, and white males in Union County (*see AD: Figure 2*). In North Carolina, Alzheimer death rates were higher among White females, African American females and White males (*see AD: Figure 2*). Union County death rates exceeded North Carolina death rates.

2006-2010 Alzheimer's Death Totals:

Union County	**Rank 3**	**Deaths = 339**	**Death Rate = 35.7**	**LCD Figure 2**
North Carolina	**Rank 6**	**Deaths = 12,785**	**Death Rate = 27.7**	**LCD Figure 4**

See the following pages for Healthy People 2020 Objectives on Alzheimer's disease.

AD: Figure 1

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates
Standard U.S. Population ;*Rates Per 100,000 Population

Alzheimer's Disease	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Union County	43	34.7	156	58.7	7	42.9	18	51.9	224	50.5
North Carolina	2,445	22.5	6,657	31.3	349	16.8	1,035	22.3	10,486	27.1

Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/

AD: Figure 2

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates
Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Alzheimer's Disease	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Union County	80	44.7	209	65.0	17	N/A	32	84.1	0	N/A	0	N/A	0	N/A	1	N/A	339	59.7
North Carolina	3,028	23.3	7,884	32.5	421	20.9	1,285	27.6	39	17.3	81	21.1	16	N/A	31	9.7	12,785	28.5

Data Source: http://www.schs.state.nc.us/schs/data/databook/

Chronic Health

Chronic Respiratory Disease

From 2000-2010, Chronic Respiratory Disease is the fourth leading cause of death in Union County and North Carolina. The death rate total for Union County was 31.4 vs. 46.8 for State (*see LCD Figures 1-4*). From 2001-2010, Chronic Respiratory Disease is the third leading cause of death for Union County in people over 40 years of age (*see LCD Figures 13 & 14).* The death rates for this age group have decreased from 40.1 in 2001-2005 to 31.4 in 2006-2010 (*see LCD Figures 13 & 14 and the North Carolina Statewide and County Trends in Key Health Indicators for Union County for further Chronic Respiratory Disease comparisons*).

From 2006-2010, Chronic Respiratory Disease death rates have been higher in the White male (58.7) and female (40.8) population. These rates have decreased for men and increased for women (*see CLRD Figures 1 & 2*). The Healthy People 2020 Objectives for Chronic Respiratory Disease are listed on the following pages.

CLRD: Figure 1

2001-2005 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard = North Carolina U.S. Population ; *Rates Per 100,000 Population

Chronic Lower Respiratory Diseases	White Male		White Female		Minority Male		Minority Female		OVERALL	
Leading Causes	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Union County	104	60	100	36.4	10	38	5	13.3	219	42.4
North Carolina	8,111	62.7	8,489	43	1,346	51.4	854	18.5	18,800	46.9

**Data Source: http://www.schs.state.nc.us/schs/data/databook/2007/*

CLRD: Figure 2

2006-2010 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates Standard = Year 2000 U.S. Population ; *Rates Per 100,000 Population

Chronic Lower Respiratory Diseases	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic					
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
Cause of Death:	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Union County	138	58.7	136	40.8	13	N/A	8	N/A	2	N/A	1	N/A	0	N/A	0	N/A	298	45.0
North Carolina	8,857	58.7	10,253	46.4	1,239	45.1	1,008	21.1	94	27.4	73	15.6	20	6.8	29	7.5	21,573	46.4

**Data Source: http://www.schs.sta te.n c.us/schs/data/da tabook/*

Union County – Health Indicators/Communicable Disease

Salmonellosis, Campylobacter and Hepatitis B/Carrier continue to have higher incidence rates in Union County in 2009-2010. Pertussis (Whooping Cough) has increased significantly from 2009-2010.

Adult Health Indicators / Communicable Disease

	Union County	Union County
Number of Cases	**2009**	**2010**
Campylobactor	**18**	**16**
E. Coli	**1**	**0**
Hepatitis A	**1**	**0**
Hepatitis B	**3**	**5**
Hepatitis B Carrier	**4**	**9**
Hepatitis C	**0**	**1**
Lyme Disease	**0**	**0**
Meningococcal	**2**	**1**
Meningitis Pneumococcal	**1**	**1**
Rocky Mountain Spotted Fever	**0**	**2**
Salmonellosis	**46**	**66**
Shigellosis	**7**	**2**
Pertussis (Whooping Cough)	**1**	**10**

Data Source: http://www.co.union.nc.us/Portals/0/Health/Documents/SOTCH_2011.pdf

HIV/AIDS and Other Sexually Transmitted Disease

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

Table 1. N. C. HIV Disease† Cases by County of First Diagnosis, 2007-2011

Residence	2007 Cases	2008 Cases	2009 Cases	2010 Cases	2011 Cases	2007 Rate*	2008 Rate*	2009 Rate*	2010 Rate*	2011 Rate*
UNION	19	14	19	12	12	10.3	7.2	9.6	6.0	6.0
NC TOTAL	1,807	1,811	1,634	1,469	1,563	19.9	19.6	17.4	15.4	16.4

AIDS, a more life threatening stage of HIV disease, accounts for morbidity in Union County and is a cause of disability and death. Figure 2 shows the total AIDS cases and rate for both the county and state.

