

**UNION COUNTY**  
**2012 COMMUNITY HEALTH ASSESSMENT**



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**Appendix A**

**Community Health Assessment Surveys; Adult, Senior, Teen**

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**Community Health Assessment Survey Demographic Results  
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**Appendix C**

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**Community Health Assessment Priority Setting Survey**

**Appendix E**

**Union County Health & Wellness Resource Guide**

**Appendix F**

**Secondary Data Supporting Documentation / Healthy NC 2020**

## **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 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

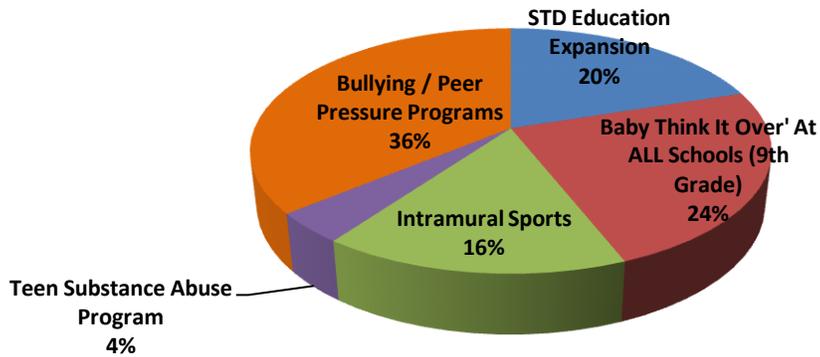
### **Built Environment**

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

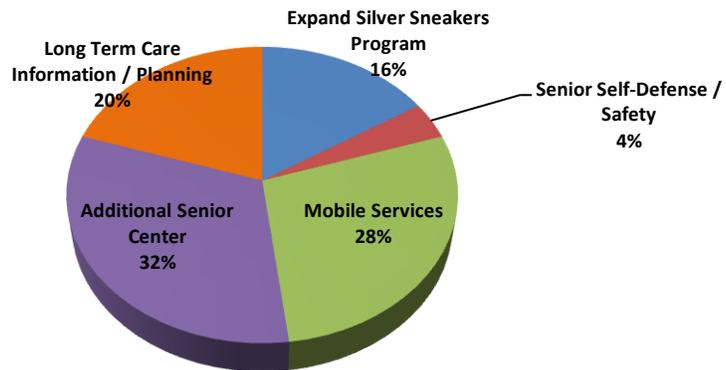
### **At-Risk Populations**

Obese Residents  
Mental Health Patients  
Adults not receiving prevention services

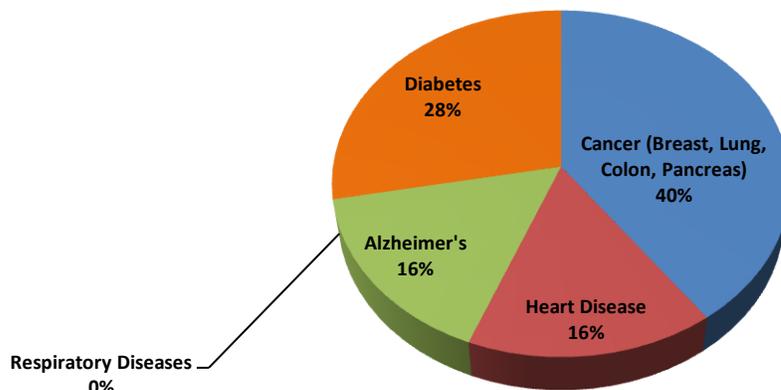
## Teen Priorities



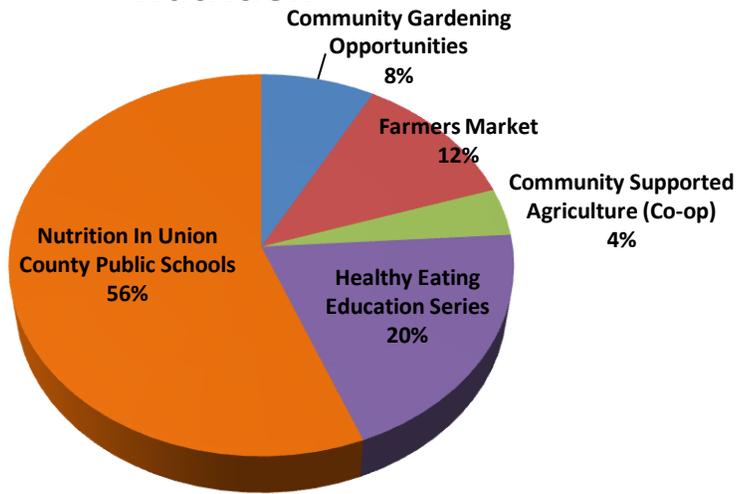
## Senior Priorities



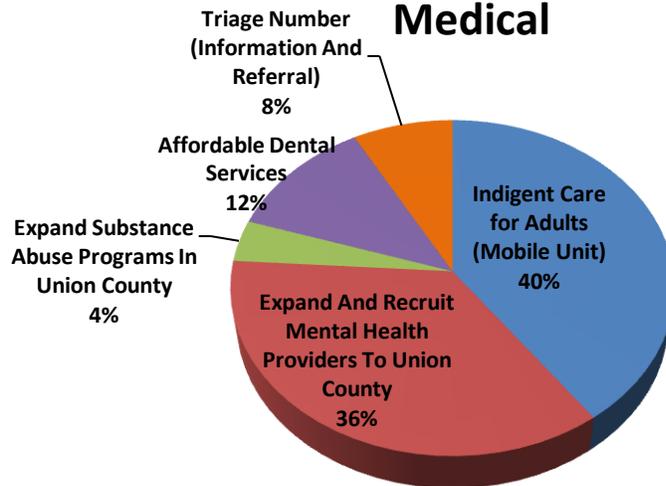
## Chronic Diseases



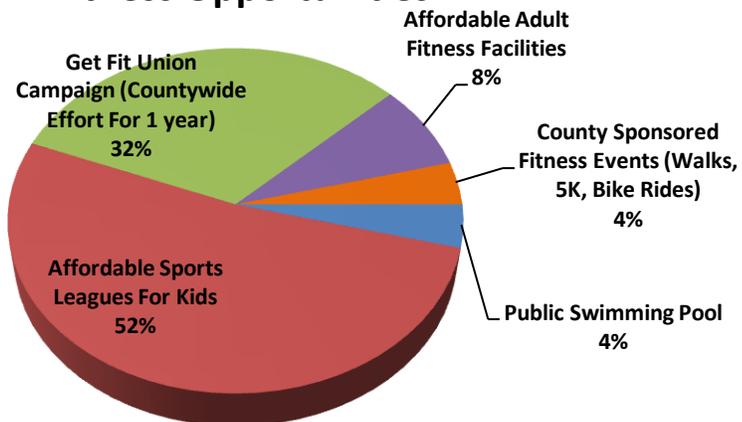
## Nutrition



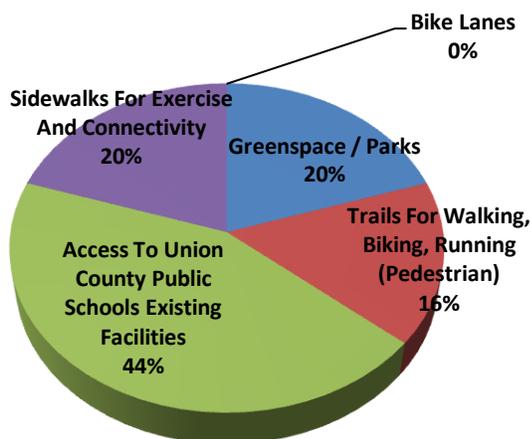
## Medical



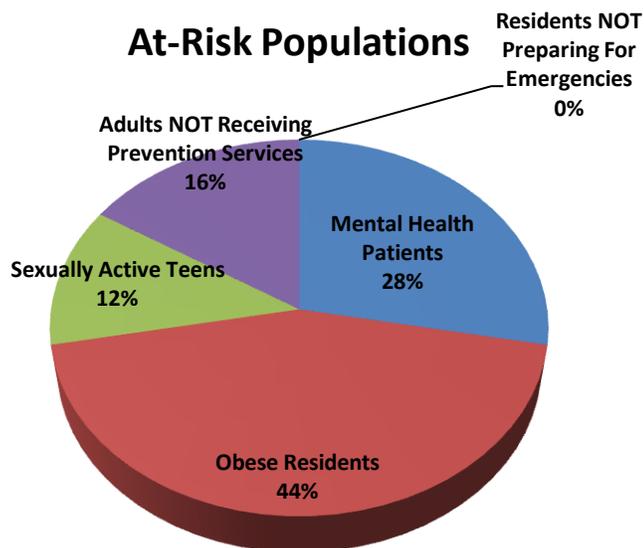
## Fitness Opportunities



## Built Environment



## At-Risk Populations



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 an increase in emergency response calls involving violence or erratic behavior (domestic violence, substance abuse, mental health issues). 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.

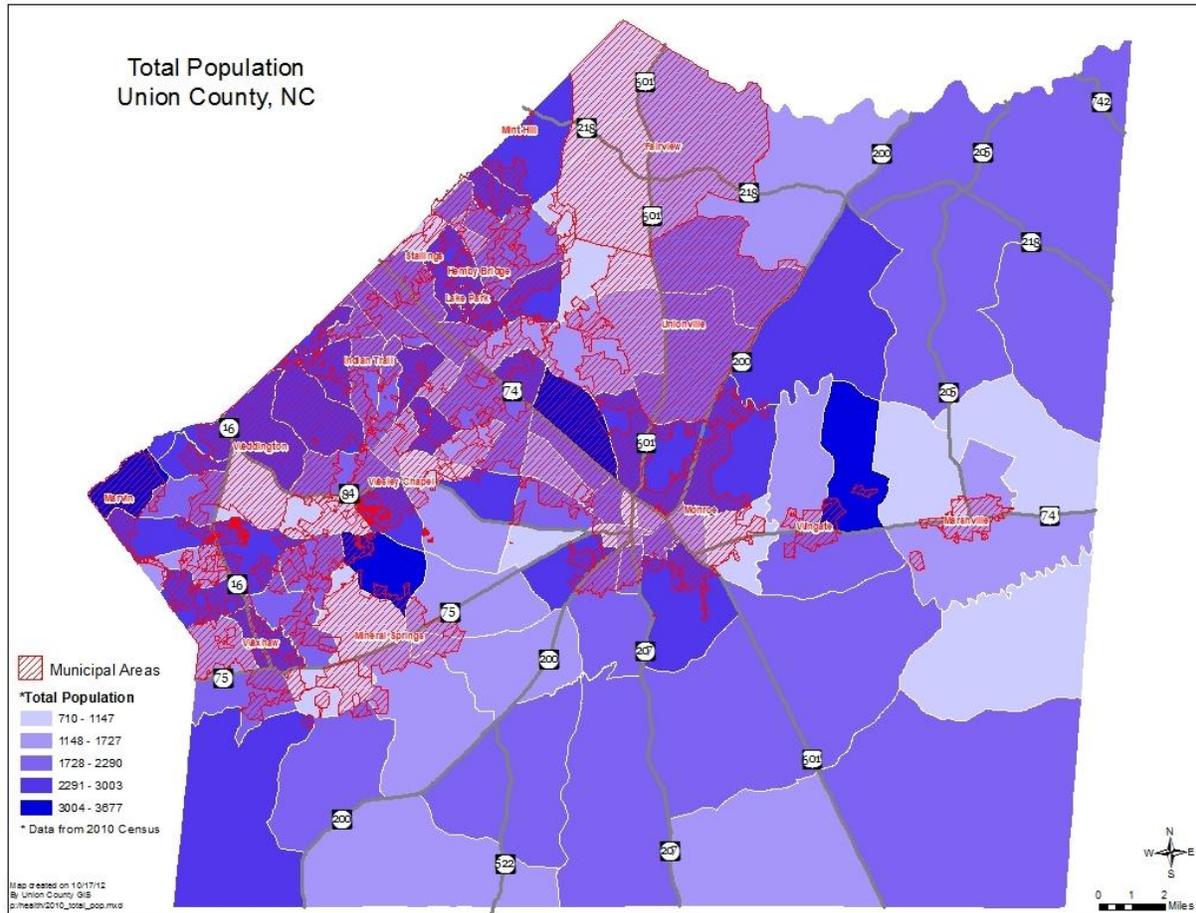
While all cancer is a concern, certain cancer is more prevalent in Union County: colon cancer, prostate cancer and lung cancer have been on the rise, while breast cancer has declined. In responding to a survey question about prevention services, only 22.3% of seniors and 7.9% of adults had a colonoscopy 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 (1<sup>st</sup> 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 6<sup>th</sup> 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.

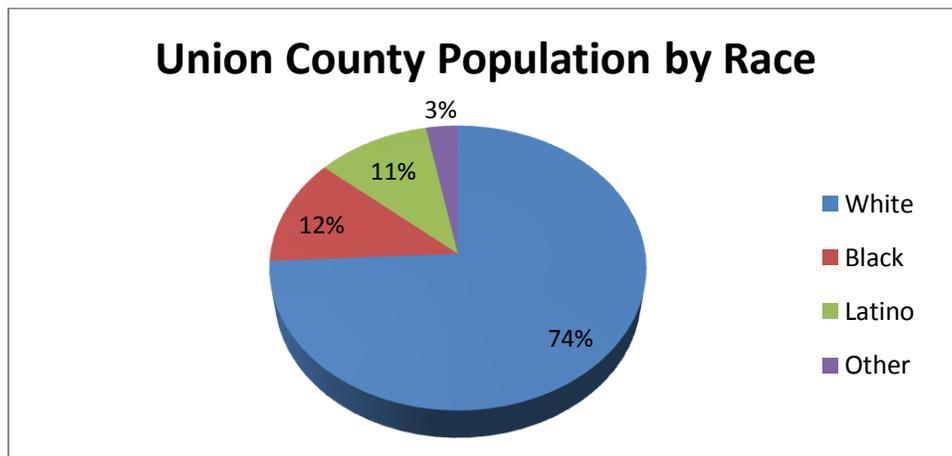
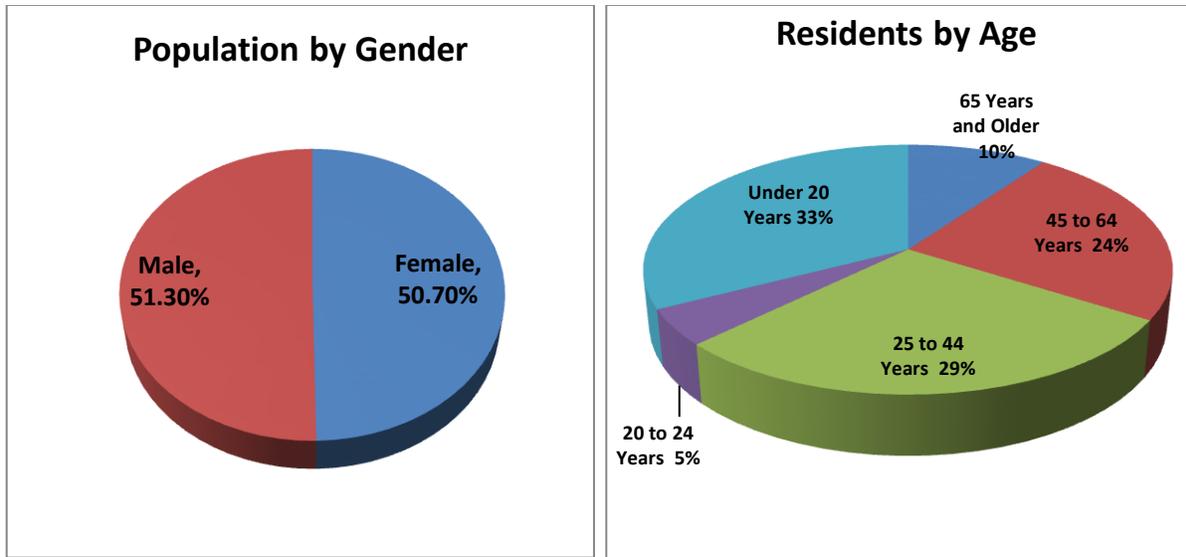
Despite an unbalanced tax base and school debt, the county's overall economic climate did not experience the catastrophic losses experienced elsewhere in the state and nation. The diversity of the existing business and industry helped to maintain stability in a weak economy. Union County's employer base 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.

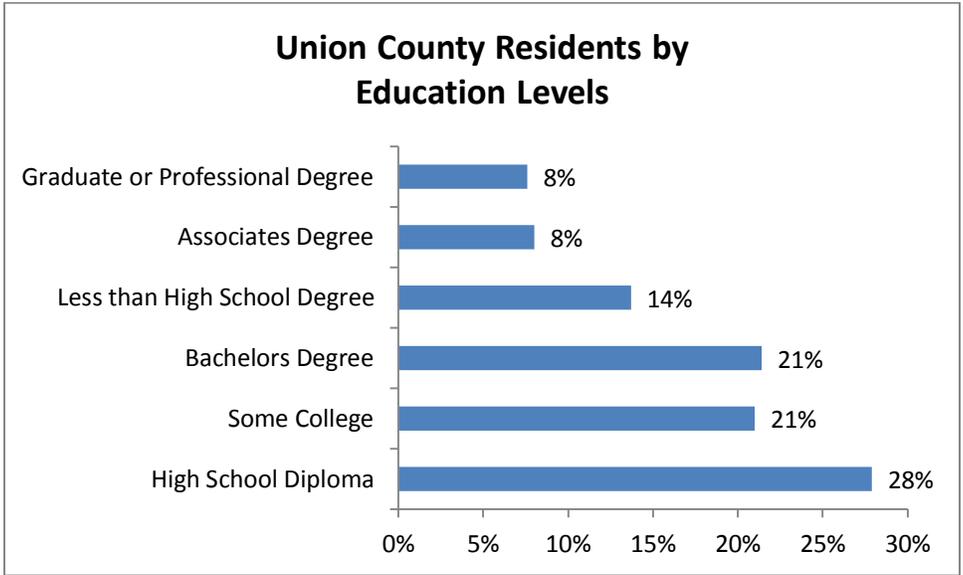
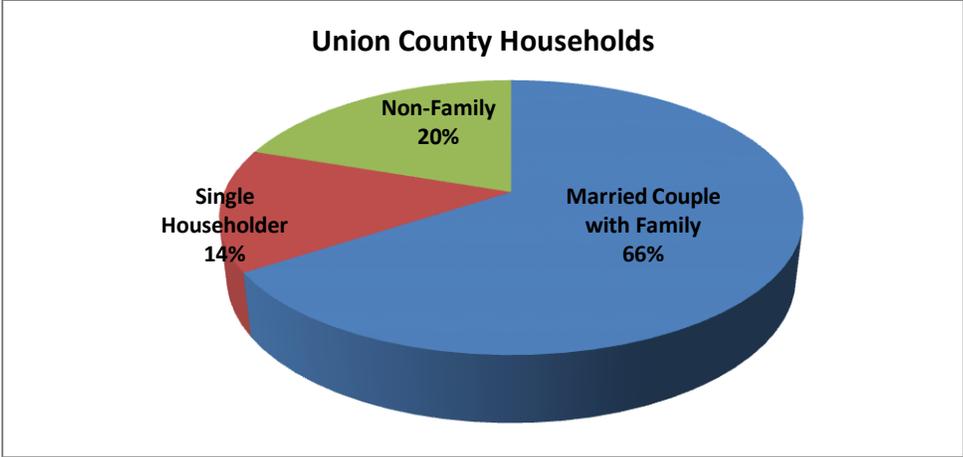
As residential growth slows, the county is changing their approach to economic development. The county and city of Monroe are entering into a contract to provide countywide economic development services and avoid duplication of effort and staffing. The combined efforts will focus on recruitment of new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



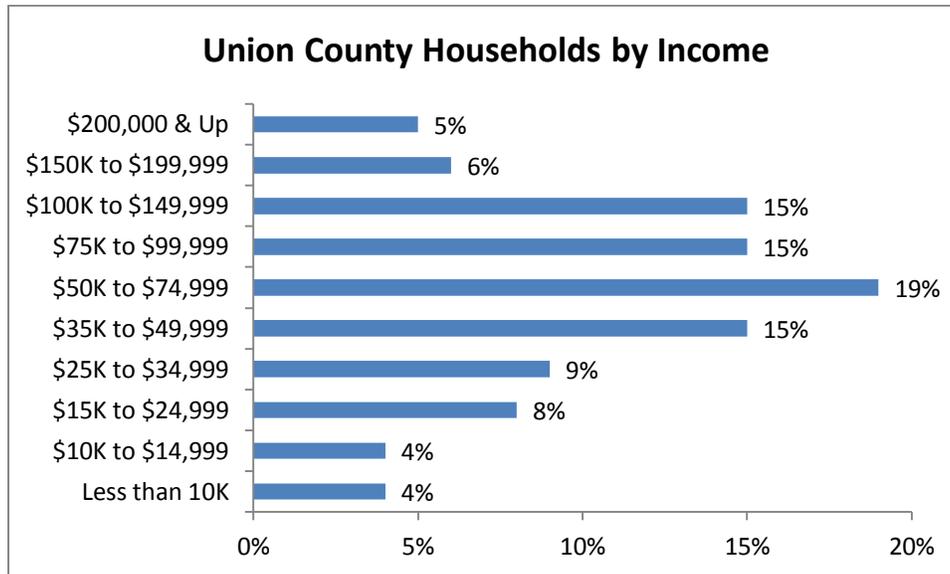


With the majority of Union County households consisting of married couples with children, the Union County Schools have been a priority of county residents. The UCPS web page states school bonds taken out to provide infrastructure for the decade of expanding student enrollment, totaled \$501.7 million 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 6<sup>th</sup> 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.



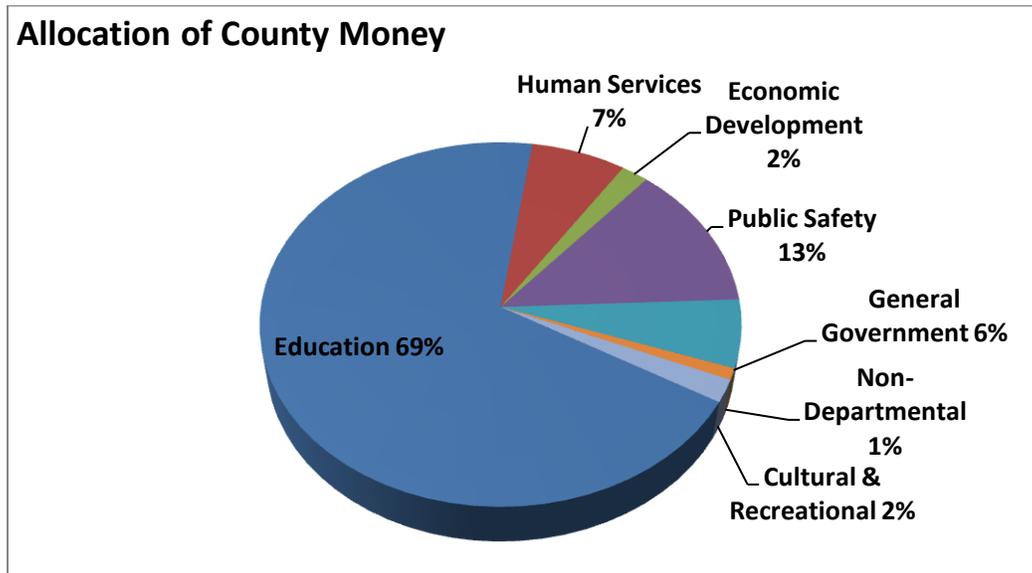
### County vs State Medicaid Data

<b>Medicaid Data</b>	<b>Union County</b>	<b>North Carolina</b>
% 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%

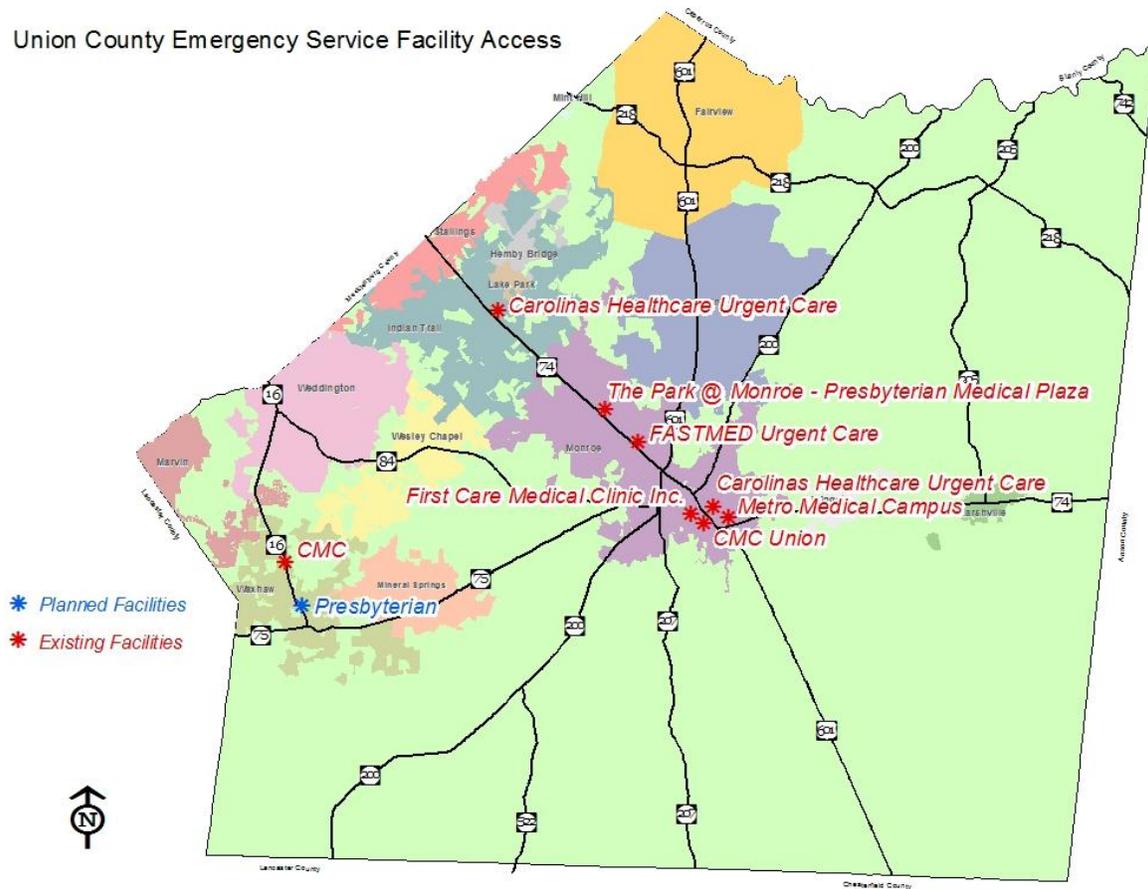
Data Source: NCIOM

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	Union County	NC
	2010	2011	2011
Dentists	2.5	2.6	4.3
<i>Physicians</i>	<i>8.3</i>	<i>8.1</i>	<i>22.1</i>
<i>Primary Care Physician</i>	<i>4.6</i>	<i>4.0</i>	<i>7.0</i>
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
<i>Chiropractors</i>	<i>1.5</i>	<i>1.3</i>	<i>1.6</i>
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

## Union County Emergency Service Facility Access



- 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**

Lack of Exercise / Poor Eating

Alcohol Abuse

Obesity

### **Senior**

Concerns over Long Term Care

Prescription Drug Costs

Medical Problems / Indigent Issues

Lack of Adult Daycare

### **Teen**

Teen Pregnancy

Sex Education

Peer Pressure

Soft Drink Consumption

### **Chronic Diseases**

Cancer

Heart Disease

Alzheimer's

Diabetes

### **Environmental Health**

Restaurant Safe Food Handling

Drinking Water Access / Quality

Outdoor Air Quality

Smoke Free Restaurants

### **General Concerns**

Affordable Healthcare

Stress related to Money

Mental Health Services

At the conclusion of the 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: *Increase 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%.

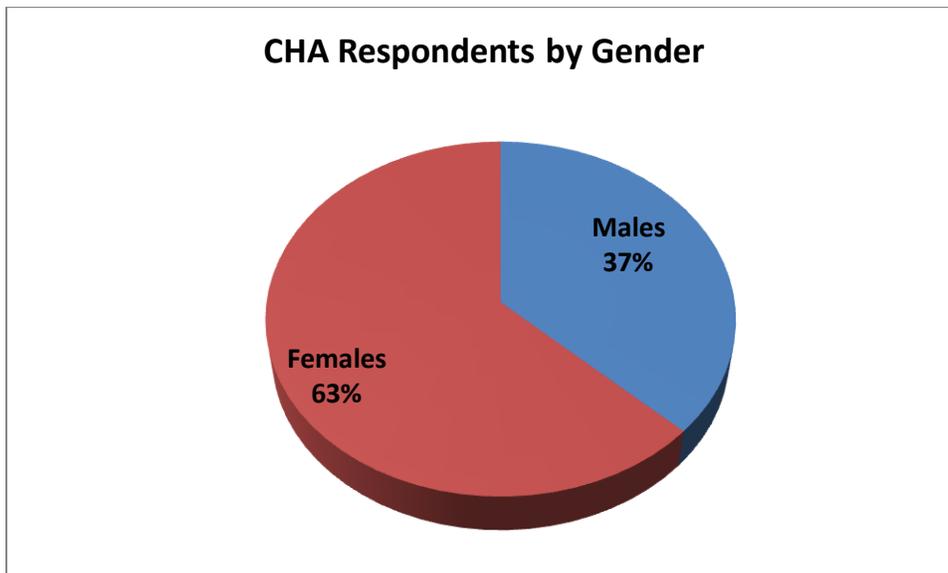
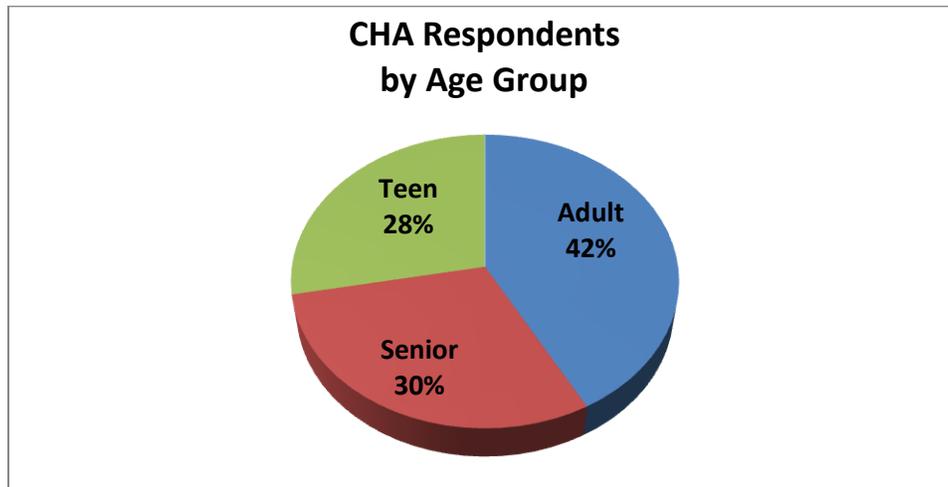
## Total 2012 Community Health Assessment Survey Respondents

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)

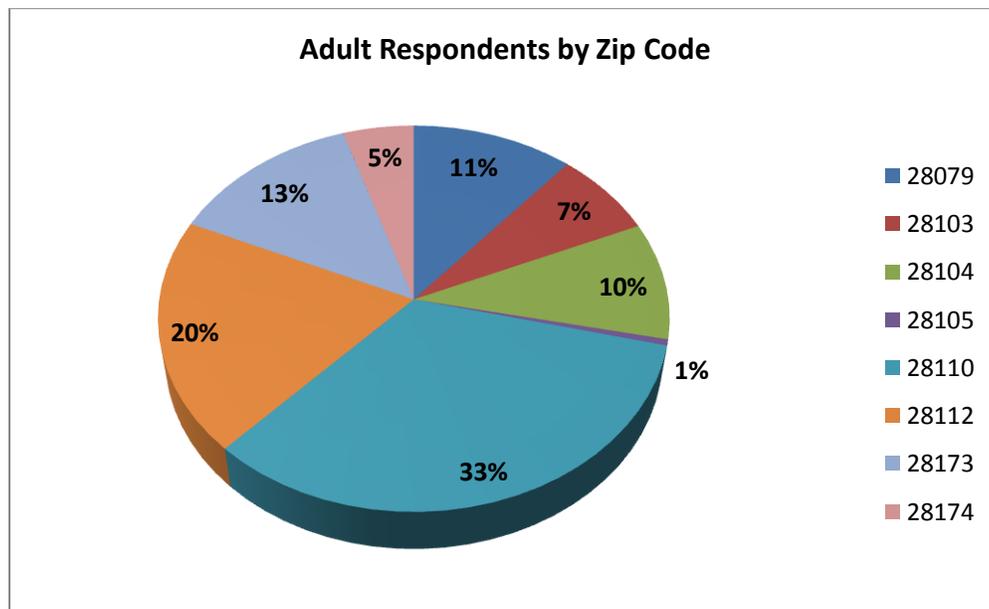
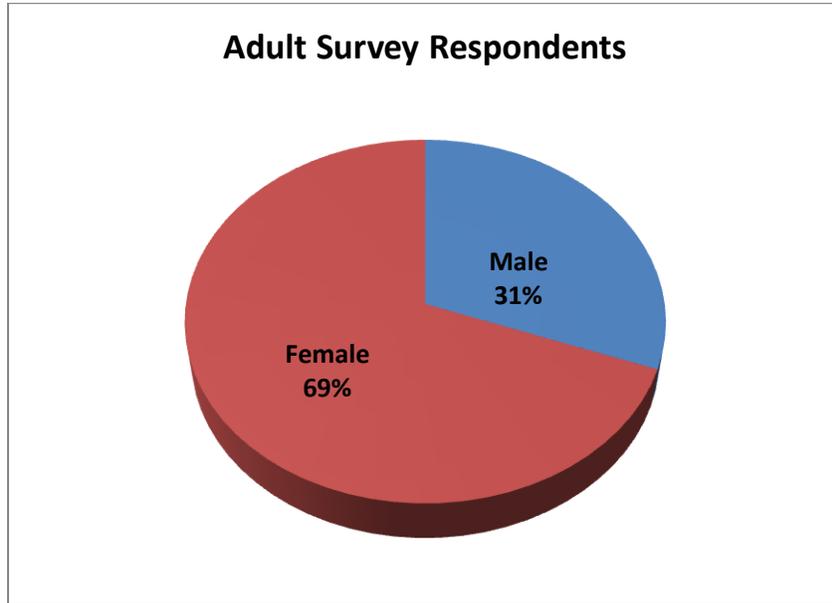


# Adult Survey Results

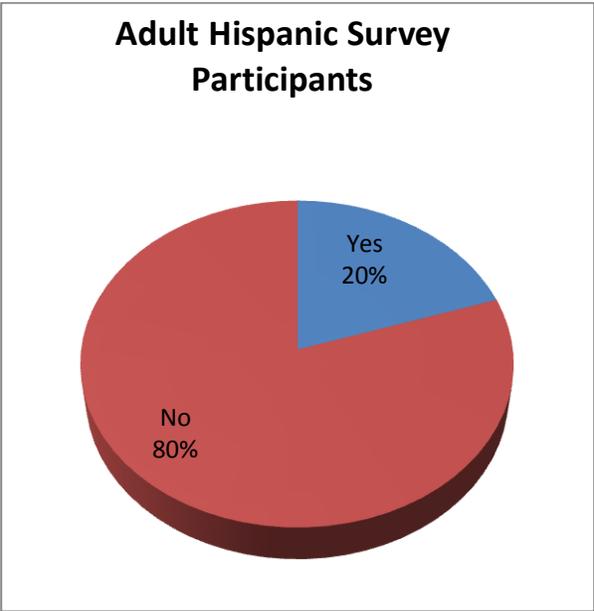
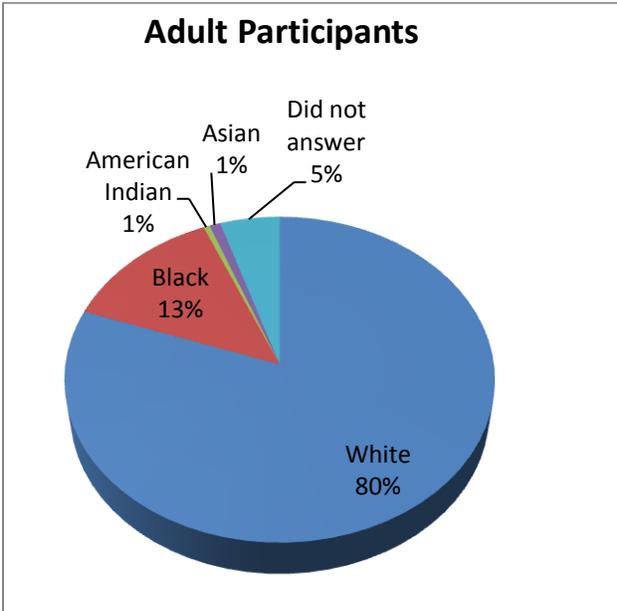
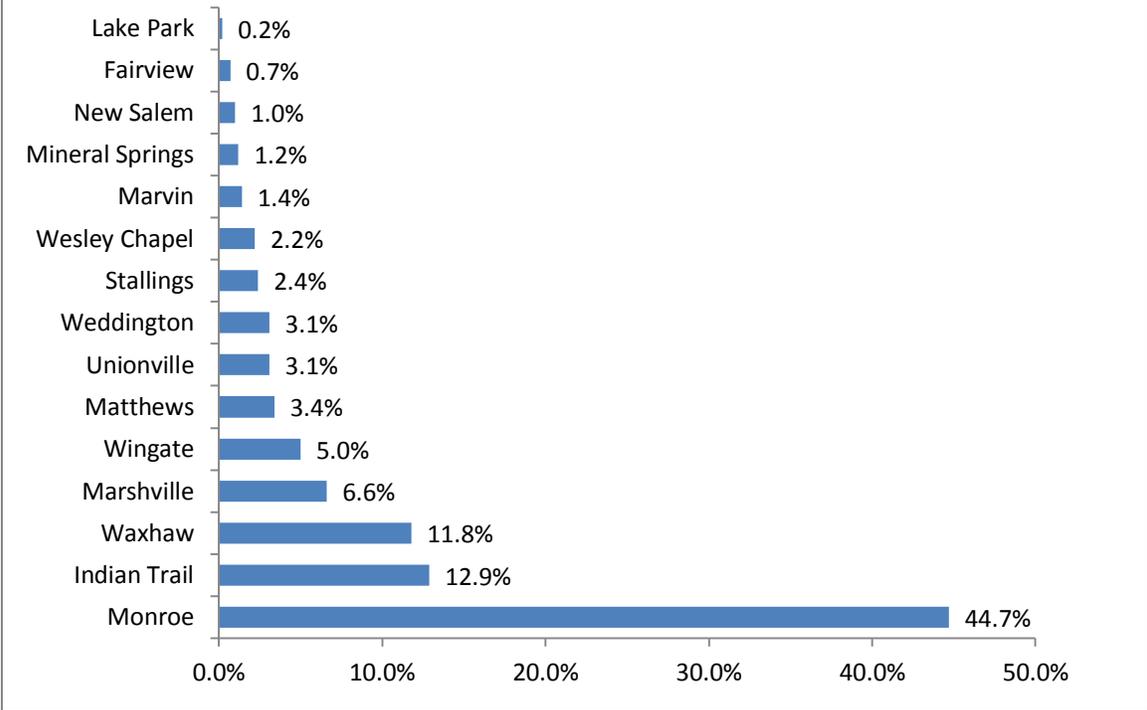
### Adult Survey Respondents by Demographic Breakdown (Ages 19-54)

862 Total Adult Survey Respondents

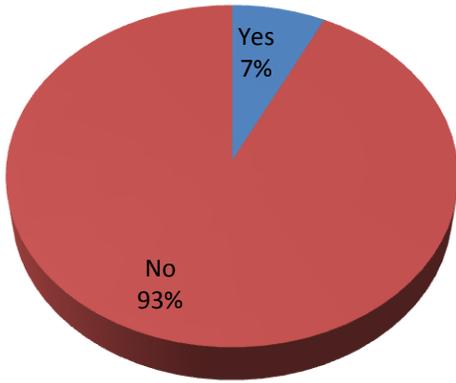
42% Adult Respondents Overall



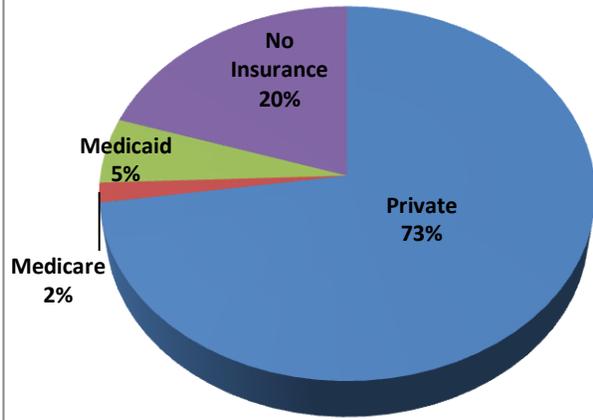
### Community Residence of Participants



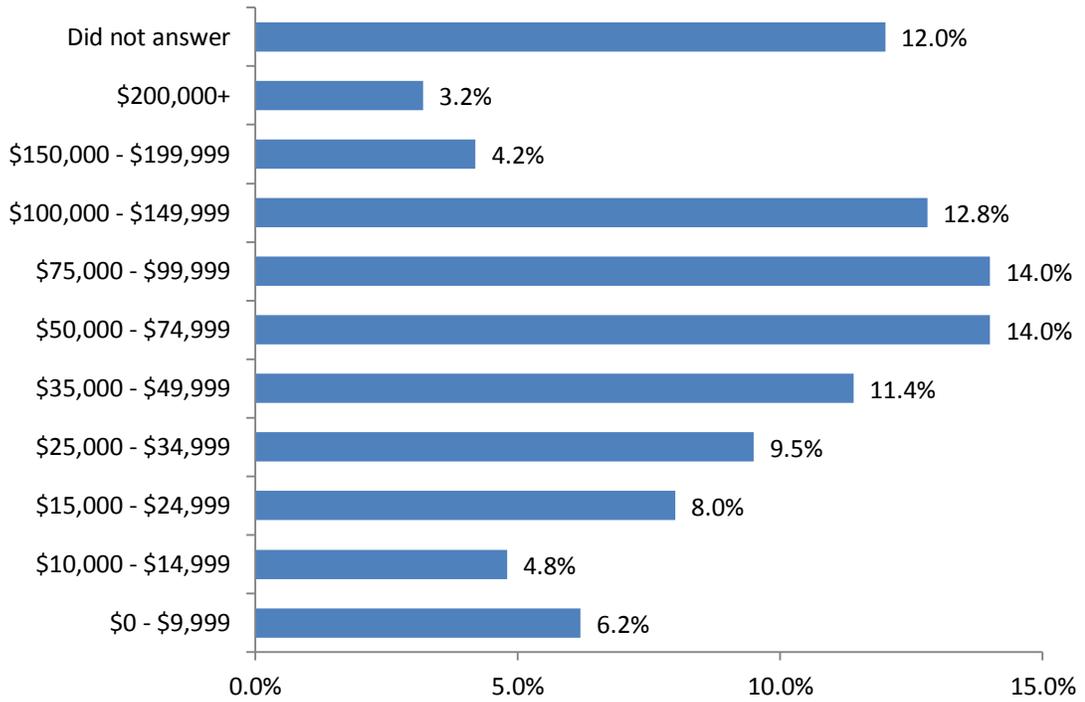
### Adults Live Alone



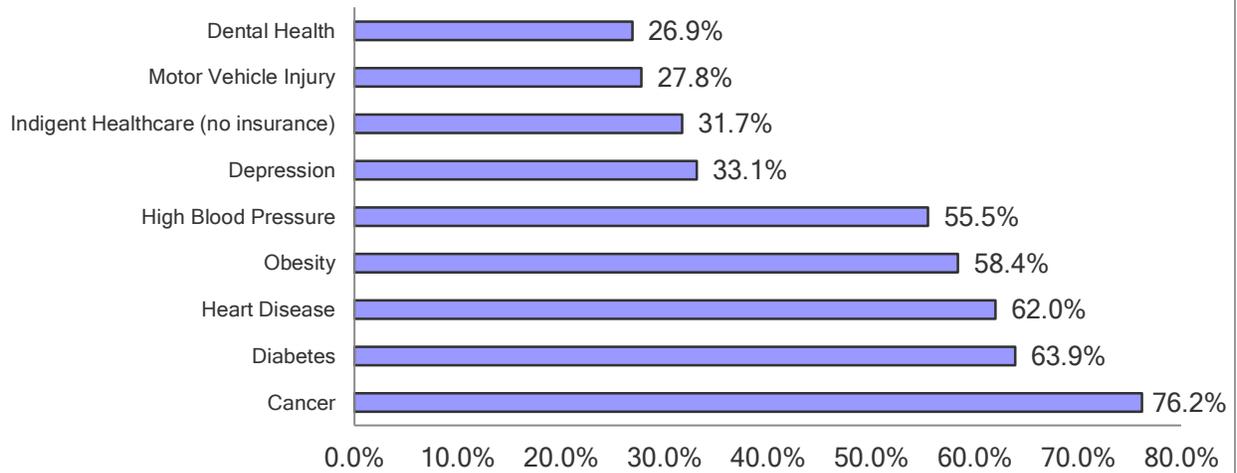
### Adult Insurance Status



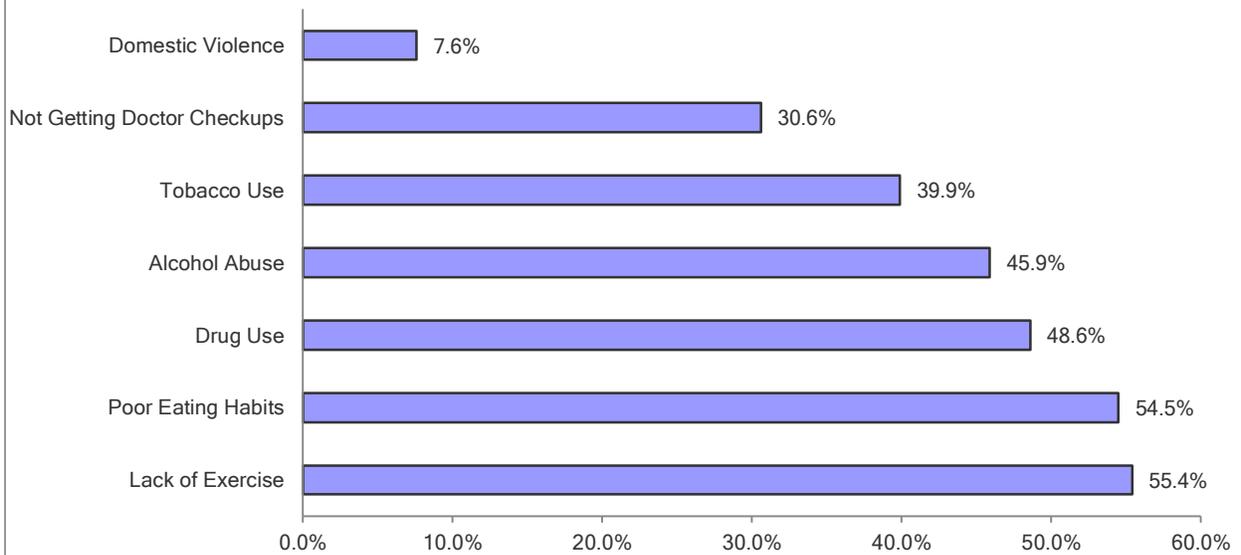
### Adult Survey Participants Annual Household Income



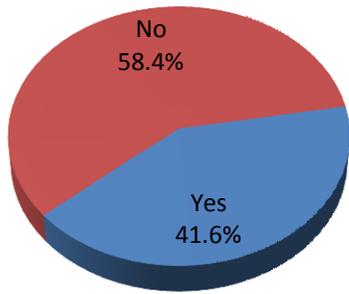
### Adults Health Concerns About Union County Residents



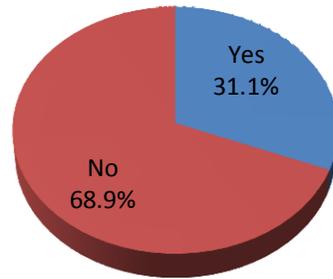
### Behaviors Adults Believe Cause Poor Health For County Residents



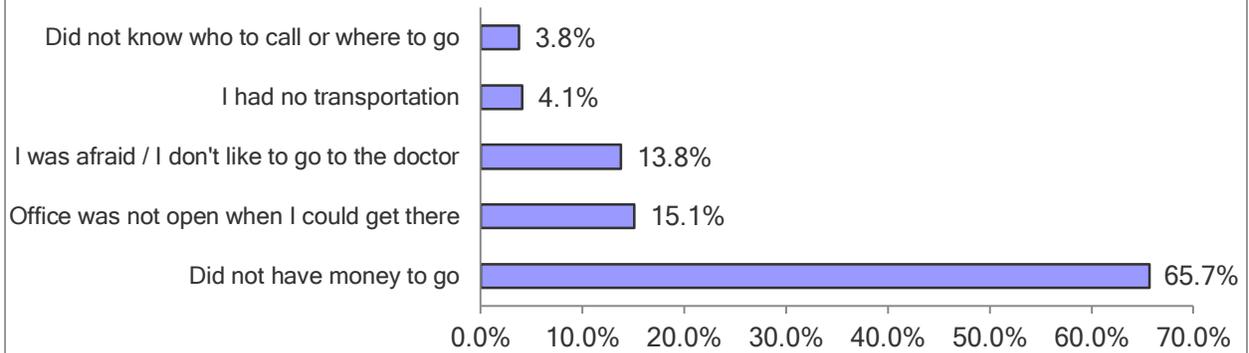
**Adults That Did Not See A Doctor When Needed**



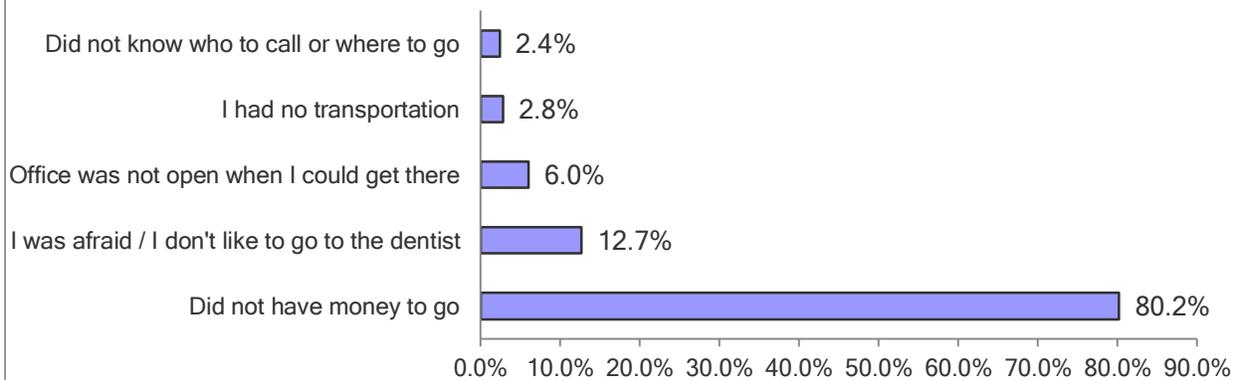
**Adults That Did Not See A Dentist When Needed**

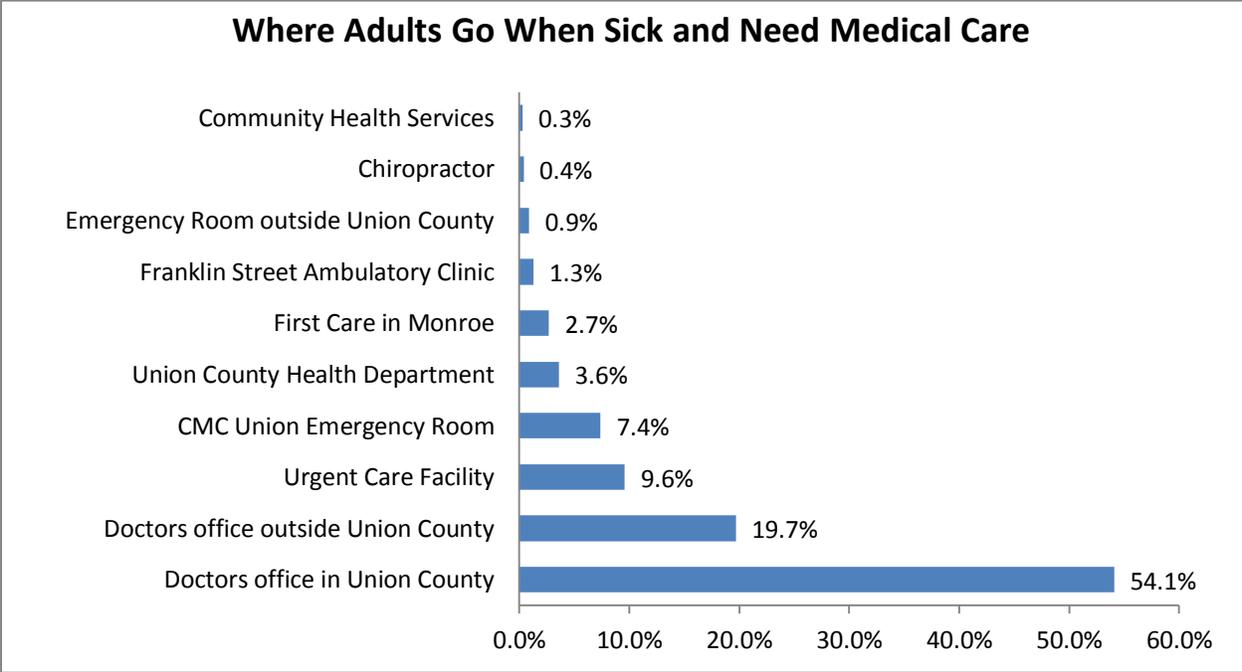
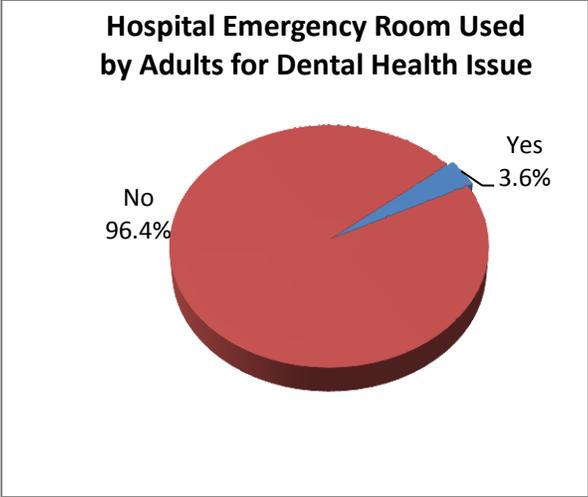


**Adult Reasons For Not Seeing A Doctor**

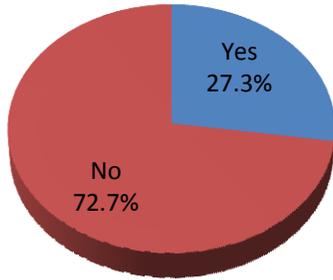


**Adult Reasons For Not Seeing A Dentist**

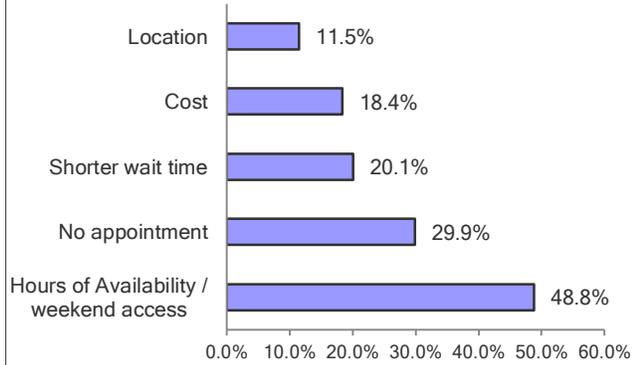




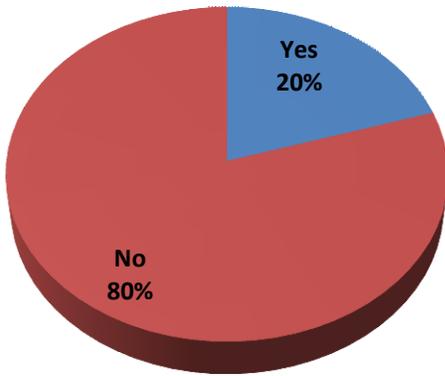
### Adults Used Minute Clinics for Medical Service



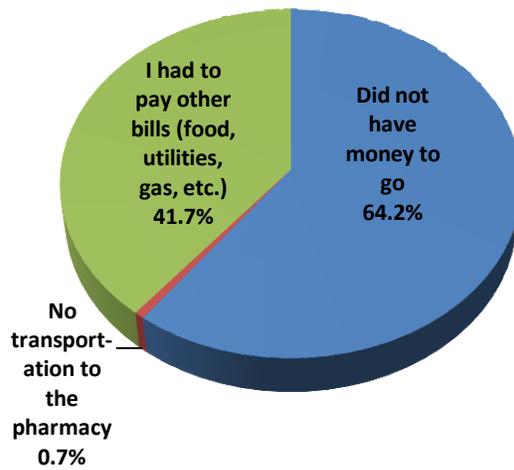
### Adult Reasons for Using a Minute Clinic



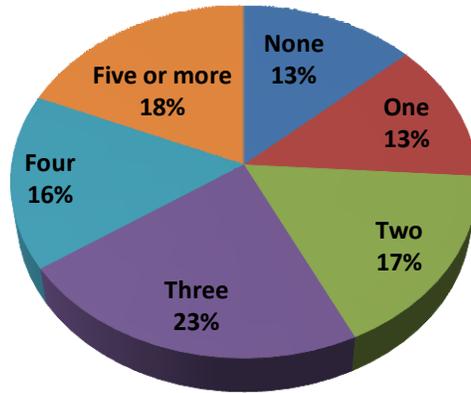
### Adults Needing Prescription Medicine But Did Not Get It



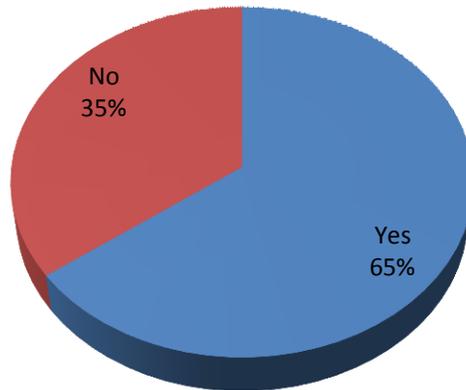
### Adults Reasons For Not Filling Needed Prescriptions



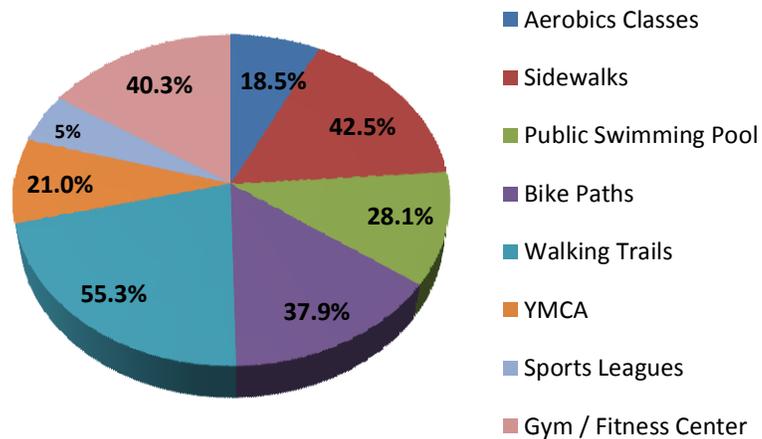
### Number of Days Per Week Adults Get at Least 30 Minutes of Exercise



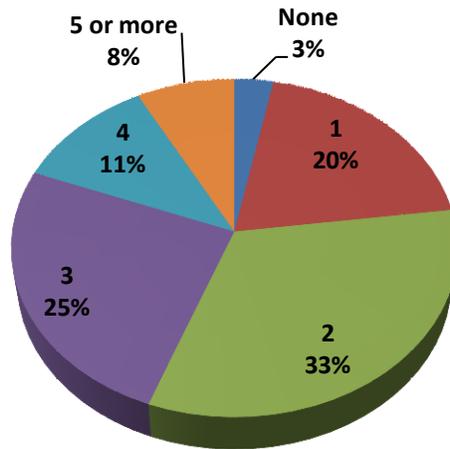
### Enough Opportunities for Physical Activity Near Home For Adults



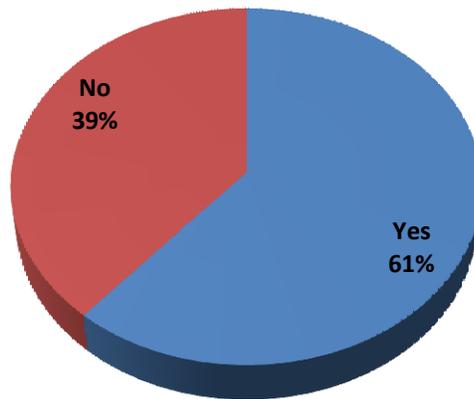
### Adult Physical Activity Opportunities



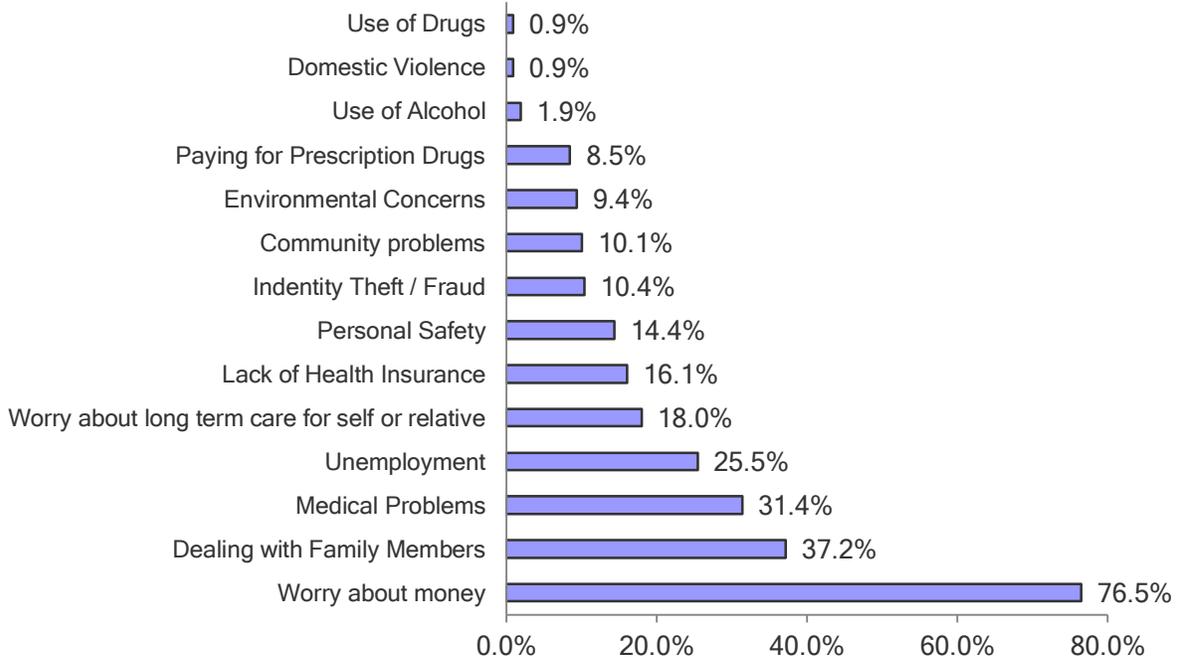
### Adult Servings of Fruits and Vegetables Consumed Daily



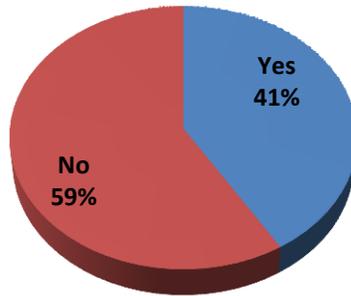
### Adults that made Purchases at Farmers Markets in Union County



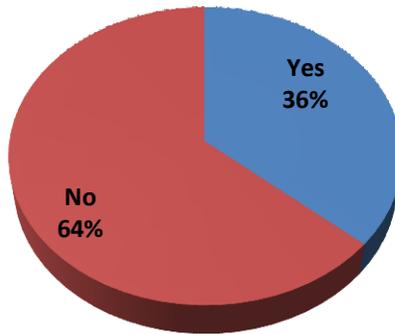
### Adult Reasons for Stress



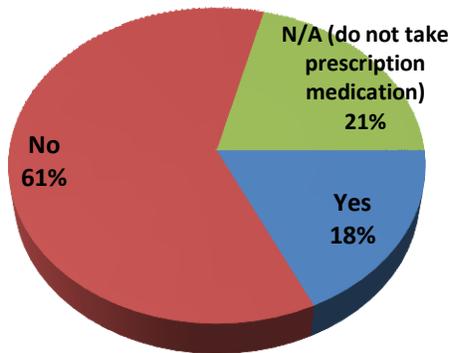
### Percentage of Adults who have an Emergency Plan



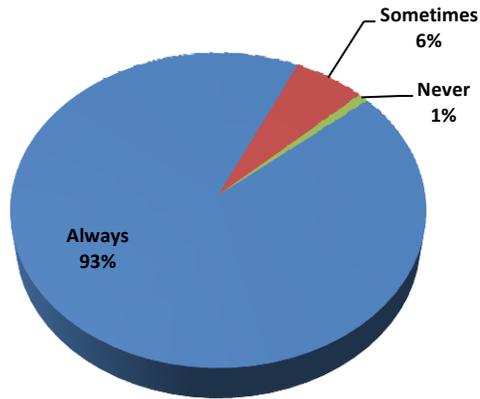
### Adults That Keep a Supply of Water and Non-perishable Food



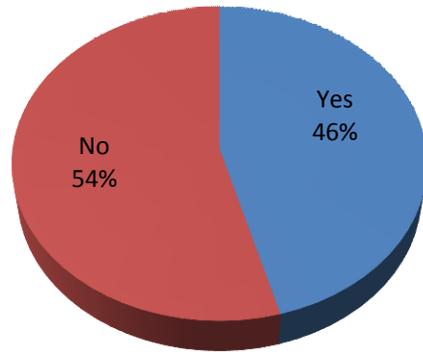
### Adults That Keep a Supply of Prescription Medications for Emergencies



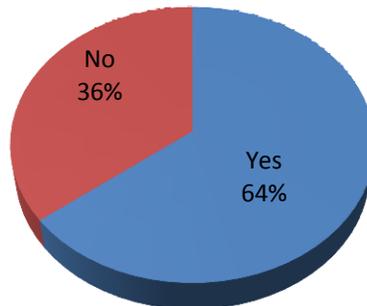
### Adult Seat Belt Compliance



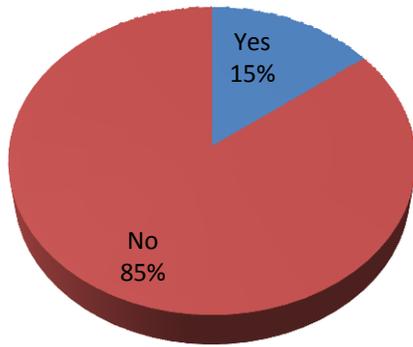
### Adults with Guns at Home



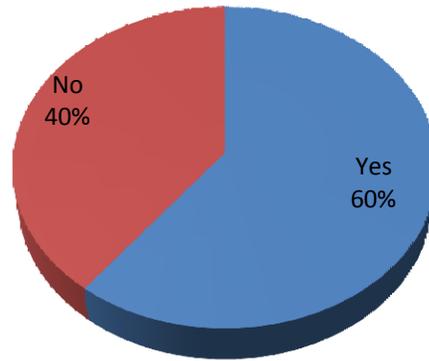
### Adults Lock Up Guns and Ammo



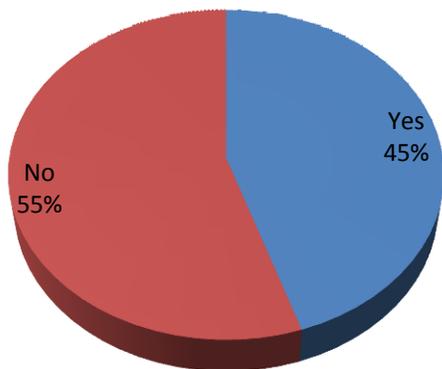
**Adults Smoke or Use Smokeless Tobacco**



**Adult Smokers Want to Quit**



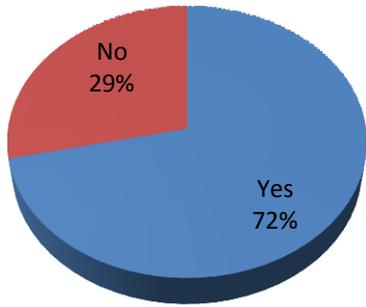
**Adult Alcoholic Beverage Consumption**



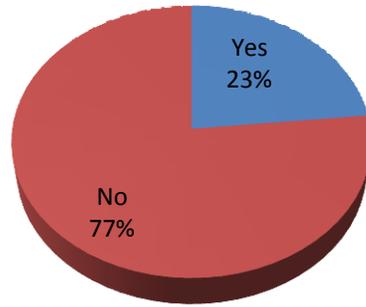
**Adults that Drive After Drinking Alcoholic Beverages**



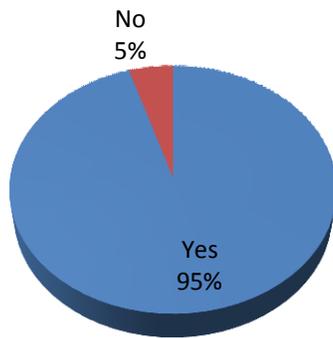
**Adults Use Cell Phone While Driving**



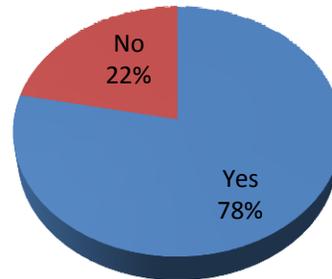
**Adults that Text or Ride with Someone that Text While Driving**



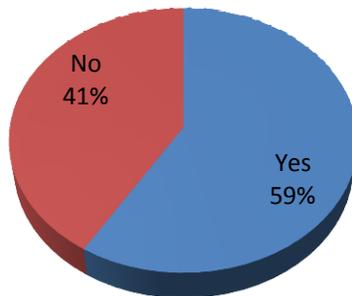
**Adults with Smoke Detector at Home**



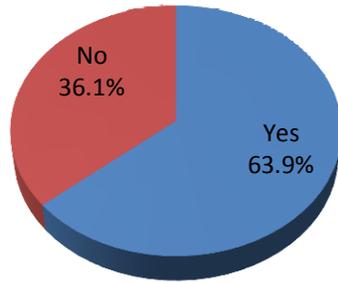
**Adults Check Smoke Detector Batteries Annually**



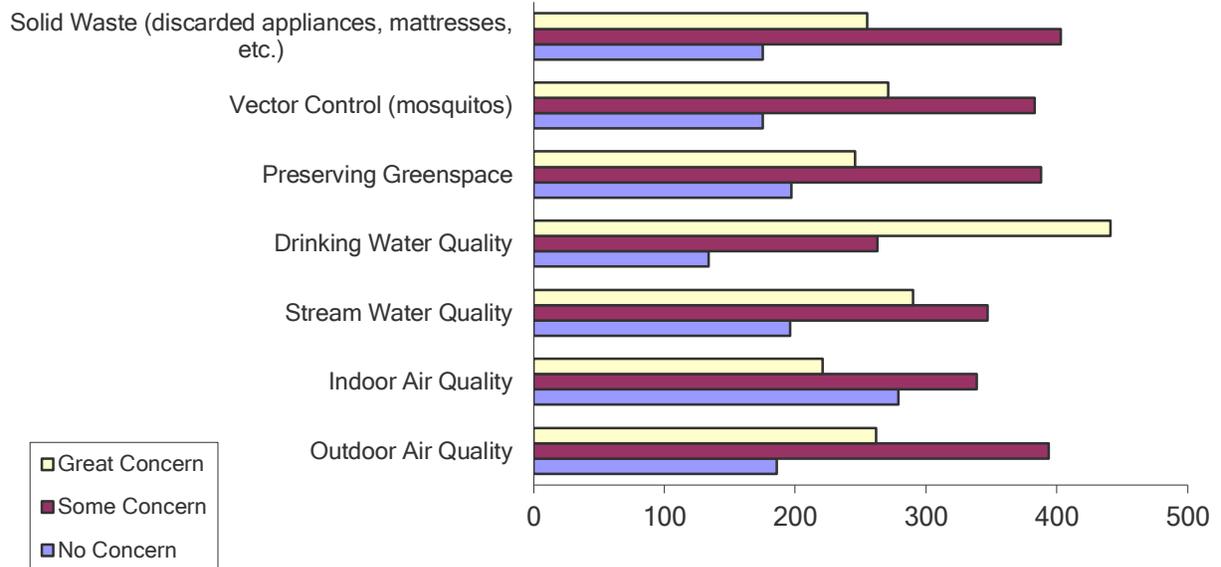
**Adult with Carbon Monoxide Detectors at Home**



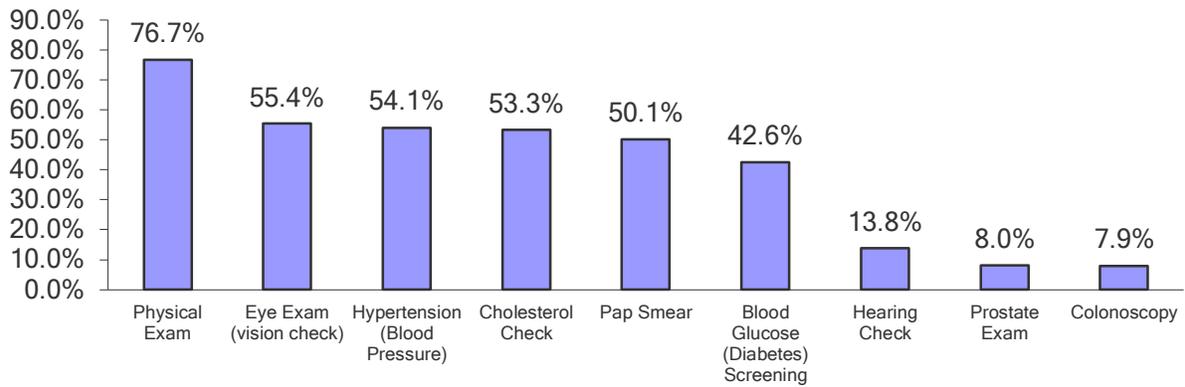
### Adults Know How to Access Department of Social Services



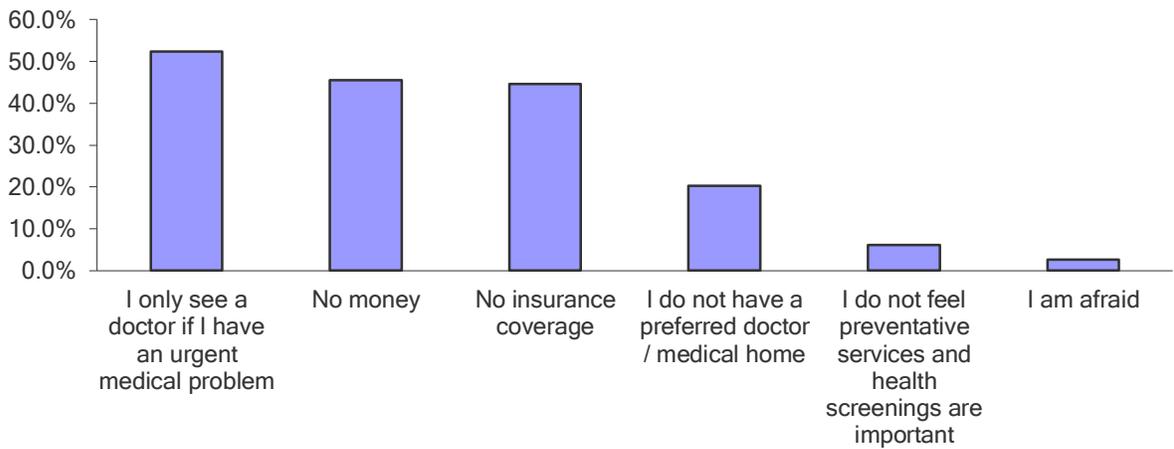
### Adult / Environmental Health Concerns



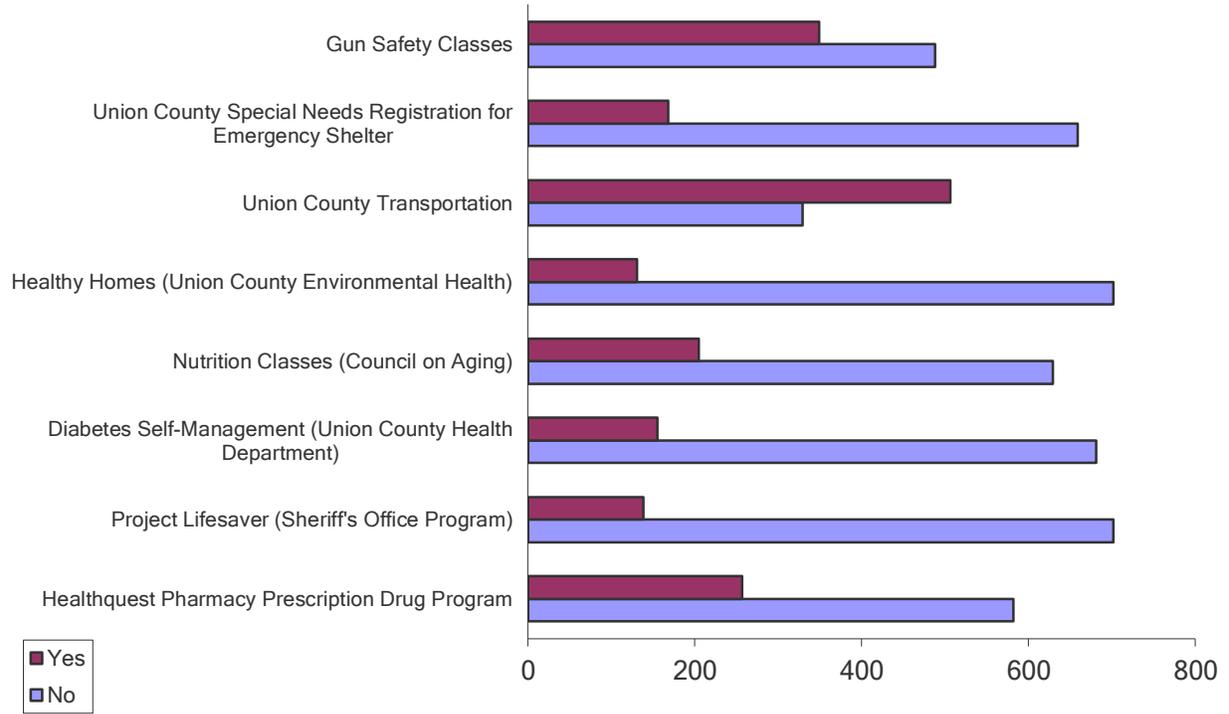
**Preventative Services Adults Received Within The Past Year**



**Reasons Adults Did Not Receive Preventative Services in the Past Year**



### ADULT HEALTH, WELLNESS, AND SAFETY RESOURCE AWARENESS

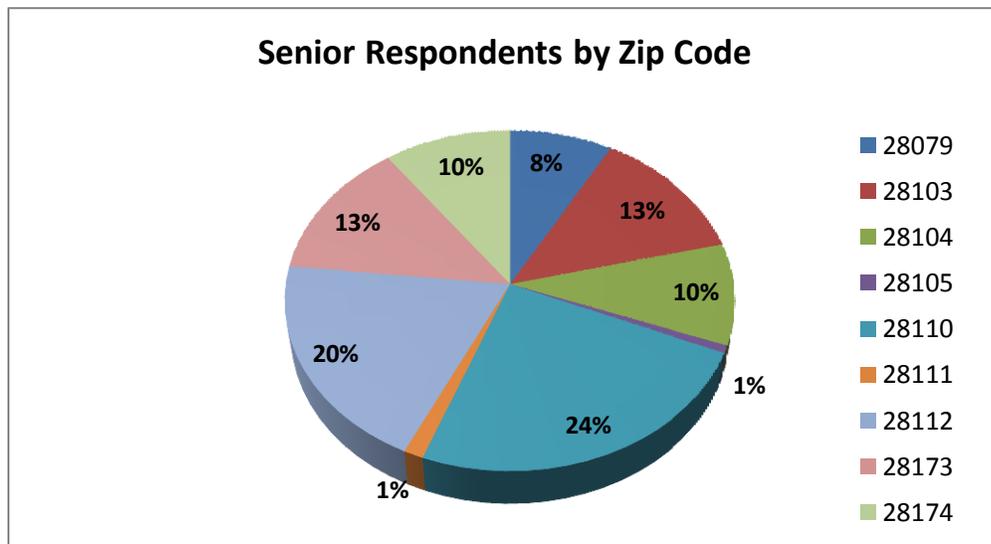
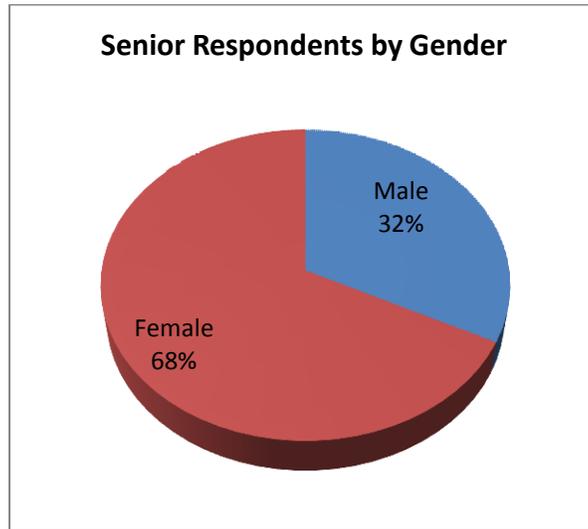


# Senior Adult Survey Results

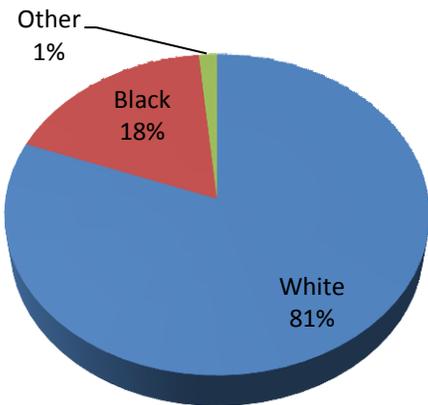
### Senior Survey Respondents by Demographic Breakdown (Ages 55 +)

606 Total Senior Survey Respondents

30% Senior Respondents Overall



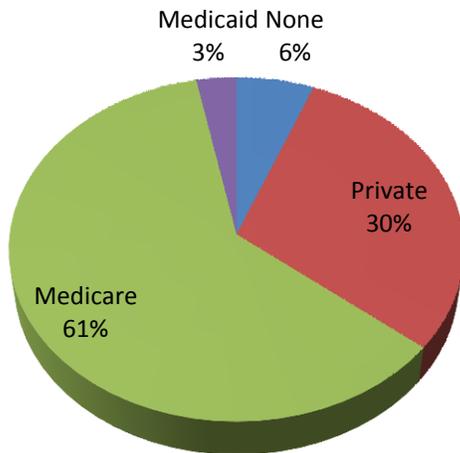
**Senior Respondents by Race**



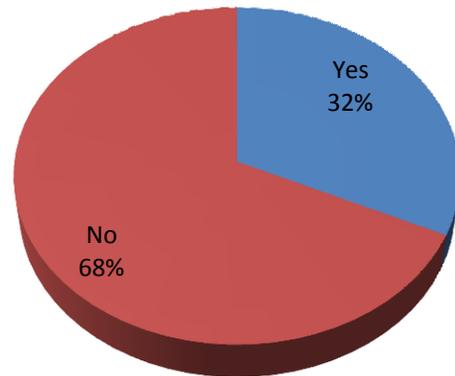
**Hispanic Senior Respondents**



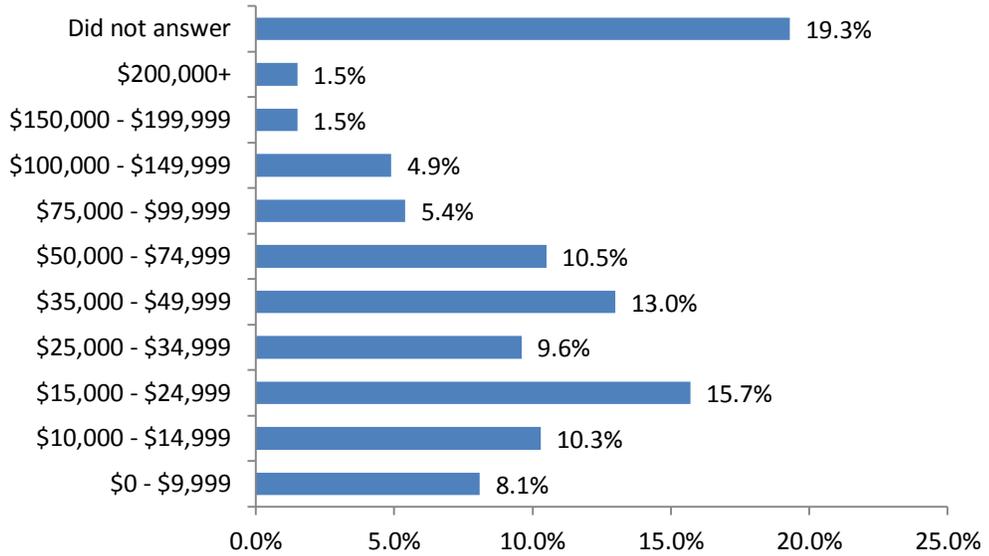
**Senior Insurance Status**



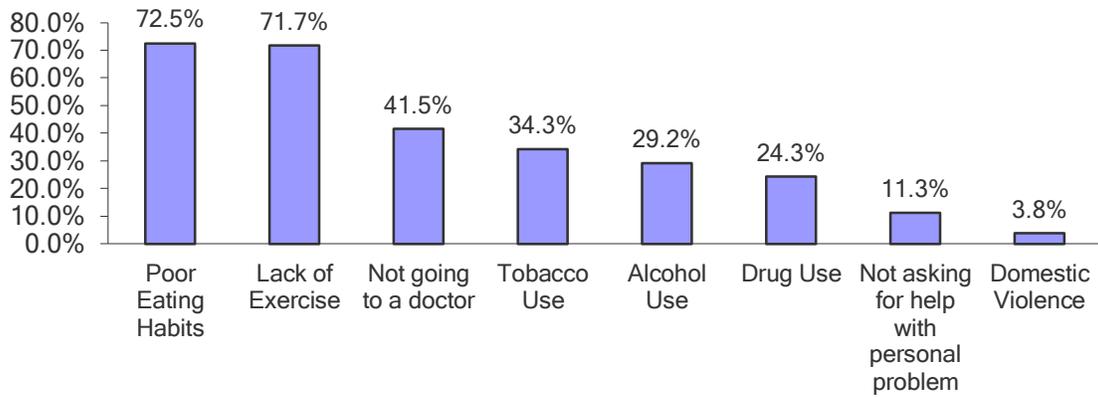
**Seniors Who Are Employed**



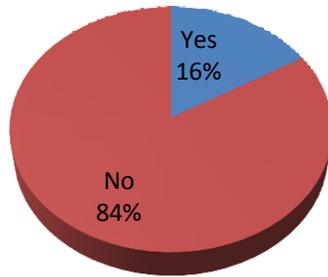
### Senior Respondents Annual Household Income



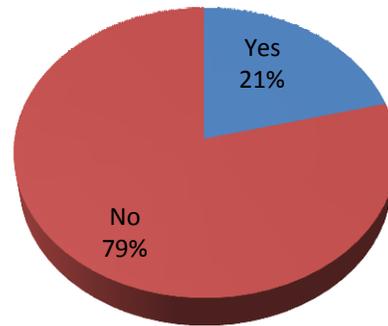
### Behavior Seniors believe cause poor health for County Residents



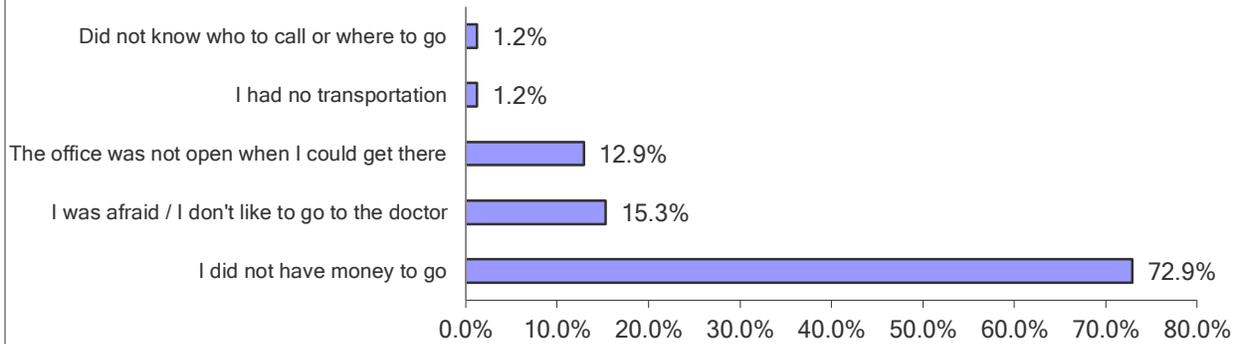
### Seniors Did Not See A Doctor When Needed



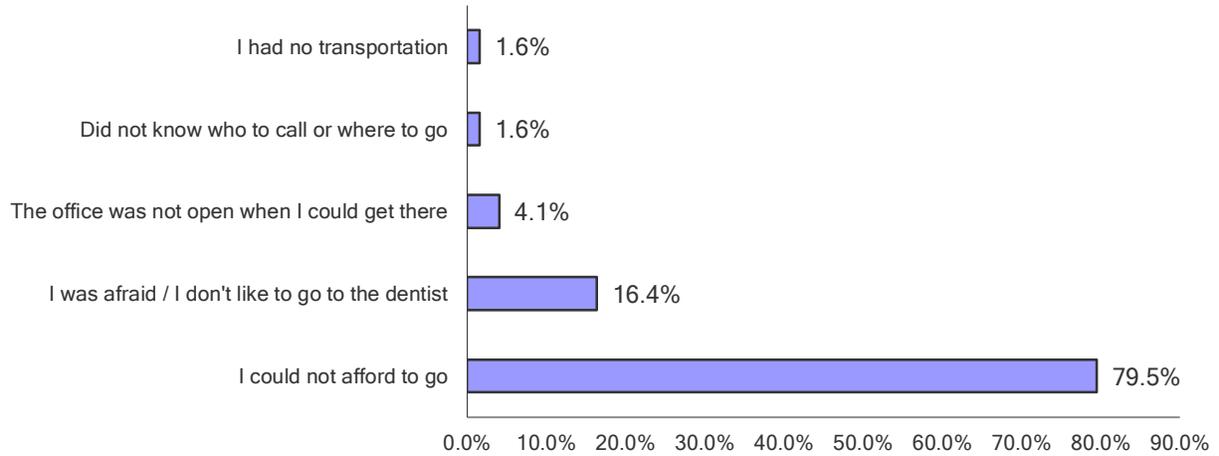
### Seniors Did Not See A Dentist When Needed

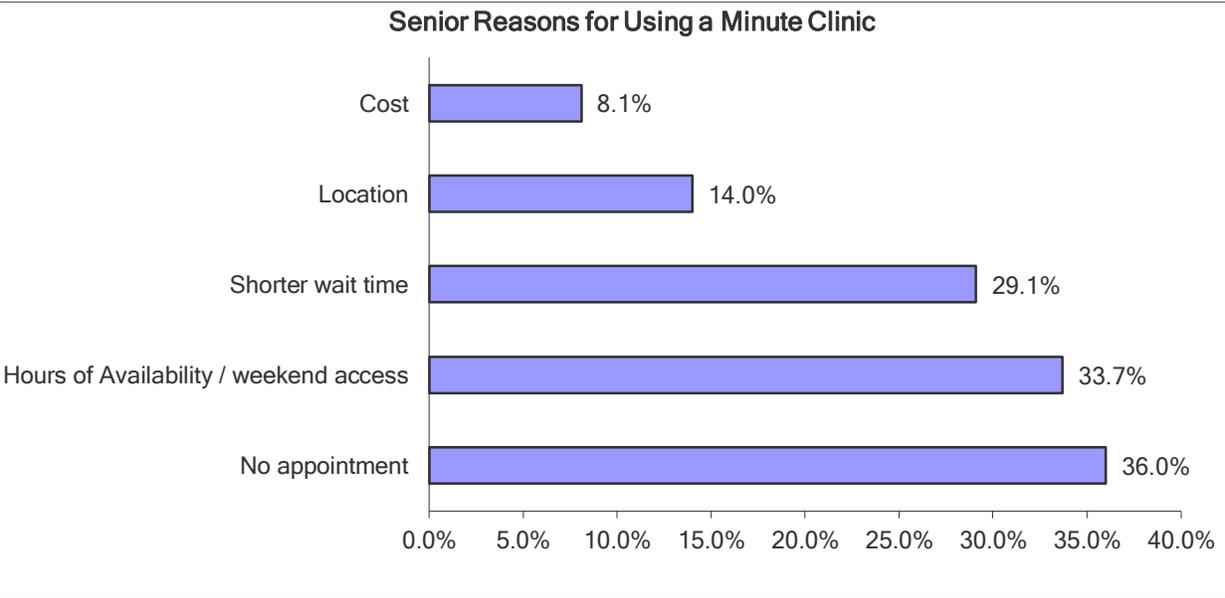
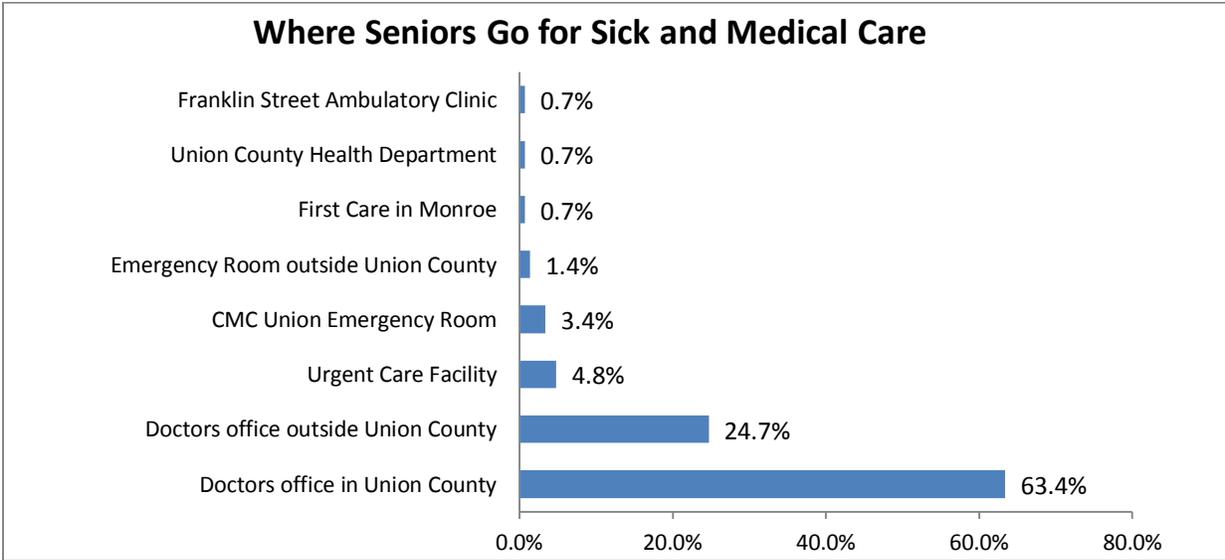
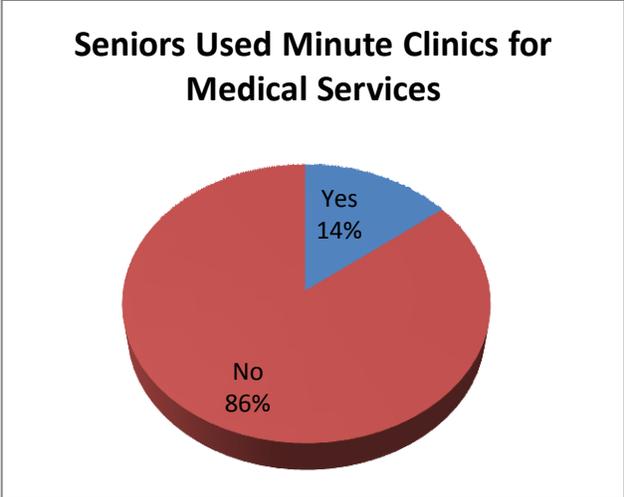
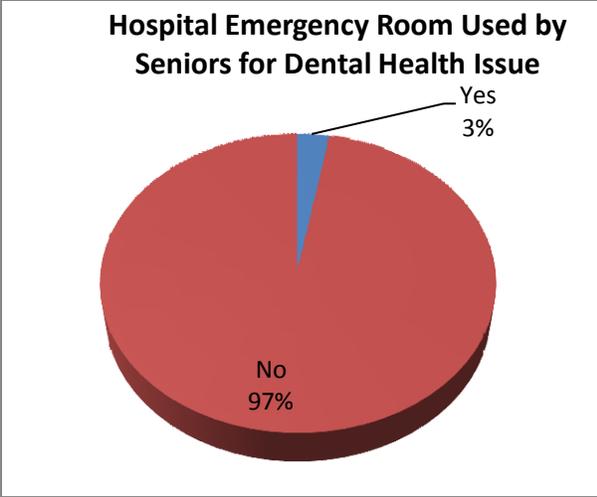