Table 2. N. C. AIDS Cases by County of AIDS Diagnosis, 2007-2011

COUNTY	2007 Cases	2008 Cases	2009 Cases	2010 Cases	2011 Cases	2007 Rate*	2008 Rate*	2009 Rate*	2010 Rate*	2011 Rate*
UNION	4	8	8	5	15	2.2	4.1	4.0	2.5	7.5
NC TOTAL	855	930	936	788	830	9.4	10.1	10.0	8.3	8.7

Data Source: *http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf*

Healthy North Carolina 2020 STD Objectives are:

Reduce the rate of new HIV infection diagnoses (per 100,000 population)
2020 Target: 22.2

Reduce the percentage of positive results among individuals aged 15-24 years tested for chlamydia. 2020 Target: 8.7%

Union County does meet the target set by HNC2020. There has been a decrease in the number of HIV cases from 2009-2011 and an increase in the number of AIDS cases from 2010-2011 in Union County. 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.

Chlamydia and gonorrhea cases continue to rise in Union County while Syphilis cases (Primary, Secondary, Early Latent) remain lower. HP2020 STD Objectives are listed at the end of this section.

Sexually Transmitted Disease

Chlamydia, Gonorrhea, Syphilis

Table 7. N. C. Chlamydia Cases by County of Report, 2007-2011

COUNTY	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate*	Rate*	Rate*	Rate*	Rate*
UNION	242	360	485	440	515	131.2	186.1	244.2	218.6	255.8
NC TOTAL	30,612	37,885	43,734	42,167	53,854	337.7	409.7	466.2	442.2	564.8

Table 8. N. C. Gonorrhea Cases by County of Report, 2007-2011

COUNTY	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate*	Rate*	Rate*	Rate*	Rate*
UNION	208	164	204	133	162	112.7	84.8	102.7	66.1	80.5
NC TOTAL	16,666	15,012	14,811	14,153	17,158	183.9	162.3	157.9	148.4	179.9

Table 9. N. C. Primary and Secondary Syphilis Cases by County of Report, 2007-2011

COUNTY	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate*	Rate*	Rate*	Rate*	Rate*
UNION	0	0	4	2	2	0.0	0.0	2.0	1.0	1.0
NC TOTAL	324	293	581	396	431	3.6	3.2	6.2	4.2	4.5

Table 10. N. C. Early Syphilis (Primary, Secondary, Early Latent) Cases by County of Report, 2007-2011

COUNTY	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate*	Rate*	Rate*	Rate*	Rate*
UNION	0	2	7	3	2	0.0	1.0	3.5	1.5	1.0
NC TOTAL	569	516	938	724	768	6.3	5.6	10.0	7.6	8.1

Table 7-10 Source: *http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf*

Reproductive Health

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 on the North Carolina State Center for Health Statistics website @ http://www.schs.state.nc.us/schs/data/databook/.

Live Birth Data

From 2000-2010, there were 13,187 live births in Union County with an overall live birth rate of 13.9 births per 1,000 population which is slightly higher than the North Carolina live birth rate of 14.2 during the same period (*see Figure 1*).

North Carolina Resident Live Birth Rates per 1,000 Population, 2006-2010

Figure 1			Non-Hispanic									
	Total		Total		White		Black		Other		Hispanic	
County of Residence	Births	Rate	Births	Rate	Births	Rate	Births	Rate	Births	Rate	Births	Rate
North Carolina	638,377	13.8	534,565	12.5	354,429	11.4	150,454	15.1	29,682	19.3	103,812	30.4
Union	13,187	13.9	10,535	12.3	8,428	11.7	1,821	15.7	286	15.2	2,652	28.0

**Data Source: http://www.schs.sta te.nc.us/schs/data/da tabook/CD1%20Live %20birth %20rates.html*

Pregnancy, Fertility and Abortion Rate (Ages 15-19) 2010

Union County's total pregnancy rate was lower than the rate in North Carolina (36.3 vs. 49.7 per 1,000 population) with a significantly higher rate among minorities when compared to Whites (*see Table 1 on following page*). Teenage fertility rate was lower than the North Carolina rate (27.1 vs. 38.3 per 1,000 population) but also higher among African Americans compared to Whites (*see Table 3 on following pages*). Total teenage abortion rate was lower than the North Carolina rate (8.9 vs. 11.0 per 1,000 population) however, there were more abortions among African Americans than Whites (*see Table 5 on following pages*).

Pregnancy, Fertility and Abortion Rate (Ages 15-44) 2010

Union County's total pregnancy rate was lower than the rate in North Carolina (69.7 vs. 76.4 per 1,000 population) with a much higher rate among minorities compared to whites (*see Table 2 on following page*). Total fertility rate was lower than North Carolina (61.1 vs. 62.7 per 1,000 population) with a slightly higher rate among minorities compared to Whites (*see Table 4 on following pages*). Total abortion rate was lower than the rate in North Carolina (8.4 vs. 13.2 per 1,000 population) although a higher rate exists among minorities as compared to Whites.

TABLE 1- 2010 NC RESIDENT **PREGNANCY RATES** PER 1,000 POPULATION:
FEMALES AGES **15-19** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Pregnancies	Rate	White Non-Hispanic Pregnancies	Rate	Af. Am. Non-Hispanic Pregnancies	Rate	Other Non-Hispanic Pregnancies	Rate	Hispanic Pregnancies	Rate
RESIDENCE:										
NORTH CAROLINA	15,957	49.7	6,525	34.4	6,292	70.2	609	48.9	2,456	82.7
UNION	269	36.3	124	23.2	86	77.5	1	7.2	57	69.4

**Data Source: http://www.schs.state.nc.us/schs/data/databook/CD9B%20pregpub%20rates%201519.html*

TABLE 2- 2010 NC RESIDENT **PREGNANCY RATES** PER 1,000 POPULATION:
FEMALES AGES **15-44** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Pregnancies	Rate	White Non-Hispanic Pregnancies	Rate	Af. Am. Non-Hispanic Pregnancies	Rate	Other Non-Hispanic Pregnancies	Rate	Hispanic Pregnancies	Rate
RESIDENCE:										
NORTH CAROLINA	148,922	76.4	78,671	65.6	40,836	86.1	7,288	84.5	21,573	114.0
UNION	2,825	69.7	1,754	59.7	483	92.3	74	72.4	507	103.8

TABLE 3 - 2010 NC RESIDENT **FERTILITY RATES** PER 1,000 POPULATION:
FEMALES AGES **15-19** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Births	Fertility Rate	White Non-Hispanic Births	Fertility Rate	Af. Am. Non-Hispanic Births	Fertility Rate	Other Non-Hispanic Births	Fertility Rate	Hispanic Births	Fertility Rate
RESIDENCE: **NORTH CAROLINA**	12,303	38.3	5,162	27.2	4,561	50.9	483	38.8	2,097	70.6
UNION	201	27.1	96	18.0	58	52.3	1	7.2	46	56.0

**Data Source: http://www.schs.state.nc.us/schs/data/databook/CD9B%20pregpub%20rates%201519.html*

TABLE 4 - 2010 NC RESIDENT **FERTILITY RATES** PER 1,000 POPULATION:
FEMALES AGES **15-44** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Births	Fertility Rate	White Non-Hispanic Births	Fertility Rate	Af. Am. Non-Hispanic Births	Fertility Rate	Other Non-Hispanic Births	Fertility Rate	Hispanic Births	Fertility Rate
RESIDENCE: **NORTH CAROLINA**	122,302	62.7	68,496	57.1	28,926	61.0	6,150	71.3	18,730	99.0
UNION	2,476	61.1	1,583	53.8	364	69.5	66	64.6	463	94.8

TABLE 5 - NC RESIDENT **ABORTION RATES** PER 1,000 POPULATION:
FEMALES AGES **15-19** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Abortions	Rate	White Non-Hispanic Abortions	Rate	Af. Am. Non-Hispanic Abortions	Rate	Other Non-Hispanic Abortions	Rate	Hispanic Abortions	Rate
RESIDENCE: **NORTH CAROLINA**	3,544	11.0	1,325	7.0	1,677	18.7	118	9.5	349	11.7
UNION	66	8.9	27	5.1	27	24.3	0	0.0	11	13.4

**Data Source: http://www.schs.state.nc.us/schs/data/databook/CD9B%20pregpub%20rates%201519.html*

TABLE 6 - 2010 NC RESIDENT **ABORTION RATES** PER 1,000 POPULATION:
FEMALES AGES **15-44** BY RACE, PERINATAL CARE REGIONS, AND COUNTY OF RESIDENCE

	Total Abortions	Rate	White Non-Hispanic Abortions	Rate	Af. Am. Non-Hispanic Abortions	Rate	Other Non-Hispanic Abortions	Rate	Hispanic Abortions	Rate
RESIDENCE: **NORTH CAROLINA**	25,808	13.2	9,819	8.2	11,559	24.4	1,103	12.8	2,773	14.7
UNION	339	8.4	166	5.6	114	21.8	8	7.8	44	9.0

Reproductive Health

Birth Weight Distribution

Babies that are born under 2500 grams are considered low birth weight. Union County low and very low birth weights remain lower than North Carolina. Healthy People 2020 Target is 7.8% and Union County falls just below this. Minority low birth rates are almost twice as high when compared to white low birth rates (*see Figure 1 on following page*).

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 North Carolina 2020 Objectives for Maternal and Infant Health are:

Reduce the infant mortality rate (per 1,000 live births) **2020 Target** 6.3%

In Union County during the period of 2006-2010, the death rate for infants was 6.5 vs. 7.9 in North Carolina. African American infant death rate was 15.4, almost triple that of Whites which were 4.4 (*see Figure 5 on following pages*).

Fetal, Neonatal and Post Neonatal Deaths

For the period 2006-2010, total fetal death rate for Union County was 4.5 vs. 6.6 per 1,000 deliveries for North Carolina. African American fetal death rate is significantly higher (9.8 per 1,000 deliveries) than whites (*see Figure 2 on following pages*). The total neonatal (<28 days) death rate for Union County was 4.5 vs. 5.3 in North Carolina. African American neonatal death rates were much higher when compared to Whites and Hispanics (*see Figure 3 on following pages*). Post-neonatal (28 days-1 year) death rates for Union County were 2.0 vs. 2.6 in North Carolina with African American post-neonatal death rates being higher when compared to Whites and Hispanics (*see Figure 4 on following pages*).

**See North Carolina Statewide and County Trends in Key Health Indicators: Union County in the LCD section for further comparisons…*

**See HNC2020 Maternal and Infant Health Objectives listed at the beginning of the Reproductive Health section…*

**See HP2020 Maternal, Infant and Child Health Objectives listed at the end of the Reproductive Health section…*

2006-2010 North Carolina Resident Live Births by County of Residence:
Number and Percent of Low (<= 2500 grams) and Very Low (<= 1500 grams) Weight Births by Race and Ethnicity

Figure 1				Non-Hispanic									
		Total		Total		White		Black		Other		Hispanic	
County of Residence	Birth Weight	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.
North Carolina	Low	58,260	9.1	51,694	9.7	27,316	7.7	21,604	14.4	2,774	9.3	6,566	6.3
	Very Low	11,464	1.8	10,269	1.9	4,754	1.3	5,081	3.4	434	1.5	1,195	1.2
Union	Low	1,002	7.6	807	7.7	542	6.4	235	12.9	30	10.5	195	7.4
	Very Low	188	1.4	162	1.5	93	1.1	66	3.6	3	1.0	26	1.0