### Senior Reasons For Not Seeing A Doctor

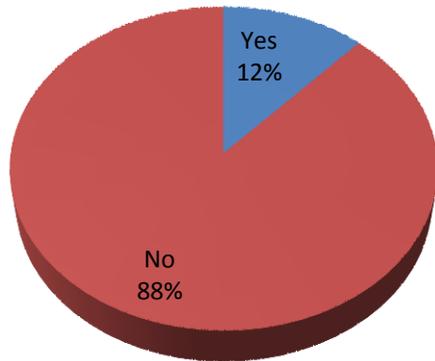


### Reason that Senior Did Not See a Dentist

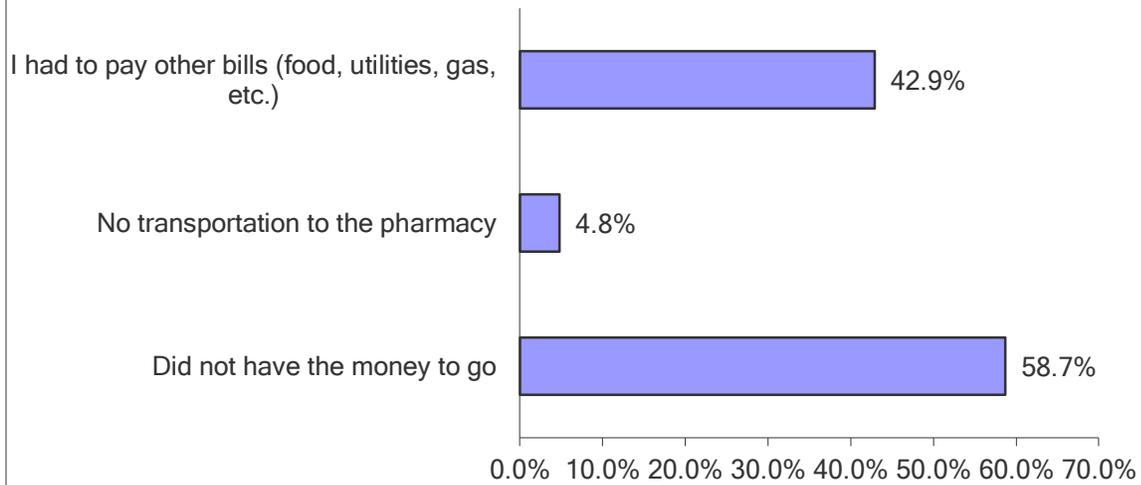




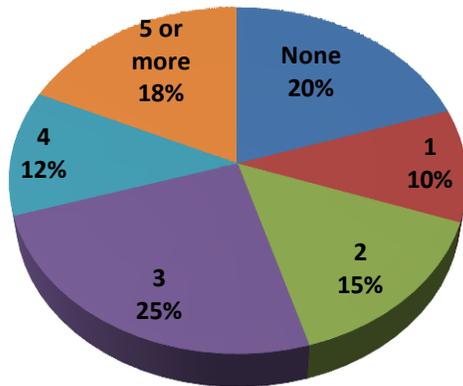
### Seniors Needing Prescription Medicine But Did Not Get It



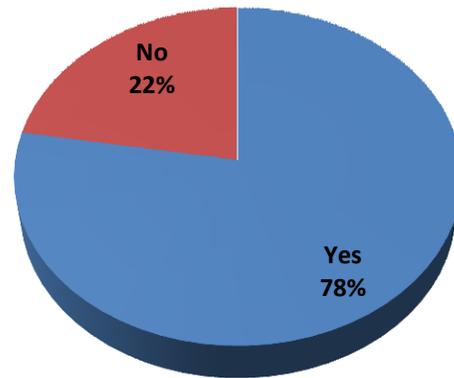
### Senior Reason for not filling a Prescription



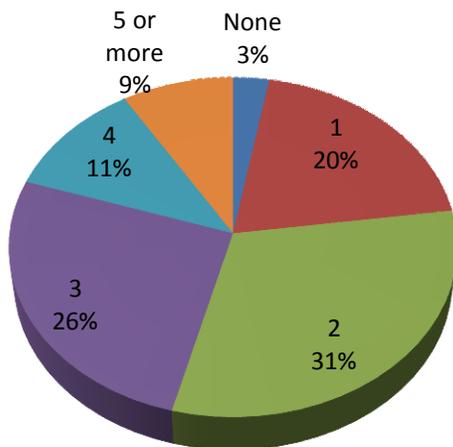
**Number of Days a Week with 30 minutes or more of Exercise**



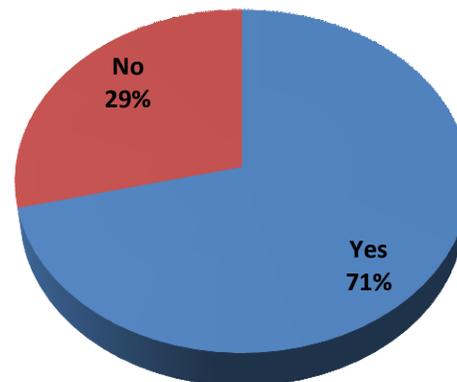
**Enough Opportunities for Physical Activity Near Home For Seniors**

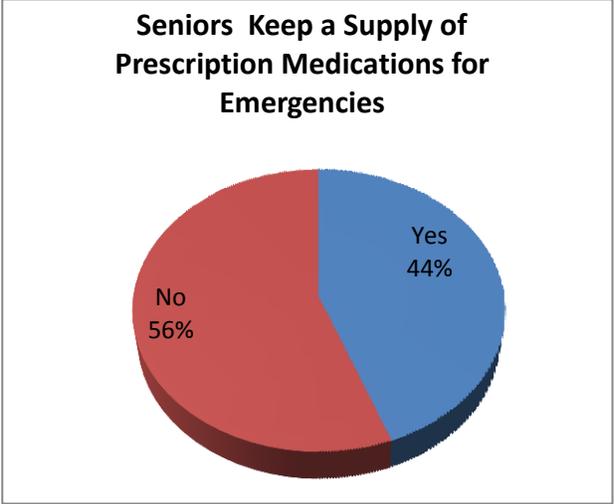
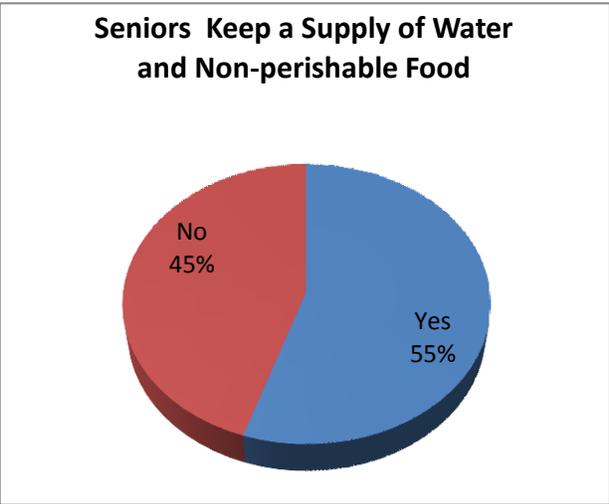
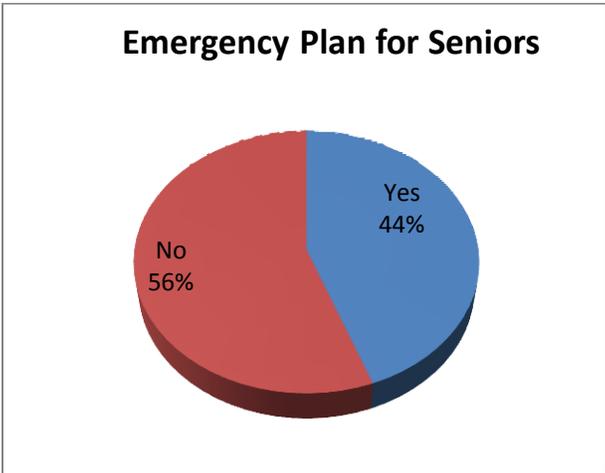
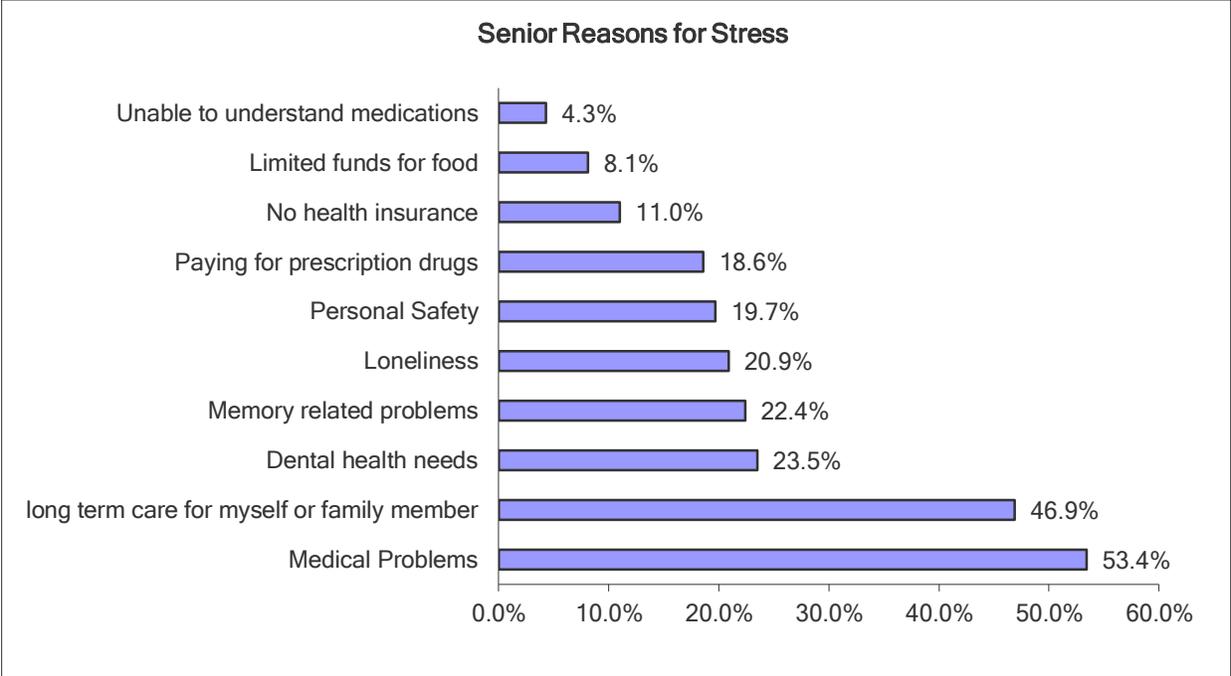


**Senior Servings of Fruits and Vegetables Consumed Daily**

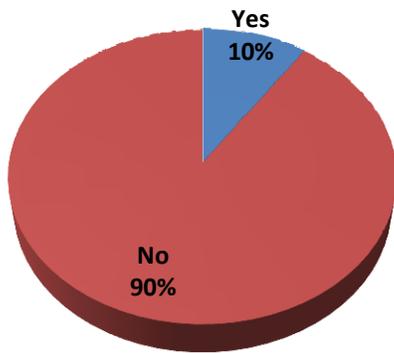


**Seniors Purchase at Farmers Markets in Union County**

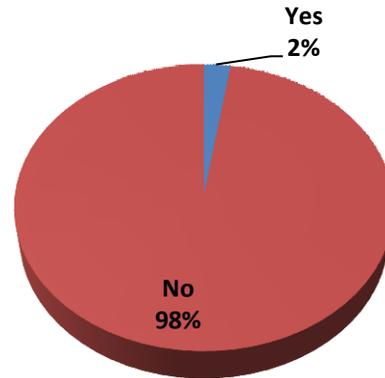




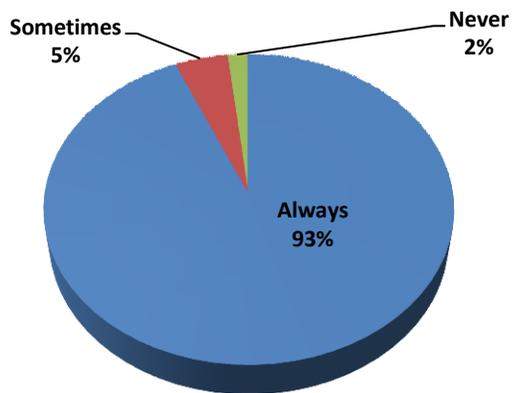
**Seniors Receive Help Taking or Managing Medications**



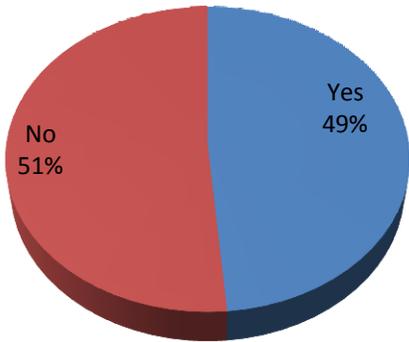
**Seniors Receiving Home Health Services**



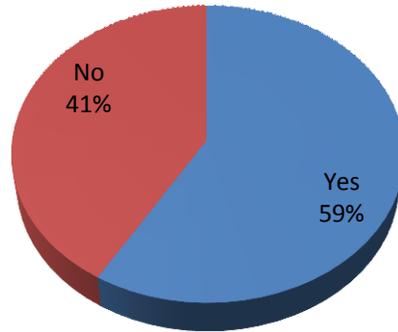
**Senior Seat Belt Compliance**



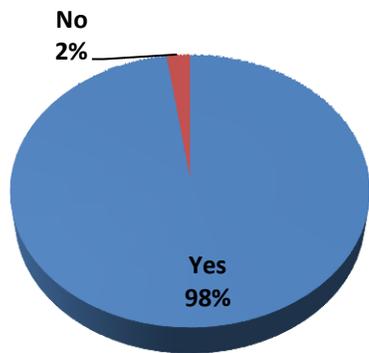
**Seniors with Guns at Home**



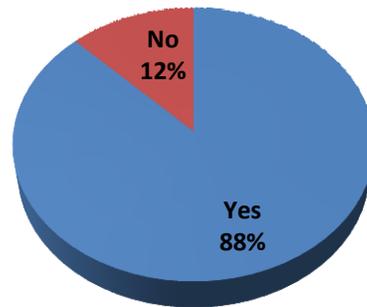
**Seniors Lock Up Gun and Ammunition**



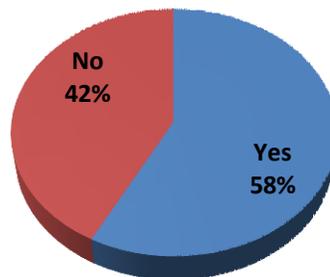
**Seniors with Smoke Detector at Home**



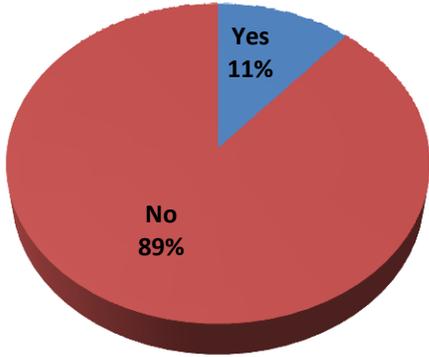
**Seniors Check Smoke Detector Batteries Annually**



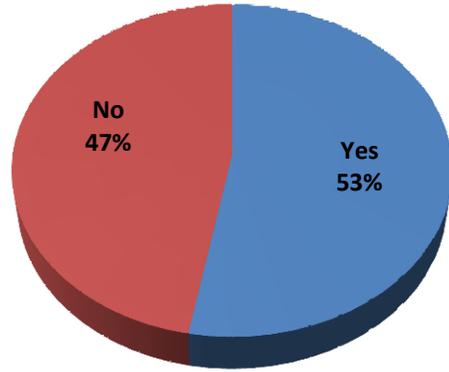
**Seniors with Carbon Monoxide Detectors at Home**



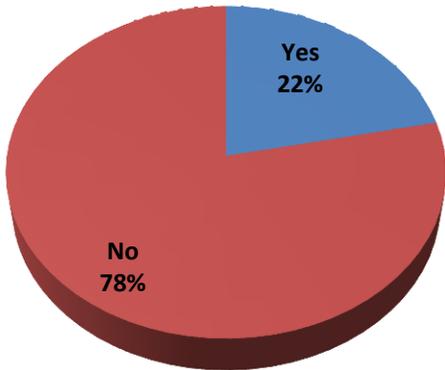
**Seniors Smoke or Use Smokeless Tobacco**



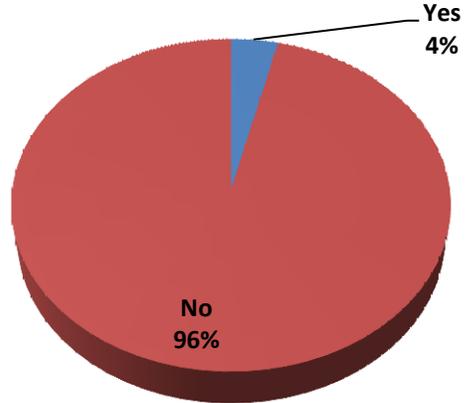
**Senior Smokers Want to Quit**



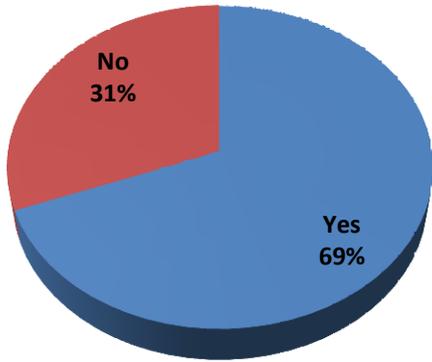
**Senior Alcoholic Beverage Consumption**



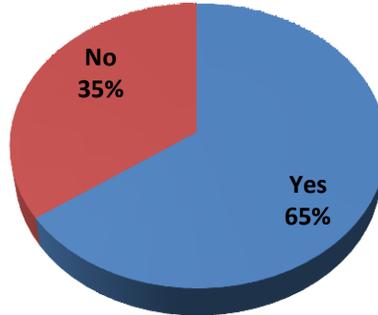
**Seniors that Drive After Drinking Alcoholic Beverages**



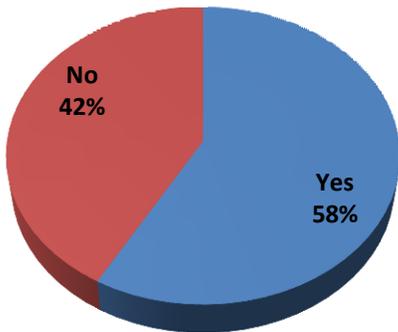
**Seniors Know How to Access Department of Social Services**



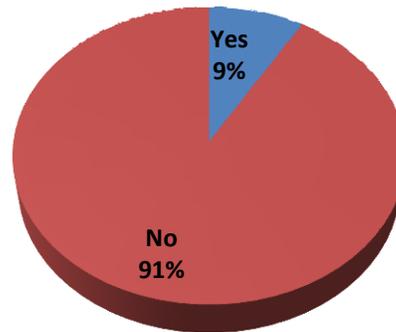
**Senior Know How to Access Mental Health Services**



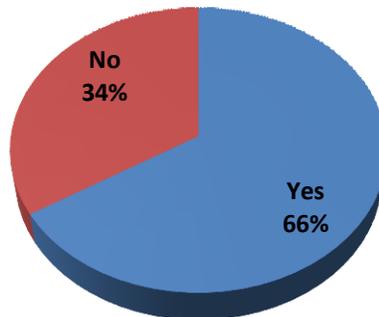
**Seniors Know Where or How to Access Substance Abuse Services**

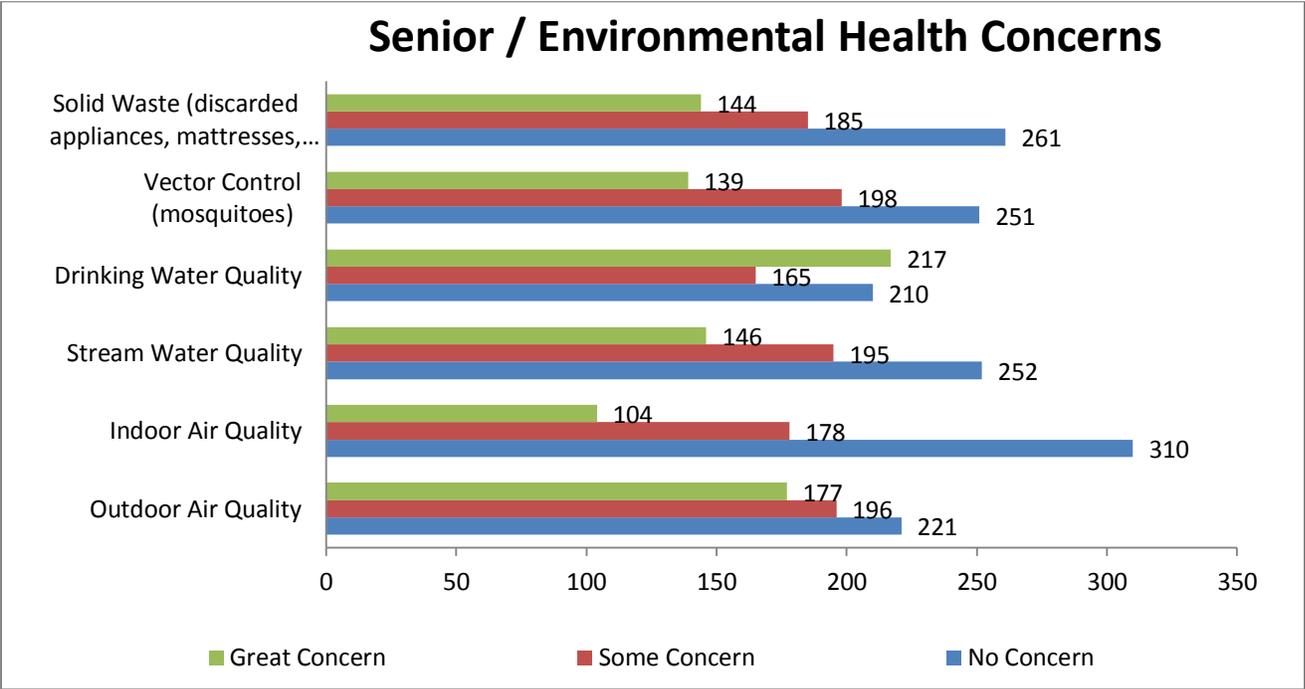
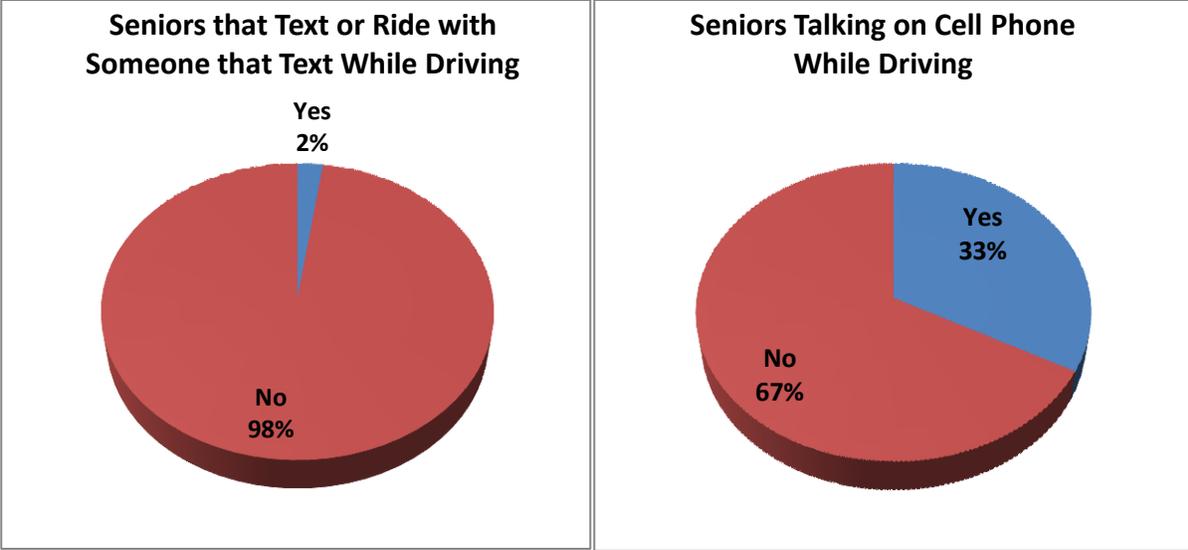


**Senior Caring for Elderly Parent / Family Member**

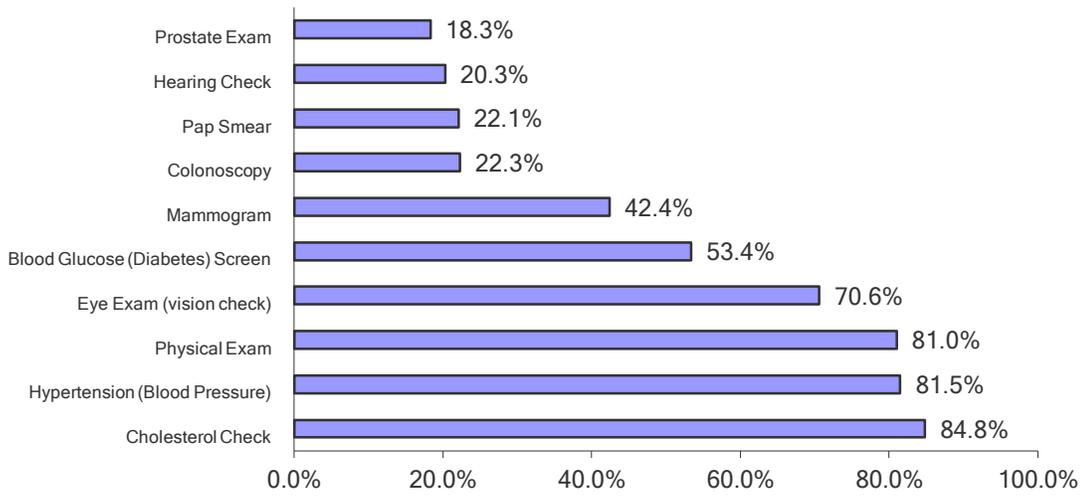


**Seniors Being Abused or Neglected Know Who to Call**

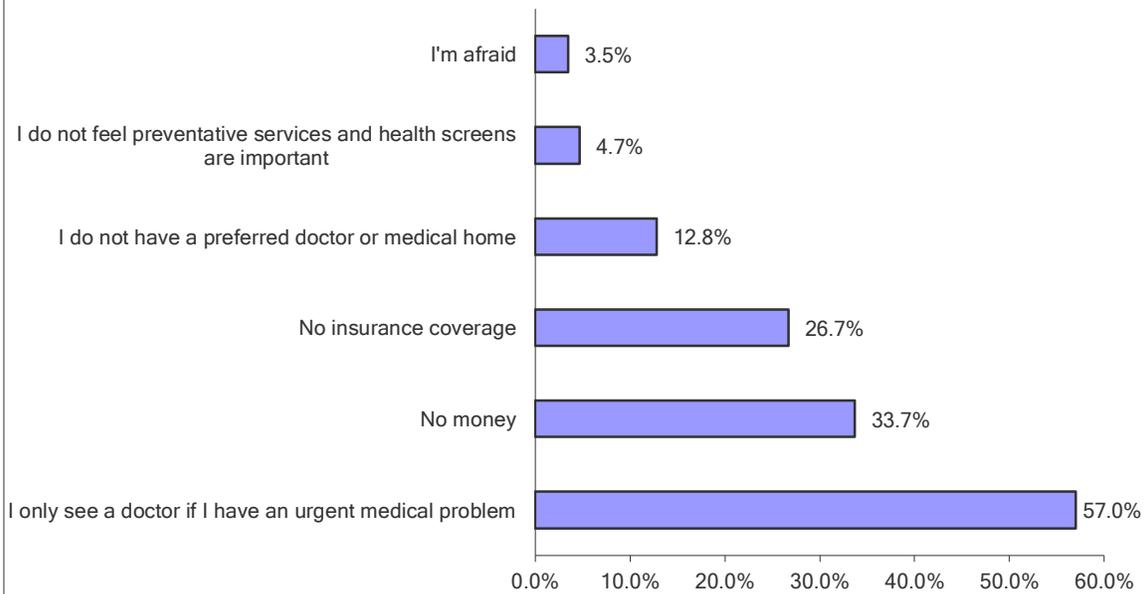




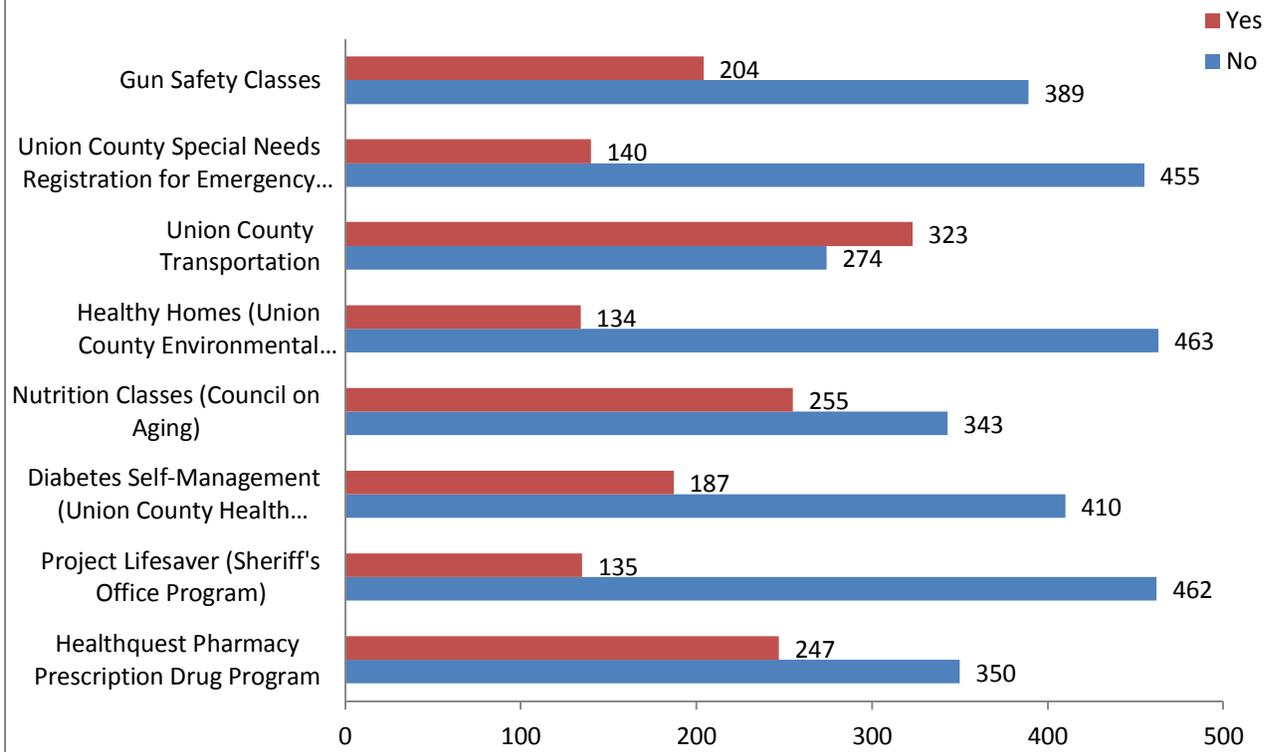
### Preventative Services Seniors Had within the past Year



### Seniors Not Receiving Preventative Services in the Past Year

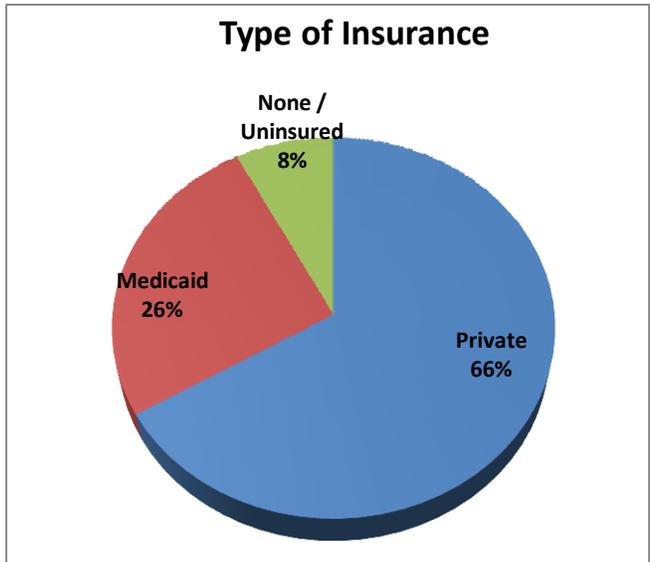
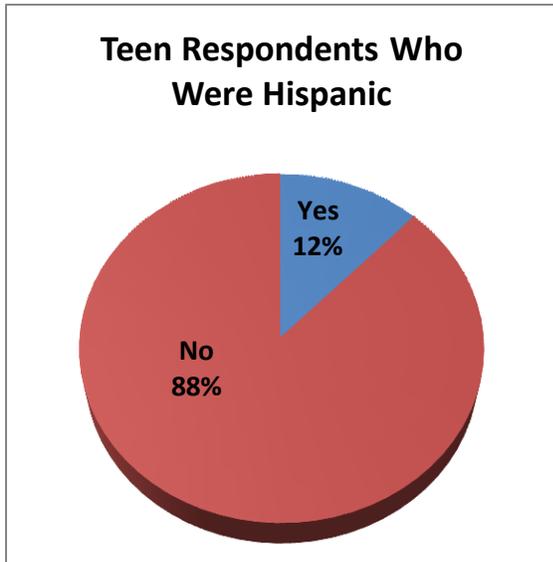
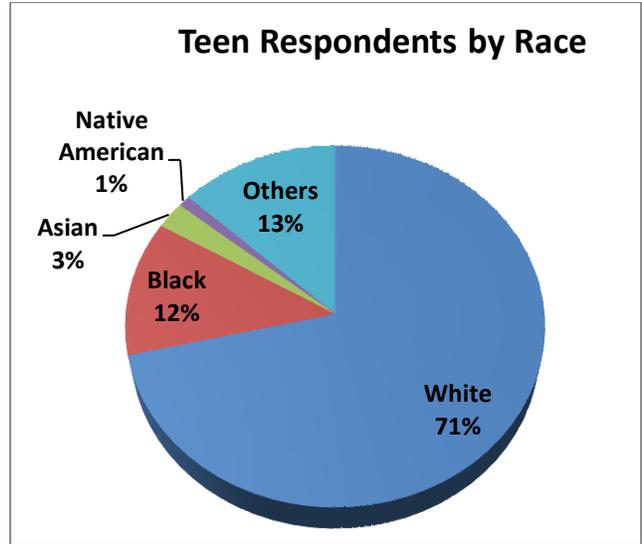
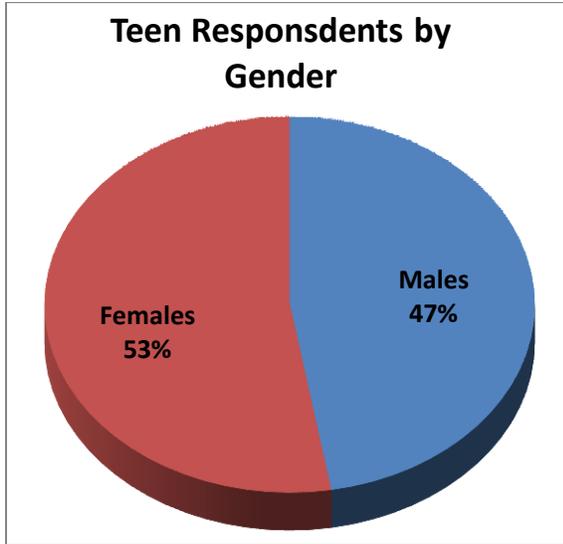


## SENIOR HEALTH, WELLNESS, AND SAFETY RESOURCE AWARENESS

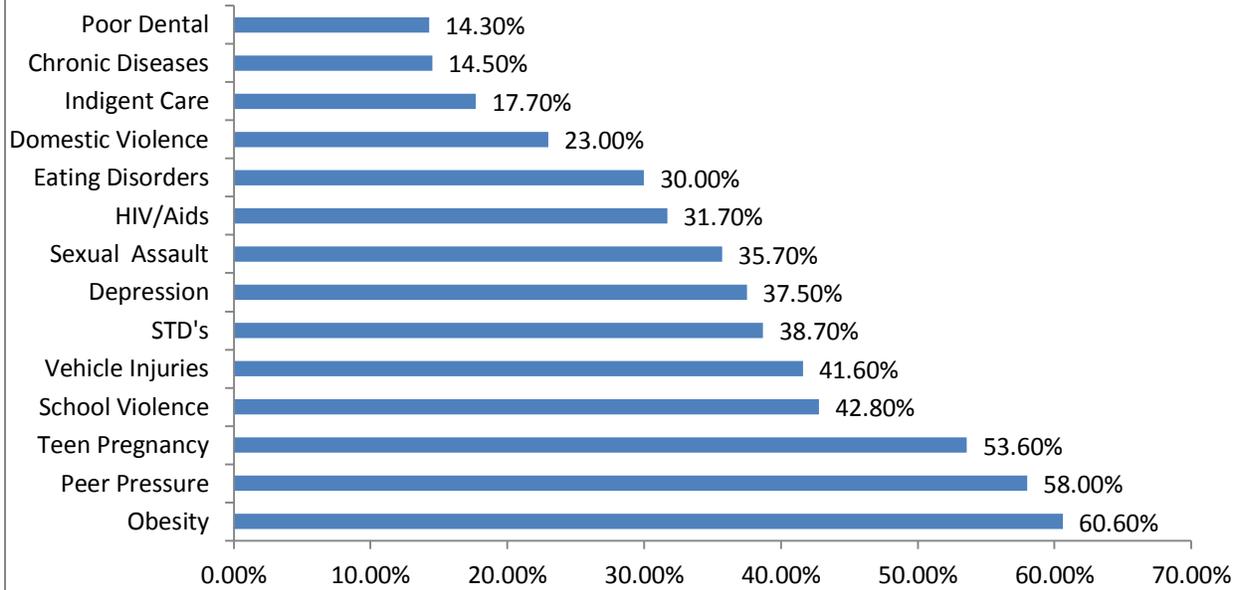


# Teen Survey Results

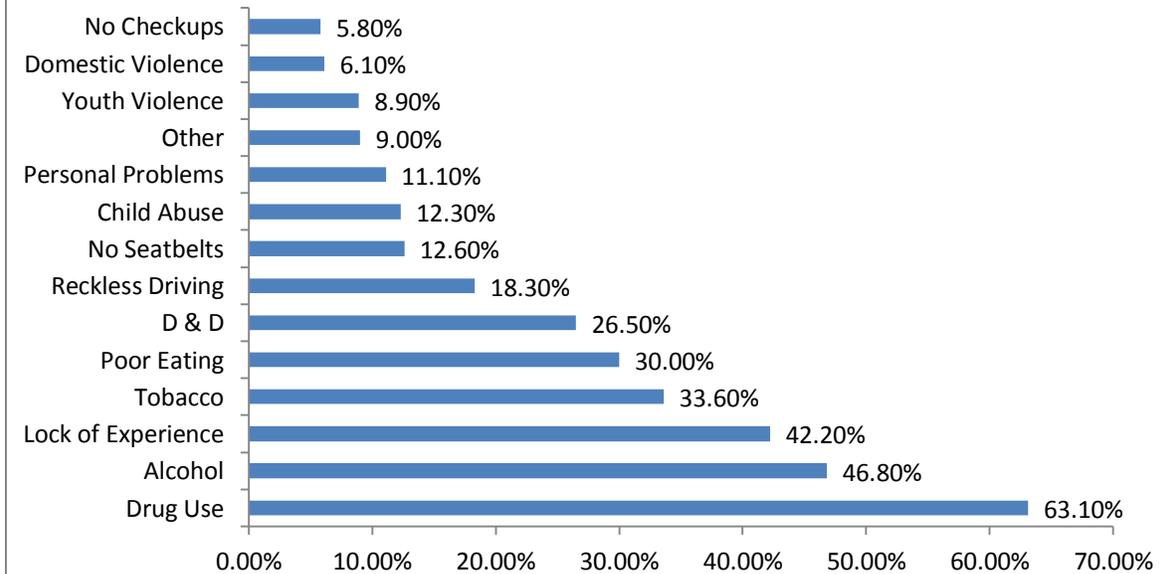
**Teen Survey Respondents by Demographic Breakdown (Ages 13 to 18)**  
586 Total Teen Survey Respondents      28% Teen Respondents Overall



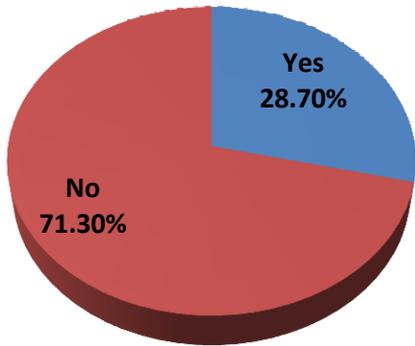
## Teen - Health Care Concerns



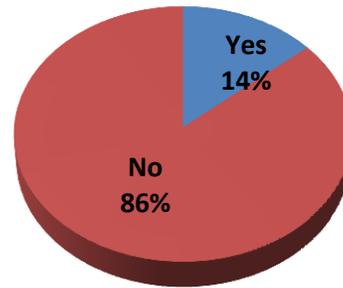
## Behaviors Leading to Poor Health



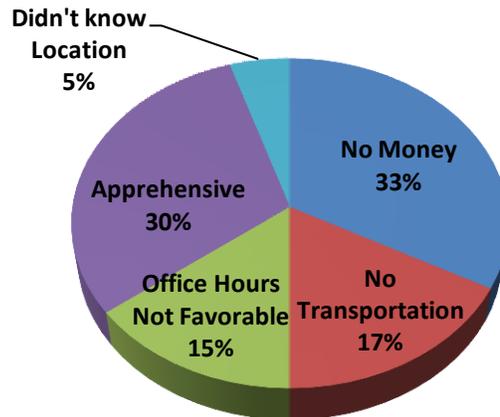
**Needed to See a Doctor But Did Not**



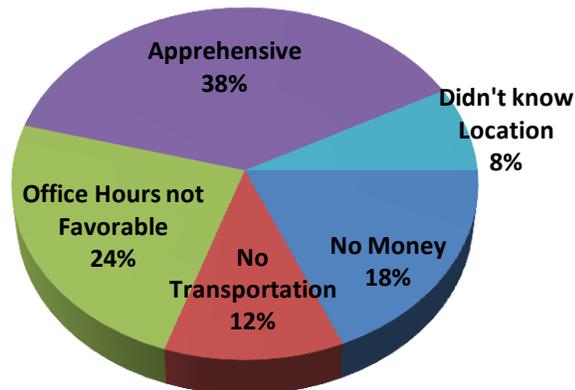
**Needed to See Dentist but Did Not**



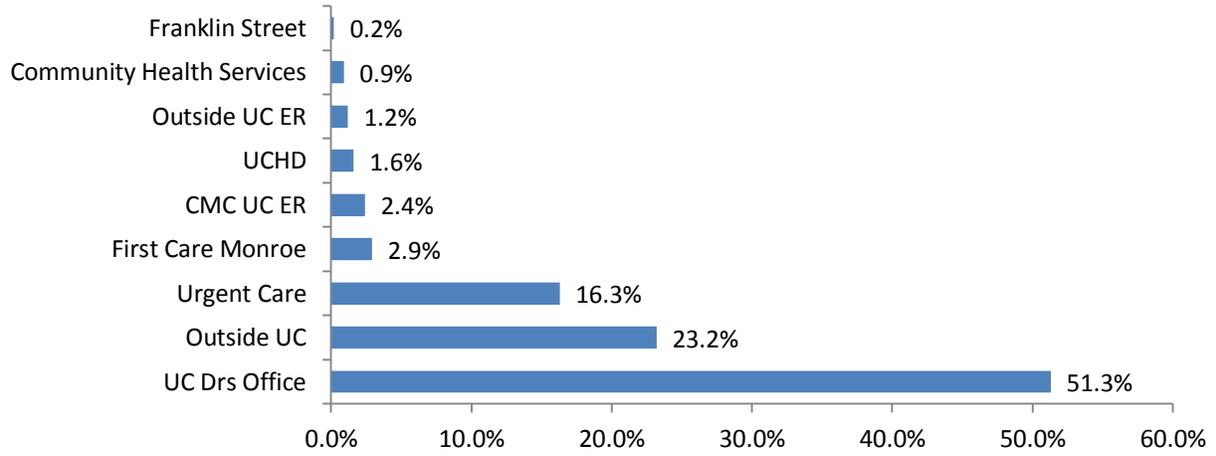
**Reason Not Visited a Dentist**



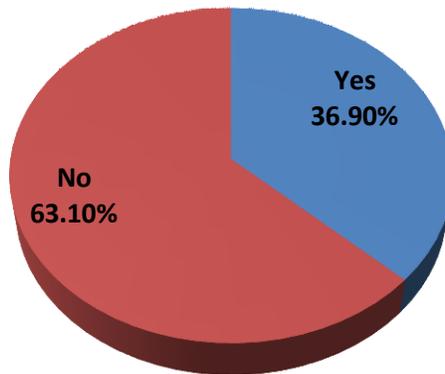
**Main Reason Not To See Doctor**



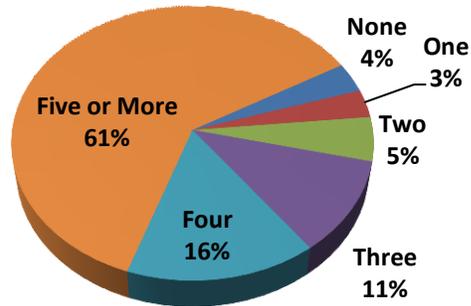
### Where I Go When Sick



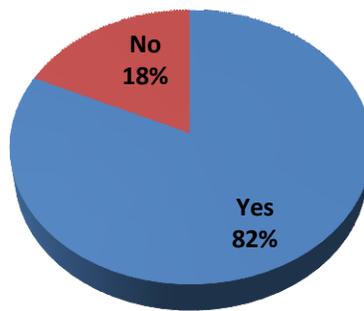
### Visited Minute Clinic in Last Year



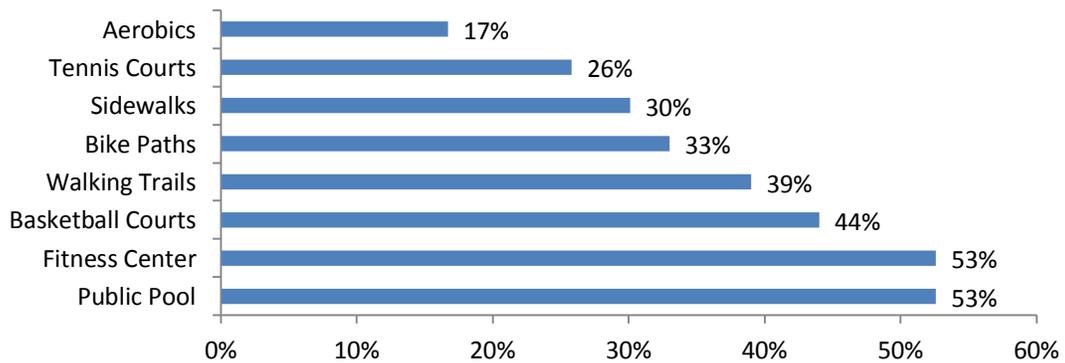
### Number of Times per Week Exercised at Least 20-30 Minutes



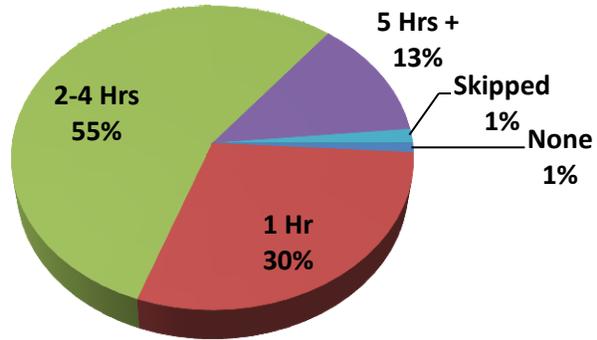
### Teens Response to having Enough Physical Activity Near Home



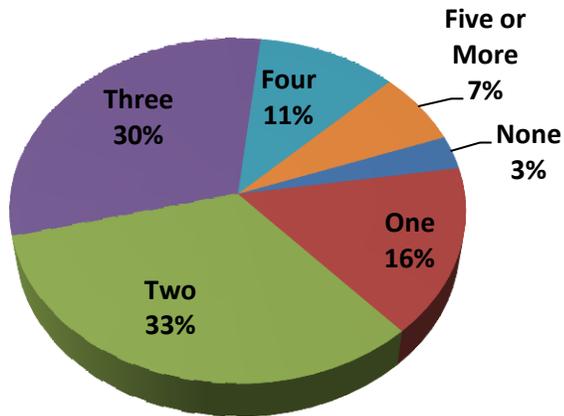
### Opportunities for Teens Needed Near Home



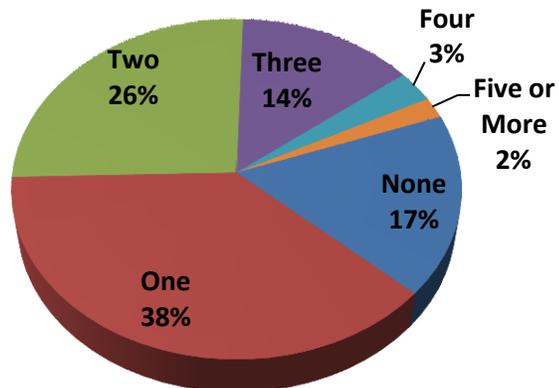
### Hours of Screen Time Each Day



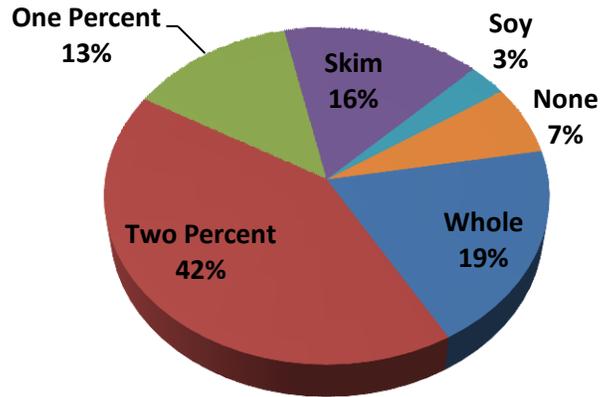
### Daily Servings of Fruits and Vegetables



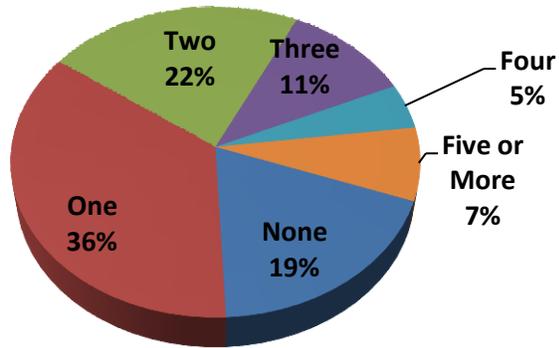
### Weekly Fast Food Intake



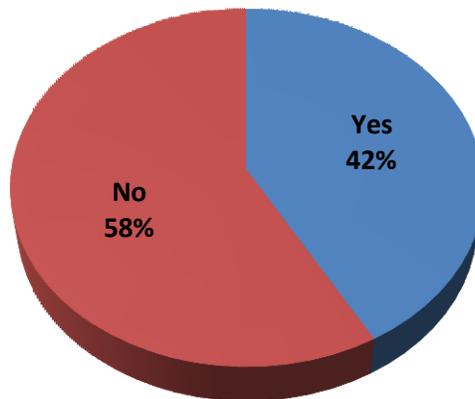
### Type of Milk Consumed



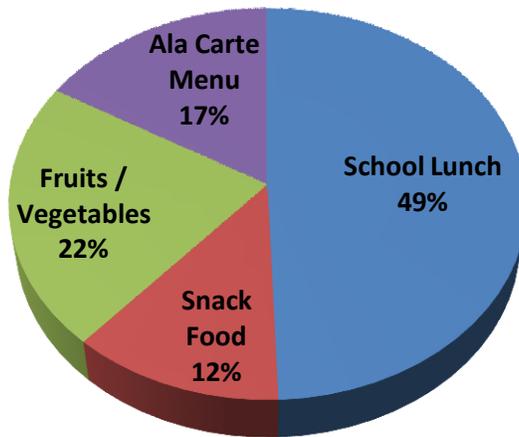
### Daily Soft Drink & High Sugar Drink Consumption



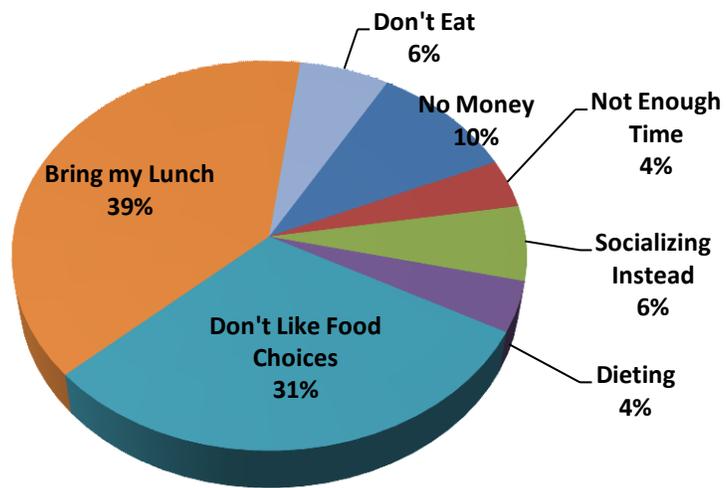
### Drink Coffee Products



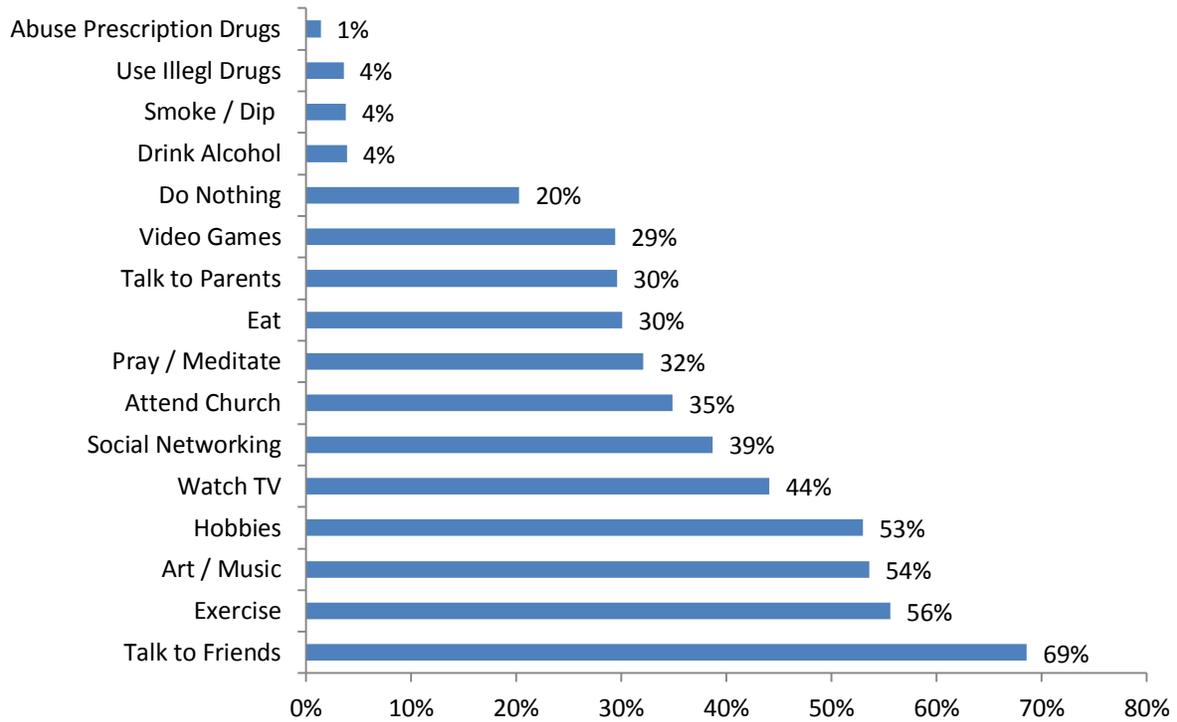
### Students Lunch Consumption



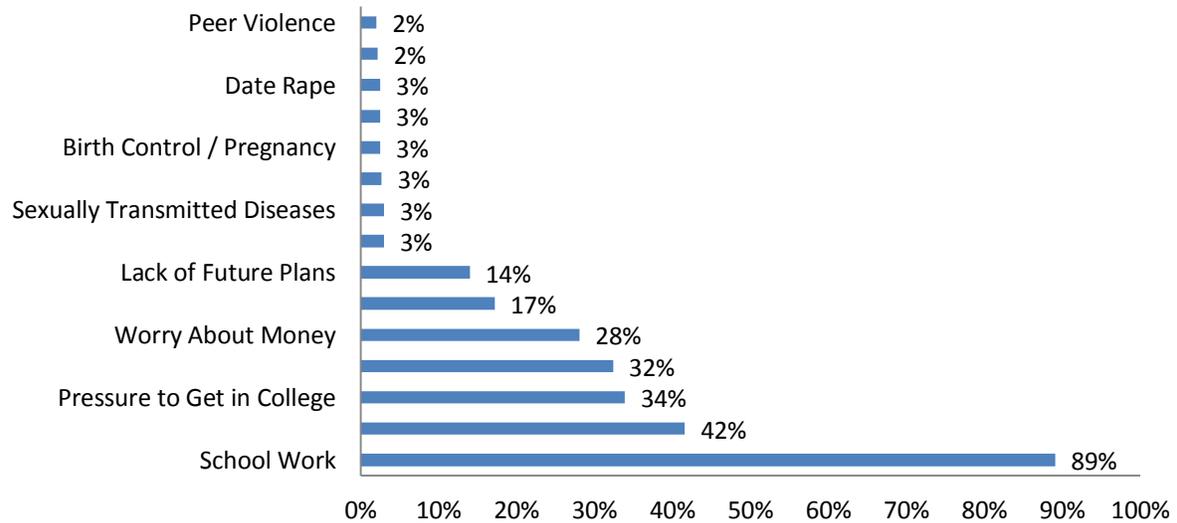
### Why Students Don't Buy Lunch



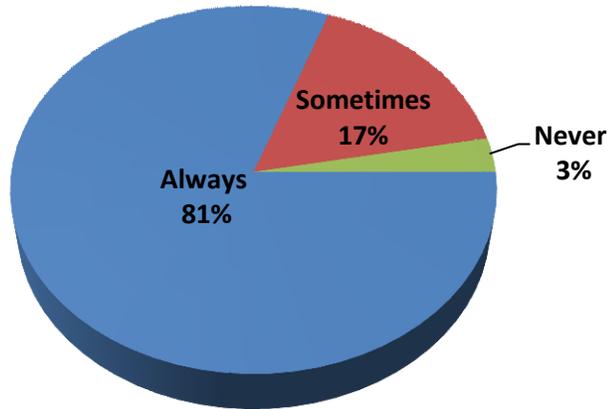
## How Teens Are Dealing With Stress



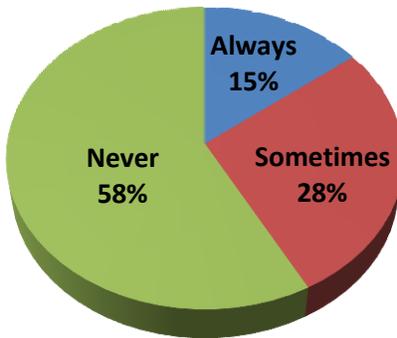
## Sources of Teen Stress



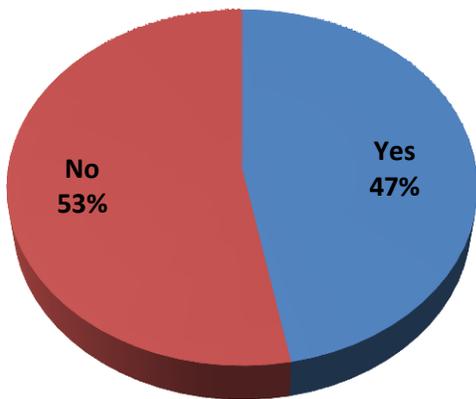
### Teen Seat Belt Use



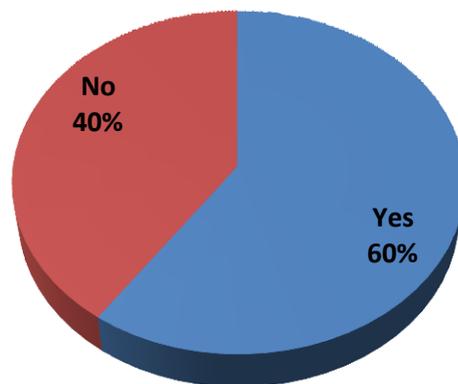
### Teen Helmet Use on Bikes, Skates, Skateboards



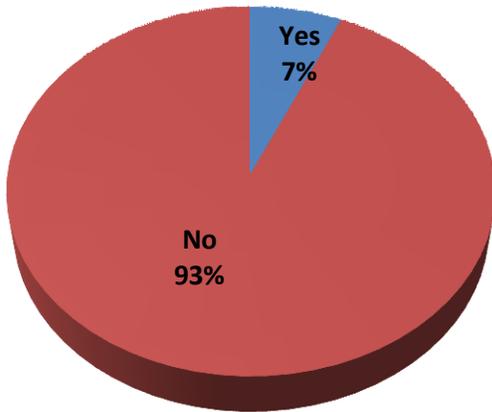
### Guns in Homes Where Teens Live



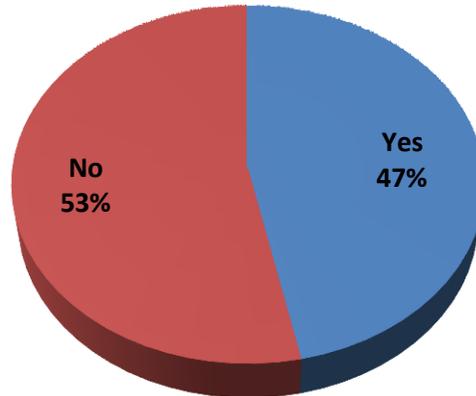
### Teen Homes With Guns that are Kept Locked Up



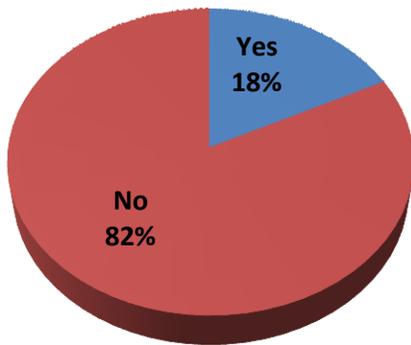
**Teen Smoking / Tobacco Use**



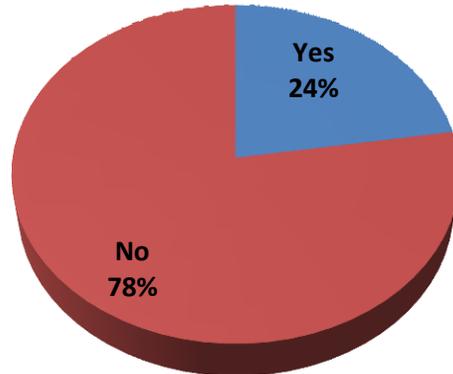
**Teen Smokers that Want to Quit**



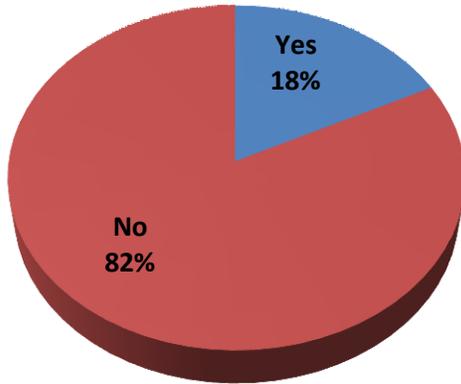
**Teen Alcohol Use**



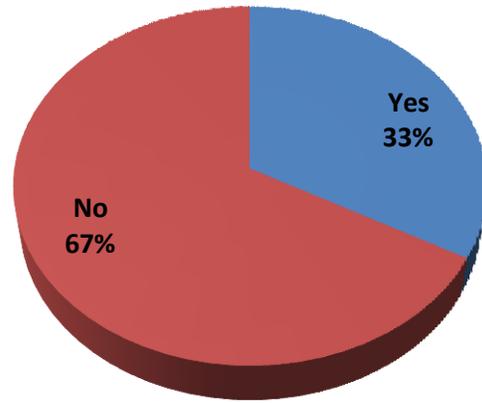
**Teen Drinking and Driving**



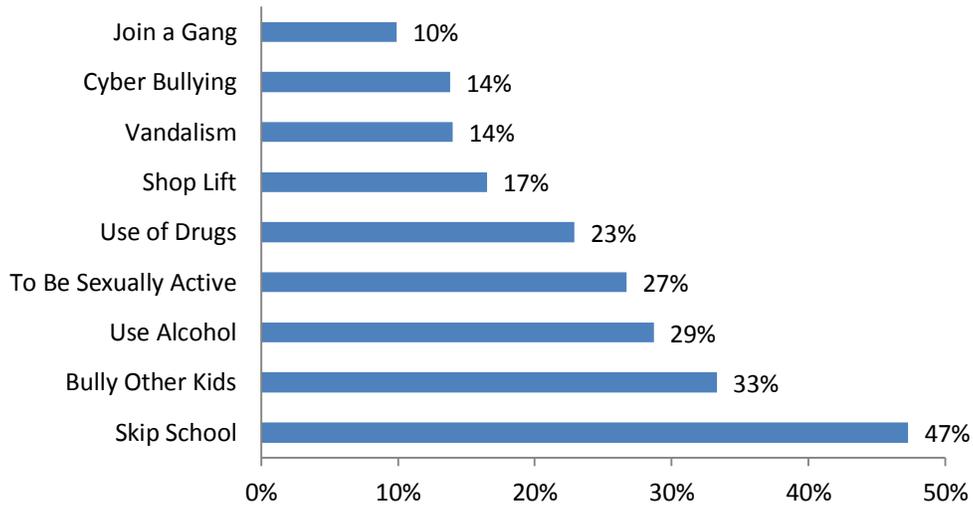
**Teens -Talk on Cell Phone While Driving**



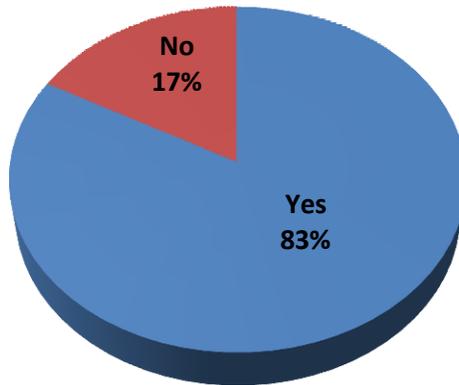
**Teens - Text While Driving**



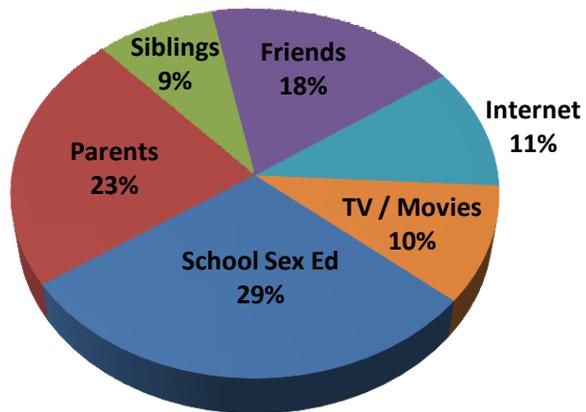
**Teen Peer Pressure**



### School Sex Education Is Sufficient



### Sources of Teen Sex Information



## 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?***

<b>ISSUE/CONCERN/OPINION</b>	<b>Seniors</b>	<b>Mental Health &amp; Clergy</b>	<b>Health Care Providers</b>	<b>Environmental Health</b>	<b>Emergency Services</b>	<b>Latino</b>	<b>Physicians</b>	<b>Teens</b>	<b>Elected Officials</b>
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 clinics to off load Emergency Room and be convenient throughout the County.	X	X	X		X	X	X		
Union County's rate for Alzheimer's is twice that of the State (UC – 57.5, State 28.3). There are several	X						X		X

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials	
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.										
Substance Abuse is an issue in the County. This includes: <ul style="list-style-type: none"> <li>• A lot of older people and teens heavily use alcohol</li> <li>• Seniors take too much medication</li> <li>• Lack of coordination on medication between doctors</li> <li>• Teens steal prescription meds from their homes and other adults</li> </ul>	X	X			X	X	X	X		
The economic situation* has caused people to not get proper health care, especially preventative and mental health care. (*Loss of job and/or insurance, inability to afford co-pay or elective procedures, etc.)		X	X		X					X
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		X								

ISSUE/CONCERN/OPINION	Seniors	Mental Health & Clergy	Health Care Providers	Environmental Health	Emergency Services	Latino	Physicians	Teens	Elected Officials
Clinics.									
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 care.		X	X		X		X		
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 3 <sup>rd</sup> largest County for agriculture in the State.	X	X		X			X		
Reduced tax revenue has caused budget cuts and the discontinuance of	X	X	X	X	X				

<b>ISSUE/CONCERN/OPINION</b>	<b>Seniors</b>	<b>Mental Health &amp; Clergy</b>	<b>Health Care Providers</b>	<b>Environmental Health</b>	<b>Emergency Services</b>	<b>Latino</b>	<b>Physicians</b>	<b>Teens</b>	<b>Elected Officials</b>
services at a time when demand is up.									
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?**

<b>ISSUE/CONCERN/OPINION</b>	<b>Seniors</b>	<b>Mental Health &amp; Clergy</b>	<b>Health Care Providers</b>	<b>Environmental Health</b>	<b>Emergency Services</b>	<b>Latino</b>	<b>Physicians</b>	<b>Teens</b>	<b>Elected Officials</b>
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.schs.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.schs.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	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			
		<b>TOTAL DEATHS --- ALL CAUSES</b>	8,887	77.2
	<b>1</b>	<b>Conditions originating in the perinatal period</b>	2,766	24.0
	<b>2</b>	<b>Motor vehicle injuries</b>	1,401	12.2
	<b>3</b>	<b>Congenital anomalies (birth defects)</b>	1,061	9.2
	<b>4</b>	<b>Other Unintentional injuries</b>	648	5.6
	<b>5</b>	<b>SIDS</b>	491	4.3
	<b>6</b>	<b>Homicide</b>	416	3.6
	<b>7</b>	<b>Cancer - All Sites</b>	278	2.4
	<b>8</b>	<b>Suicide</b>	241	2.1
	<b>9</b>	<b>Diseases of the heart</b>	221	1.9
	<b>10</b>	<b>Septicemia</b>	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	NORTH CAROLINA			
		<b>TOTAL DEATHS --- ALL CAUSES</b>	8,748	69.8
	<b>1</b>	<b>Conditions originating in the perinatal period</b>	2,626	21.0
	<b>2</b>	<b>Congenital anomalies (birth defects)</b>	1,109	8.9
	<b>3</b>	<b>Motor vehicle injuries</b>	1,103	8.8
	<b>4</b>	<b>Other Unintentional injuries</b>	705	5.6
	<b>5</b>	<b>SIDS</b>	479	3.8
	<b>6</b>	<b>Homicide</b>	416	3.3
	<b>7</b>	<b>Cancer - All Sites</b>	269	2.1
	<b>8</b>	<b>Suicide</b>	263	2.1
	<b>9</b>	<b>Diseases of the heart</b>	235	1.9
	<b>10</b>	<b>Pneumonia &amp; influenza</b>	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	Pneumonias 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	Pneumonias 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	Septtemia	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/>

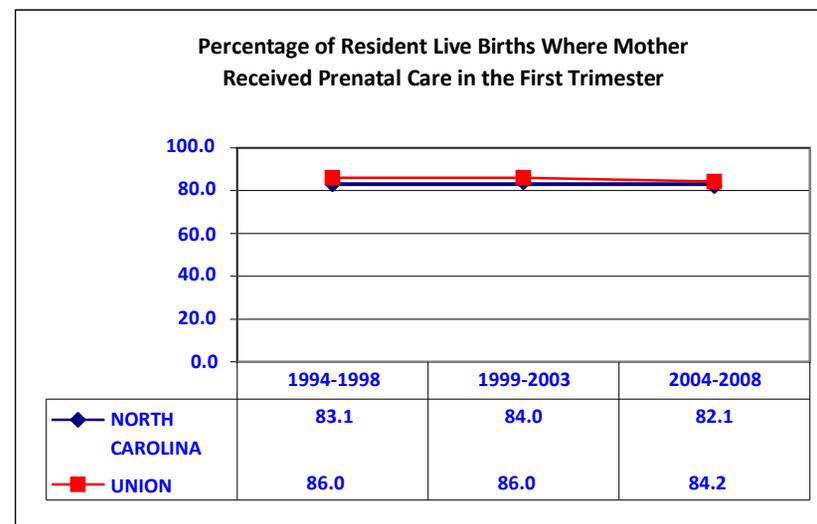
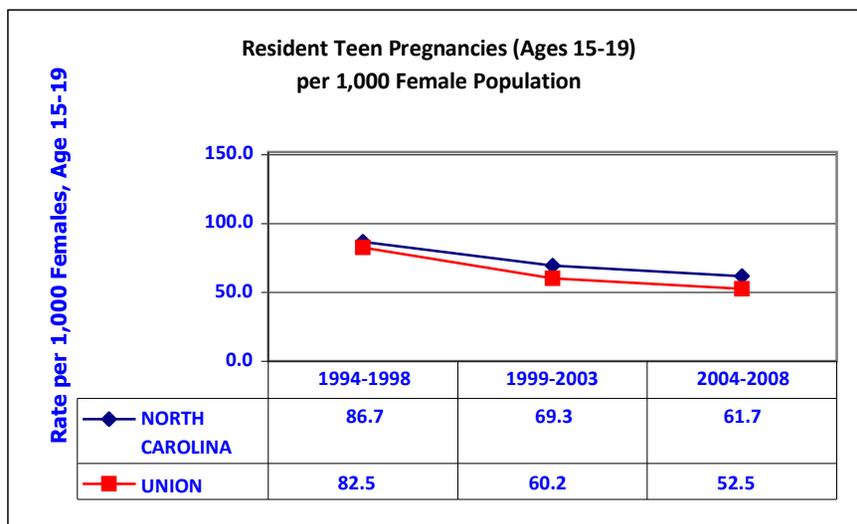
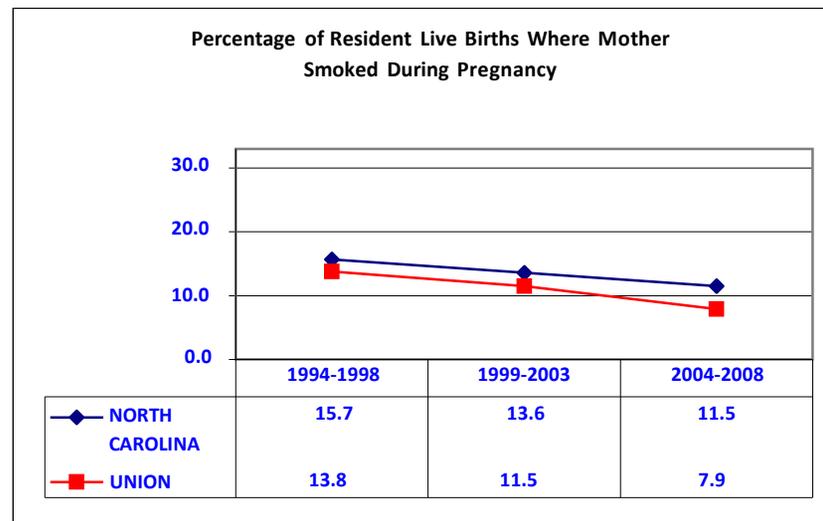
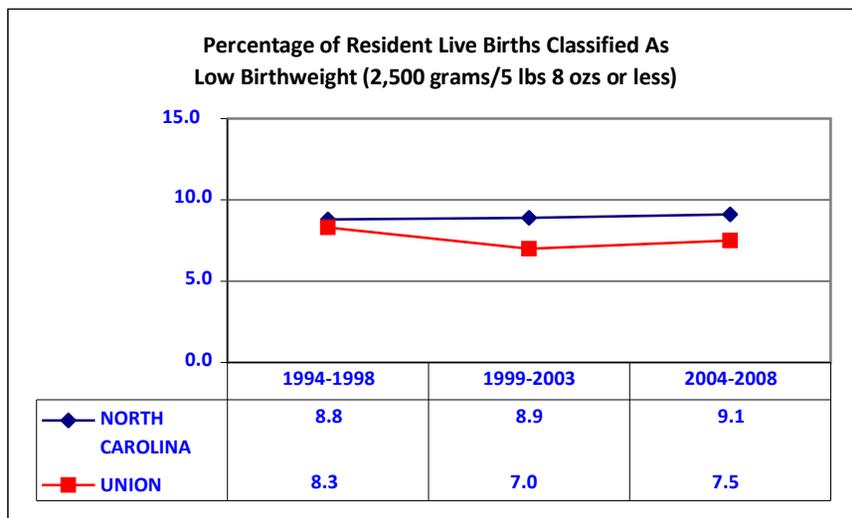
### LCD: Figure 24

**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



2008 Total Population: 191,108

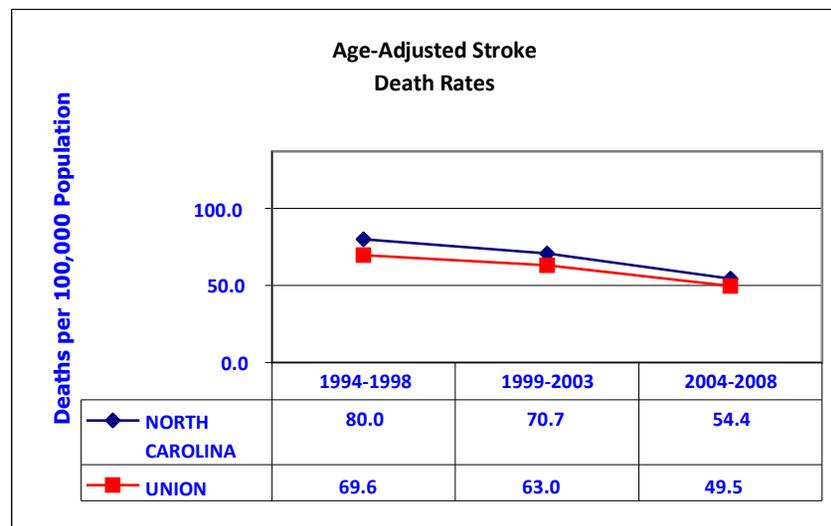
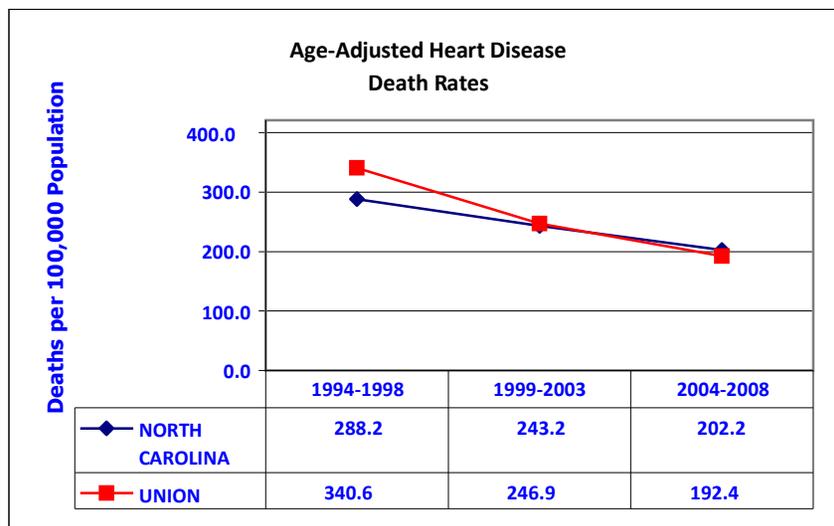
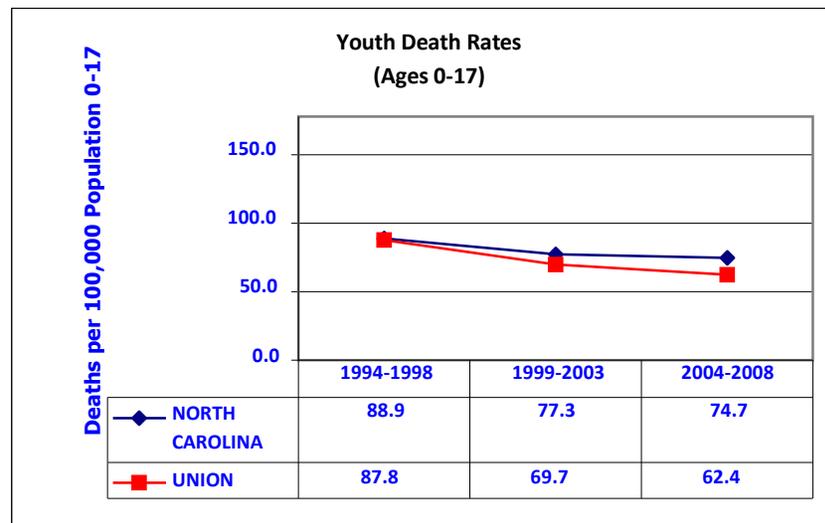
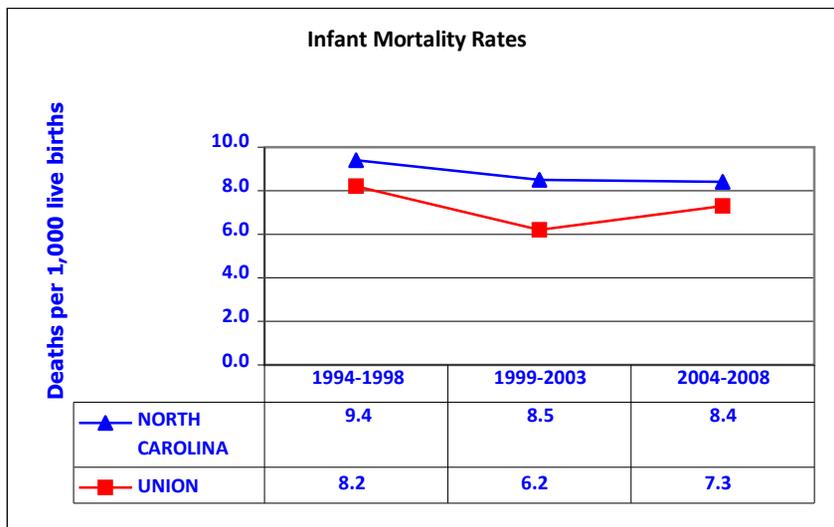
Percentage Population Ages 65+: 9.5

9.5

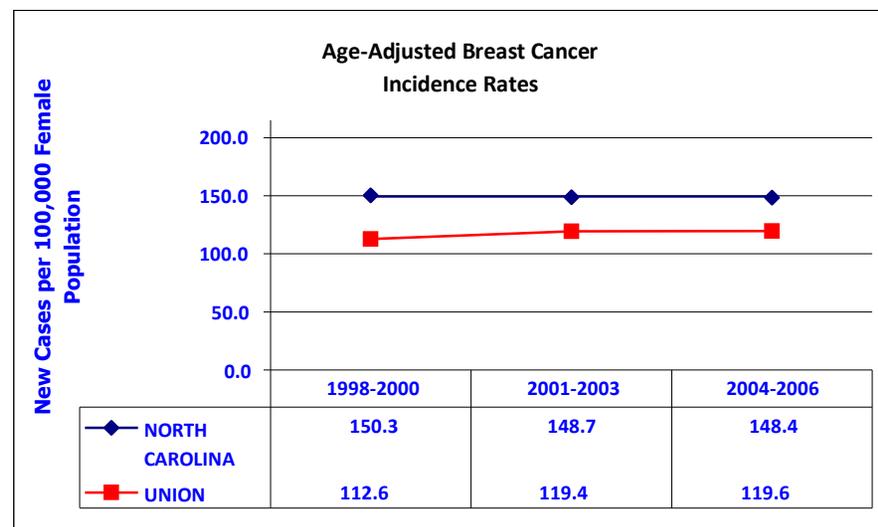
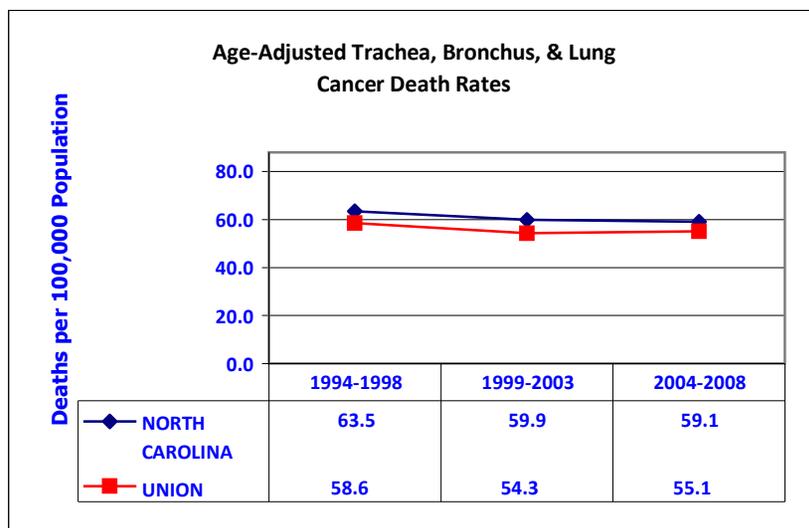
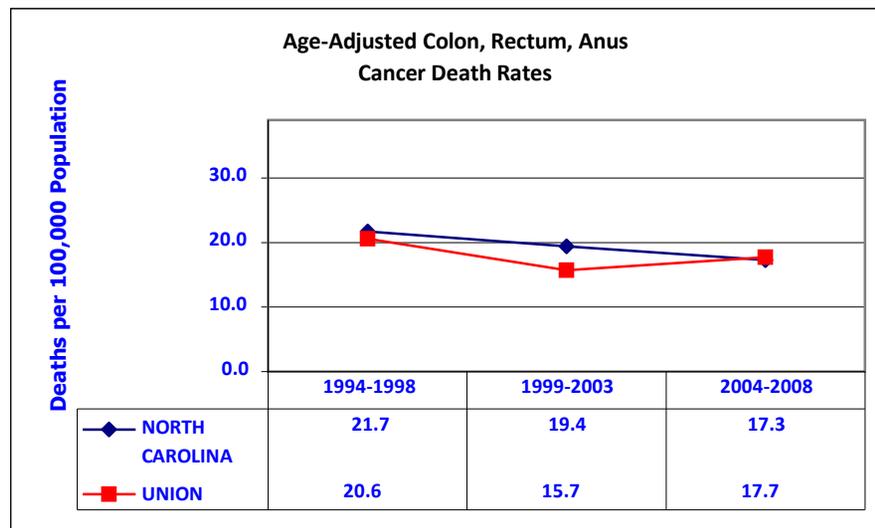
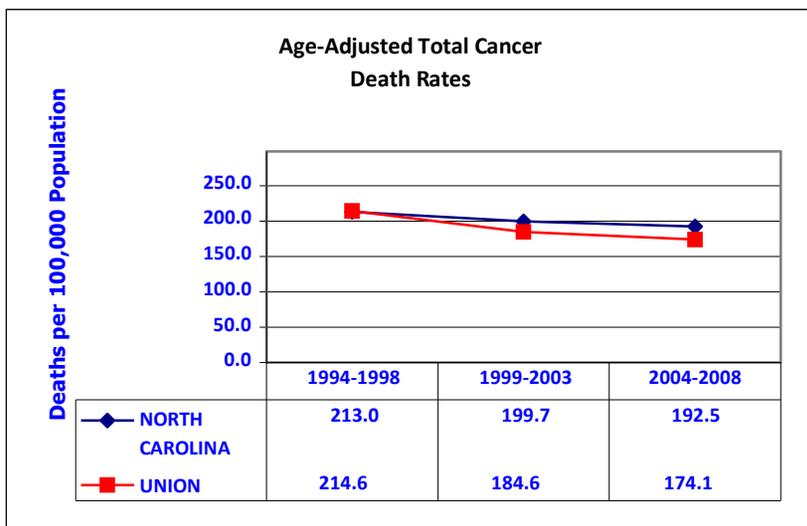
Percentage Population Minority: 12.9

12.9

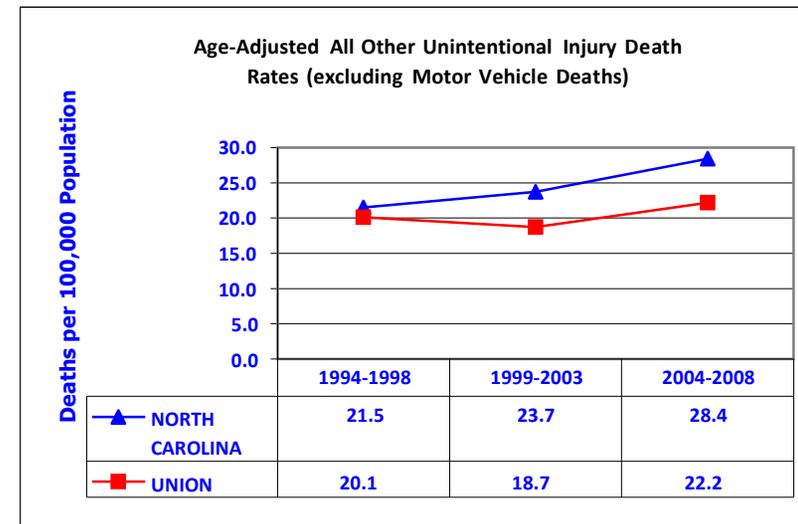
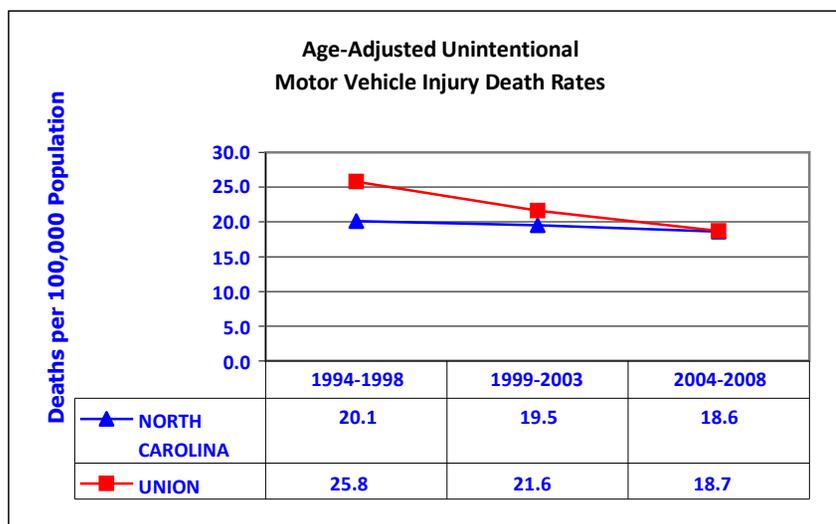
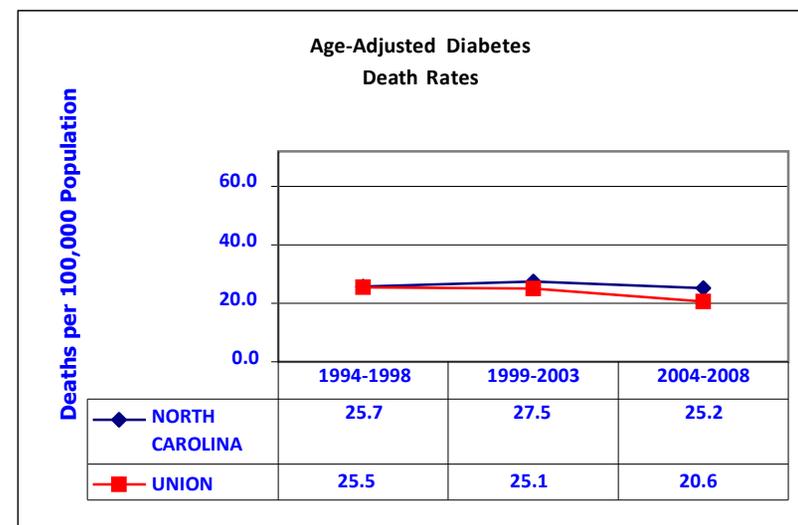
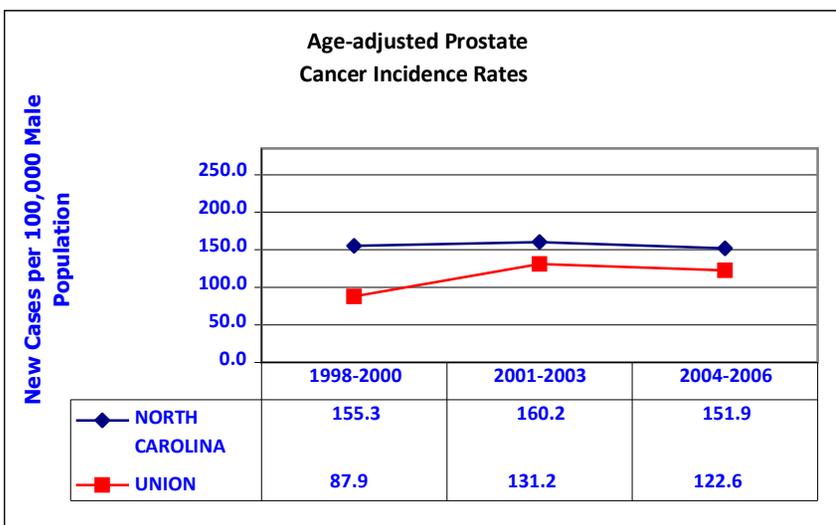
# NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



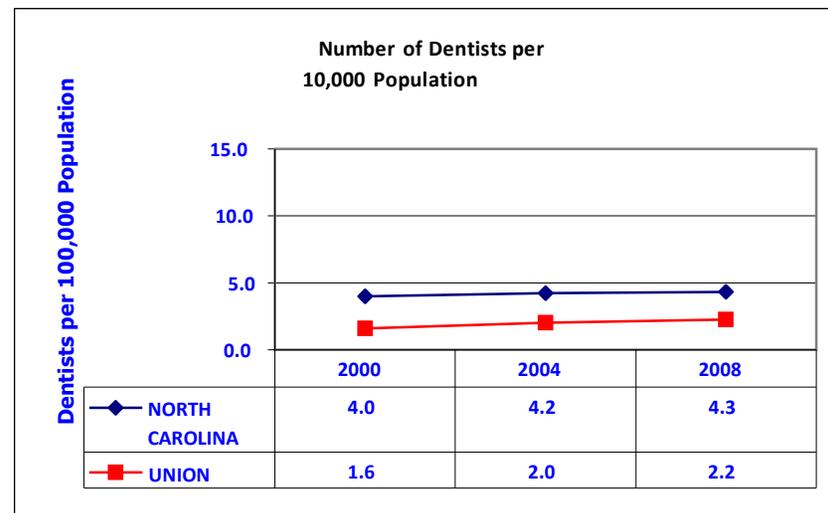
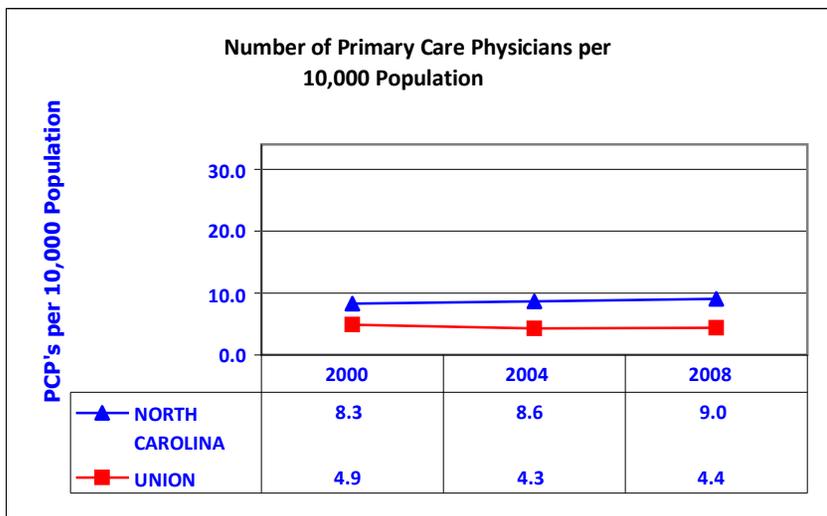
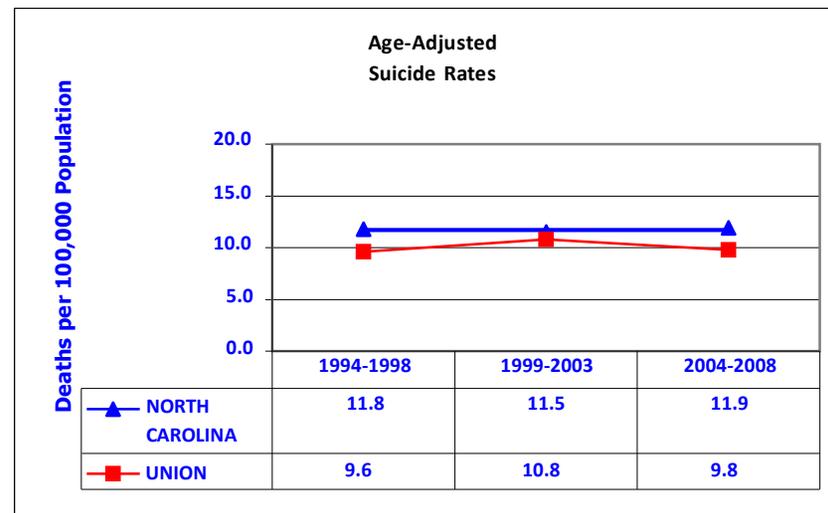
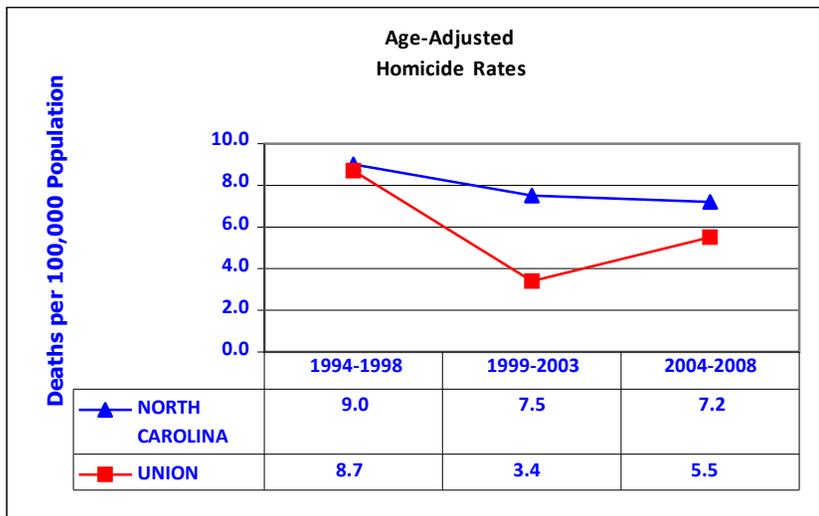
# NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