**Data Source: http://www.schs.state.nc.us/schs/data/databook/CD46%20LBW%20&%20VLBW%20by%20race.html*

Figure 2 - NC RESIDENT FETAL DEATH RATES PER 1,000 DELIVERIES, 2006-2010

	TOTAL FETAL DEATHS	TOTAL FETAL DEATH RATE	WHITE NON-HISPANIC FETAL DEATHS	WHITE NON-HISPANIC FETAL DEATH RATE	AF. AM. NON-HISPANIC FETAL DEATHS	AF. AM. NON-HISPANIC FETAL DEATH RATE	OTHER NON-HISPANIC FETAL DEATHS	OTHER NON-HISPANIC FETAL DEATH RATE	HISPANIC FETAL DEATHS	HISPANIC FETAL DEATH RATE
RESIDENCE										
NORTH CAROLINA	4,234	6.6	1,754	4.9	1,830	12.0	146	4.9	504	4.8
UNION	59	4.5	34	4.0	18	9.8	1	3.5	6	2.3

Data Source: http://www.schs.state.nc.us/schs/data/databook/CD11%20fetal%20death%20rates.html

Figure 3 - NC RESIDENT NEONATAL (<28 DAYS) DEATH RATES PER 1,000 LIVE BIRTHS, 2006-2010

	TOTAL NEONATAL DEATHS	TOTAL NEONATAL DEATH RATE	WHITE NON-HISPANIC NEONATAL DEATHS	WHITE NON-HISPANIC NEONATAL DEATH RATE	AF. AM. NON-HISPANIC NEONATAL DEATHS	AF. AM. NON-HISPANIC NEONATAL DEATH RATE	OTHER NON-HISPANIC NEONATAL DEATHS	OTHER NON-HISPANIC NEONATAL DEATH RATE	HISPANIC NEONATAL DEATHS	HISPANIC NEONATAL DEATH RATE
RESIDENCE										
NORTH CAROLINA	3,415	5.3	1,360	3.8	1,500	10.0	119	4.0	436	4.2
UNION	60	4.5	22	2.6	23	12.6	0	0	15	5.7

Data Source: http://www.schs.state.nc.us/schs/data/databook/CD12A%20neonatal%20death%20rates.html

Figure 4 - NC RESIDENT POSTNEONATAL (28 DAYS- 1 YEAR) DEATH RATES, 2006-2010

	POSTNEONATAL DEATHS	TOTAL POSTNEONATAL DEATH RATE	WHITE NON-HISPANIC POSTNEONATAL DEATHS	WHITE NON-HISPANIC POSTNEONATAL DEATH RATE	AF. AM. NON-HISPANIC POSTNEONATAL DEATHS	AF. AM. NON-HISPANIC POSTNEONATAL DEATH RATE	OTHER NON-HISPANIC POSTNEONATAL DEATHS	OTHER NON-HISPANIC POSTNEONATAL DEATH RATE	HISPANIC POSTNEONATAL DEATHS	HISPANIC POSTNEONATAL DEATH RATE
RESIDENCE NORTH CAROLINA	1,651	2.6	714	2.0	708	4.8	68	2.3	161	1.6
UNION	26	2.0	15	1.8	5	2.8	0	0	6	2.3

*Data Source: http://www.schs.state.nc.us/schs/data/databook/CD12B%20postneonatal%20death%20rates.html

Figure 5 - NC RESIDENT INFANT (<1 YEAR) DEATH RATES PER 1,000 LIVE BIRTHS, 2006-2010

	TOTAL INFANT DEATHS	TOTAL INFANT DEATH RATE	WHITE NON-HISPANIC INFANT DEATHS	WHITE NON-HISPANIC INFANT DEATH RATE	AF. AM. NON-HISPANIC INFANT DEATHS	AF. AM. NON-HISPANIC INFANT DEATH RATE	OTHER NON-HISPANIC INFANT DEATHS	OTHER NON-HISPANIC INFANT DEATH RATE	HISPANIC INFANT DEATHS	HISPANIC INFANT DEATH RATE
RESIDENCE NORTH CAROLINA	5,066	7.9	2,074	5.9	2,208	14.7	187	6.3	597	5.8
UNION	86	6.5	37	4.4	28	15.4	0	0	21	7.9

*Data Source: http://www.schs.state.nc.us/schs/data/databook/CD12C%20inf%20death%20rates.html

Environmental Health

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 below). 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.

Pollutant [final rule cite]		Primary / Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]		primary and secondary	Rolling 3 month average	0.15 µg/m³ (1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [71 FR 61144, Oct 17, 2006]	$PM_{2.5}$	primary and secondary	Annual	15 µg/m³	annual mean, averaged over 3 years
			24-hour	35 µg/m³	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 µg/m³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010]		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
[38 FR 25678, Sept 14, 1973]		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

*Data Source: http://epa.gov/air/criteria.html

Particulate Matter (PM) pollutants are usually small in size and include: 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 bu brning power pla dioxide helps to form ground level ozone, acid rain and particular matter. Acid rain is caused by high levels respiratory problems in human health.

Ground-level Ozone

Ozone (O3) is the major component of smog and is created by a reaction between nitrogen oxides an ozone can cause coughing, damage to the lung tissues, reduced lung function and chest pain. Children are developing and they spend more time outdoors. Union County is listed by the EPA as a non-attainment *Values Report for UnionCounty in 2011 on following page – Data Source: http://www.epa.gov/airdata/ad_reports.html*).

EPA uses calculations by using the concentrates of these pollutants in an area to find the Air Quality Index between local air quality and health. The Air Quality Index is divided into six categories.

AQI value	Category	Ozone 1-hour (ppm)	Ozone 8-hour (ppm)	$PM_{2.5}$ 24-hour (µg/m3)
0 - 50	Good	-	0.000 - 0.059	0.0 - 15.4
51 - 100	Moderate	-	0.060 - 0.075	15.5 - 35.4
101 - 150	Unhealthy for Sensitive Groups	0.125 - 0.164	0.076 - 0.095	35.5 - 65.4
151 - 200	Unhealthy	0.165 - 0.204	0.096 - 0.115	65.5 - 150.4
201 - 300	Very Unhealthy	0.205 - 0.404	0.116 - 0.374	150.5 - 250.4
301 - 500	Hazardous	0.405 - 0.604	Above 0.375, 1-hour ozone would be used for AQI calculation.	250.5 - 500.4

**Image Source: http://www.cata.org/Portals/0/images/Services/AQIBreak points_2008.jpg*

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 po 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 e sensitive to ozone may experience respiratory symptoms.

"Unhealthy for Sensitive Groups" When AQI values are between 101 and 150, members of sensitive groups ma they are likely to be affected at lower levels than the general public. For example, people with lung disease are 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 m

"Hazardous" AQI values over 300 trigger health warnings of emergency conditions. The entire population is mo

**Data 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 "unhealthy for sensitive groups," "unhealthy," and "very unhealthy" which are of particular concern due to th reports of "hazardous" days. (*see Air Quality Index Reports for Union County in 2011 on following pages - Dat http://www.epa.gov/airdata/ad_reports.html*).

Respiratory disease is Union County's fourth leading cause of death. One common form of respiratory d people of all ages but is increasingly becoming more common among children. Exposure to pollutants and al

Geographic Area: Union County, NC

Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)
Monitor Values Report

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	4821	0.091	0.089	0.087	0.087	0	0.00	214	208	97	1	None	1	371790003	701 Charles Street	Monroe	Union	NC	04

Monitor Values Report

Geographic Area: Union County, NC
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5020	0.078	0.078	0.075	0.073	2	2.10	214	207	97	0	None	1	371790003	701 Charles Street	Monroe	Union	NC	04

Air Quality Index Report

Geographic Area: Union County, NC
Summary: by County
Year: 2011

		Number of Days when Air Quality was...					AQI Statistics			Number of Days when AQI Pollutant was...					
County	# Days with AQI	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Maximum	90th Percentile	Median	CO	NO2	O3	SO2	PM2.5	PM10
Union	213	170	41	2	.	.	106	67	42	.	.	213	.	.	.

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#aqi

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.
<http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