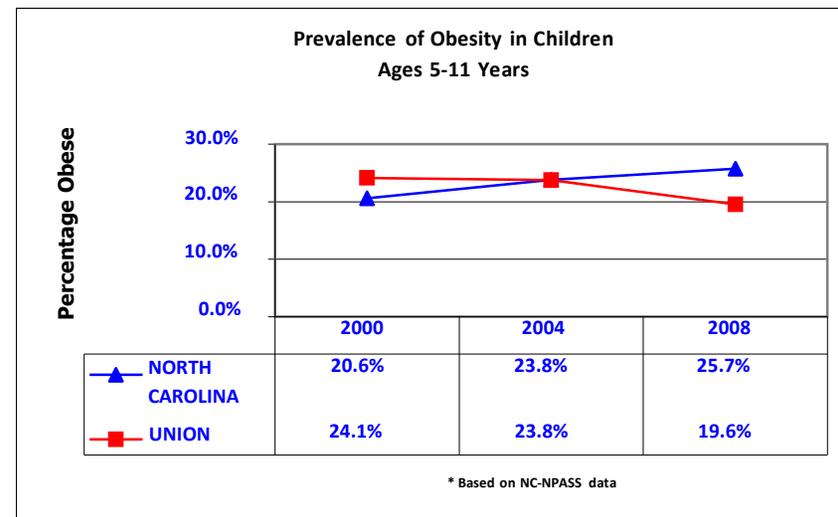
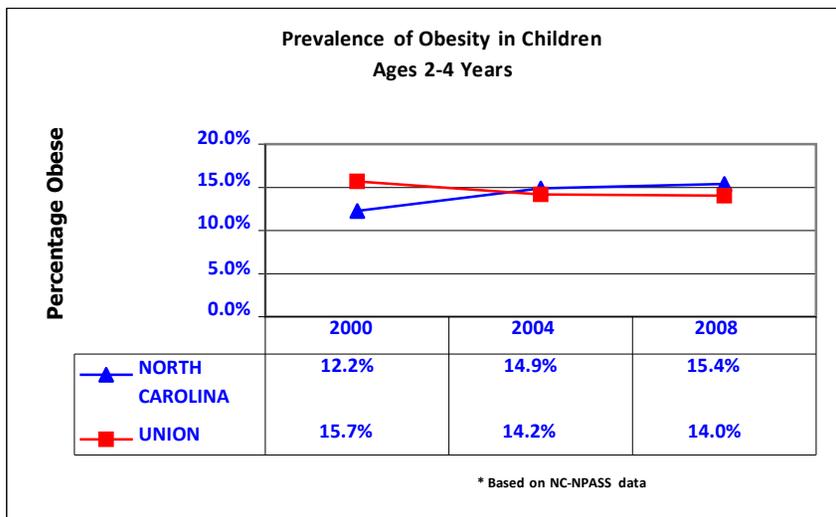
# NORTH CAROLINA STATEWIDE AND COUNTY TRENDS IN KEY HEALTH INDICATORS: UNION COUNTY



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



# 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 Leading Causes	White Male		White Female		Minority Male		Minority Female		OVERALL	
	#	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 Cause of Death:	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female			
	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 Leading Causes	White Male		White Female		Minority Male		Minority Female		OVERALL	
	#	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 Cause of Death:	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female		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	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Leading Causes										
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				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female			
	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 Leading Causes	White Male		White Female		Minority Male		Minority Female		OVERALL	
	#	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 Cause of Death:	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
	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 Leading Causes	White Male		White Female		Minority Male		Minority Female		OVERALL	
	#	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 Cause of Death:	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
	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's Disease

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:**

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

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 Leading Causes	White Male		White Female		Minority Male		Minority Female		OVERALL	
	#	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 Cause of Death:	White, non-Hispanic				African American, non-Hispanic				Other Races, non-Hispanic				Hispanic				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female		Overall	
	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	
	#	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				Overall	
	Male		Female		Male		Female		Male		Female		Male		Female			
	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.state.nc.us/schs/data/databook/>

## 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	
	2009	2010
Number of Cases		
Campylobacter	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](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	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate *				
<b>UNION</b>	19	14	19	12	12	10.3	7.2	9.6	6.0	6.0
<b>NC TOTAL</b>	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	2008	2009	2010	2011	2007	2008	2009	2010	2011
	Cases	Cases	Cases	Cases	Cases	Rate *				
<b>UNION</b>	4	8	8	5	15	2.2	4.1	4.0	2.5	7.5
<b>NC TOTAL</b>	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										
County of Residence	Total		Total		White		Black		Other		Hispanic	
	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.state.nc.us/schs/data/databook/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

	<b>Total Pregnancies</b>	<b>Rate</b>	<b>White Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Af. Am. Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Other Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Hispanic Pregnancies</b>	<b>Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	15,957	49.7	6,525	34.4	6,292	70.2	609	48.9	2,456	82.7
<b>UNION</b>	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

	<b>Total Pregnancies</b>	<b>Rate</b>	<b>White Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Af. Am. Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Other Non- Hispanic Pregnancies</b>	<b>Rate</b>	<b>Hispanic Pregnancies</b>	<b>Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	148,922	76.4	78,671	65.6	40,836	86.1	7,288	84.5	21,573	114.0
<b>UNION</b>	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

	<b>Total Births</b>	<b>Fertility Rate</b>	<b>White Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Af. Am. Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Other Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Hispanic Births</b>	<b>Fertility Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	12,303	38.3	5,162	27.2	4,561	50.9	483	38.8	2,097	70.6
<b>UNION</b>	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

	<b>Total Births</b>	<b>Fertility Rate</b>	<b>White Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Af. Am. Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Other Non-Hispanic Births</b>	<b>Fertility Rate</b>	<b>Hispanic Births</b>	<b>Fertility Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	122,302	62.7	68,496	57.1	28,926	61.0	6,150	71.3	18,730	99.0
<b>UNION</b>	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

	<b>Total Abortions</b>	<b>Rate</b>	<b>White Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Af. Am. Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Other Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Hispanic Abortions</b>	<b>Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	3,544	11.0	1,325	7.0	1,677	18.7	118	9.5	349	11.7
<b>UNION</b>	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

	<b>Total Abortions</b>	<b>Rate</b>	<b>White Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Af. Am. Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Other Non-Hispanic Abortions</b>	<b>Rate</b>	<b>Hispanic Abortions</b>	<b>Rate</b>
<b>RESIDENCE:</b>										
<b>NORTH CAROLINA</b>	25,808	13.2	9,819	8.2	11,559	24.4	1,103	12.8	2,773	14.7
<b>UNION</b>	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**

<b>Figure 1</b>				<b>Non-Hispanic</b>									
		<b>Total</b>		<b>Total</b>		<b>White</b>		<b>Black</b>		<b>Other</b>		<b>Hispanic</b>	
<b>County of Residence</b>	<b>Birth Weight</b>	<b>Births</b>	<b>Pct.</b>	<b>Births</b>	<b>Pct.</b>	<b>Births</b>	<b>Pct.</b>	<b>Births</b>	<b>Pct.</b>	<b>Births</b>	<b>Pct.</b>	<b>Births</b>	<b>Pct.</b>
<b>North Carolina</b>	<b>Low</b>	58,260	9.1	51,694	9.7	27,316	7.7	21,604	14.4	2,774	9.3	6,566	6.3
	<b>Very Low</b>	11,464	1.8	10,269	1.9	4,754	1.3	5,081	3.4	434	1.5	1,195	1.2
<b>Union</b>	<b>Low</b>	1,002	7.6	807	7.7	542	6.4	235	12.9	30	10.5	195	7.4
	<b>Very Low</b>	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 NEO NATAL DEATHS	TOTAL NEO NATAL DEATH RATE	WHITE NON-HISPANIC NEO NATAL DEATHS	WHITE NON-HISPANIC NEO NATAL DEATH RATE	AF. AM. NON-HISPANIC NEO NATAL DEATHS	AF. AM. NON-HISPANIC NEO NATAL DEATH RATE	OTHER NON-HISPANIC NEO NATAL DEATHS	OTHER NON-HISPANIC NEO NATAL DEATH RATE	HISPANIC NEO NATAL DEATHS	HISPANIC NEO NATAL 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
<b>RESIDENCE</b>										
<b>NORTH CAROLINA</b>	1,651	2.6	714	2.0	708	4.8	68	2.3	161	1.6
<b>UNION</b>	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
<b>RESIDENCE</b>										
<b>NORTH CAROLINA</b>	5,066	7.9	2,074	5.9	2,208	14.7	187	6.3	597	5.8
<b>UNION</b>	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
<a href="#">Carbon Monoxide</a> [76 FR 54294, Aug 31, 2011]	primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
<a href="#">Lead</a> [73 FR 66964, Nov 12, 2008]	primary and secondary	Rolling 3 month average	0.15 µg/m <sup>3</sup> <sup>(1)</sup>	Not to be exceeded
<a href="#">Nitrogen Dioxide</a> [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 <sup>(2)</sup>	Annual Mean
<a href="#">Ozone</a> [73 FR 16436, Mar 27, 2008]	primary and secondary	8-hour	0.075 ppm <sup>(3)</sup>	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
<a href="#">Particle Pollution</a> [71 FR 61144, Oct 17, 2006]	PM <sub>2.5</sub>	Annual	15 µg/m <sup>3</sup>	annual mean, averaged over 3 years
		24-hour	35 µg/m <sup>3</sup>	98th percentile, averaged over 3 years
	PM <sub>10</sub>	24-hour	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
<a href="#">Sulfur Dioxide</a> [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]	primary	1-hour	75 ppb <sup>(4)</sup>	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	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 (SO<sub>2</sub>)** and nitrogen dioxide (NO<sub>2</sub>) are both emitted from coal and oil burning power plants and combustion of fossil fuels. Nitrogen dioxide helps to form ground level ozone, acid rain and particulate matter.

## Ground-level Ozone

Ozone (O<sub>3</sub>) is the major component of smog and is created by a reaction between nitrogen oxides and volatile organic compounds. Inhalation of ozone can cause coughing, damage to the lung tissues, reduced lung function and chest pain. Children are particularly at risk since their lungs are still developing and they spend more time outdoors. Union County is listed by the EPA as a non-attainment area for ozone level. (\*see *Ozone Monitor Values Report for Union County in 2011* on following page – Data Source: [http://www.epa.gov/airdata/ad\\_reports.html](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 (AQI) which helps to explain the relationship 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 <sub>2.5</sub> 24-hour (µg/m <sup>3</sup> )
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](http://www.cata.org/Portals/0/images/Services/AQIBreak%20points_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 pollution poses little or no risk. Air quality is considered satisfactory, and air pollution poses little or no risk.

**"Moderate"** The AQI for your community is between 51 and 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.

**"Unhealthy for Sensitive Groups"** When AQI values are between 101 and 150, members of sensitive groups may experience health effects. This means they are likely to be affected at lower levels than the general public. For example, people with lung disease are at greater risk from exposure to ozone, while people with either lung disease or heart disease are at greater risk from exposure to particle pollution. The general public is not likely to be affected when the AQI is in this range.

**"Unhealthy"** Everyone may begin to experience health effects when AQI values are between 151 and 200. Members of sensitive groups may experience more serious health effects.

**"Very Unhealthy"** AQI values between 201 and 300 trigger a health alert, meaning everyone may experience more serious health effects.

**"Hazardous"** AQI values over 300 trigger health warnings of emergency conditions. The entire population is more likely to be affected.

\*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 of days that were considered "moderate," "unhealthy for sensitive groups," "unhealthy," and "very unhealthy" which are of particular concern due to the health effects listed above. There were no reports of "hazardous" days. (see *Air Quality Index Reports for Union County in 2011* on following pages - Data Source: [http://www.epa.gov/airdata/ad\\_reports.html](http://www.epa.gov/airdata/ad_reports.html)).

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

**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](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](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/asp>

## **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](http://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](http://www.co.union.nc.us/PropertyServices/PublicWorks/Stormwater/tabid/279/Default)

### **Solid Waste Management**

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

### **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:

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

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

<b>Type of Service</b>	<b>Number of Inspections / Visits</b>
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, Appalachian 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](http://www.epa.gov/airdata)

[www.schs.state.nc.us/SCHS/index.html](http://www.schs.state.nc.us/SCHS/index.html)

[www.co.union.nc.us](http://www.co.union.nc.us)

[www.ucps.k12.nc.us](http://www.ucps.k12.nc.us)

[www.charlotteusa.com](http://www.charlotteusa.com)

[www.unioncountycoc.com](http://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 Claim



**APPENDIX A**

**COMMUNITY HEALTH**

**ASSESSMENT SURVEY TOOLS**

# 2012 Union County Community Health Assessment Survey

## Adult Residents (between 19 and 54)

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

Please complete the following for statistical purposes only.

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

### HEALTH CONCERNS

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

- |   |                               |
|---|-------------------------------|
| <b>A</b> Cancer                             | <b>B</b> Diabetes             |
| <b>C</b> Heart Disease                      | <b>D</b> High Blood Pressure  |
| <b>E</b> Mental Illness                     | <b>F</b> Depression           |
| <b>G</b> Obesity                            | <b>H</b> Motor Vehicle Injury |
| <b>I</b> Indigent Healthcare (no insurance) | <b>J</b> Dental Health        |

Other: \_\_\_\_\_

### UNHEALTHY BEHAVIORS

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

- |                             |                                      |
|-----------------------------|--------------------------------------|
| <b>A</b> Alcohol Abuse      | <b>B</b> Not Getting Doctor Checkups |
| <b>C</b> Drug Use           | <b>D</b> Lack of Exercise            |
| <b>E</b> Poor Eating Habits | <b>F</b> Tobacco Use                 |
| <b>G</b> Unsafe Sex         | <b>H</b> Domestic Violence           |

Other behaviors, please explain: \_\_\_\_\_

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

Yes                      No

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

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

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

Yes                      No

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

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

**7. Have you used a hospital Emergency Room for a dental issue in the past 12 months?**

Yes                      No

**8. Where do you go most often when you are sick and need medical care? Circle ONLY one.**

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

Other: \_\_\_\_\_

**9. Have you used a Minute Clinic for medical services within the past 12 months?**

Yes                      No

**10. If you were seen at a Minute Clinic, why did you go there?**

- |   |                            |
|---|----------------------------|
| <i>A</i> Cost                                   | <i>B</i> Shorter wait time |
| <i>C</i> Location                               | <i>D</i> No appointment    |
| <i>E</i> Hours of Availability / weekend access |                            |

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

Yes                      No

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

- A** Did not have money to go                      **B** I had to pay other bills (food, utilities, gas, etc.)  
**C** No transportation to the pharmacy              Other(explain): \_\_\_\_\_

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

- None            1                      2                      3                      4                      5 or more

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

- Yes                      No

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

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

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

- None            1                      2                      3                      4                      5 or more

**17. Have you ever purchased fruits and vegetables from a Farmers Market in Union County?**

- Yes                      No

**18. What are the three largest sources of stress / concern in your life? Circle the letter of up to three of the choices listed below.**

- A** Worry about money              **B** Medical Problems                      **C** Paying for Prescription Drugs  
**D** Personal Safety                      **E** Use of Alcohol                              **F** Use of Drugs  
**G** Community problems              **H** Unemployment                              **I** Dealing with Family Members  
**J** Environmental Concerns              **K** Domestic Violence                              **L** Lack of Health Insurance  
**M** Worry about long term care for self or relative              **N** Identity Theft / Fraud

**19. Do you have an Emergency plan for yourself and your family?**

- Yes                      No

**20. Do you keep a supply of non-perishable food and water for emergencies?**

- Yes                      No

**21. Do you keep a supply of your prescription medications for emergencies?**

- Yes                      No                      NA (do not take prescription medication)

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

Always                      Sometimes                      Never

**23. Do you have a gun in your home?**

Yes                      No

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

Yes                      No

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

Yes                      No

**26. If yes, would you like to quit?**

Yes                      No

**27. Do you drink alcoholic beverages?**

Yes                      No

**28. Do you ever drive after drinking alcoholic beverages?**

Yes                      No

**29. Do you talk on your cell phone while you are driving?**

Yes                      No

**30. Do you text while you are driving or ride with someone that text while driving?**

Yes                      No

**31. Do you have a smoke detector in your home?**

Yes                      No

**32. Do you check the batteries in your smoke detector once a year?**

Yes                      No

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

Yes                      No

**34. Would you know how to access Department of Social Service programs if you needed assistance?**

Yes                      No

**35. ENVIRONMENTAL HEALTH (circle your answer)**

	Great Concern	Some Concern	No Concern
Outdoor Air Quality	GC	SC	NC
Indoor Air Quality	GC	SC	NC
Stream Water Quality	GC	SC	NC
Drinking Water Quality	GC	SC	NC
Preserving Greenspace	GC	SC	NC
Vector Control (mosquitos)	GC	SC	NC
Solid Waste (discarded appliances, mattresses, etc.)	GC	SC	NC

**36. PREVENTATIVE SERVICES: Check all preventative health services that you have had within the past 12 months.**

- |   |                                    |  |
|---|------------------------------------|--|
| <input type="checkbox"/> Physical Exam                      | <input type="checkbox"/> Mammogram | <input type="checkbox"/> Prostate Exam |
| <input type="checkbox"/> Eye Exam (vision check)            | <input type="checkbox"/> Pap Smear | <input type="checkbox"/> Hearing Check |
| <input type="checkbox"/> Hypertension (Blood Pressure)      |                                    |  |
| <input type="checkbox"/> Colonoscopy                        |                                    |  |
| <input type="checkbox"/> Cholesterol Check                  |                                    |  |
| <input type="checkbox"/> Blood Glucose (Diabetes) Screening |                                    |  |

**37. HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS**

Indicate whether or not you are aware of the program or service:

Healthquest Pharmacy Prescription Drug Program	Yes	No
Project Lifesaver (Sheriff's Office Program)	Yes	No
Diabetes Self-Management (Union County Health Department)	Yes	No
Nutrition Classes (Council on Aging)	Yes	No
Healthy Homes (Union County Environmental Health)	Yes	No
Union County Transportation	Yes	No
Union County Special Needs Registration for Emergency Shelter	Yes	No
Gun Safety Classes	Yes	No

**38. If you did not receive any preventative services within the past 12 months, please indicate why. Mark all that apply.**

No money

No insurance coverage

I do not feel preventative services and health screenings are important

I only see a doctor if I have an urgent medical problem

I am afraid

I do not have a preferred doctor / medical home

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

---

---

## 2012 Union County Community Health Assessment Survey For Seniors (55 and older)

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

Zip Code \_\_\_\_\_ Age \_\_\_\_\_ I am: Male Female

What city or town in Union County do you live in? \_\_\_\_\_

Race: White Black Asian Native American Other: \_\_\_\_\_

Hispanic: Yes No Do you live alone? Yes No

What type of insurance do you have? None Private Medicare Medicaid

Are you employed? Yes No

What is your annual household income?

\$0 - \$9,999	\$10,000 - \$14,999	\$15,000 - \$24,999	\$25,000 - \$34,999	\$35,000 - \$49,999
\$50,000 - \$74,999	\$75,000 - \$99,999	\$100,000 - \$149,999	\$150,000 - \$199,999	\$200,000+

1. Listed below are behaviors that may cause poor health. Circle the letter of up to three behaviors that you think keep people in Union County from being healthy.

- |   |  |
|---|--|
| <p><b>A</b> Not going to a doctor</p> <p><b>C</b> Lack of Exercise</p> <p><b>E</b> Drug Use</p> <p><b>G</b> Not asking for help with personal problem</p> | <p><b>B</b> Poor Eating Habits</p> <p><b>D</b> Alcohol Use</p> <p><b>F</b> Tobacco Use</p> <p><b>H</b> Domestic Violence</p> |
|---|--|
- Other behaviors, please explain: \_\_\_\_\_

2. Was there a time in the last 12 months that you needed to see a doctor but did not?

Yes No

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

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

Other: \_\_\_\_\_

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

Yes                      No

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

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

**C** I had not transportation                      **D** Did not know who to call or where to go

**E** The office was not open when I could get there

Other reason: \_\_\_\_\_

**6. Have you used a hospital Emergency Room for a dental health problem within the past 12 months?**

Yes                      No

**7. Where do you go most often when you are sick and need medical care? Circle one.**

**A** Doctors office in Union County

**B** Urgent Care Facility

**C** Doctors office outside Union County

**D** Union County Health Department

**E** CMC Union Emergency Room

**F** Franklin Street Ambulatory Clinic

**G** Emergency Room outside Union County

**H** Chiropractor

**I** First Care in Monroe

**J** Community Health Services

Other: \_\_\_\_\_

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

\_\_\_\_\_

**9. Have you used a Minute Clinic for medical services in the past 12 months?**

Yes                      No

**10. If you were seen at a Minute Clinic, why did you go there?**

**A** Cost    **B** Shorter wait time

**C** Location                                      **D** No appointment

**E** Hours of Availability / weekend access

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

Yes                      No

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

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

**C** No transportation to the Pharmacy                      Other: \_\_\_\_\_

**13. How many days a week do you normally get at least 30 minutes of exercise?**

None              1              2              3              4              5 or more

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

Yes                      No

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

None            1                      2                      3                      4                      5 or more

**16. Have you ever purchased fruits and vegetables from a Farmers Market in Union County?**

Yes                      No

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

**A** Medical problems

**B** Dental health needs

**C** No health insurance

**D** Loneliness

**E** Memory related problems

**F** Personal safety

**G** Paying for prescription drugs

**H** Limited funds for food

**I** Unable to understand medications

**J** Worry about long term care for myself or family member

**18. Do you have an emergency plan for yourself and your family?**

Yes                      No

**19. Do you keep a supply of water and non-perishable food for emergencies?**

Yes                      No

**20. Do you keep a supply of your prescription medications for emergencies?**

Yes                      No

**21. Does anyone help you take or manage your medications?**

Yes                      No

**22. Do you receive any Home Health Services in your home?**

Yes                      No

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

Always                      Sometimes                      Never

**24. Do you have a gun in your home?**

Yes                      No

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

Yes                      No

**26. Do you have a smoke detector in your home?**

Yes                      No

**27. Do you check the batteries in your smoke detector at least once year?**

Yes                      No

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

Yes                      No

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

Yes                      No

**30. If yes, would you like to quit?**

Yes                      No

**31. Do you drink alcoholic beverages?**

Yes                      No

**32. Do you ever drive after drinking alcoholic beverages?**

Yes                      No

**33. Do you know where or how to access mental health services if you needed to?**

Yes                      No

**34. Do you know where or how to access substance abuse services if you needed to?**

Yes                      No

**35. Would you know how to access Department of Social Service programs if you needed Assistance?**

Yes                      No

**36. Are you caring for an elderly parent or family member in your home?**

Yes                      No

**37. If you were being abused or neglected would you know who or where to call?**

Yes                      No

**38. Do you talk on your cell phone while driving?**

Yes                      No

**39. Do you text while you are driving or ride with someone that text while driving?**

Yes                      No

**40. ENVIRONMENTAL HEALTH (circle your answer)**

	<b>Great Concern</b>	<b>Some Concern</b>	<b>No Concern</b>
Outdoor Air Quality	GC	SC	NC
Indoor Air Quality	GC	SC	NC
Stream Water Quality	GC	SC	NC
Drinking Water Quality	GC	SC	NC
Vector Control (mosquitos)	GC	SC	NC
Solid Waste (discarded appliances, mattresses, etc.)	GC	SC	NC

**41. PREVENTATIVE SERVICES: Check all preventative health services that you have had within the past 12 months.**

Physical Exam                       Mammogram                       Prostate Exam  
 Eye Exam (vision check)                       Pap Smear                       Hearing Check  
 Hypertension (Blood Pressure)                       Cholesterol Check                       Colonoscopy  
 Blood Glucose (Diabetes) Screen

**42. If you did not receive any preventative services within the past 12 months, please indicate why. Check all that apply.**

No money  
 No insurance coverage  
 I do not feel preventative services / health screens are important  
 I only see a doctor if I have an urgent medical problem  
 I do not have a preferred doctor or medical home  
 I'm afraid

**43. HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS**

**Indicate whether or not you are aware of the program or service:**

Healthquest Pharmacy Prescription Drug Program	Yes	No
Project Lifesaver (Sheriff's Office Program)	Yes	No
Diabetes Self-Management (Union County Health Department)	Yes	No
Nutrition Classes (Council on Aging)	Yes	No
Healthy Homes (Union County Environmental Health)	Yes	No
Union County Transportation	Yes	No
Union County Special Needs Registration for Emergency Shelters	Yes	No
Gun Safety Classes	Yes	No

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

## 2012 Union County Community Health Assessment Survey

### FOR TEENS (13 – 18)

The intent of this survey is to help identify the major health issues facing Union County teens today. Please take a few minutes to complete the survey.

The survey is anonymous. **DO NOT put your name on the survey. Your answers will not be connected to you in any way.**

What is your gender? Male \_\_\_\_\_ Female \_\_\_\_\_

What is your zip code? \_\_\_\_\_ What is your age? \_\_\_\_\_

What is your race? White \_\_\_\_\_ Black \_\_\_\_\_ Asian \_\_\_\_\_ Native American \_\_\_\_\_  
Other \_\_\_\_\_

Are you Hispanic? Yes \_\_\_\_\_ No \_\_\_\_\_

What type of health insurance do people in your home have?

Private Insurance \_\_\_\_\_ Medicaid \_\_\_\_\_ None / Uninsured \_\_\_\_\_

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

- |   |   |
|---|---|
| <b>A</b> Indigent Healthcare (no insurance) | <b>B</b> Teen Pregnancy                       |
| <b>C</b> HIV Aids                           | <b>D</b> STDs (Sexually Transmitted Diseases) |
| <b>E</b> Peer Pressure                      | <b>F</b> Sexual Assault / Rape                |
| <b>G</b> School Violence                    | <b>H</b> Domestic Violence (abuse at home)    |
| <b>I</b> Obesity / Overweight               | <b>J</b> Depression                           |
| <b>K</b> Motor Vehicle Injuries             | <b>L</b> Eating Disorders / Body Image        |
| <b>M</b> Poor Dental Health                 | <b>N</b> Chronic Diseases                     |

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

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

Other behaviors, please list: \_\_\_\_\_

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

\_\_ Yes                      \_\_ No

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

**A** I did not have the money to go

**B** I had no transportation

**C** The office was not open when I could get there

**D** I was afraid / I don't like to go to the doctor

**E** Did not know where to go or who to call

Other reason: \_\_\_\_\_

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

\_\_\_Yes

\_\_\_No

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

**A** I did not have the money to go

**D** I was afraid / I don't like to go to the dentist

**B** I had no transportation

**E** Did not know where to go or who to call

**C** The office was not open when I could get there

Other reason: \_\_\_\_\_

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

**A** Doctor's office in Union County

**B** Doctor's office outside Union County

**C** CMC Union Emergency Room

**D** Emergency Room outside Union County

**E** Urgent Care Facility

**F** Union County Health Department

**G** Franklin Street Ambulatory Clinic

**H** Community Health Services

**I** First Care in Monroe

Other: \_\_\_\_\_

**8. Have you been seen in a Minute Clinic within the last 12 months?**

\_\_\_Yes

\_\_\_No

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

None

1

2

3

4

5 or more

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

\_\_\_Yes

\_\_\_No

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

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

Other \_\_\_\_\_

12. How many hours of screen time do you spend daily? (TV, video games, Facebook, computer)

- None**      **1 hour**      **2 to 4 hours**      **5 or more hours**

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

- None**      **1**      **2**      **3**      **4**      **5 or more**

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

- None**      **1**      **2**      **3**      **4**      **5 or more**

15. What type of milk do you usually drink?

- Whole**      **2%**      **1%**      **Skim/Fat Free**      **Soy**      **None**

16. How many soft drinks, high sugar fruit drinks or Energy Drinks do you have daily?

Examples: Fruitopia, soda, sweet tea, Snapple, Gatorade, Red Bull, etc.

- None**      **1**      **2**      **3**      **4**      **5 or more**

17. Do you drink hot or cold coffee?

- Yes       No

18. What do you normally eat for lunch?

- A** School lunch (meal of the day)      **B** Snack food (chips, ice cream)  
**C** Fruits/vegetables      **D** A la carte Menu (french fries, pizza, chicken sandwich, etc.)

Other, please explain: \_\_\_\_\_

19. If you do not buy your lunch, why do you not purchase your lunch at school?

- A** No money      **B** Not enough time  
**C** Socializing during lunch      **D** Dieting  
**E** Do not like food choices      **F** Bring my lunch from home  
**G** Don't eat lunch      Other reason: \_\_\_\_\_

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

- |   |                            |                            |
|---|----------------------------|----------------------------|
| <b>A</b> Attend Church                                      | <b>B</b> Pray / Meditate   | <b>C</b> Art / Music       |
| <b>D</b> Exercise   | <b>E</b> Hobbies           | <b>F</b> Social networking |
| <b>G</b> Talk to parents                                    | <b>H</b> Watch TV          | <b>I</b> Video games       |
| <b>J</b> Talk to friends                                    | <b>K</b> Do Nothing        | <b>L</b> Eat               |
| <b>M</b> Smoke or dip tobacco                               | <b>N</b> Use illegal drugs | <b>O</b> Alcohol           |
| <b>P</b> Use / Abuse prescription or over the counter drugs | Other: _____               |                            |

**21. What are the 3 sources for stress / concern in your life? Please circle up to *three*.**

- |                         |                                       |                                     |
|-------------------------|---------------------------------------|-------------------------------------|
| <b>A</b> School work    | <b>B</b> Peer Pressure                | <b>C</b> Worry about money          |
| <b>D</b> Self-image     | <b>E</b> Lack of future plans         | <b>F</b> Use of Drugs               |
| <b>G</b> Use of alcohol | <b>H</b> Loneliness                   | <b>I</b> Birth Control / Pregnancy  |
| <b>J</b> Peer violence  | <b>K</b> Violence at Home             | <b>L</b> Internet Predators         |
| <b>M</b> Date rape      | <b>N</b> Sexually Transmitted Disease | <b>O</b> Pressure to get in college |

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

Always       Sometimes       Never

**23. Do you wear a helmet when riding bikes, skates, skateboards, etc.?**

Always       Sometimes       Never

**24. Is there a gun in your home?**

Yes       No

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

Yes       No

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

Yes       No

**27. If yes, would you like to quit?**

Yes       No

**28. Do you drink alcoholic beverages?**

Yes       No

**29. Do you ever drive after drinking alcoholic beverages?**

Yes

No

**30. Do you talk on your cell phone while you are driving?**

Yes

No

**31. Do you text while you are driving or ride with someone that text while driving?**

Yes

No

**32. Have you been pressured by friends or classmates to do any of the following: Please circle ALL that apply.**

**A** To be sexually active

**B** Vandalism

**C** Use of drugs

**D** Use of alcohol

**E** Join a gang

**F** Skip school

**G** Bully other kids

**H** Cyber bullying

**I** Shop Lift

**33. Is the sex education information you receive at school enough information for you to understand your sexual health and how to protect yourself from sexually transmitted diseases?**

Yes

No

**34. Where do you get information about sexual health? Please check all that apply.**

School Sex Ed

Parents

Siblings

Friends

Internet

TV / Movies

Other \_\_\_\_\_

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

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**APPENDIX B**

**COMMUNITY ASSESSMENT**

**PRIORITY SETTING TOOL**

# Ranking Health And Wellness Issues That Impact Union County Residents

Please prioritize numerically from 1 - 5 the following in the order that you feel is best for the community. Number 1 being the MOST IMPORTANT and Number 5 being the LEAST IMPORTANT.

## 1. Chronic Diseases

	1	2	3	4	5
Cancer (Breast, Lung, Colon, Pancreas)	<input type="radio"/>				
Heart Disease	<input type="radio"/>				
Alzheimer's	<input type="radio"/>				
Respiratory Diseases	<input type="radio"/>				
Diabetes	<input type="radio"/>				

## 2. Built Environment

	1	2	3	4	5
Greenspace / Parks	<input type="radio"/>				
Trails For Walking, Biking, Running (Pedestrian)	<input type="radio"/>				
Access To Union County Public Schools Existing Facilities	<input type="radio"/>				
Sidewalks For Exercise And Connectivity	<input type="radio"/>				
Bike Lanes	<input type="radio"/>				

## 3. Nutrition

	1	2	3	4	5
Community Gardening Opportunities	<input type="radio"/>				
Farmers Market	<input type="radio"/>				
Community Supported Agriculture (Co-op)	<input type="radio"/>				
Healthy Eating Education Series	<input type="radio"/>				
Nutrition In Union County Public Schools	<input type="radio"/>				

#### 4. Fitness

	1	2	3	4	5
Affordable Sports Leagues For Kids	<input type="radio"/>				
Affordable Adult Fitness Facilities	<input type="radio"/>				
Public Swimming Pool	<input type="radio"/>				
County Sponsored Fitness Events (Walks, 5K, Bike Rides)	<input type="radio"/>				
Get Fit Union Campaign (Countywide Effort For 1 year)	<input type="radio"/>				

#### 5. Medical

	1	2	3	4	5
Indigent Care for Adults (Mobile Unit)	<input type="radio"/>				
Expand And Recruit Mental Health Providers To Union County	<input type="radio"/>				
Expand Substance Abuse Programs In Union County	<input type="radio"/>				
Affordable Dental Services	<input type="radio"/>				
Triage Number (Information And Referral)	<input type="radio"/>				

#### 6. Senior

	1	2	3	4	5
Expand Silver Sneakers Program	<input type="radio"/>				
Senior Self-Defense / Safety	<input type="radio"/>				
Mobile Services	<input type="radio"/>				
Additional Senior Center	<input type="radio"/>				
Long Term Care Information / Planning	<input type="radio"/>				

#### 7. Teen

	1	2	3	4	5
STD Education Expansion	<input type="radio"/>				
'Baby Think It Over' At ALL Schools (9th Grade)	<input type="radio"/>				
Intramural Sports	<input type="radio"/>				
Teen Substance Abuse Program	<input type="radio"/>				
Bullying / Peer Pressure Programs	<input type="radio"/>				

## 8. At-Risk Populations

	1	2	3	4	5
Mental Health Patients	<input type="radio"/>				
Obese Residents	<input type="radio"/>				
Sexually Active Teens	<input type="radio"/>				
Adults NOT Receiving Prevention Services	<input type="radio"/>				
Residents NOT Preparing For Emergencies	<input type="radio"/>				

**APPENDIX C**  
**FOCUS GROUP SUMMARY**  
**NARRATIVES**

## Focus Group Summaries

### Teen Focus Group Summary

Nutrition and poor eating habits are major contributors to unhealthy teens. Dietary choices include too much fast food. Even when healthy foods are made available, teens don't choose the healthier options.

Exercise is key to improving the teen health. The main teen complaint regarding exercise is not having enough, safe, convenient community parks available for exercise. Teens wanted bike trails, walking trails, and sidewalks. Students questioned why school facilities are locked and off limits on weekends.

Screen time occupies a large majority of teen activity. The participants admitted that the amount of screen time they spend is excessive and isolates them from their families. Between all existing methods of technology, Facebook, Twitter, Internet surfing, texting, e-mail and video games, teens stay up very late at night, sacrificing sleep for screen time. The point was made that the portability of technology has increased usage. Teens stated that video games can become addictive and can interfere with their social skills. Individual game systems allow one player and don't require interaction. An admission to being addicted to video games was made. In the summer months teens said when parents leave for work, they would play video games for hours never leaving the house or going outside.

Peer pressure was presented as being a constant factor for teens. Peer Pressure and bullying were interconnected according to the focus group participants. Teens felt cyber behavior starts in Middle School and continues through high school. Participants stated that bullying is difficult to prove and therefore, is ignored by adults. A great deal of bullying is done on-line in social networking venues. Students don't feel they are bullying if they can't see the person they are bullying. Twitter is the on-line bullying tool of most teens because while Facebook is traditionally monitored by parents, twitter is not. Teens view Twitter as a teen world in which they can vent, it is seen as an open forum with no restrictions and no parental interference.

Students that are being bullied don't report it because they have a fear of retaliation or an escalation of the bullying. Students aware of bullying do not tell for fear of getting pulled into the drama. Racism was brought up as a part of the bullying that kids experience. They also stated that if they have a different viewpoint, they will be judged and bullied. When bullying is reported, typically is reported after the fact, the delayed reporting makes it very difficult for adults to intervene in a meaningful manner.

Teens openly discussed teen sexual behaviors and attitudes. High school environments are small communities and everyone knows everyone's business. Who is having sex is often talked about. Teens mentioned that many assumptions are made regarding sex, such as if a teen couple has been dating for a while they MUST be having sex. This assumption can lead the teen couple to feeling pressured to actually engage in sex. Teens that are having sex are more concerned about pregnancy than sexually transmitted diseases (STDs). Teen girls believe that the boyfriend will be there if a pregnancy occurs. Teens stated the reality is the boyfriend does not stay in the picture once a pregnancy happens and the girl is left to handle the pregnancy alone. Most teens feel if they don't know anyone with an STD they won't catch one, or that very few people actually have STDs. Most teens feel "untouchable" regarding pregnancy or diseases, "it won't happen to me" theory.

The scare tactics used by adults to deter teen sex was labeled ineffective by teens. The most effective way to discourage teen sex was requiring teens to carry a "Baby Think it Over Doll". The simulated infant that involuntarily cries and demands care was seen as a convincing way to prevent teen sex. The dolls

were too much work and interfered with school and social activities. The dose of reality made students not want to have babies as teens.

Teens wanted more information, education on STD testing. Teens do not want adults to know they are having sex, therefore, if they have a concern about an STD, they won't ask to be tested. They do not want to have to answer questions about their sexual activities.

Drugs and alcohol use were a part of teen culture experienced by focus group participants. Alcohol was seen as much more socially acceptable than drug use, in fact teens often brag about their alcohol consumption. The perception is that alcohol is very easy to obtain for teens. Most teens drink their parents' alcohol readily available in their homes. Drug use is prevalent, but not openly discussed. Drugs are more expensive and harder to obtain than alcohol.

### **Senior Focus Group Summary**

When the seniors were asked what was impacting their health and wellness, the response was based upon the need for additional information and services. The seniors feel that more communication in multiple media outlets is needed to inform residents about health and wellness programs, services and events. The fact that many seniors either do not have access to the internet, or are unaware of how to use it prohibits seniors from accessing important health related information. They requested newspaper articles, newsletters and local advertising for events.

Seniors mentioned several services that are lacking, that impact their health. The fact that Union County has no local transit system, especially on the rural eastern end makes it difficult for seniors to reach appointments and resources.

Affordable senior housing does not exist in Union County. They would like Senior housing sold based upon income level, such as patio homes or senior community rentals. The units should be compact, handicap accessible and have necessary amenities within walking distance. This type of a senior community would allow more seniors to continue to live independently and age in place. They made the distinction that this community is not assisted living, as that is not an affordable option for most seniors.

Educational classes and information were requested on pharmaceuticals. Seniors feel they are prescribed multiple medications and often lack an understanding of the medications and potential drug interactions. Seniors would like assistance to review prescriptions.

Several county entities were held up as providing excellent services for seniors. The Council on Aging offers multiple senior prevention programs and support groups: fall prevention, chronic disease management, focused caregiver support groups, range of motion classes, ambulatory equipment loan program, Medicare information services and the Senior Health Expo. Enterprise Fitness offers the Medicare supported Silver Sneakers Program, a senior instructor led fitness class. The Ella Fitzgerald Center offers multiple classes, ranging from fitness to ceramics, with the opportunity for seniors to have social interaction. The City of Monroe Old Armory Community Center has opened a fitness center for Monroe Residents. The Ella Fitzgerald Senior Center and the Armory were complimented on sustaining low cost programs over the years.

CMC Union was praised for the improvements that have been made in recent years. The expansion of services to include a rehabilitation center, cancer center, and other specialists improved access to care at the local level. The expansion of the CMC Emergency Department with additional rooms has improved Emergency services according to the seniors. The Hospital Administrator was viewed by the

seniors as receptive to public comments regarding the hospital. A noted change was the CMC Campus going smoke free.

Other services that seniors are aware of, but felt were cost prohibitive included the Monroe Aquatics Center. Seniors would like a YMCA in Union County.

Nutrition plays a role in the health of seniors. The main issue impacting senior nutrition was a lack of availability of fresh local produce in an accessible farmers market, or a local health food store, such as an Earth Fare or Fresh Market. The eastern end of the county was specifically mentioned as being void of local produce markets and stands. The DSS Commodity Food Program has been diverted to local food pantry rather than DSS, seniors were not happy with this change. Seniors would like to see more volunteers to deliver healthy food to homebound seniors.

Smoking cessation classes were a need that seniors feel still exists. Despite existing efforts to educate the public, seniors feel that the rural areas of the county still need tobacco and smoking cessation classes and education. They want to see the culture of tobacco use broken in Union County.

The main environmental concerns that seniors had were poor air quality which they feel is directly connected to the increased volume of traffic on the roads in Union County. The arsenic in Union County well water was another concern. Questions were raised about the impact the poultry industry has had on the county water supply, through poultry waste seeping into the water table through groundwater and run off.

Emergency Preparedness was discussed briefly. Seniors had very little knowledge about Emergency resources and plans that were in place with county agencies. There was no knowledge of the County Code Red Emergency Notification system. The Special Needs Registry was an unknown for seniors as well.

### **Latino Focus Group Summary (as translated)**

#### **What impacts health and wellness?**

- Bad nutrition, diabetes, high blood pressure
- We need more prevention classes, information, education, guidance, follow-up
- Overweight, lack of resources for mental health problems, drugs
- Undocumented Hispanics need access to community services
- Lack of resources for teenagers with problems related with DSS (Social Services)
- Lack of communication between teenagers and parents
- Lack of information
- More education in subjects like AIDS, sexual preferences, domestic violence, bullying, abuse against children and teenagers
- More clinics for seniors
- Pregnancy in teenagers
- Need of prevention measures to avoid pregnancy in middle and high school
- Educate the “next generation” and parents

#### **Places that give more opportunities for wellness:**

- Aquatic Center (needs tours for Hispanic new members)
- YMCA in Union County
- Dickerson Center

- Transportation problems

#### **Issues creating road blocks to Fitness / Suggestions**

- More areas for walking and exercise like the ones at CMC Hospital
- More P.E. at school
- More areas for exercise in neighborhoods / more community parks
- More trails for walking
- More security at parks
- More programs to give incentives to the community
- Programs to help to pay for sports for young people at Athletic Associations
- More sports at schools (especially for girls)
- Create clubs for organizations within the Latino community
- Sports for adults

#### **Environmental problems:**

- Rent of apartments in bad conditions
- Hispanics need more knowledge in their rights (apartments for rent)
- Lack of interest in reading newspapers to be informed of environmental problems
- Electric plant in Icemorlee Street is a problem for the community (especially children)
- More recycling campaign
- Incentives for recycling
- Opportunities and places for recycling
- Containers for recycling
- Lack of information

#### **Critical changes in behavior:**

- Integration/Awareness
- Communication
- Prevention / Education
- Programs of guidance and knowledge
- Activities at school
- Union County Health Department needs more information to the community about all the programs and classes that help the community
- Lack of information in the Hispanic community of Union County Health Department opportunities

#### **Mental Health and Clergy Summary**

The group had strong opinions regarding what is impacting the health and wellness of county residents, specifically residents dealing with mental health and substance abuse issues. The lack of networking and support for these populations has improved in recent years, but still has large gaps in service availability and access to care.

Union County has very few shelter opportunities. The opportunities that do exist are meant to serve specific niche populations: men's shelter, battered woman's shelter and limited substance abuse programs. None of these programs allow youth or families entrance into the shelter.

Alcoholics Anonymous in Union County does include 6 chapters that allow youth to participate.

The participants in the mental health clergy session felt the use of alcohol is on the rise with all age groups. Youth are drinking more and more frequently and at younger ages. CMC's First Step Program for Alcohol and Drug Treatment is the county's only adult substance abuse facility. According to participants, First Steps runs at 93% capacity. Insurance will not cover substance abuse treatment. First Step will transport people to AA meetings.

In recent years the drugs of choice in Union County have been Black Tar Heroin, with 18 to 24 year old white males as the most frequent offenders. The youth drug culture in the county is based around kids stealing prescription medications from their parents. Alcohol and Marijuana use is widespread.

Mental health services are limited and the ones that do exist are difficult to access. Daymark is the county's main mental health provider, operating as a non-profit, using a sliding fee scale with very limited free service options. Intensive mental health services are more challenging to access. Mental health for Medicaid clients is the most difficult to access. The downturn in the economy decreased incomes, raised unemployment, and left more residents without insurance and therefore no ability to pay for needed mental health and substance abuse services. Many residents view mental health and substance abuse facilities as a danger to the community and they are not welcomed.

National Association of Mental Institute (NAMI) has established programs for mental health advocacy and could implement instruction in Union County.

Latino mental health and substance abuse services were practically non-existent according to participants.

Needed built environments in Union County were sidewalks, walking trails and more green space. The Aquatics Center was a good addition to the county years ago, but it has become overcrowded. Local recreation leagues and summer programs were seen as financially out of reach for many families. More affordable options are needed to increase access to physical activity for more children. Cane Creek Park is a nice park, but again has fees associated with it and lacks sufficient campsite hook ups.

Overcrowded roads pose a threat to residents trying to walk, run or bike. No sidewalks, bike lanes or shoulders leave pedestrians vulnerable to accidents.

The Monroe Boys and Girls Club was a favorable addition to the community and viewed as an affordable, positive option for families in the community.

Healthy food options were an identified need, with fresh markets and increased access to local produce.

Environmental issues impacting residents were identified as arsenic in the water, too many power lines and large electrical power stations, all are believed to be causing cancer. The proximity to Charlotte was seen as a major factor in poor air quality. The water supply available to the county is insufficient.

Behavior changes that would improve residents' health would require increased awareness. Churches were seen as the most viable option to reach community members. Residents need to be informed about all available services and resources.

Residents need to be taught how to properly dispose of unused medications. Seeking grant funding as a way to subsidize existing services was a suggestion.

## **Healthcare Providers Summary**

The discussion on what is impacting health and wellness of county residents had more to do with an inability to access services than services themselves. Transportation to healthcare was viewed as an impediment for low income residents to get to medical appointments. While County Transportation does provide an alternative, it is not always convenient to scheduled appointments. People are uncertain who “qualifies” to use it. Medicaid provides limited funds toward transportation.

The poor economy in general was seen as a barrier for residents being healthy. When money becomes tight, people are unable to make co-pays and opt not to get care. When preventative appointments, or routine physicals are omitted, problems are not detected or prevented, leading to more critical healthcare issues. Once people lose insurance coverage entirely, they only seek care for emergencies.

As specific issue mentioned by providers was in the way people to deal with prescription medication. A provider will write a prescription for the most optimal drug to treat the situation at-hand, occasionally the patient will experience side effects. The provider will write a new prescription. However, the problem arises when the patient elects to continue taking the original prescription or stops taking it and does not fill the new prescription in an effort to save money.

Accessing specialized care, specifically mental health care was viewed as difficult at best. More specialists from all disciplines are needed. The mental health providers that are in Union County are over-burdened. Mental health patients on Medicaid have very few resources to access mental health care. There are no local Geriatric or Pediatric Mental Health Assessment resources in Union County. Patients must be deemed in crisis in order to access mental health services.

With Union County having a lower Medicare / Medicaid reimbursement rate than Mecklenburg County, the incentive for practitioners to establish a practice in Union County is low. Union County has 60% of residents on Medicaid and Medicare, with 40% on private insurance. Mecklenburg County has 30% on Medicaid and Medicare with 70% on private insurance. The paperwork required for Medicaid reimbursements continues to increase in complexity. This translates to a cost for healthcare providers so they must have higher numbers of private pay insurance patients to offset the cost of the Medicaid patients.

The county does have resources that have a concentrated focus on specific diseases, for example the Health Department Susan G. Komen grant. The Komen grant does pay for prevention based screening services. However, the funds and resources for anyone diagnosed stops post screening. The Health Department must piece together care plans with external partners in order to make certain no one with a cancer diagnosis is left to fend for themselves. These types of gaps in services for the uninsured and underinsured are problematic.

The holes in health care in the county extend far beyond breast cancer. The county does not have a suitable indigent care clinic or practice. There are no free clinics and only one adult clinic that operate on a sliding fee scale.

The built environments that the providers saw as necessary to improve the health of residents were tied to green space and recreational areas. The county lacks sidewalks in most areas, making it non-

pedestrian friendly and lacking in connectivity. The lack of bike lanes and shoulders on county roads makes a dangerous environment for cyclists, runners and automobile drivers. There are few alternatives for places to ride bikes, walk or run, as there are very few bike paths, greenways, or parks. Many low income residents are simply afraid to be out in their own neighborhoods.

A frustration expressed was that the Union County Schools do not allow access to their facilities on the weekends. Residents feel that as tax payers they should have some access to exercise facilities that already exist: tracks, tennis courts, basketball courts, etc. The participants understood the concern for vandalism and a need for security that would be a reality if the schools opened facilities to the public. It was pointed out that the schools do allow recreational leagues to use their facilities. However, not all families can afford to sign their children up for rec league sports. The schools have installed disc golf courses at several schools and they are open to the public.

Environmental factors impacting health were air and water quality. The rapid growth the county experienced in the previous decade has created an influx of automobiles into the county, and that combined with a lack of mass transit has damaged the air quality in the county. Participants feel that if mass transit were available from Union County into Charlotte residents would use it. An economic development concern was expressed that if mass transit became available, Union County residents would commute into Charlotte for retail and recreational spending, further depleting the county tax revenues.

The water quality was major concern, with the focus being the high number of contaminants present in wells in the county: arsenic, heavy metals, and pesticides. With Union County sitting on a slate bed, most wells cannot be drilled very deeply, therefore water yield is low. The feeling was that local developers are not taking run off into consideration and are not protecting the county water supply.

Loss of green space to development was viewed as having a negative effect on the health of the environment. Also, large agricultural companies that purchase small farms and clear the trees for crops, are also seen as having a negative impact on the land and air.

The county deciding to keep the community based recycling centers open for the citizens as seen as positive. The county is hoping people will recycle or dispose of household items safely and in a way that will not harm the environment.

An incentive system was suggested as a way to educate and gain participation with residents on health and wellness. Providers would like to see local employers incentivize employees to be healthy, attend health fairs, get screenings and become more active. Help people take a more active role in improving their own health by doing what's healthy, eating healthy and exercising. The emphasis needs to shift from corrective measures back to prevention.

Communication about the health resources and services available in Union County needs to increase. When changes occur, that needs to be communicated to the residents.

## **Environmental Health Group Summary**

The main thing believed to be impacting residents' health in Union County is poor eating habits. The group stated that the county is the 3rd largest in the state and 85th in the nation for agriculture. However, there is still a low awareness of where and how to access local produce and healthy foods. While there are numerous roadside markets, people claim they are not convenient. The consumption of local produce is low. According to an Ag Agent participating in the session, 90% of produce grown in Union County is sold in Mecklenburg. The Local Food Council, or Carolina Home Grown, has recently started a campaign to educate residents on the importance of eating local foods, both from a health standpoint and an economic standpoint.

The lack of health food stores, such as GNC and Fresh Markets were seen as detrimental.

Cooperative Extension has started collaborating with the Health Department, Public Schools, Child Care Centers and Churches to establish Community Gardens, and teach the concept of Farm to Table and where food comes from. The Grow Your Own movement has been started at the local level. The Extension Service has three staff members working to educate and raise awareness about healthy eating. Two positions focus on adult programs and one is youth focused. The programs include nutrition awareness and food safety instruction. A separate program offered by Extension Service is Eat Smart Move More that promotes a healthy lifestyle and behavior changes to improve health.

Other efforts around nutrition include the nutritionists, nurses and trainers at the Monroe Aquatics Center that assist in educating members on good nutrition and healthy eating. The UCPS offer a Foods Class at the high school level for students interested in pursuing a career in culinary arts or food service. The class does incorporate food safety into the curriculum.

Keeping local produce local was a topic of conversation. The question was raised about why the county schools do not purchase and serve local produce to students. The GAP (Good Agricultural Practices) Certification requirement was provided as the explanation. GAP certification is an in depth study of the growing, shipping, packing, selling and serving process that the food follows from the Farm to the Table. It does have a cost associated with it for the farmers. It is believed that more interest might be generated with farmers if some of the initial costs were offset for them. It typically does not change many of the farmers growing practices, but does require a paper trail and regular farm inspections to authenticate GAP practices are being used.

The bad economy was seen as a negative impact on the health of residents. The lack of employment opportunities translated into unhealthy lifestyles, with stress eating, or eating cheap fast food as part of daily life. With unemployment rates rising for several years, people had less money, therefore spent less, equating to businesses earning less, reducing tax revenues. The cyclical effect of the poor economy left less money for the local government, businesses and households. Services were impacted. The statement was made that the reduced tax revenues caused budget cuts which equated to a discontinuance of services at a time when the demand for services was on the rise.

With the county still dealing with an unbalanced tax base, the vast majority being residential, there are not enough tax revenues to provide adequate infrastructure such as roads, sidewalks, parks, and water and sewer lines.

Built Environments that are lacking in the county are parks and green spaces. There are not enough places for recreation, too few parks and the ones that exist are not easily accessible for most county residents. The fact that parks charge entrance fees is a detriment to use. There are insufficient walking

trails, bike trails and running trails. The Carolina Thread Trail was touted as an excellent concept, but the concept was never funded. The 20 year plan to improve access to trails in a 19 county region of both NC and SC was adopted by the affected municipalities, but remains without appropriated dollars.

The local municipalities that have reserved land for parks were commended. Indian Trail has a 51 acre site that will become a park, with a trail system. Two other municipalities were thought to have master plans that included land for parks to be developed in the future.

It is believed that most Union County residents utilize Mecklenburg County parks out of necessity. There are options for recreation on the western side of Union County, but the rural eastern side of the county has no park space.

Ground Water was a major health concern for the Environmental group. The statement that most county wells have a low yield because the county sits on the Carolina Slate Belt, also resulting in one in every two county wells having high arsenic levels. Union County well water often has contaminants such as: nitrates, bacteria, solvents, and petroleum in high levels. There is very little public awareness except with arsenic. With insufficient infrastructure for water lines, many residents are forced to drink well water. Union County has very few natural water supplies to draw water from. The City of Monroe uses Lake Monroe and Lake Twitty for their water. With further development, the natural filters for water sources are being destroyed, as more land is being used for residential purposes. The Union County Health Department can test private wells for contaminants, and will provide the results to the property owner. The only local well rules are that both irrigation wells and drinking water wells are built to standard. The certification for wells was recently moved from the state to the county level. There have been efforts in place to get standards and information to the counties on hazards by location, but little money was allocated to make the information available to property owners.

Concerns were expressed about damage being caused to county water table by the use of irrigation wells. Anytime the water table is accessed, the levels are impacted regardless of use. The concern is the amount of water that the irrigation wells consume when residents are relying on the water table to provide their drinking water.

Currently the county does not have any gray water lines or plans for reuse of run- off water that could be purified and returned to the local water sources.

The amount of residential development and resulting loss of trees has depleted the natural filters that protect the land and water table. Without the filters run off from developments allows contaminants into the ground water and into the water table. The development has also added to the number of retention ponds in the county. Retention ponds can be environmentally unhealthy as well, often attracting mosquitos and being a potential source of disease.

Foreclosed and abandoned properties with swimming pools or spas can be a source of mosquitos and disease.

Another concern is for residential homes that were built with intended occupancy being a single family and now have multiple families residing under one roof. When this occurs in a home on a septic system, it has the potential to create a strain on the septic system.

Air Quality was a concern due to ozone levels. Particulate matter from combustion and burning contributes to the ozone problems. Mecklenburg and all counties on the border of Mecklenburg remained non-attainment for economic development for years. While improvements and monitoring

continues standards are expected to become stricter in 2013 and 2014. Communities will be given time to meet new standards. However, the fact that bordering Mecklenburg County contributes to the air quality issues, it will be difficult to improve the air quality in a single county.

Poor air quality has an impact on elderly, children and asthmatics and people with respiratory illnesses. Children with respiratory issues must play indoors on days when the air quality is at code red, orange or yellow.

A solution to the air quality problem was a mass transit option for county residents. However the solution needed to be more than a bus.

The most critical behavior change thought to improve residents health, would be to encourage residents to take responsibility for their own health. People need to exercise, and eat locally grown produce, and reduce a sense of entitlement to services. Residents need to be educated that in order to provide all the services and facilities they are requesting, such as parks, there will be a cost to the taxpayers to pay for it.

### **Emergency Service Provider Group Summary**

The economy was the main issue the emergency service providers felt was impacting residents' health and wellness. Unemployed people cannot afford healthcare, preventative services, or gym memberships. Co-pays have increased making care out of reach for many people. In a down economy people stop routine healthcare appointments, rehab, therapy and life improving surgeries. While it is a problem that affects everyone, it impacts low income the most. Often a choice must be made between electric bills or prescription medications. Parents send children to school sick because they cannot afford to miss work and cannot afford the doctor visit. There is a definite need for free clinics in the county, but none exist.

EMS calls are on the rise, and this trend can be connected to the economy as well. In a down economy suicide, domestic violence and substance abuse calls are up.

Budget cuts in government agencies are causing services to be eliminated. Efforts should be made to retain essential services.

A dangerous, unhealthy situation that has arisen out of the poor economy is multiple families living in a single family residence. This creates a situation for MRSA and other communicable diseases to spread.

Residents need to exercise and the county only offers limited opportunities for fitness. Many of the existing facilities are already at capacity, or are cost prohibitive for families. Existing facilities are also not convenient for all residents. Facilities should be built across the county rather than in just the heavily populated areas. UCPS need to open access to school tracks, courts and fields for public use. This would create fitness opportunities within all geographic areas of the county.

## **Elected Officials Telephone Interviews**

Interviewed 4 Officials Individually and Summarized Comments Here

Board of County Commissioner: Jonathon Thomas

Mayor of Fairview: Libby Long

Mayor of Marshville: Frank Deese

Superior Court Judge: Chris Bragg

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

Lack of exercise is a problem.

Efforts are being made to make appropriate health care available to all citizens:

- Do have several doctors in Marshville area
- Taking Union County Hospital to a tertiary level that will provide more diagnostic capabilities and expanded services

The economic situation has negatively impacted health and wellness:

- Loss of employment means loss of insurance and the ability to pay for health care and fitness
- People put off preventative care
- Adults postpone their care in order to provide care for their children
- Residents in rural areas have been especially effected – most of their jobs are in farming and construction, two of the hardest hit industries

People in lower income levels are less likely to seek preventative health care and live a healthy life style:

- Not aware of benefits
- Do not have funds

People need to make efforts to live healthier lives

- More physical activity
- Eat healthier
- Change ideas about food – what they eat, when they eat, portion size
- Obesity is a problem because of all the health problems it causes
- Need more education about and awareness of the benefits

- More effort to teach students about healthy lifestyles will not only benefit the students, but they likely will influence their parents

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

Need more recreation and fitness facilities:

- Need more walking trails
- Seniors need safe walking trails because they are more likely to walk than ride bicycles
- Need more private enterprise fitness facilities because additional government supplied fitness facilities mean additional taxes
- It is difficult for the County to develop parks that are convenient to everyone
- Town of Fairview recently purchased land to develop a park
- If the Carolina Thread Trail happens it will help people walk and bicycle more

Residents need to be able to access existing facilities such as those at schools:

- People used to walk around school ball fields, but fields are now not accessible
- If people had access to school facilities there might not be a need to build more facilities

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

Water Pollution and Access

- Arsenic in wells is not a problem in Marshville area
- Some wells in Fairview area have arsenic levels as high as 12 times the state limit.
- There is concern among citizens that the high levels of Arsenic is contributing to the high rate of Alzheimer's and to cancer.
- Residents in Fairview area do not have access to public water and sewer. Town is working with the County to get water and sewer in the next five years. The efforts to protect the heel splitter mussel has kept the extension of water lines into the Fairview area on hold for many years.
- The County is trying to address the water pollution and access situation by implementing the Water Line Extension Policy July 1, 2012. This program will waive the fee for the first 1000 feet of pipe for residents to connect to public water. The program will have a specific amount of funding each year and residents will have to sign up to get the waiver; if the funds are expended before all residents on the list are connected, they will be first on the list for the following year.

- Runoff from farms contributes to the water pollution.

Air Quality is an issue:

- Pollution from Charlotte and other areas adversely affects Union County Air Quality
- Poor Air Quality worsens allergies to pollen

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

Implementing a recycle program in Marshville

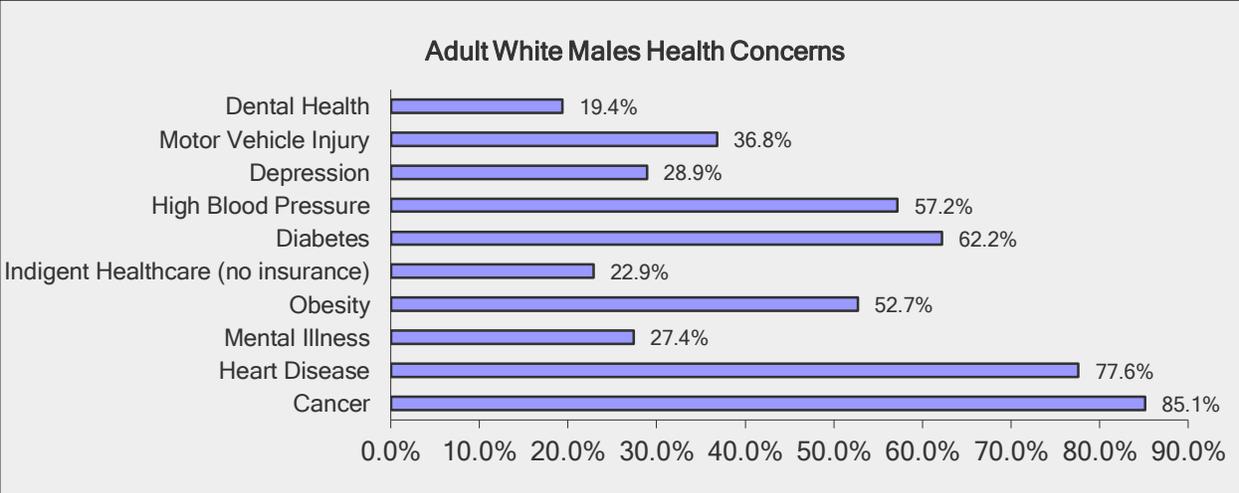
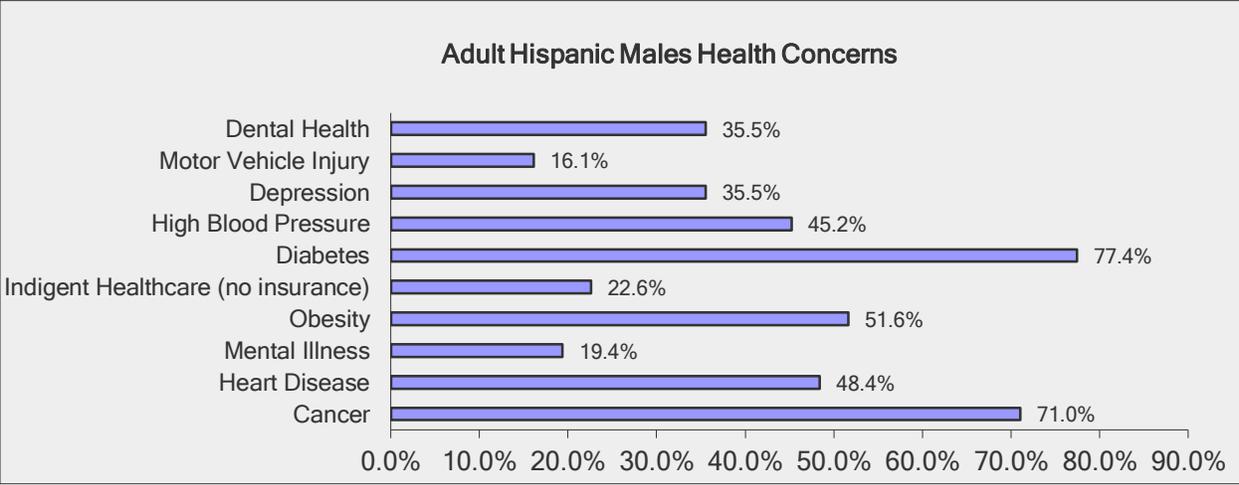
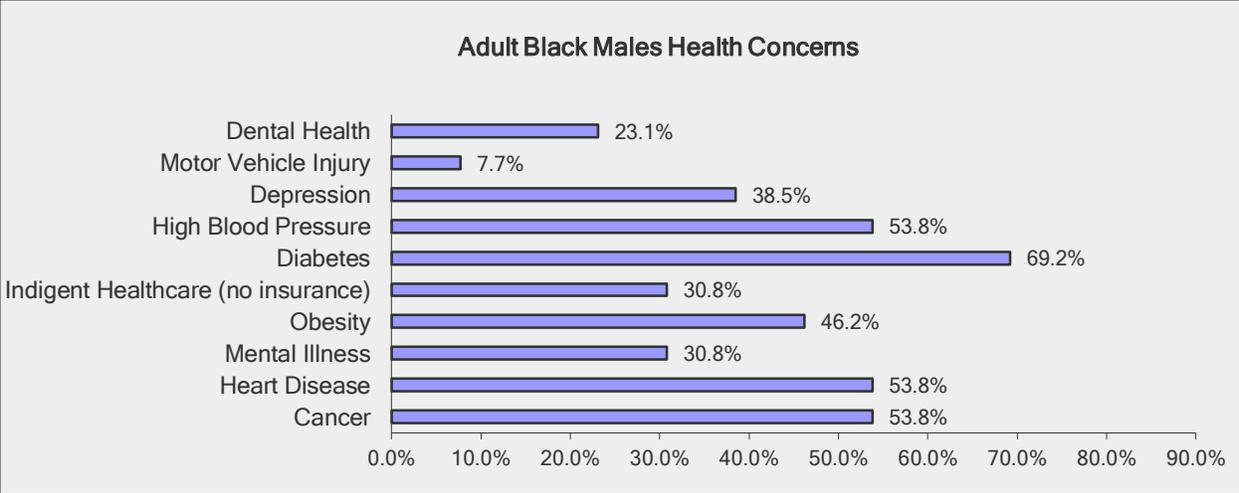
Living a healthier lifestyle:

- Eating healthy
- Getting exercise
- Getting preventative health care
- Be proactive instead of reactive

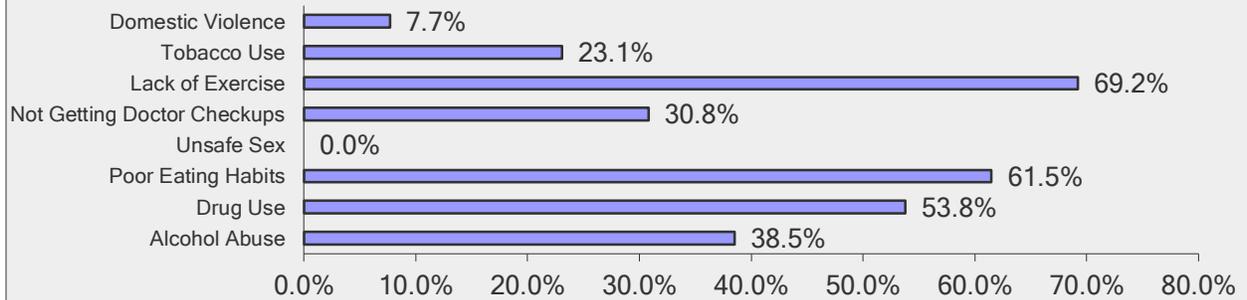
Need to educate people, especially teens, about STDs and promote screening.

**APPENDIX D**

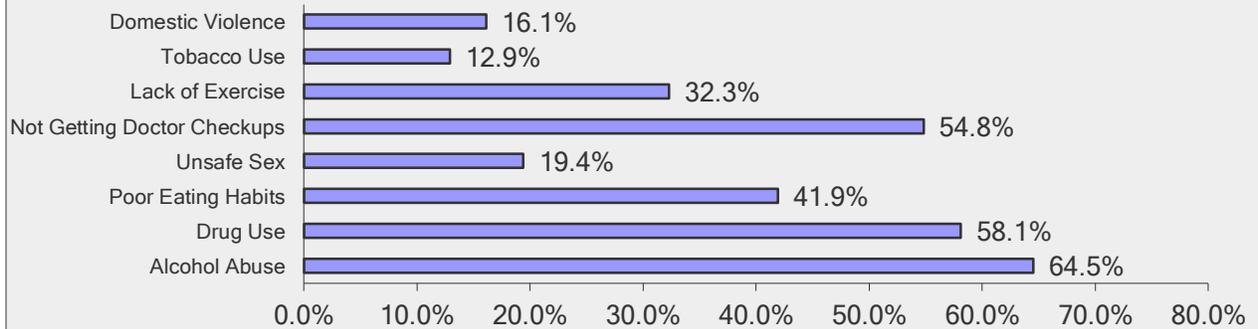
**CHA DEMOGRAPHIC RESULTS**



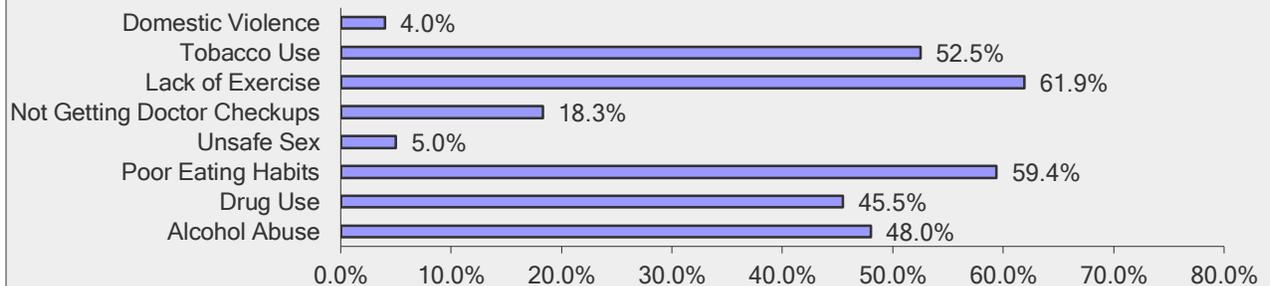
### Adult Black Males Behaviors That Cause Poor Health



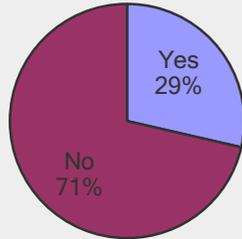
### Adult Hispanic Males Behaviors That Cause Poor Health



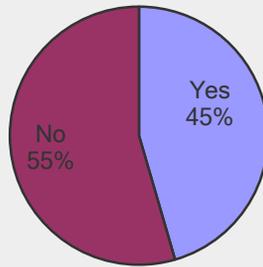
### Adult White Males Behaviors That Cause Poor Health



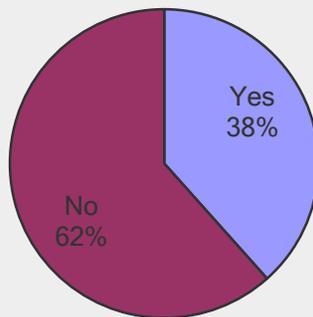
**Adult Black Males  
Did Not See A Doctor When Needed**



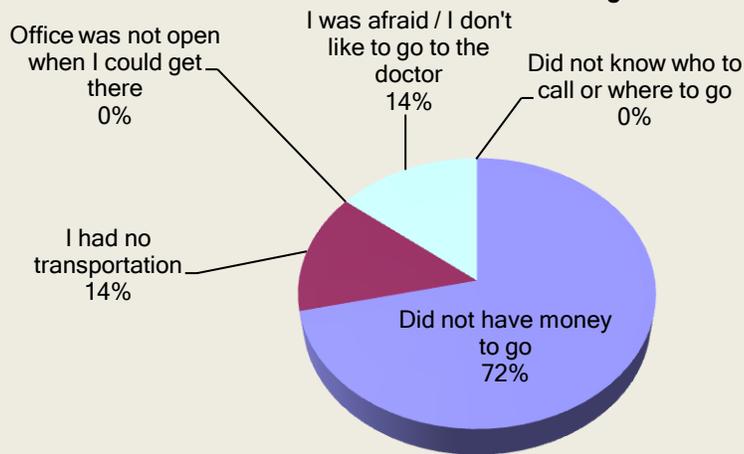
**Adult Hispanic Males  
Did Not See A Doctor When Needed**



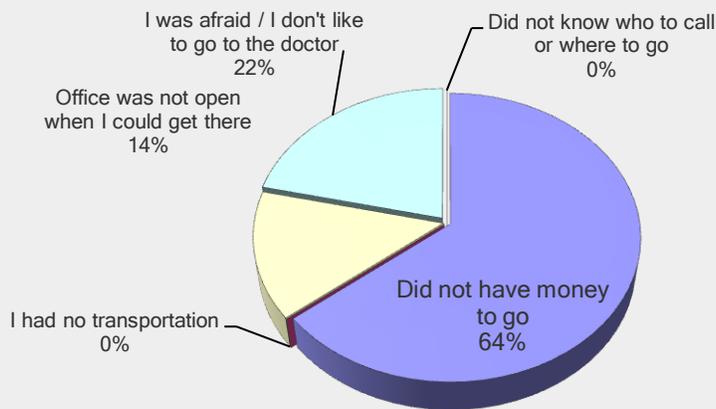
**Adult White Males  
Did Not See A Doctor When Needed**



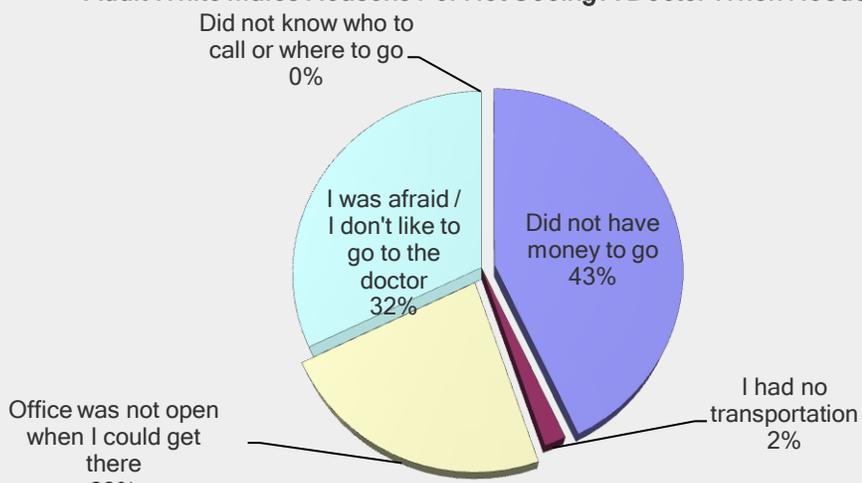
### Adult Black Males Reasons For Not Seeing A Doctor When Needed



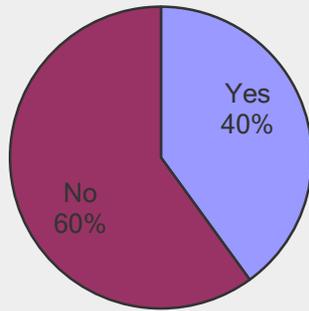
### Adult Hispanic Males Reasons For Not Seeing A Doctor When Needed



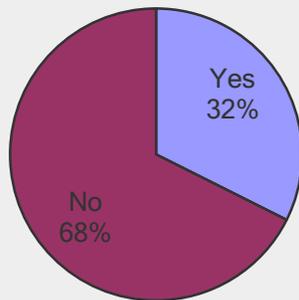
### Adult White Males Reasons For Not Seeing A Doctor When Needed



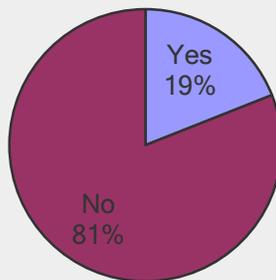
**Adult Black Males Did Not See A Dentist When Needed**



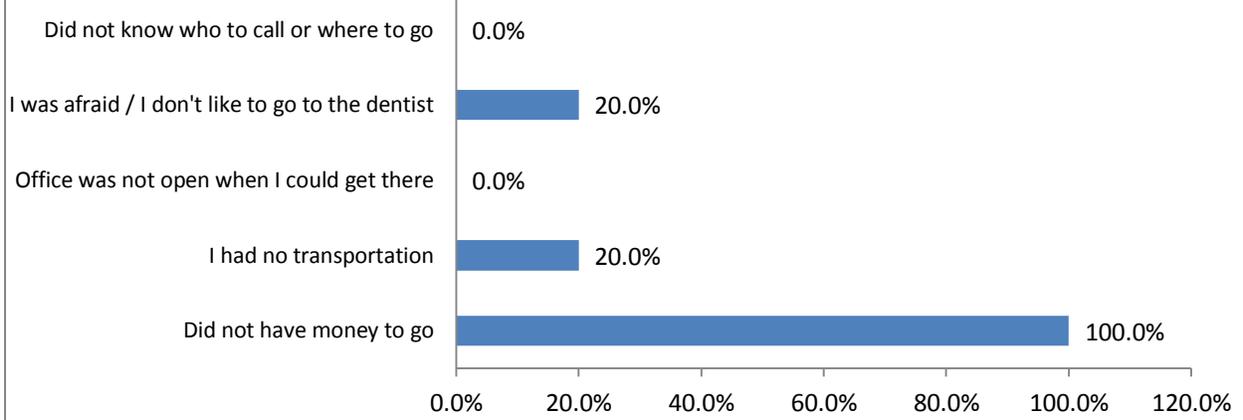
**Adult Hispanic Males Did Not See A Dentist When Needed**



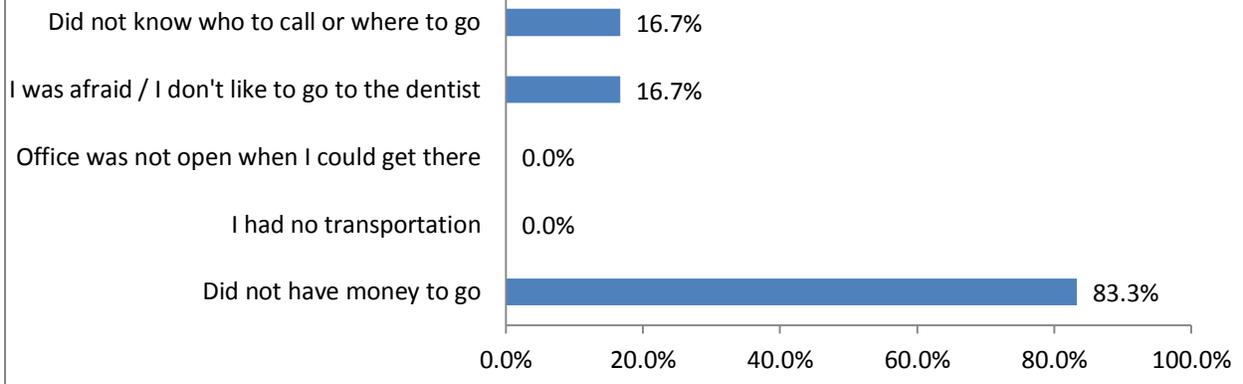
**Adult White Males Did Not See A Dentist When Needed**



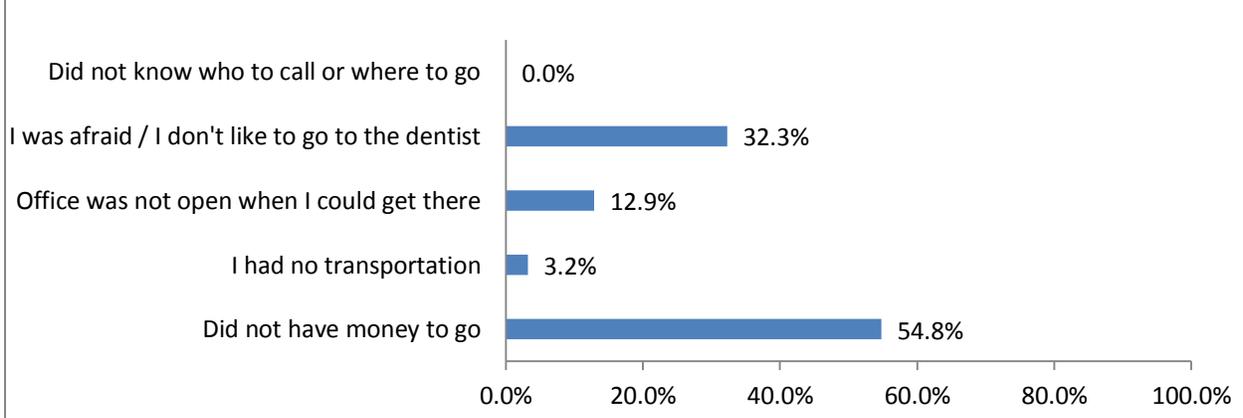
### Adult Black Males Reasons For Not Seeing A Dentist When Needed



### Adult Hispanic Males Reasons For Not Seeing A Dentist When Needed



### Adult White Males Reasons For Not Seeing A Dentist When Needed



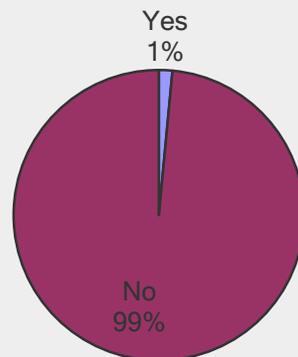
**Adult Black Males Used A Hospital Emergency Room For A Dental Issue**



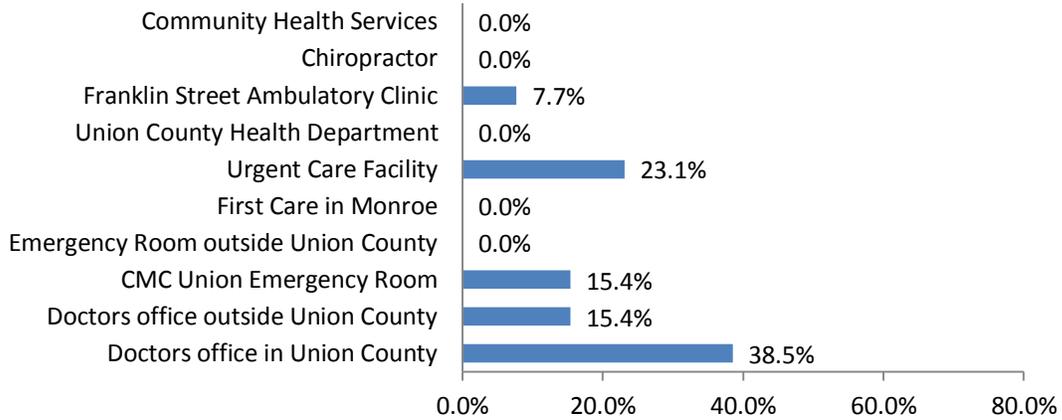
**Adult Hispanic Males Used A Hospital Emergency Room For A Dental Issue**



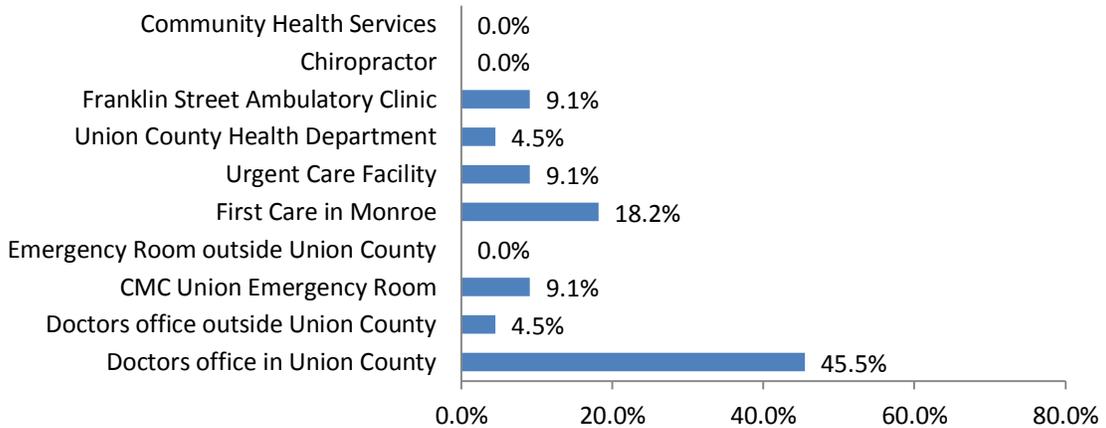
**Adult White Males Used A Hospital Emergency Room For A Dental Issue**



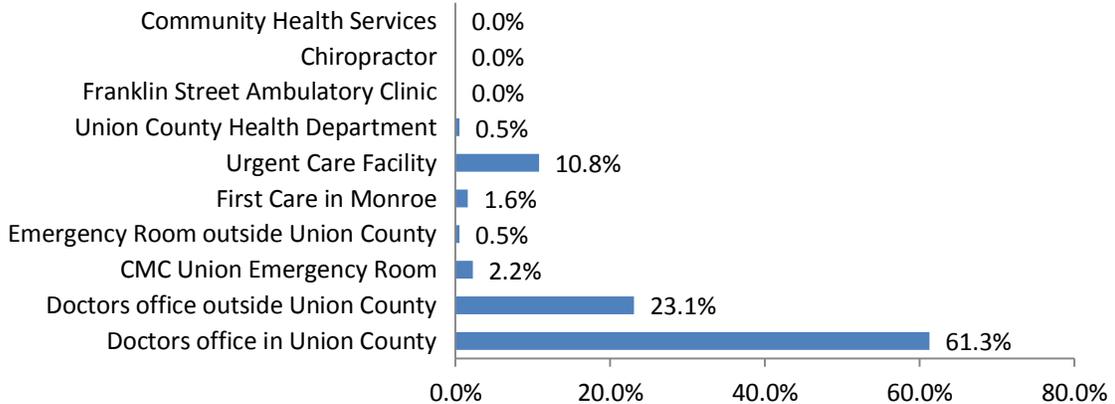
### Adult Black Males Go Most Often When Sick



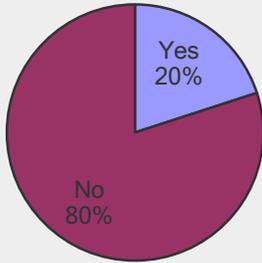
### Adult Hispanic Males Go Most Often When Sick



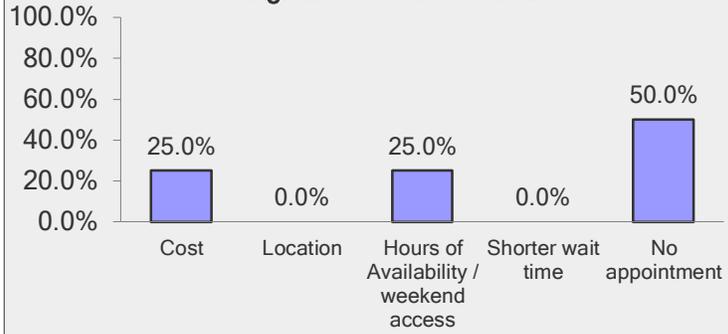
### Adult White Males Go Most Often When Sick



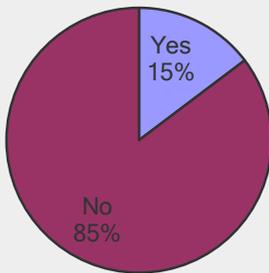
**Adult Black Males  
Used A Minute Clinic  
For Medical Services**



**Adult Black Males Reasons  
For Using Minute Clinic Medical Services**



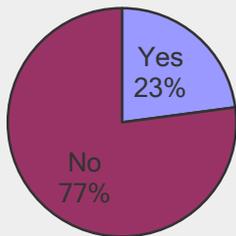
**Adult Hispanic Males  
Used A Minute Clinic  
For Medical Services**



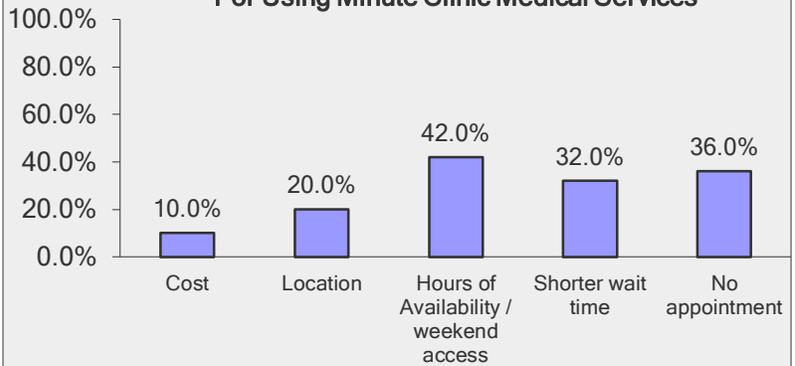
**Adult Hispanic Male Reasons  
For Using Minute Clinic Medical Services**



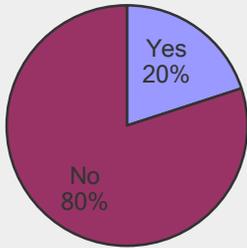
**Adult White Males  
Used A Minute Clinic  
For Medical Services**



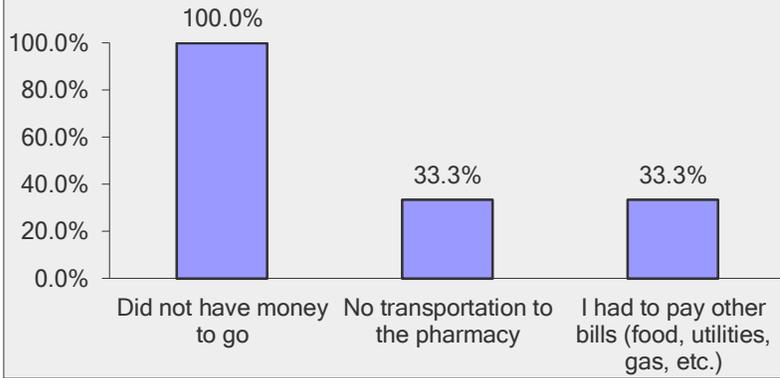
**Adult White Males Reasons  
For Using Minute Clinic Medical Services**



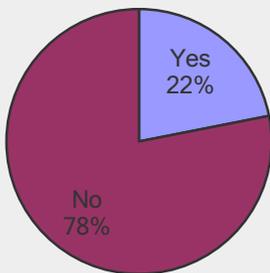
**Adult Black Males Did Not Fill Needed Prescription Medicine**



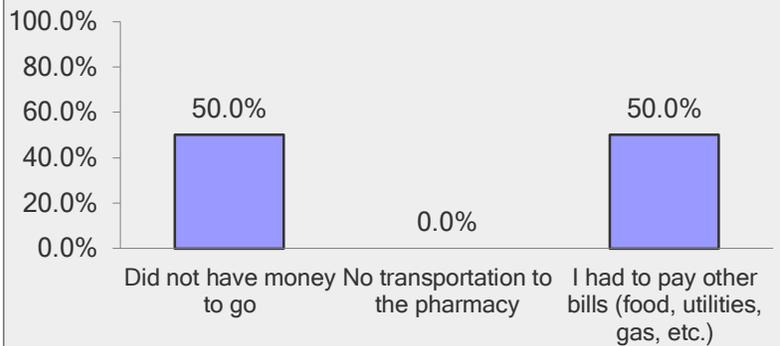
**Adult Black Males Reasons For Not Filling Perscription Medicine**



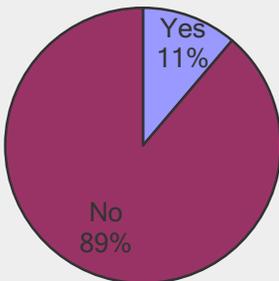
**Adult Hispanic Males Did Not Fill Needed Prescription Medicine**



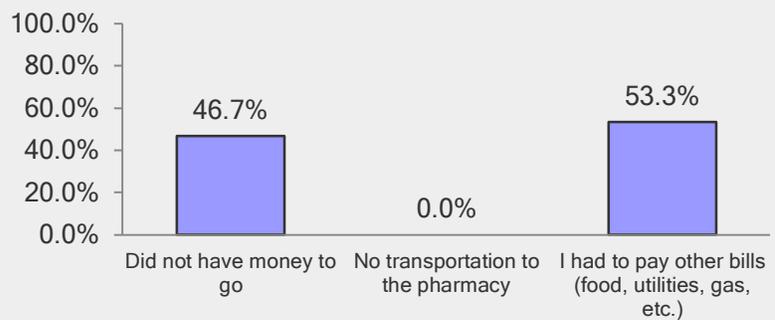
**Adult Hispanic Males Reasons For Not Filling Prescription Medicine**



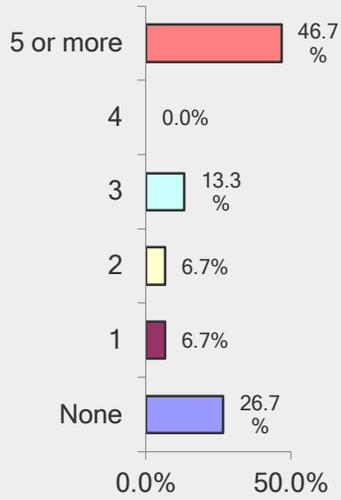
**Adult White Males Did Not Fill Needed Prescription Medicine**



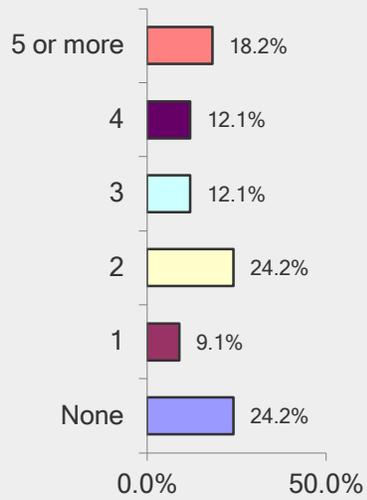
**Adult White Males Reasons For Not Filling Prescription Medicine**



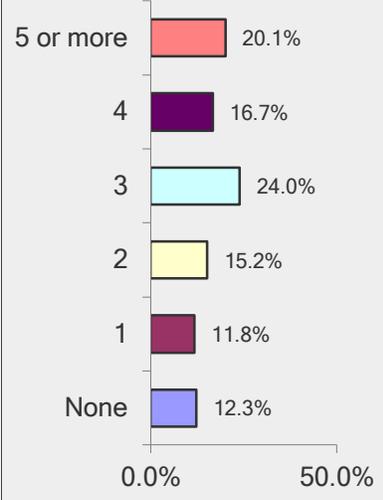
**Adult Black Males  
Weekly Exercise  
At Least 30 Minutes**

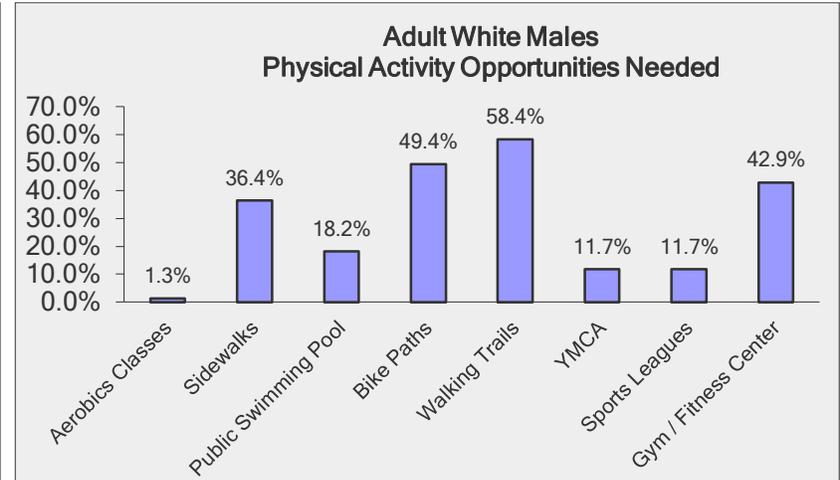
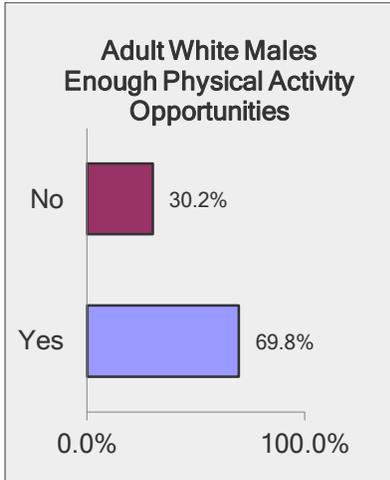
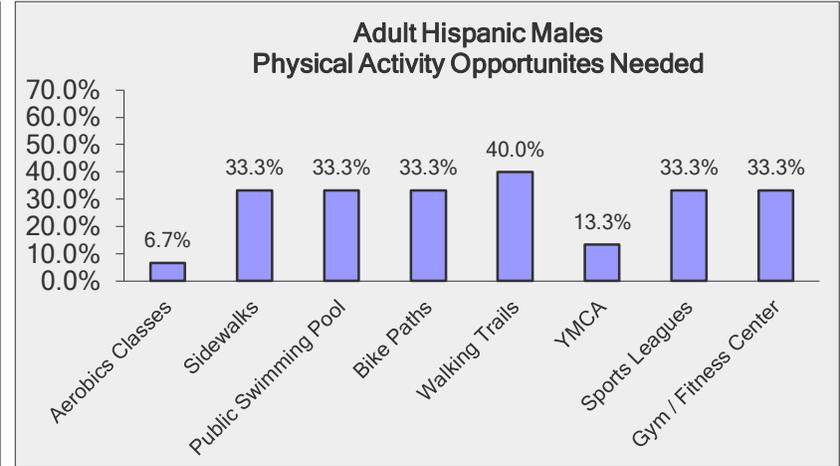
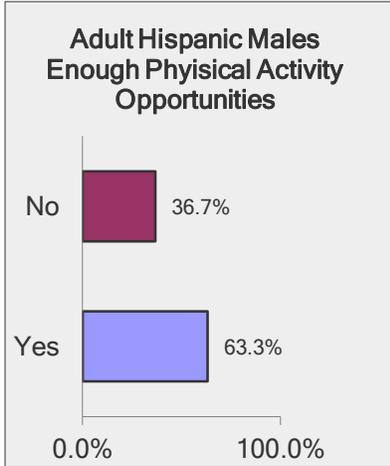
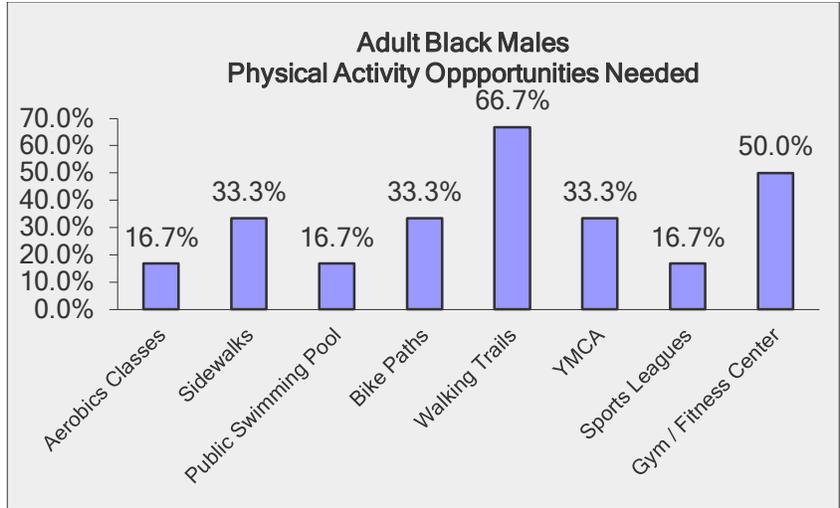
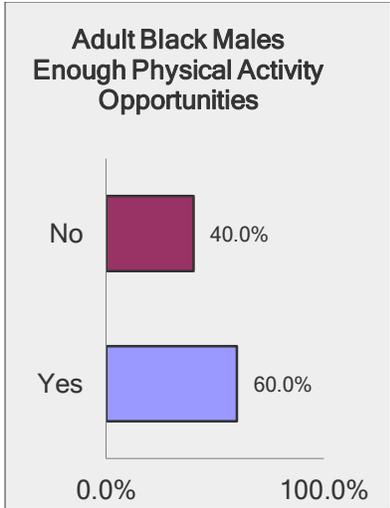