Note: All PM2.5 AQI values and summaries provided by AirData are based on the current Air Quality Index in which the AQI 100 level is equivalent to 40 micrograms per cubic meter. Summaries from other sources may use 35 micrograms per cubic meter which is the level of the 24-hour PM2.5 standard.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
04/01/2011	42	Ozone	42	.	.	.	.	.
04/02/2011	44	Ozone	44	.	.	.	.	.
04/03/2011	46	Ozone	46	.	.	.	.	.
04/04/2011	46	Ozone	46	.	.	.	.	.
04/05/2011	38	Ozone	38	.	.	.	.	.
04/06/2011	45	Ozone	45	.	.	.	.	.
04/07/2011	51	Ozone	51	.	.	.	.	.
04/08/2011	38	Ozone	38	.	.	.	.	.
04/09/2011	26	Ozone	26	.	.	.	.	.
04/10/2011	24	Ozone	24	.	.	.	.	.
04/11/2011	31	Ozone	31	.	.	.	.	.
04/12/2011	41	Ozone	41	.	.	.	.	.
04/13/2011	50	Ozone	50	.	.	.	.	.
04/14/2011	51	Ozone	51	.	.	.	.	.
04/15/2011	49	Ozone	49	.	.	.	.	.
04/16/2011	42	Ozone	42	.	.	.	.	.
04/17/2011	44	Ozone	44	.	.	.	.	.
04/18/2011	47	Ozone	47	.	.	.	.	.
04/19/2011	74	Ozone	74	.	.	.	.	.
04/20/2011	41	Ozone	41	.	.	.	.	.
04/21/2011	33	Ozone	33	.	.	.	.	.
04/22/2011	30	Ozone	30	.	.	.	.	.
04/23/2011	32	Ozone	32	.	.	.	.	.
04/24/2011	37	Ozone	37	.	.	.	.	.
04/25/2011	33	Ozone	33	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
04/26/2011	25	Ozone	25	.	.	.	.	.
04/27/2011	31	Ozone	31	.	.	.	.	.
04/28/2011	38	Ozone	38	.	.	.	.	.
04/29/2011	47	Ozone	47	.	.	.	.	.
04/30/2011	43	Ozone	43	.	.	.	.	.
05/01/2011	40	Ozone	40	.	.	.	.	.
05/02/2011	42	Ozone	42	.	.	.	.	.
05/03/2011	27	Ozone	27	.	.	.	.	.
05/04/2011	42	Ozone	42	.	.	.	.	.
05/05/2011	42	Ozone	42	.	.	.	.	.
05/06/2011	42	Ozone	42	.	.	.	.	.
05/07/2011	49	Ozone	49	.	.	.	.	.
05/08/2011	58	Ozone	58	.	.	.	.	.
05/09/2011	51	Ozone	51	.	.	.	.	.
05/10/2011	87	Ozone	87	.	.	.	.	.
05/11/2011	43	Ozone	43	.	.	.	.	.
05/12/2011	35	Ozone	35	.	.	.	.	.
05/13/2011	38	Ozone	38	.	.	.	.	.
05/14/2011	32	Ozone	32	.	.	.	.	.
05/15/2011	37	Ozone	37	.	.	.	.	.
05/16/2011	27	Ozone	27	.	.	.	.	.
05/17/2011	19	Ozone	19	.	.	.	.	.
05/18/2011	31	Ozone	31	.	.	.	.	.
05/19/2011	43	Ozone	43	.	.	.	.	.
05/20/2011	49	Ozone	49	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
05/21/2011	67	Ozone	67	.	.	.	.	.
05/22/2011	49	Ozone	49	.	.	.	.	.
05/23/2011	40	Ozone	40	.	.	.	.	.
05/24/2011	42	Ozone	42	.	.	.	.	.
05/25/2011	44	Ozone	44	.	.	.	.	.
05/26/2011	49	Ozone	49	.	.	.	.	.
05/27/2011	34	Ozone	34	.	.	.	.	.
05/28/2011	34	Ozone	34	.	.	.	.	.
05/29/2011	36	Ozone	36	.	.	.	.	.
05/30/2011	36	Ozone	36	.	.	.	.	.
05/31/2011	74	Ozone	74	.	.	.	.	.
06/01/2011	61	Ozone	61	.	.	.	.	.
06/02/2011	77	Ozone	77	.	.	.	.	.
06/03/2011	87	Ozone	87	.	.	.	.	.
06/04/2011	90	Ozone	90	.	.	.	.	.
06/05/2011	77	Ozone	77	.	.	.	.	.
06/06/2011	50	Ozone	50	.	.	.	.	.
06/07/2011	67	Ozone	67	.	.	.	.	.
06/08/2011	84	Ozone	84	.	.	.	.	.
06/09/2011	54	Ozone	54	.	.	.	.	.
06/10/2011	58	Ozone	58	.	.	.	.	.
06/11/2011	41	Ozone	41	.	.	.	.	.
06/12/2011	39	Ozone	39	.	.	.	.	.
06/13/2011	90	Ozone	90	.	.	.	.	.
06/14/2011	48	Ozone	48	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
06/15/2011	51	Ozone	51	.	.	.	.	.
06/16/2011	50	Ozone	50	.	.	.	.	.
06/17/2011	67	Ozone	67	.	.	.	.	.
06/18/2011	46	Ozone	46	.	.	.	.	.
06/19/2011	40	Ozone	40	.	.	.	.	.
06/20/2011	90	Ozone	90	.	.	.	.	.
06/21/2011	50	Ozone	50	.	.	.	.	.
06/22/2011	36	Ozone	36	.	.	.	.	.
06/23/2011	28	Ozone	28	.	.	.	.	.
06/24/2011	42	Ozone	42	.	.	.	.	.
06/25/2011	49	Ozone	49	.	.	.	.	.
06/26/2011	47	Ozone	47	.	.	.	.	.
06/27/2011	58	Ozone	58	.	.	.	.	.
06/28/2011	40	Ozone	40	.	.	.	.	.
06/29/2011	61	Ozone	61	.	.	.	.	.
06/30/2011	64	Ozone	64	.	.	.	.	.
07/01/2011	106	Ozone	106	.	.	.	.	.
07/02/2011	80	Ozone	80	.	.	.	.	.
07/03/2011	47	Ozone	47	.	.	.	.	.
07/04/2011	47	Ozone	47	.	.	.	.	.