**Adult Hispanic Males  
Weekly Exercise  
At Least 30 Minutes**

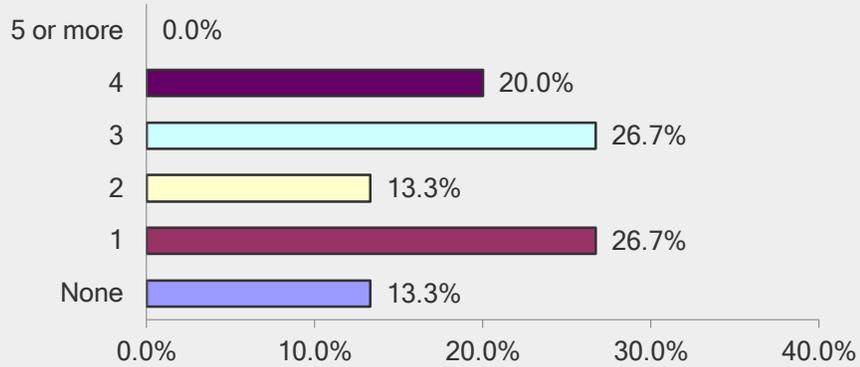


**Adult White Males  
Weekly Exercise  
At Least 30 Minutes**

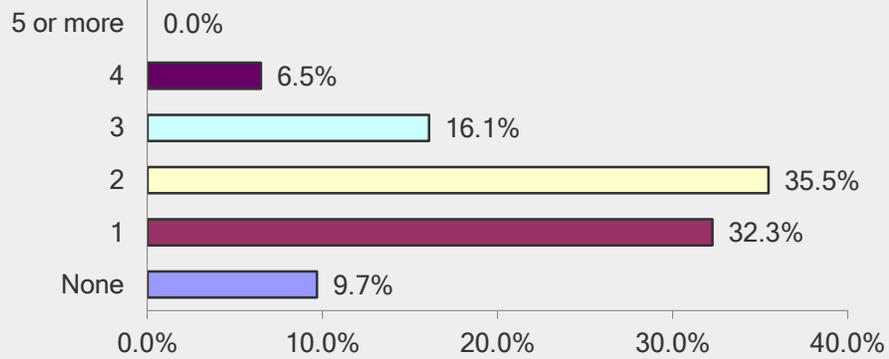




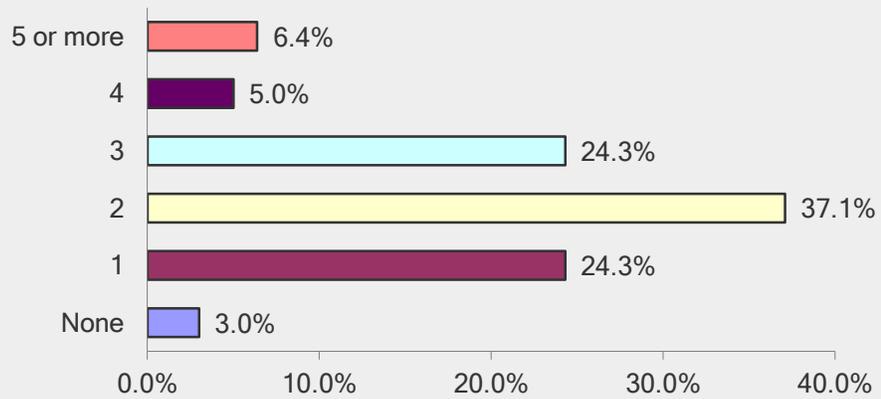
### Adult Black Males Daily Servings of Fruits and Vegetables



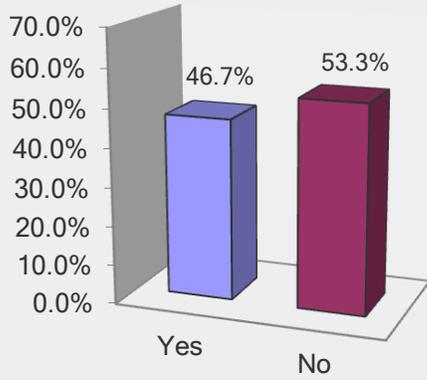
### Adult Hispanic Males Daily Servings of Fruits and Vegetables



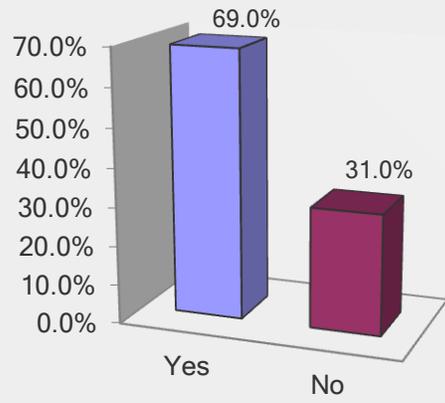
### Adult White Males Daily Servings of Fruits and Vegetables



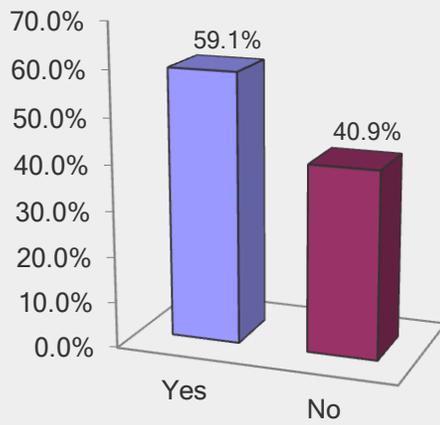
**Adult Black Males  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**

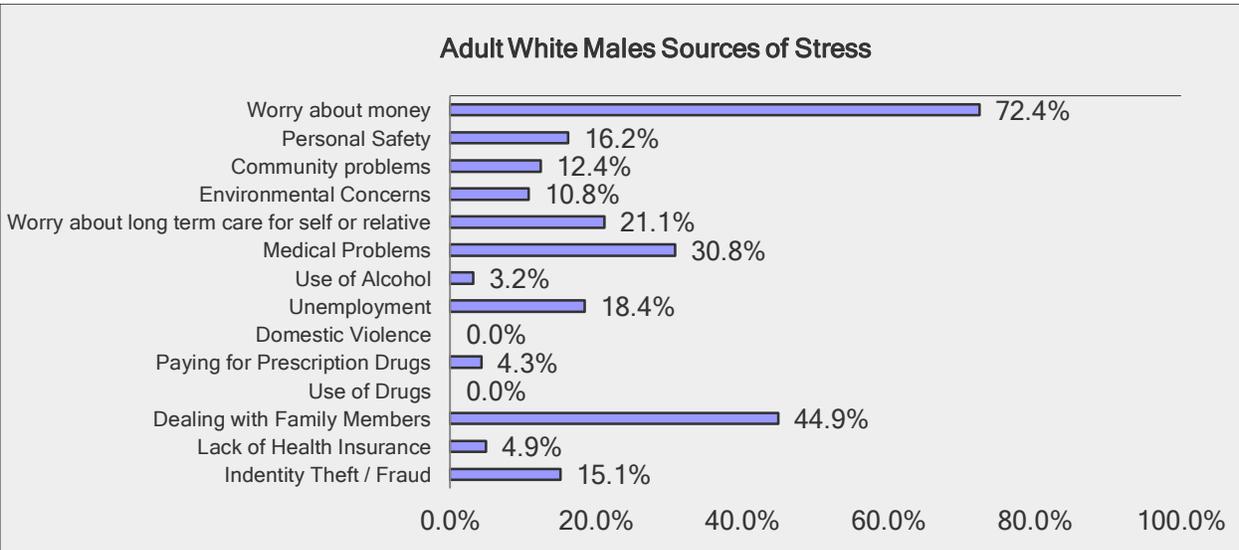
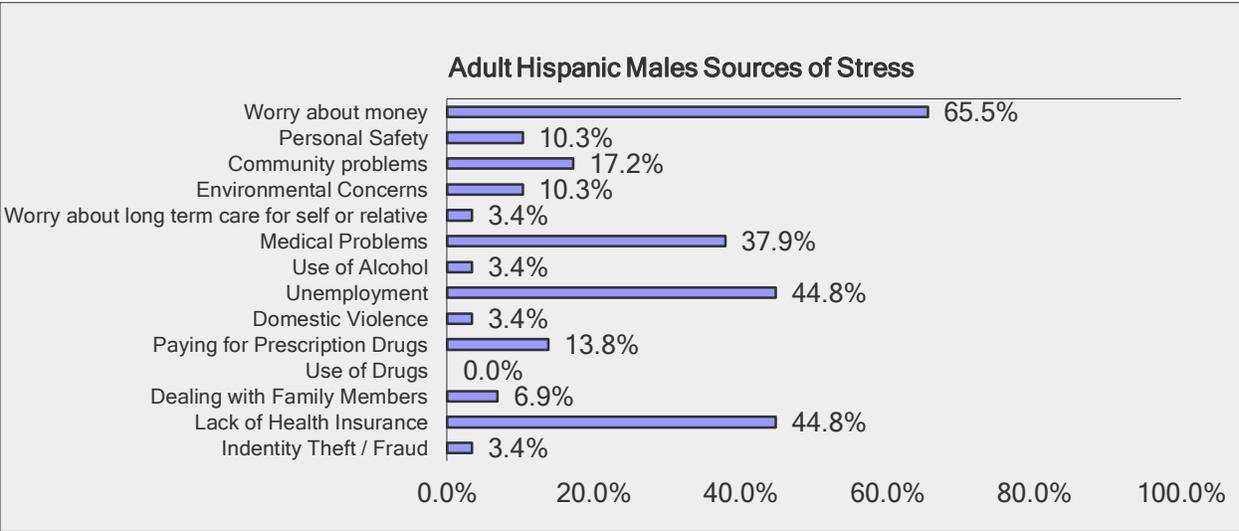
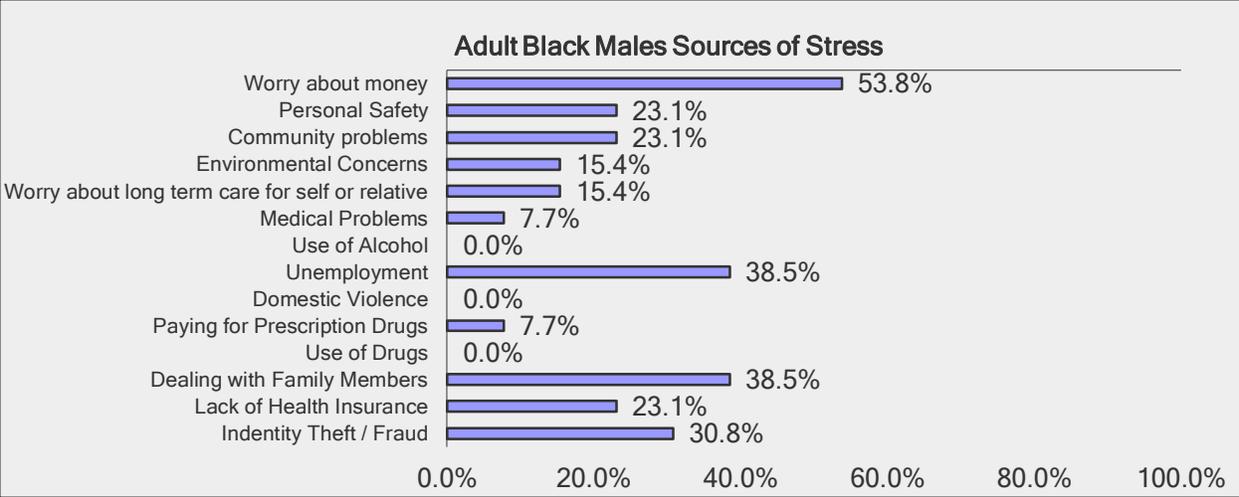


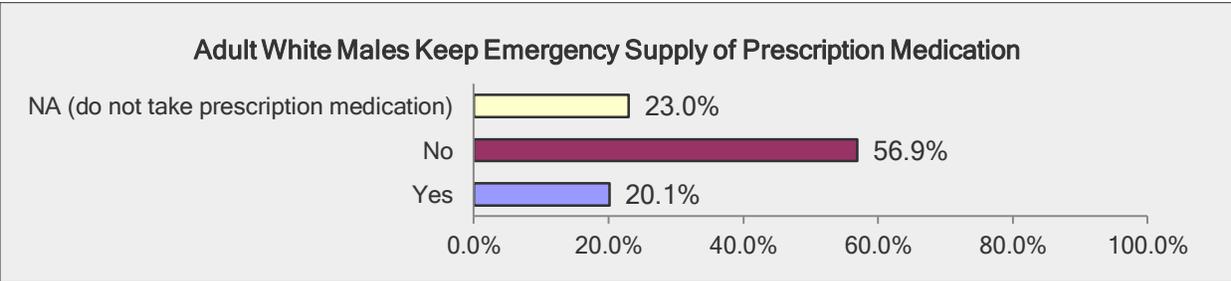
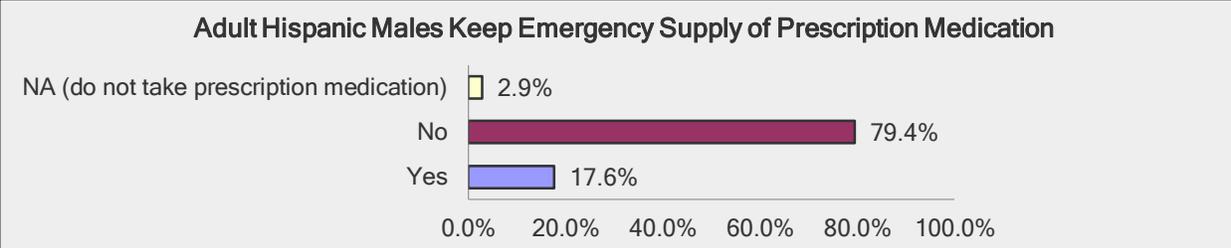
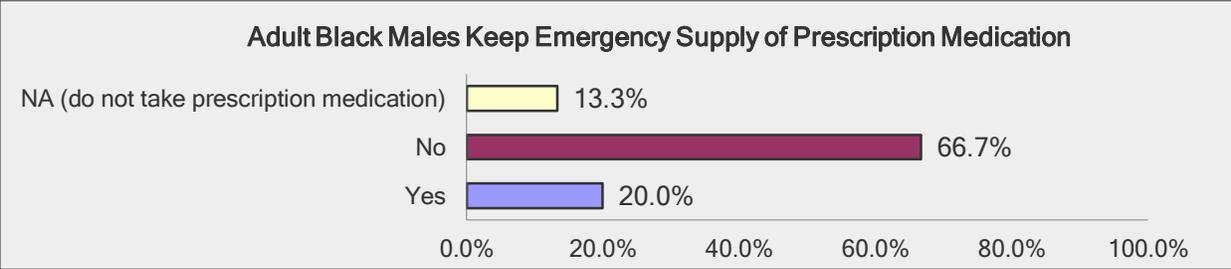
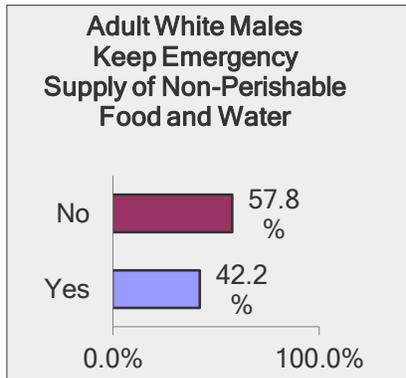
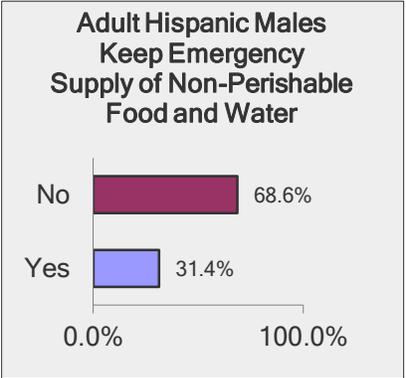
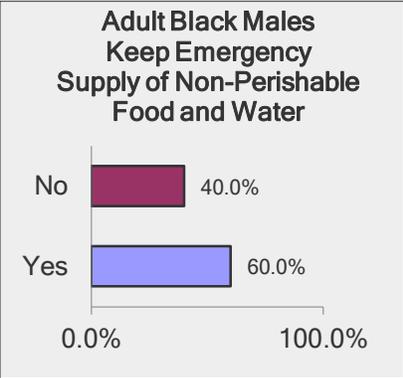
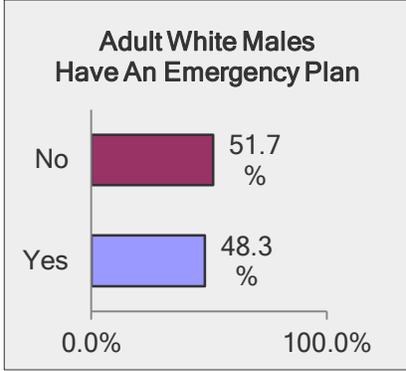
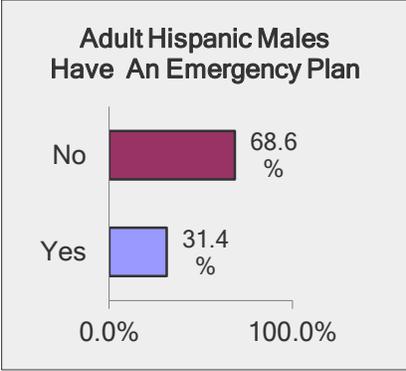
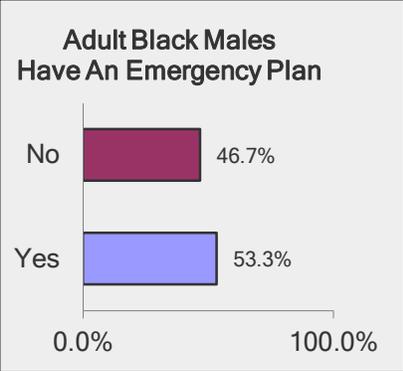
**Adult Hispanic Males  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**



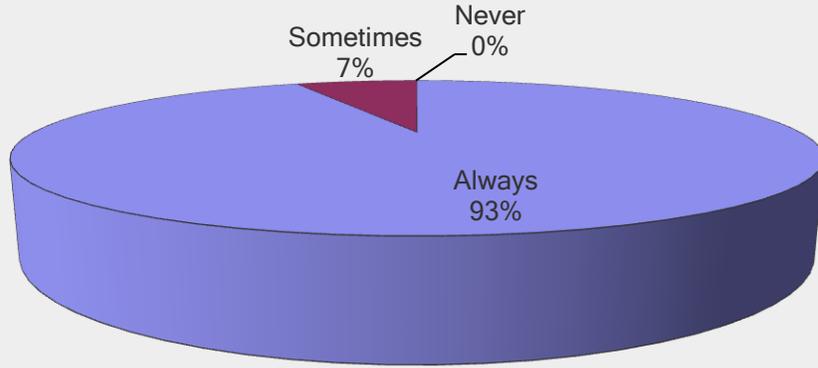
**Adult White Males  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**



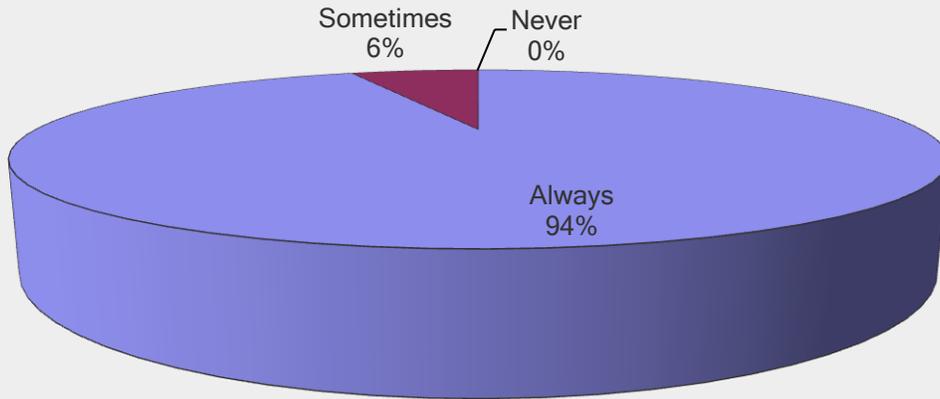




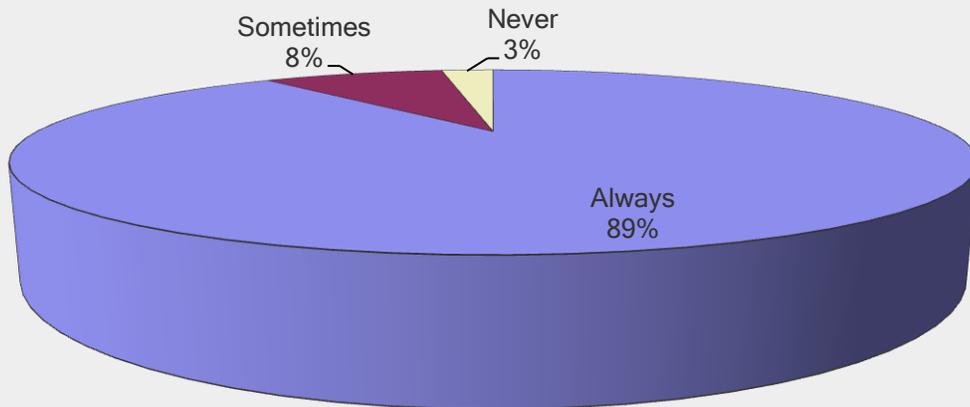
**Adult Black Males Use Seat Belts When Driving Or Riding In A Car**

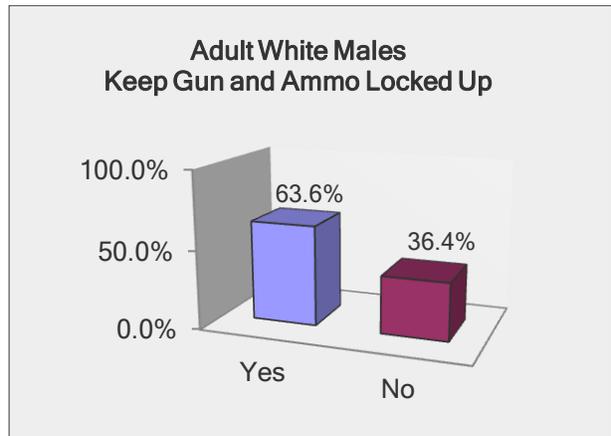
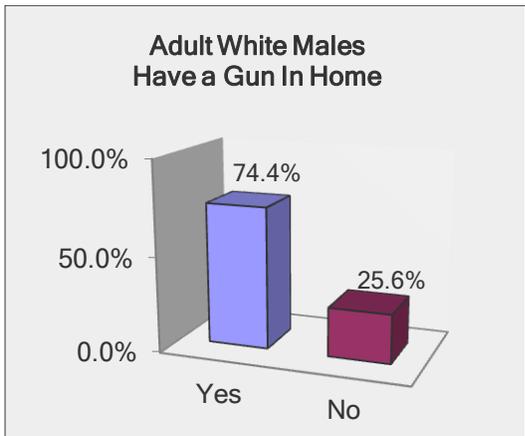
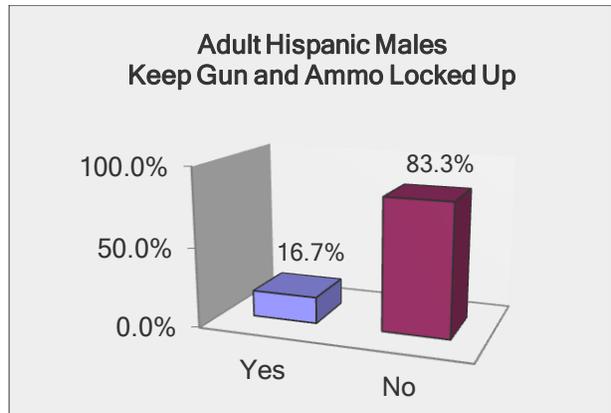
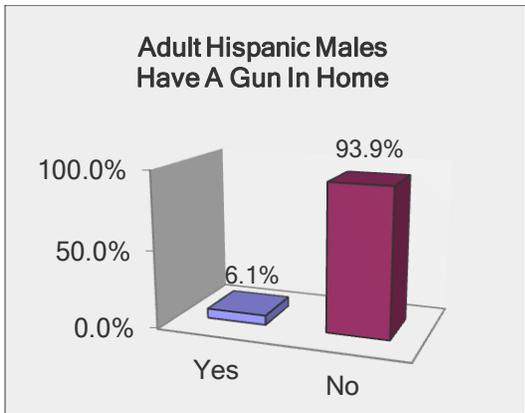
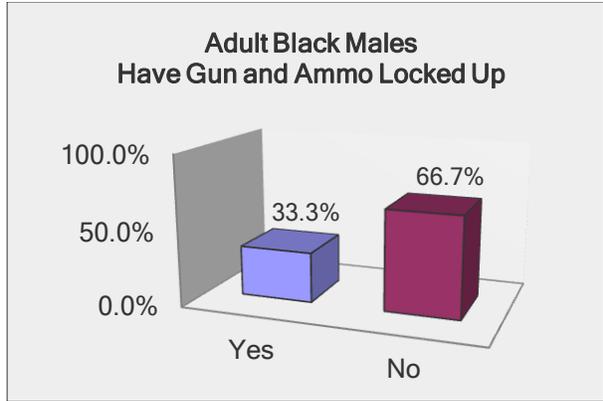
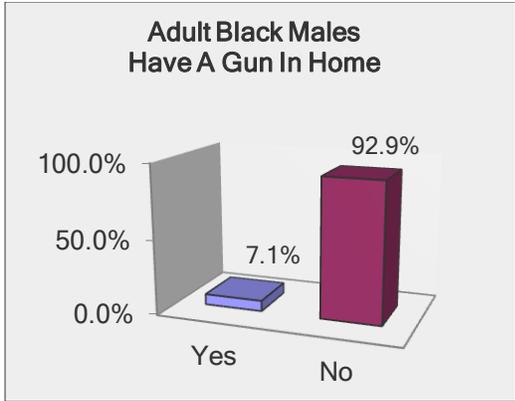


**Adult Hispanic Males Use Seat Belts When Driving Or Riding In A Car**

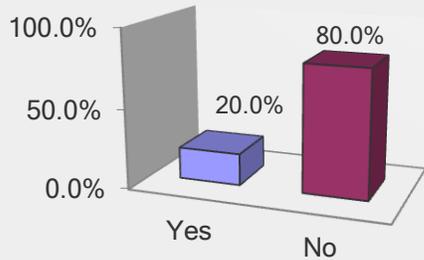


**Adult White Males Use Seat Belts When Driving Or Riding In A Car**

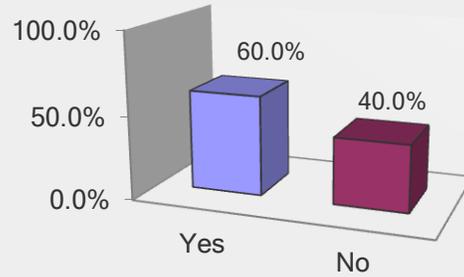




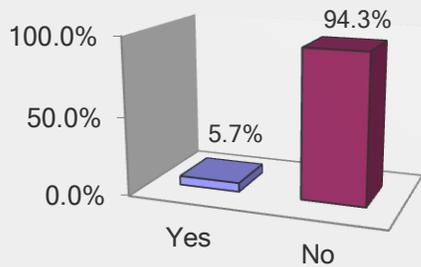
**Adult Black Males  
Smoke or Use Smokeless Tobacco**



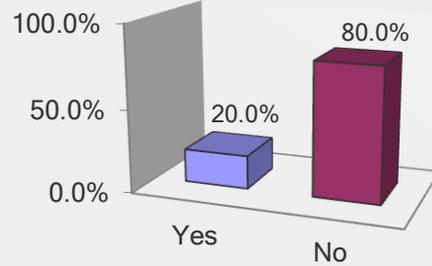
**Adult Black Male Smokers  
Would Like to Quit**



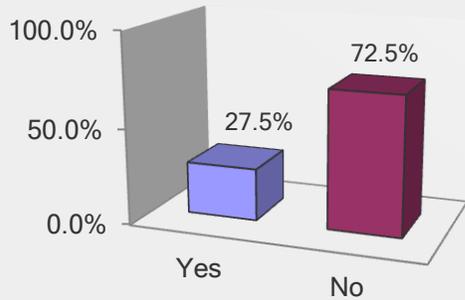
**Adult Hispanic Males  
Smoke or Use Smokeless Tobacco**



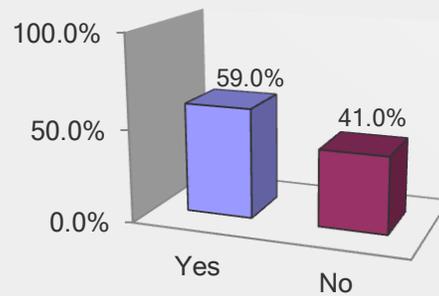
**Adult Hispanic Male Smokers  
Would Like To Quit**



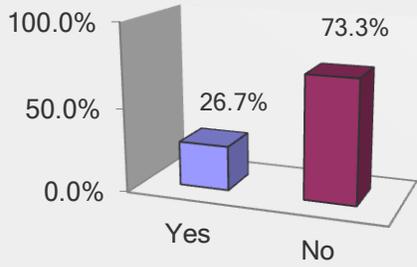
**Adult White Males  
Smoke or Use Smokeless Tobacco**



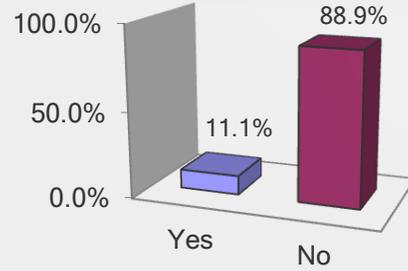
**Adult White Male Smokers  
Would Like to Quit**



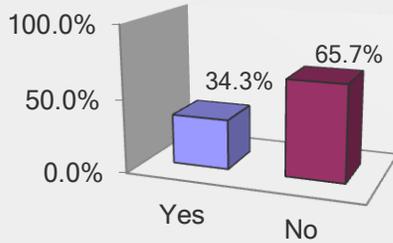
**Adult Black Males  
Drink Alcoholic Beverages**



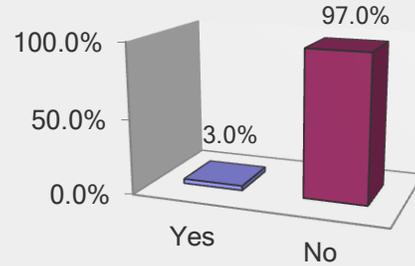
**Adult Black Males  
Drive After Drinking  
Alcoholic Beverages**



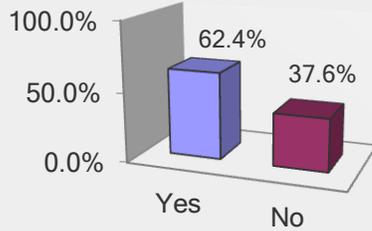
**Adult Hispanic Males  
Drink Alcoholic Beverages**



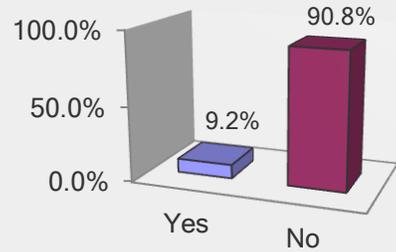
**Adult Hispanic Males  
Drive After Drinking  
Alcoholic Beverages**



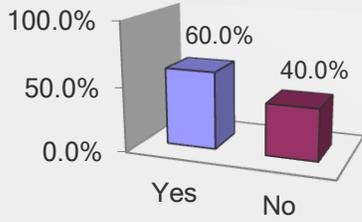
**Adult White Males  
Drink Alcoholic Beverages**



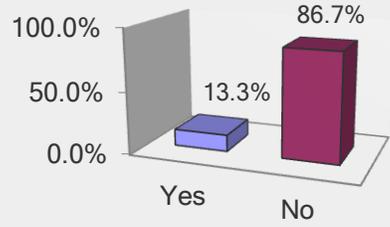
**Adult White Males  
Drive After Drinking  
Alcoholic Beverages**



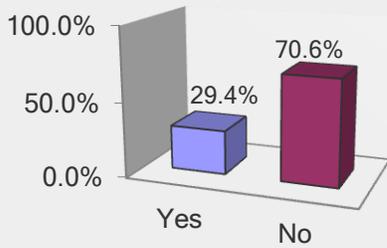
**Adult Black Males  
That Talk On A Cell Phone  
While Driving**



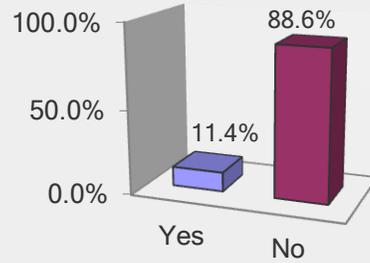
**Adult Black Males  
Text While Driving Or  
Ride With Someone  
That Text While Driving**



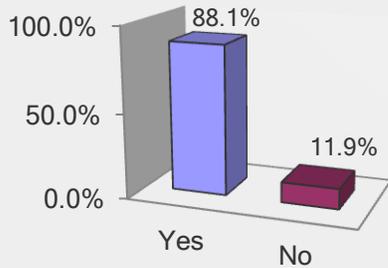
**Adult Hispanic Males  
That Talk On A Cell Phone  
While Driving**



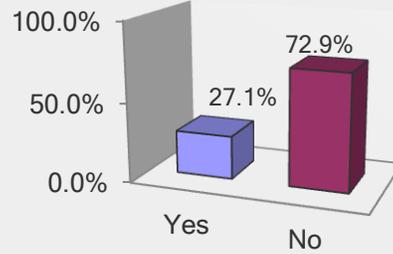
**Adult Hispanic Males  
Text While Driving Or  
Ride With Someone  
That Text While Driving**

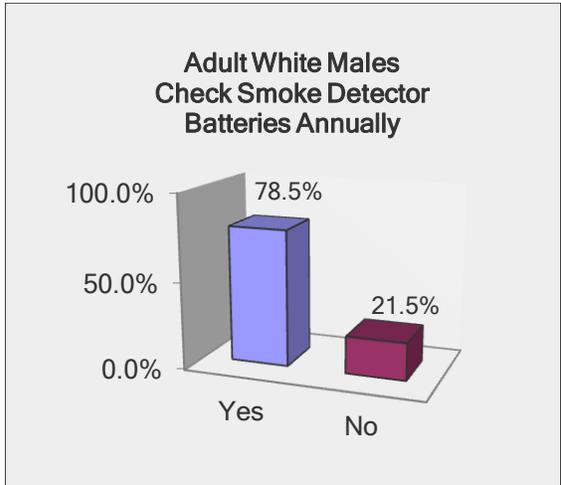
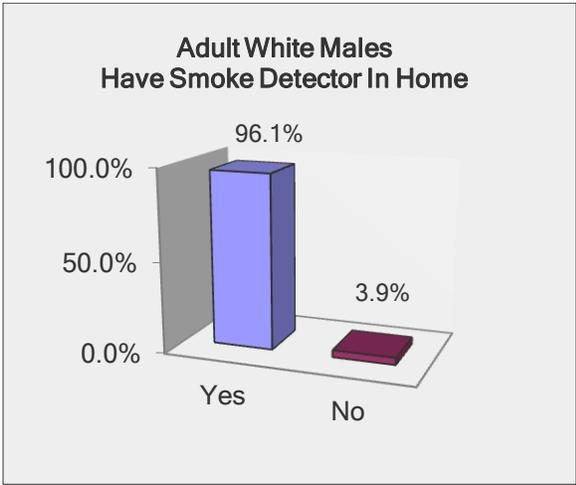
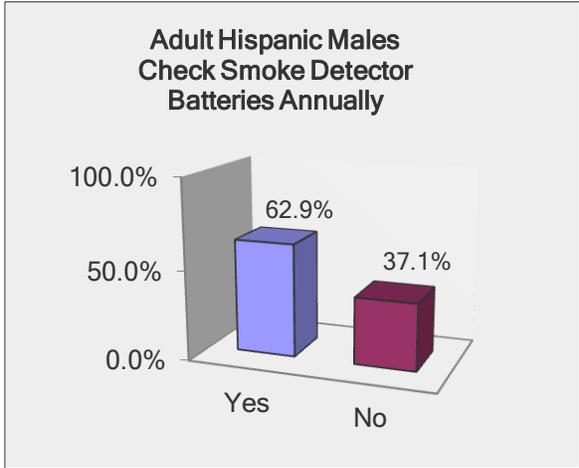
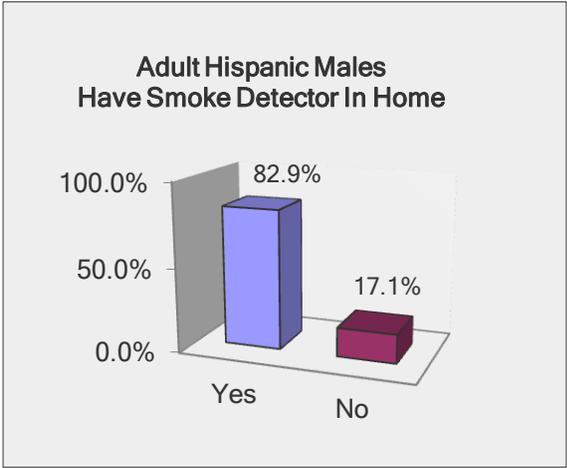
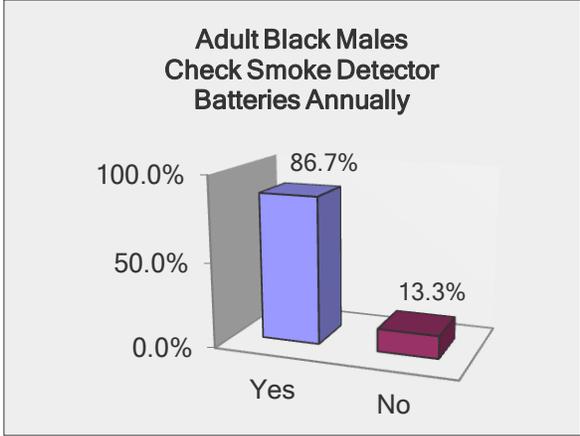
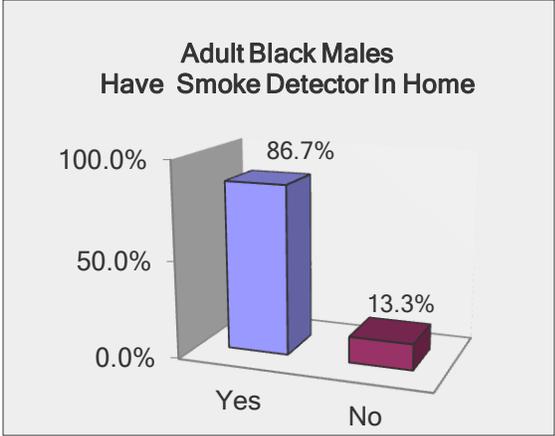


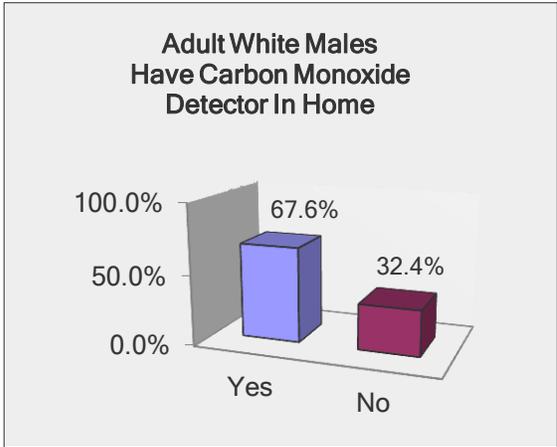
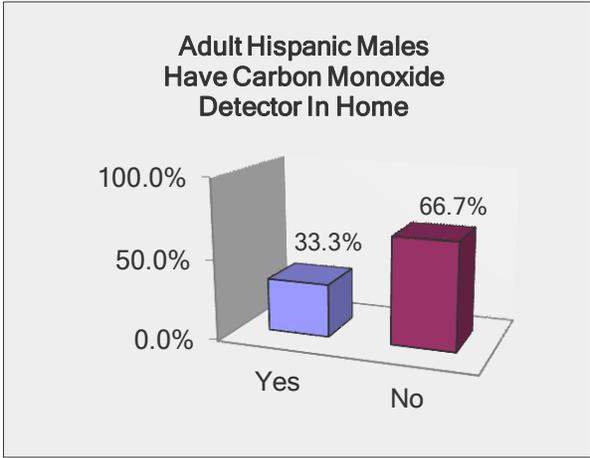
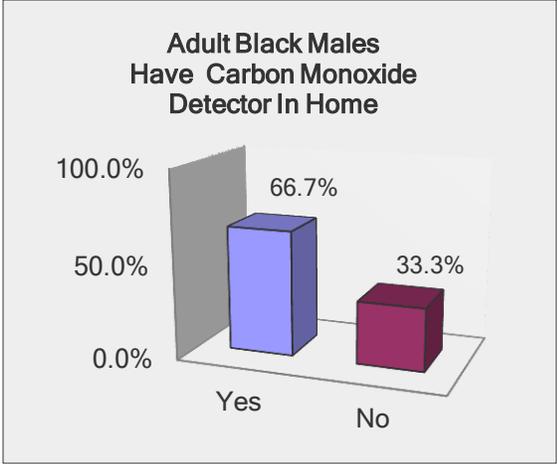
**Adult White Males  
That Talk On A Cell Phone  
While Driving**



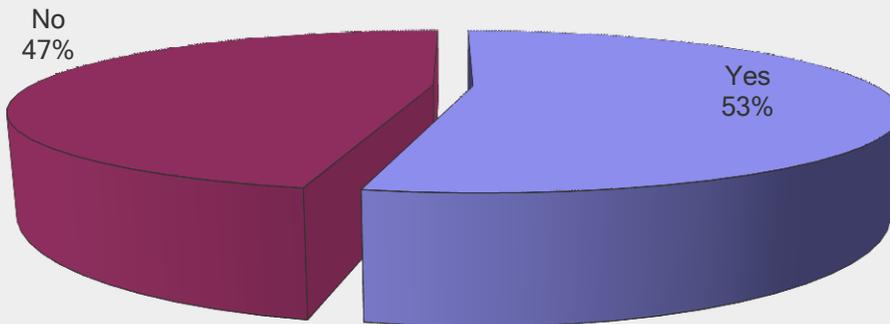
**Adult White Males  
Text While Driving Or  
Ride With Someone  
That Text While Driving**



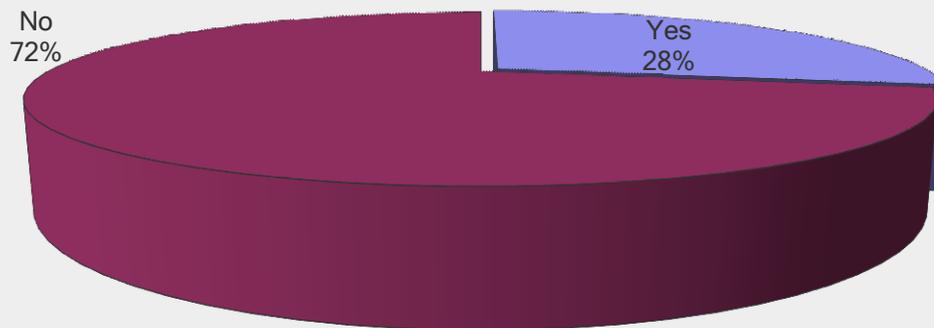




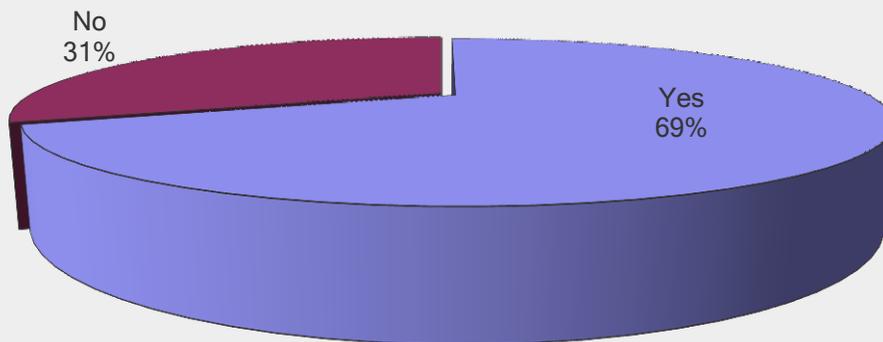
**Adult Black Males Know How To Access  
Department Of Social Service Programs For Assistance**

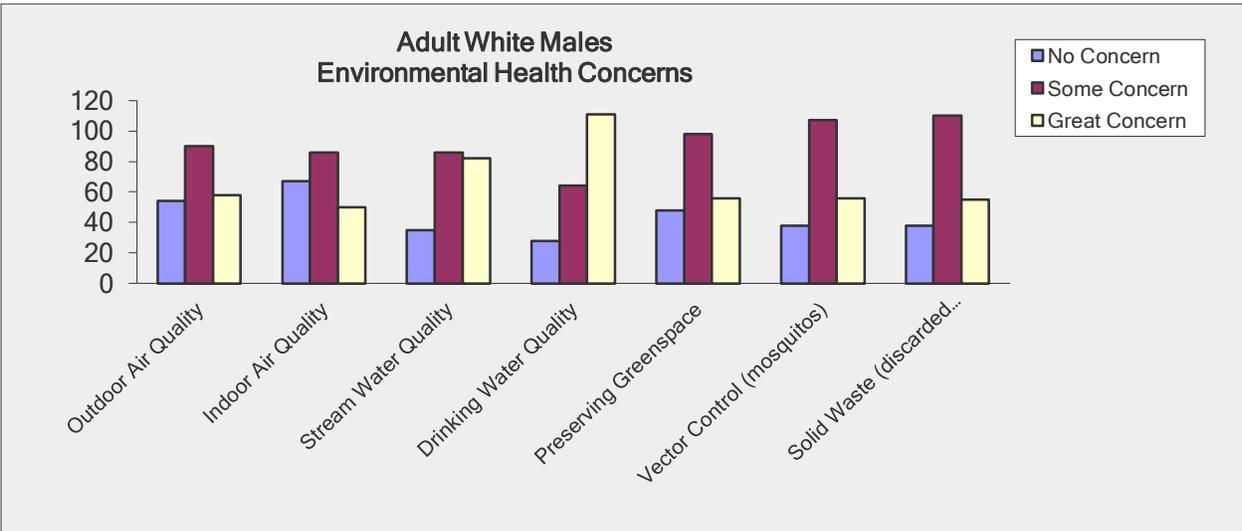
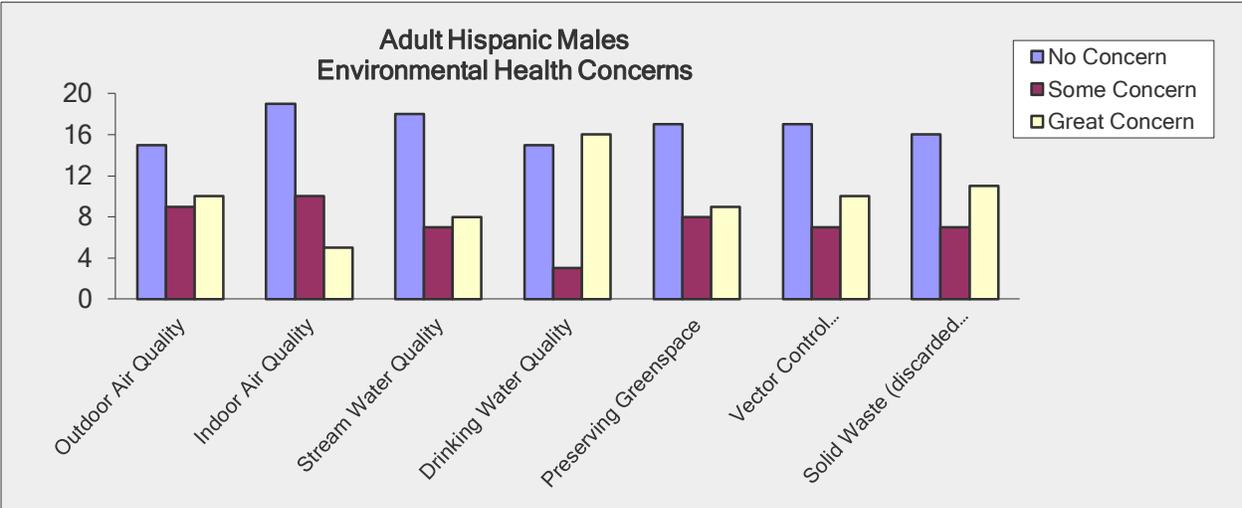
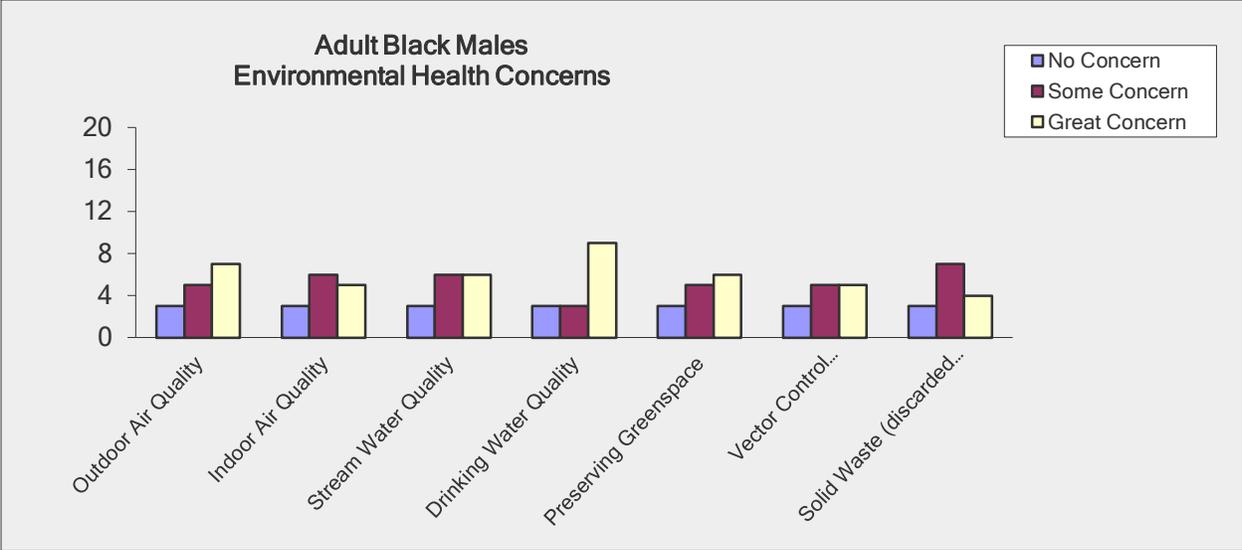