07/05/2011	47	Ozone	47	.	.	.	.	.
07/06/2011	42	Ozone	42	.	.	.	.	.
07/07/2011	46	Ozone	46	.	.	.	.	.
07/08/2011	32	Ozone	32	.	.	.	.	.
07/09/2011	42	Ozone	42	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
07/10/2011	42	Ozone	42	.	.	.	.	.
07/11/2011	39	Ozone	39	.	.	.	.	.
07/12/2011	49	Ozone	49	.	.	.	.	.
07/13/2011	64	Ozone	64	.	.	.	.	.
07/14/2011	47	Ozone	47	.	.	.	.	.
07/15/2011	28	Ozone	28	.	.	.	.	.
07/16/2011	34	Ozone	34	.	.	.	.	.
07/17/2011	36	Ozone	36	.	.	.	.	.
07/18/2011	40	Ozone	40	.	.	.	.	.
07/19/2011	90	Ozone	90	.	.	.	.	.
07/20/2011	49	Ozone	49	.	.	.	.	.
07/21/2011	49	Ozone	49	.	.	.	.	.
07/22/2011	47	Ozone	47	.	.	.	.	.
07/23/2011	41	Ozone	41	.	.	.	.	.
07/24/2011	37	Ozone	37	.	.	.	.	.
07/25/2011	33	Ozone	33	.	.	.	.	.
07/26/2011	37	Ozone	37	.	.	.	.	.
07/27/2011	48	Ozone	48	.	.	.	.	.
07/28/2011	36	Ozone	36	.	.	.	.	.
07/29/2011	50	Ozone	50	.	.	.	.	.
07/30/2011	45	Ozone	45	.	.	.	.	.
07/31/2011	39	Ozone	39	.	.	.	.	.
08/01/2011	48	Ozone	48	.	.	.	.	.
08/02/2011	106	Ozone	106	.	.	.	.	.
08/03/2011	97	Ozone	97	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
08/05/2011	25	Ozone	25	.	.	.	.	.
08/06/2011	46	Ozone	46	.	.	.	.	.
08/07/2011	43	Ozone	43	.	.	.	.	.
08/08/2011	87	Ozone	87	.	.	.	.	.
08/09/2011	48	Ozone	48	.	.	.	.	.
08/10/2011	71	Ozone	71	.	.	.	.	.
08/11/2011	46	Ozone	46	.	.	.	.	.
08/12/2011	41	Ozone	41	.	.	.	.	.
08/13/2011	35	Ozone	35	.	.	.	.	.
08/14/2011	36	Ozone	36	.	.	.	.	.
08/15/2011	49	Ozone	49	.	.	.	.	.
08/16/2011	51	Ozone	51	.	.	.	.	.
08/17/2011	61	Ozone	61	.	.	.	.	.
08/18/2011	54	Ozone	54	.	.	.	.	.
08/19/2011	90	Ozone	90	.	.	.	.	.
08/20/2011	45	Ozone	45	.	.	.	.	.
08/21/2011	39	Ozone	39	.	.	.	.	.
08/22/2011	49	Ozone	49	.	.	.	.	.
08/23/2011	42	Ozone	42	.	.	.	.	.
08/24/2011	40	Ozone	40	.	.	.	.	.
08/25/2011	35	Ozone	35	.	.	.	.	.
08/26/2011	23	Ozone	23	.	.	.	.	.
08/27/2011	40	Ozone	40	.	.	.	.	.
08/28/2011	64	Ozone	64	.	.	.	.	.
08/29/2011	48	Ozone	48	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
08/30/2011	41	Ozone	41	.	.	.	.	.
08/31/2011	46	Ozone	46	.	.	.	.	.
09/01/2011	87	Ozone	87	.	.	.	.	.
09/02/2011	100	Ozone	100	.	.	.	.	.
09/03/2011	48	Ozone	48	.	.	.	.	.
09/04/2011	42	Ozone	42	.	.	.	.	.
09/05/2011	22	Ozone	22	.	.	.	.	.
09/06/2011	34	Ozone	34	.	.	.	.	.
09/07/2011	31	Ozone	31	.	.	.	.	.
09/08/2011	41	Ozone	41	.	.	.	.	.
09/09/2011	45	Ozone	45	.	.	.	.	.
09/10/2011	50	Ozone	50	.	.	.	.	.
09/11/2011	47	Ozone	47	.	.	.	.	.
09/12/2011	67	Ozone	67	.	.	.	.	.
09/13/2011	93	Ozone	93	.	.	.	.	.
09/14/2011	67	Ozone	67	.	.	.	.	.
09/15/2011	61	Ozone	61	.	.	.	.	.
09/16/2011	21	Ozone	21	.	.	.	.	.
09/17/2011	19	Ozone	19	.	.	.	.	.
09/18/2011	26	Ozone	26	.	.	.	.	.
09/19/2011	28	Ozone	28	.	.	.	.	.
09/20/2011	30	Ozone	30	.	.	.	.	.
09/21/2011	19	Ozone	19	.	.	.	.	.
09/22/2011	25	Ozone	25	.	.	.	.	.
09/23/2011	27	Ozone	27	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
09/24/2011	26	Ozone	26	.	.	.	.	.
09/25/2011	22	Ozone	22	.	.	.	.	.
09/26/2011	18	Ozone	18	.	.	.	.	.
09/27/2011	36	Ozone	36	.	.	.	.	.
09/28/2011	41	Ozone	41	.	.	.	.	.
09/29/2011	42	Ozone	42	.	.	.	.	.
09/30/2011	41	Ozone	41	.	.	.	.	.
10/01/2011	26	Ozone	26	.	.	.	.	.
10/02/2011	33	Ozone	33	.	.	.	.	.
10/03/2011	36	Ozone	36	.	.	.	.	.
10/04/2011	42	Ozone	42	.	.	.	.	.
10/05/2011	36	Ozone	36	.	.	.	.	.
10/06/2011	37	Ozone	37	.	.	.	.	.
10/07/2011	38	Ozone	38	.	.	.	.	.
10/08/2011	41	Ozone	41	.	.	.	.	.
10/09/2011	32	Ozone	32	.	.	.	.	.
10/10/2011	38	Ozone	38	.	.	.	.	.
10/11/2011	33	Ozone	33	.	.	.	.	.
10/12/2011	17	Ozone	17	.	.	.	.	.
10/13/2011	25	Ozone	25	.	.	.	.	.
10/14/2011	35	Ozone	35	.	.	.	.	.
10/15/2011	38	Ozone	38	.	.	.	.	.
10/16/2011	36	Ozone	36	.	.	.	.	.
10/17/2011	47	Ozone	47	.	.	.	.	.
10/18/2011	36	Ozone	36	.	.	.	.	.

Air Quality Index Daily Values Report

Geographic Area: . County, NC
Pollutant: Overall
Year: 2011

Date	Overall AQI Value	Main Pollutant	Ozone AQI Value	PM2.5 AQI Value	SO2 AQI Value	NO2 AQI Value	PM10 AQI Value	CO AQI Value
10/19/2011	25	Ozone	25	.	.	.	.	.
10/20/2011	19	Ozone	19	.	.	.	.	.
10/21/2011	23	Ozone	23	.	.	.	.	.
10/22/2011	27	Ozone	27	.	.	.	.	.
10/23/2011	34	Ozone	34	.	.	.	.	.
10/24/2011	35	Ozone	35	.	.	.	.	.
10/25/2011	40	Ozone	40	.	.	.	.	.
10/26/2011	42	Ozone	42	.	.	.	.	.
10/27/2011	43	Ozone	43	.	.	.	.	.
10/28/2011	19	Ozone	19	.	.	.	.	.
10/29/2011	25	Ozone	25	.	.	.	.	.
10/30/2011	31	Ozone	31	.	.	.	.	.
10/31/2011	26	Ozone	26	.	.	.	.	.

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/Departments/PublicWorks/Water/aspx

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 Public Works 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.

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.

One of the contaminants that is commonly found in well water is Coliform bacteria. Coliform bacteria is an indicator bacteria. If coliform bacteria is present, there may be some source of contamination. If E. coli bacteria is present in water this is indicative of fecal contamination from either human or animal feces. Typically, when E. coli is present, coliform bacteria is present. However, it is possible for well water to test positive for coliform and negative for E. coli.

Contamination can be a problem with a well and/or the pipes which distribute the water. These contaminants can cause short-term health effects such as nausea, cramps, diarrhea, headaches, and other symptoms. The tables below shows data from the analysis of well water samples for bacteria, arsenic, petroleum, and pesticide contaminants.

Source: Personal communication with representative Environmental Health Well Water Section

Year	Total # of Samples	# of samples with coliform bacteria	# of samples containing E. Coli
2009	316	117	19
2010	304	113	11
2011	300	90	8

Nitrate Water Sampling 2009-2011

Year	Total # of Samples	# of samples containing Nitrate/Nitrite
2009	129	2
2010	163	3
2011	144	1

Pesticide and Petroleum Water Sampling 2009-2011 – No positive results during this time period.

Year	# of wells sampled for Pesticide	# of wells sampled for Petroleum
2009	16	10
2010	12	7
2011	7	10

Arsenic Water Sampling 2009-2011

Year	Total # of Samples	# of samples containing Arsenic
2009	258	47
2010	228	50
2011	251	47

Stormwater

Union County 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.

Stormwater 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 water bodies that are used for the drinking water supply, recreation and fishing.

Stormwater management continues to be an area of focus due to the previous rapid growth and development of the country. The Stormwater Program is dedicated to protecting surface waters, controlling flooding, and minimizing impacts to private properties by maintaining and upholding standards necessary to preserve our environment and natural resources while providing quality developments.

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

Solid Waste Management

Solid Waste Management / Landfill	FY 2008-2009 Tons	FY 2009-2010 Tons	FY 2010-2011 Tons	FY 2011-2012 Tons
Municipal Solid Waste	93779	80460	72452	73321
Construction and Demolition	15771	10646	10848	10771
Yard Waste	2187	1911	1462	2071
Metals	218	196	111	162
Tires	2003	2425	2513	2675
Recycling Material	6443	6705	3264	1340

Food Lodging & Institutions

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	**Markets**	**School Cafeterias**
Mobile Food Units /Pushcarts	**Elderly Nutrition Sites**	**Special Events**
Lodging Resident and Summer Camps	**Hospitals**	**Nursing Homes**
Daycares and After schools	**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, perform plan review for all new and remodeled facilities and serve on the Epidemiology (EPI) Team in the event of an outbreak or other public health threats.

On September 1, 2012, the N. C. Department of Health and Human Services made significant changes to North Carolina's food code. The changes reinforce the strong partnership between retail food service and public health to assure that the public can have even greater confidence that the food they eat when dining out is safe.

The new food code represents the most comprehensive change in North Carolina's food protection standards in more than 30 years. It establishes practical, science-based rules and provisions to help avoid food-borne illnesses.

North Carolina's adoption of the food code should heighten consistency within the state and brings North Carolina in line with what is being used across the U.S. The changes resulting from implementing the new food code should give restaurants the tools they need to provide a safer dining experience since the new rules focus on risk factors that cause food-borne illness.

2011 FOOD, LODGING AND INSTITUTIONS STATISTICS

Type of Service	**Number of Inspections / Visits**
Food Service Inspections / Visits	2292
Child Care Facility Center Inspections	194
Swimming Pool and Spa Inspections	301
School Building Inspections	67
Residential Care Inspections	42
Restaurant Complaint Investigations	241
Restaurant Permits Issued	305
Pre-Opening Restaurant Visits	81

Partner Pages

The completion of the Union County Health Assessment would not have been possible without the cooperation, support and assistance from the community and from internal Health Department staff. Thanks to the following: individuals, organizations and agencies for providing time, energy, knowledge and effort on the 2012 Community Health Assessment.

Union County Health Department

CMC Union

City of Monroe

Union County Sheriff's Department

Phillip Tarte, Union County Health Department

Michael Lutes, CMC Union

Janet Christy Leverage and Development

J.R. Rowell, Union County Clerk of Court

Rusti Tidey, Appalachain State University Intern

Milissa Meador, Union County Health Department

Emily Walmsley, Union County Health Department

Linda Smosky, Council on Aging

Linda Parker-Autry, Enterprise Fitness Center

Dr. Mary Ellis, Union County Public Schools

Carolyn White, Union County Public Schools

Maria Laury, Union County Health Department

Gustavo Arevalo, Union County Public Schools

Focus Group Participants

Report Data Sources

www.epa.gov/airdata

www.schs.state.nc.us/SCHS/index.html

www.co.union.nc.us

www.ucps.k12.nc.us

www.charlotteusa.com

www.unioncountycoc.com

Union County Chamber of Commerce Economic Development Study 2010

Union County Health Department Strategic Plan 2012

North Carolina Institute of Medicine County Level Estimates of Non-Elderly Uninsured

Union County Environmental Health Department

Union County Public Works Department

Union County State of the County Health Report 2011

State Center for Health Statistics, County Health Data Book

State Center for Health Statistics, Baby Book

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

North Carolina HIV / STD Surveillance Report

Healthy North Carolina 2020: A Better State of Health

NC Census Data Union County NC Quick Facts 2010

NC Medicaid Paid Claims Data