**Adult Hispanic Males Know How To Access  
Department Of Social Service Programs For Assistance**

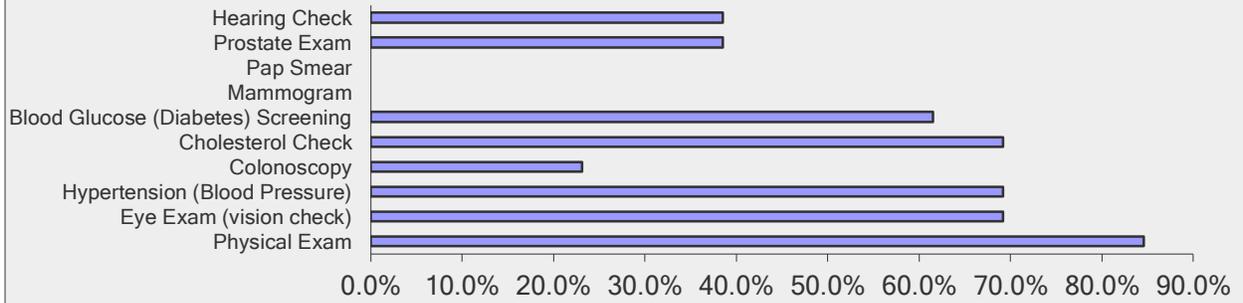


**Adult White Males Know How To Access  
Department Of Social Service Programs For Assistance**

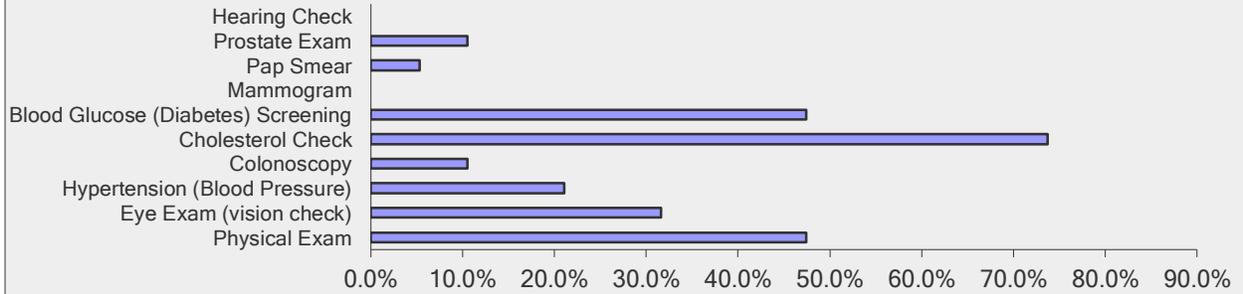




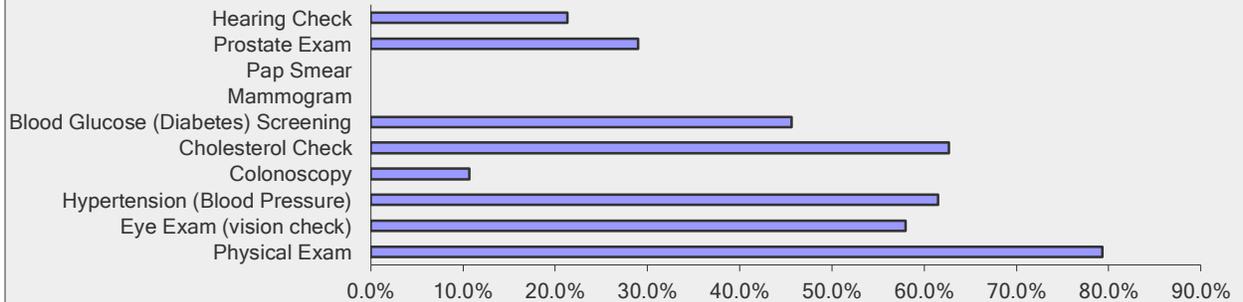
### Adult Black Males Received Preventative Health Screenings This Year

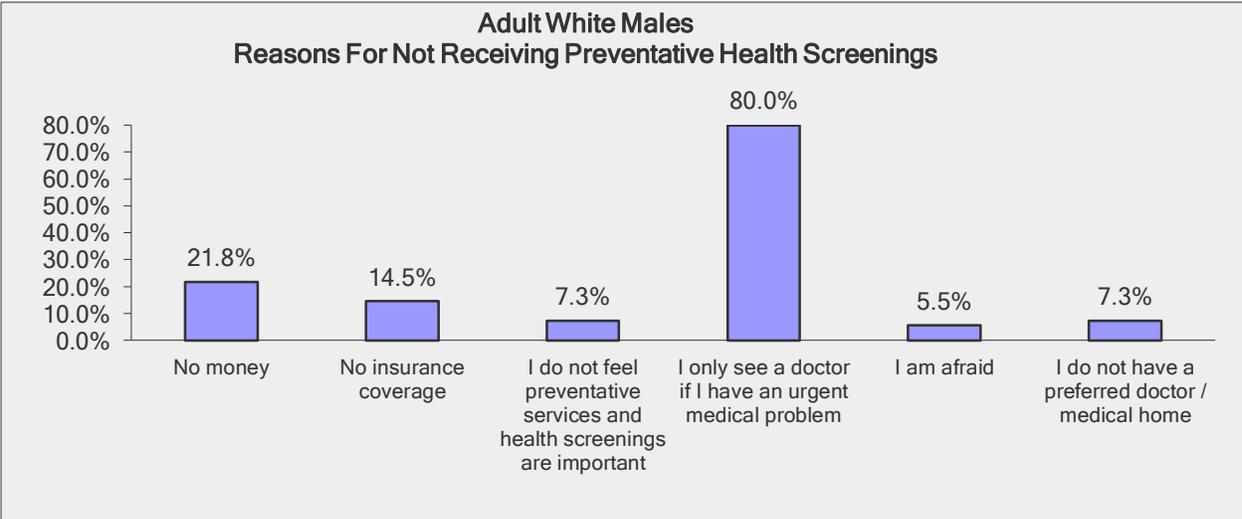
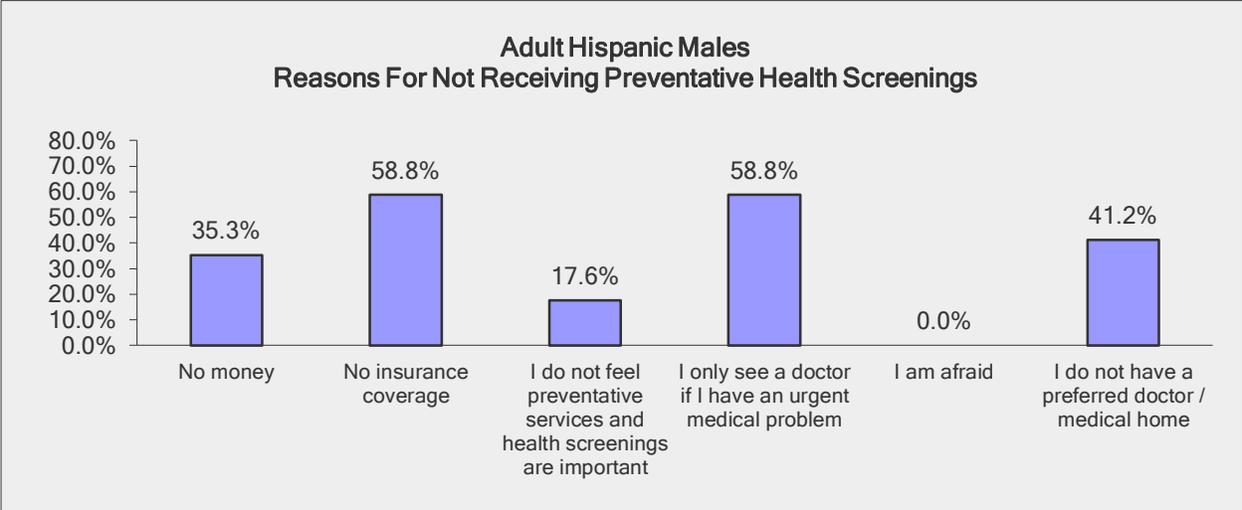
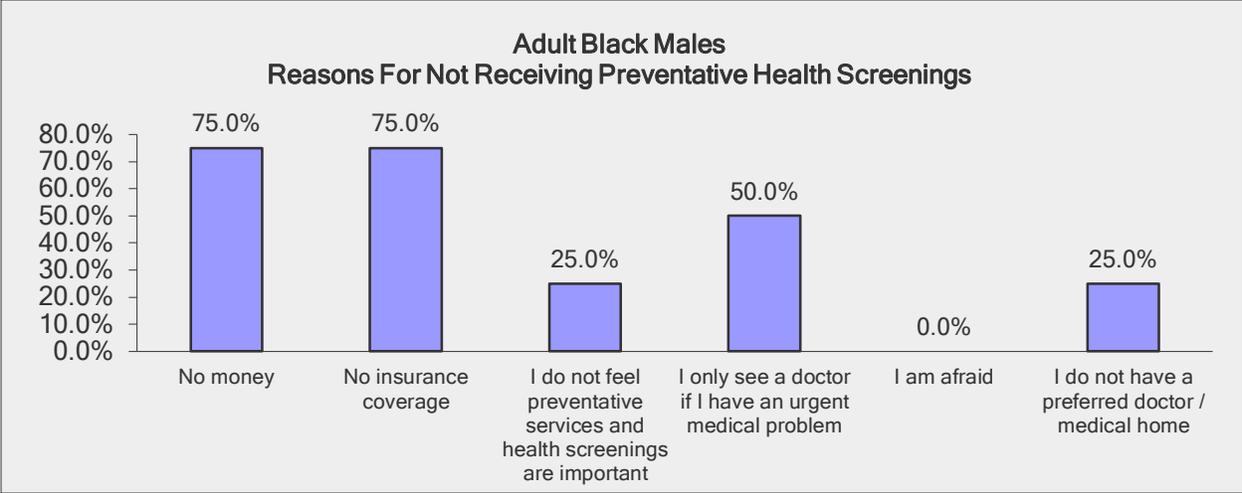


### Adult Hispanic Males Received Preventative Health Screenings This Year

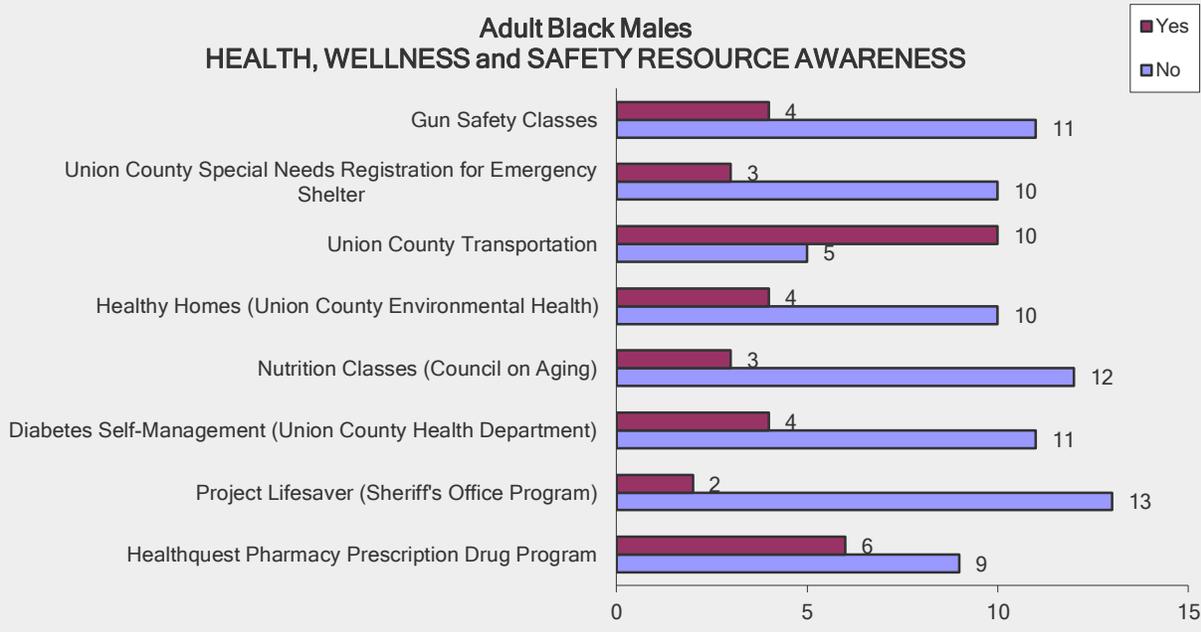


### Adult White Males Received Preventative Health Screenings This Year

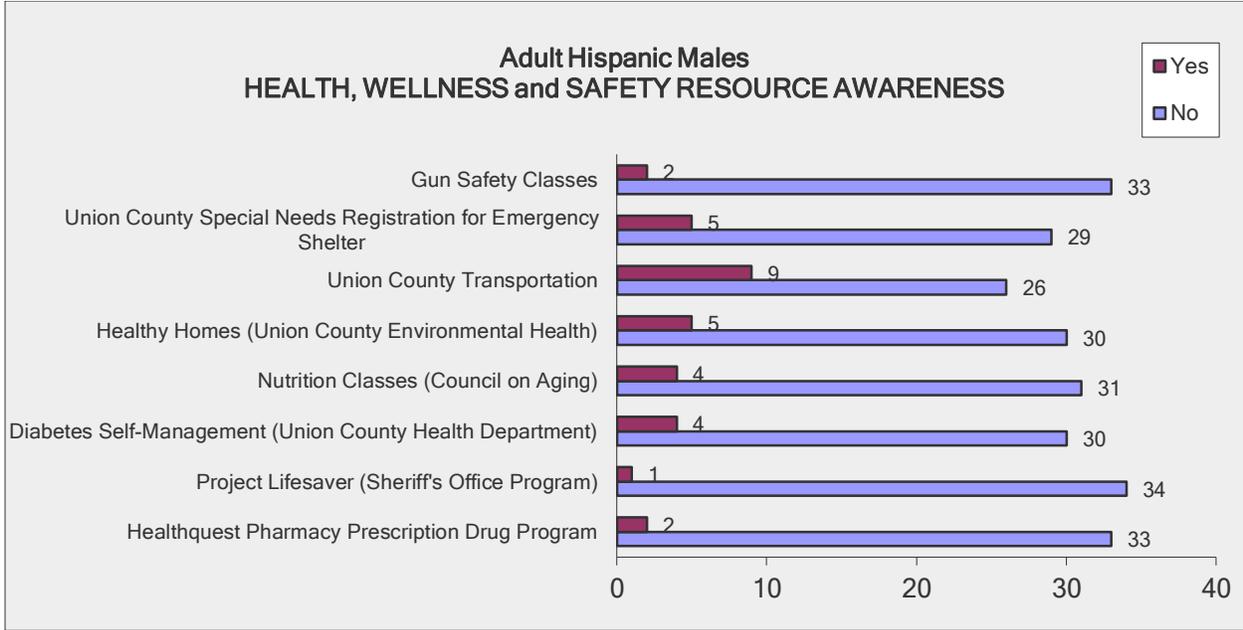




**Adult Black Males**  
**HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**

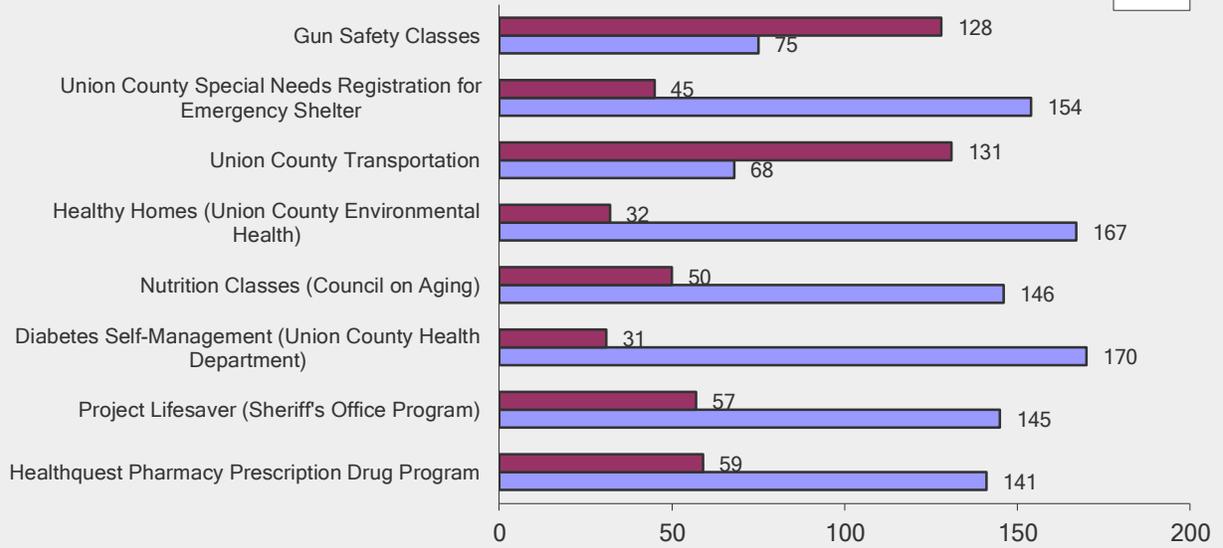


**Adult Hispanic Males**  
**HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**

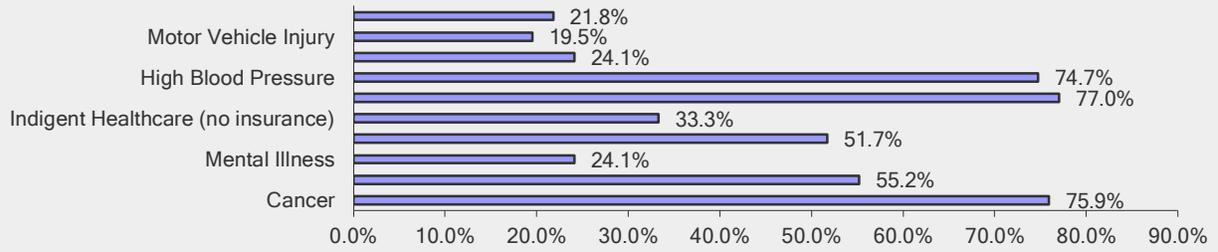


**Adult White Males**  
**HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**

■ Yes  
■ No



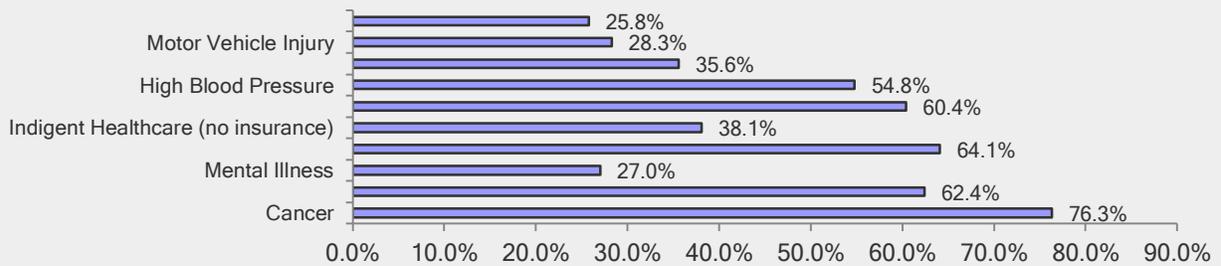
### Adult Black Females Health Concerns



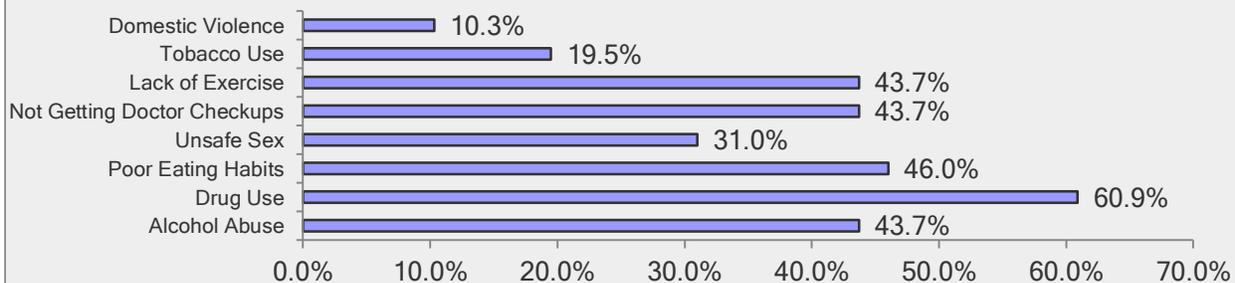
### Adult Hispanic Females Health Concerns



### Adult White Females Health Concerns



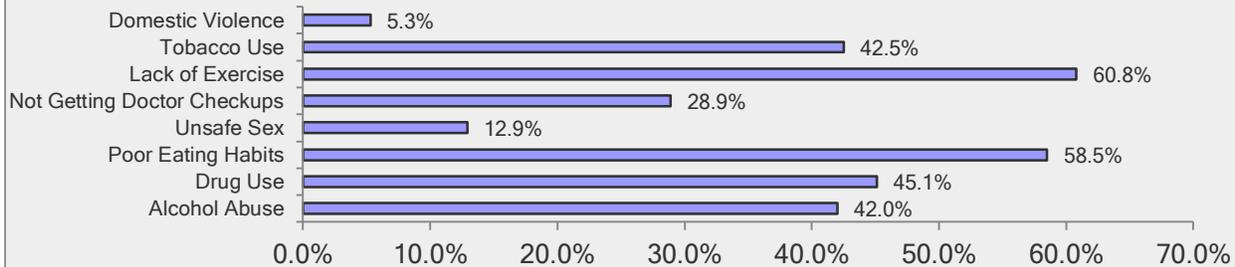
### Adult Black Females Behaviors That Cause Poor Health

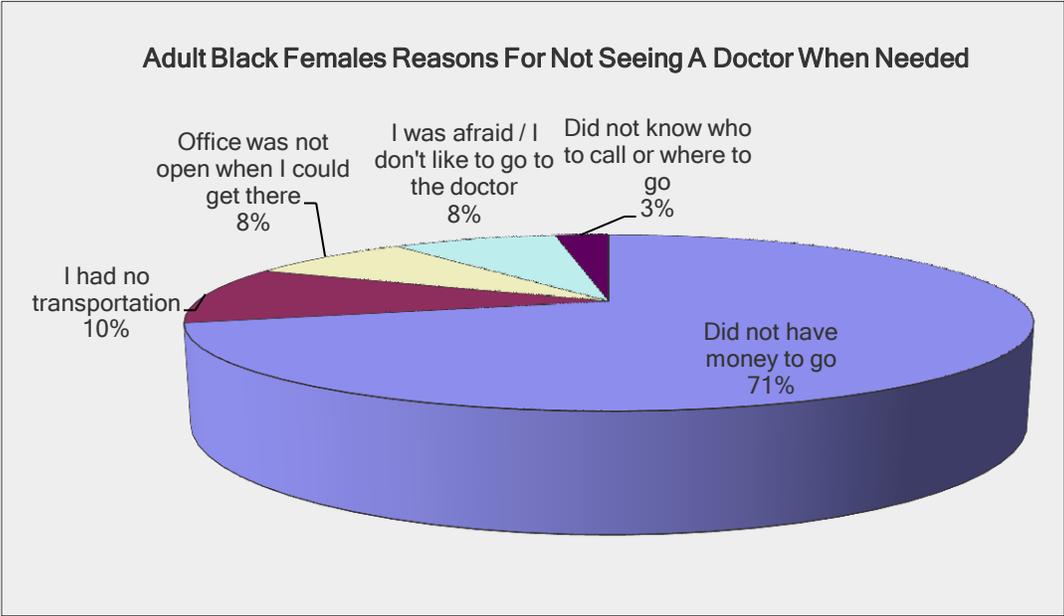
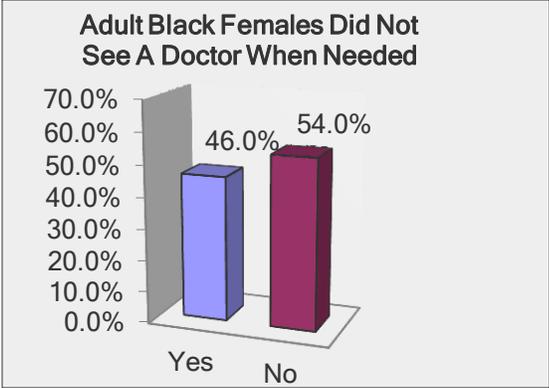


### Adult Hispanic Females Behaviors That Cause Poor Health

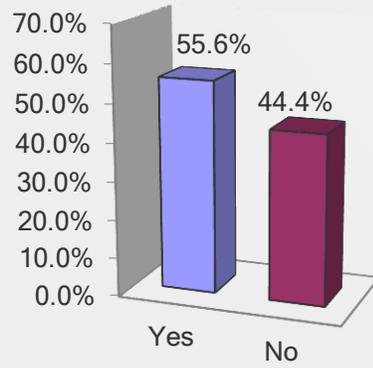


### Adult White Females Behaviors That Cause Poor Health

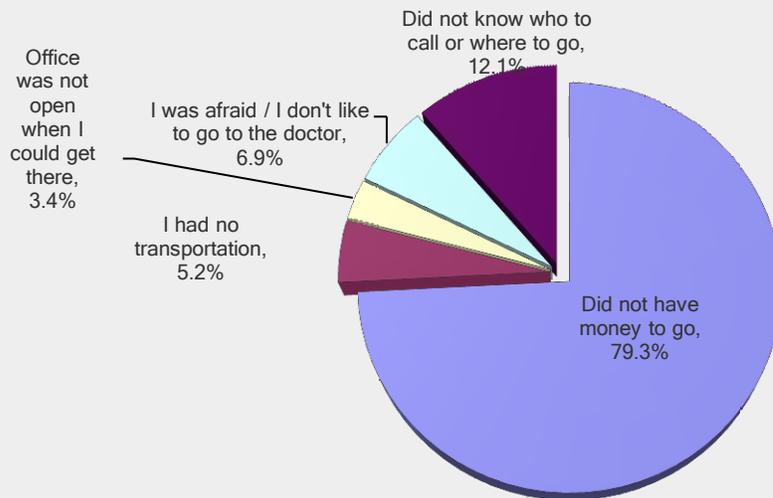


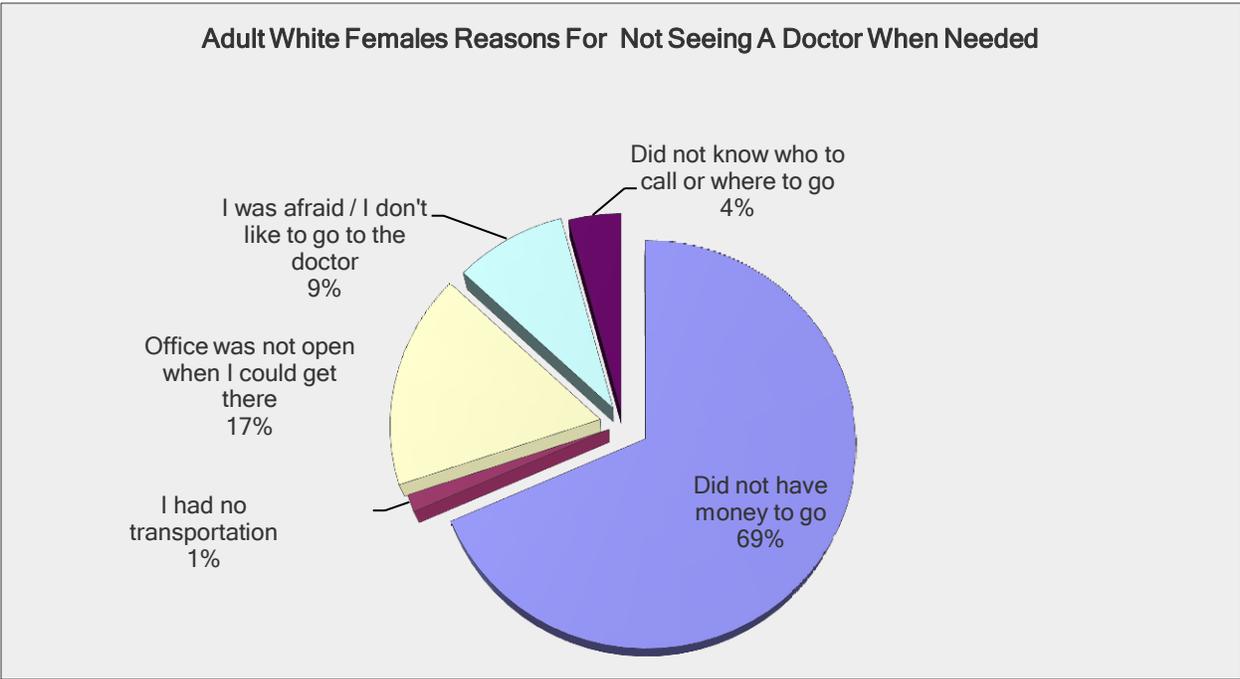
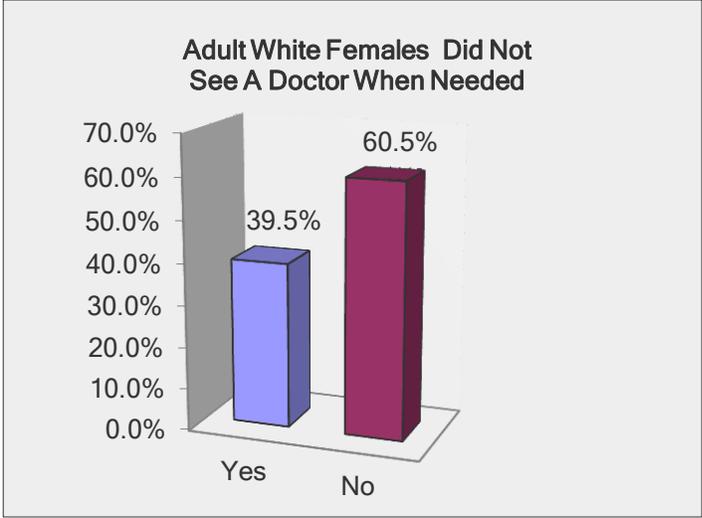


### Adult Hispanic Females Did Not See A Doctor When Needed

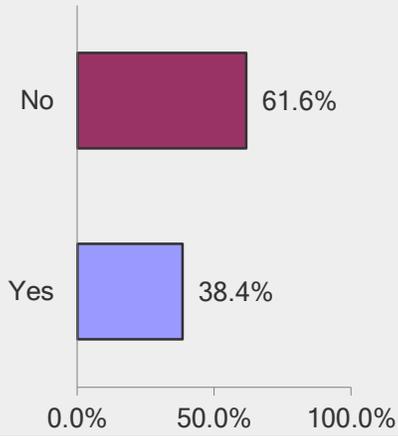


### Adult Hispanic Females Reasons For Not Seeing A Doctor When Needed

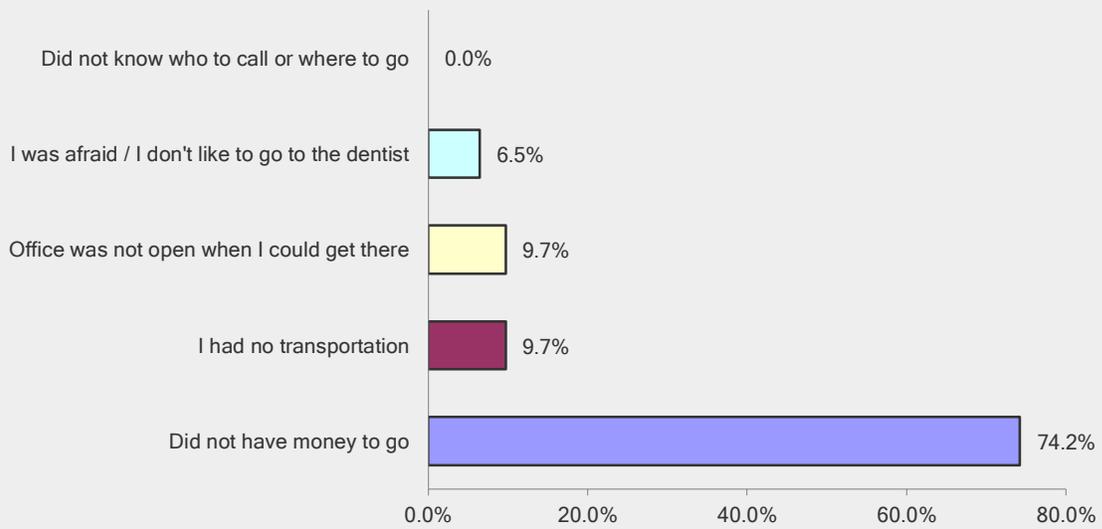




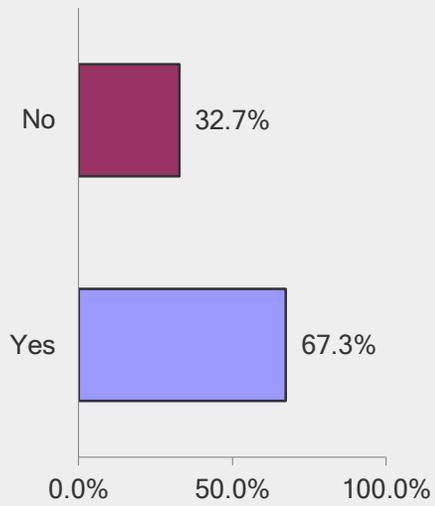
### Adult Black Females Did Not See A Dentist When Needed



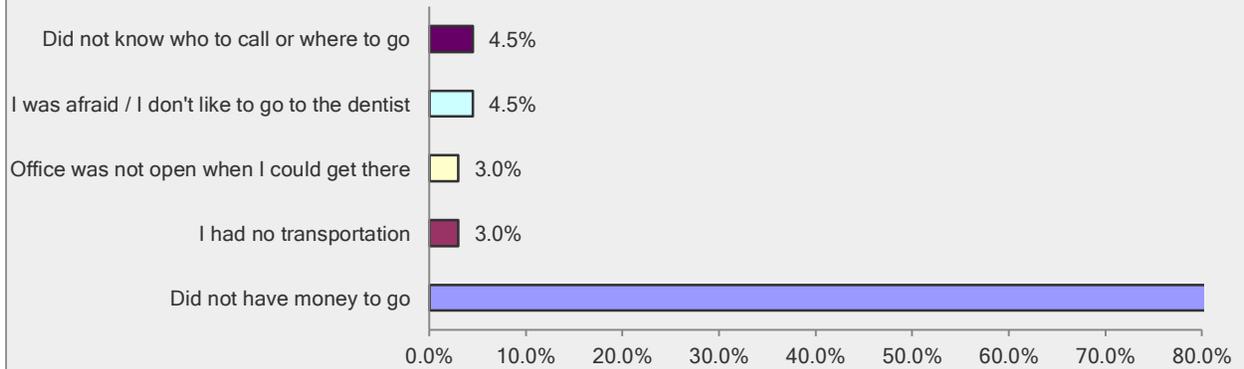
### Adult Black Females Reasons For Not Seeing A Dentist When Needed



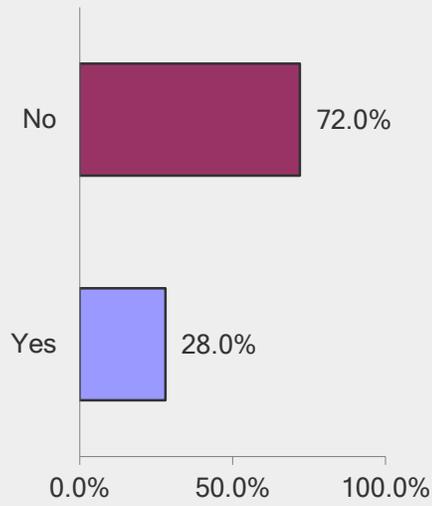
### Adult Hispanic Females Did Not See A Dentist When Needed



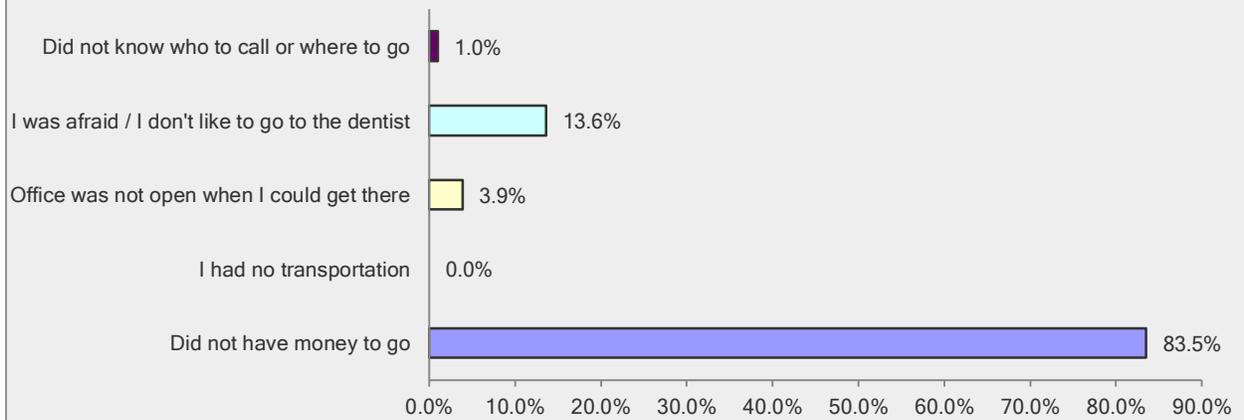
### Adult Hispanic Females Reasons For Not Seeing A Dentist When Needed



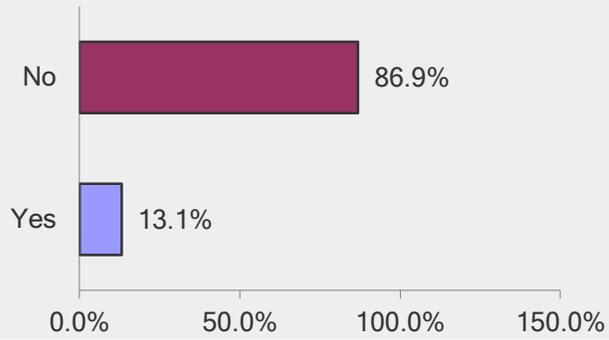
### Adult White Females Did Not See A Dentist When Needed



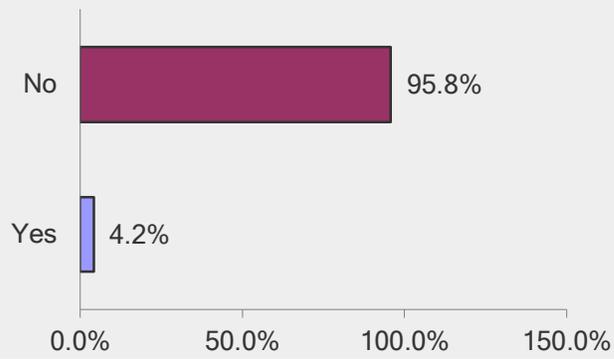
### Adult White Females Reasons For Not Seeing A Dentist When Needed



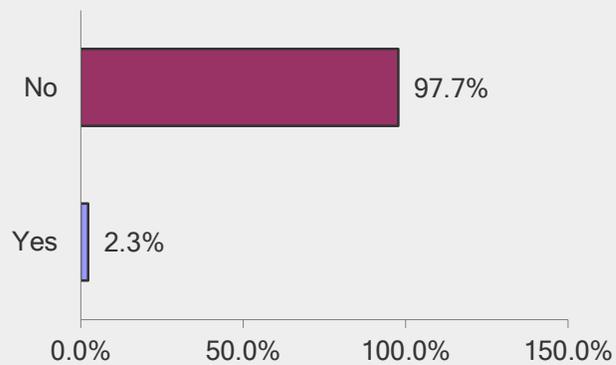
### Adult Black Females Used A Hospital Emergency Room For A Dental Issue



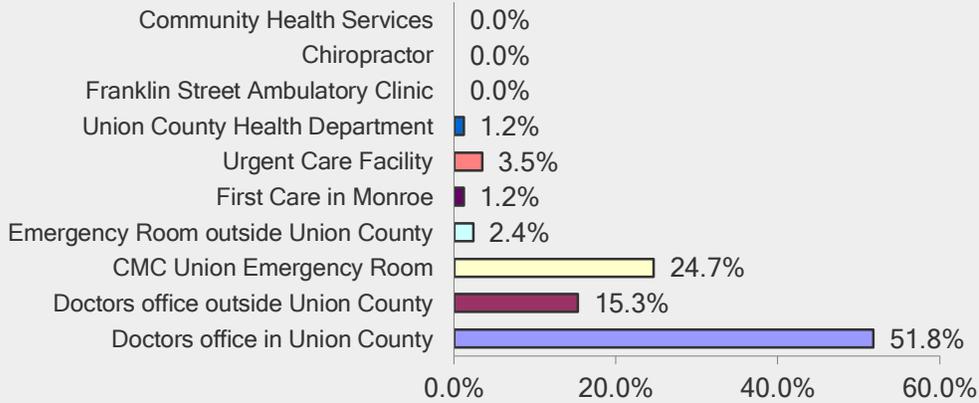
### Adult Hispanic Females Used A Hospital Emergency Room For A Dental Issue



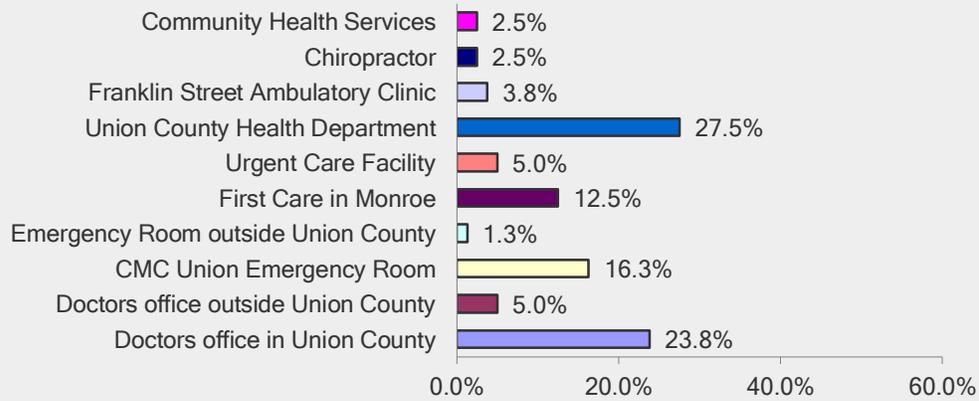
### Adult White Females Used A Hospital Emergency Room For A Dental Issue



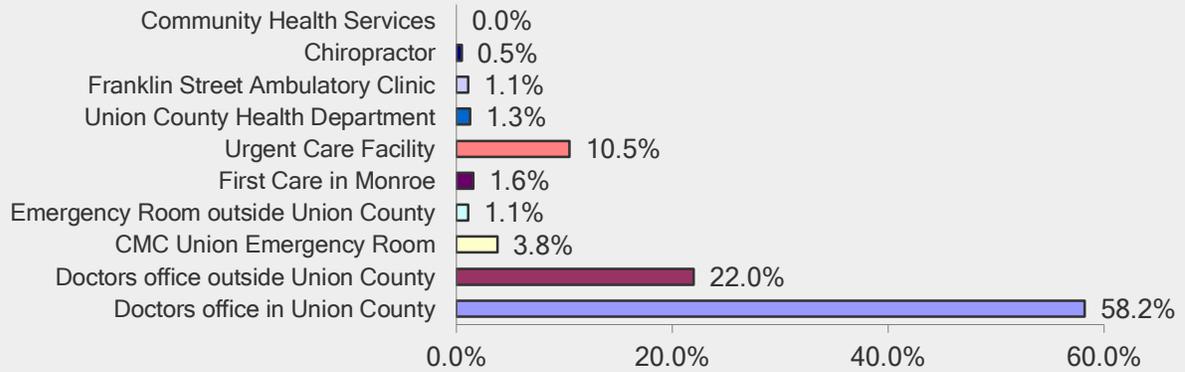
### Adult Black Females Go Most Often For Medical Care

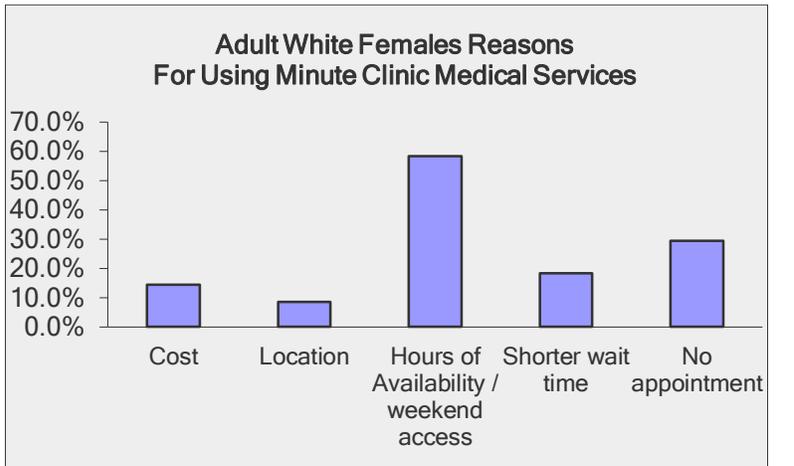
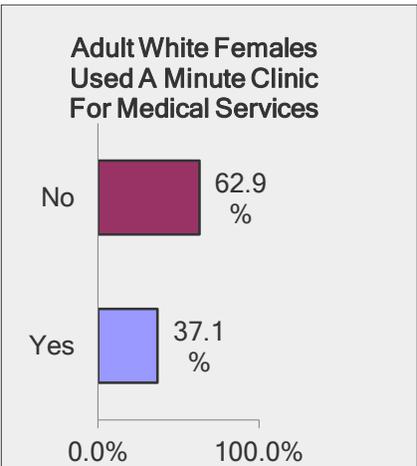
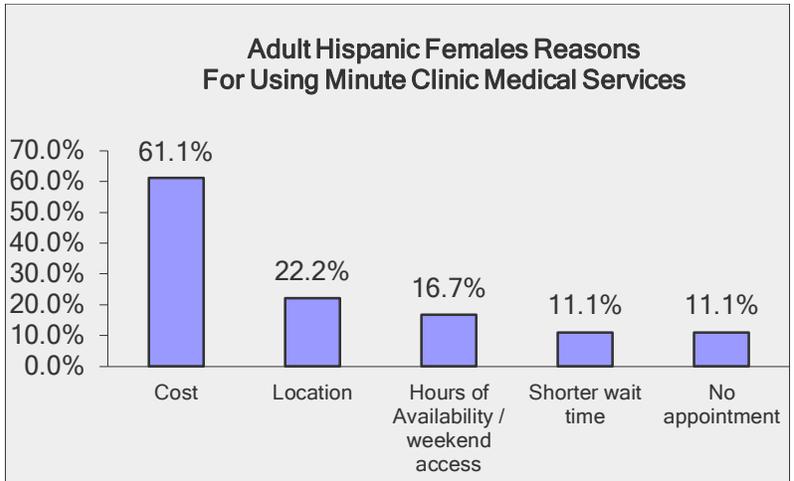
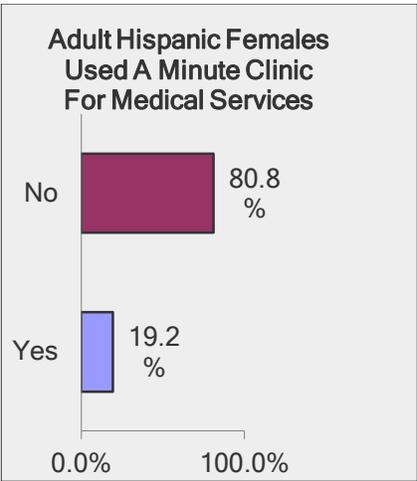
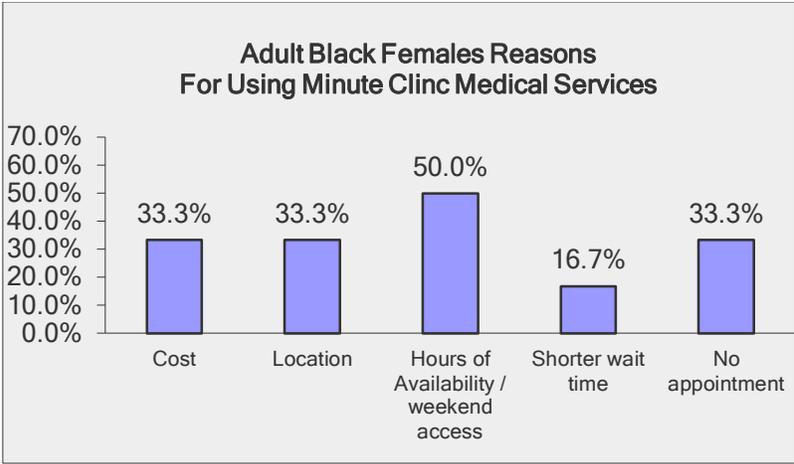
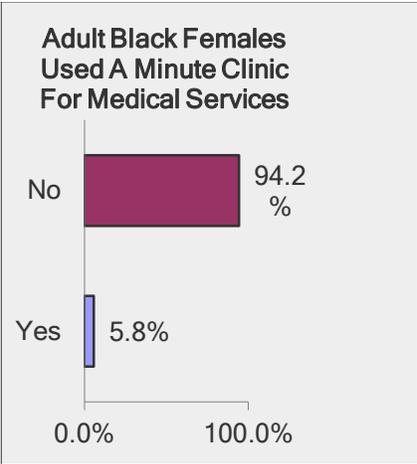


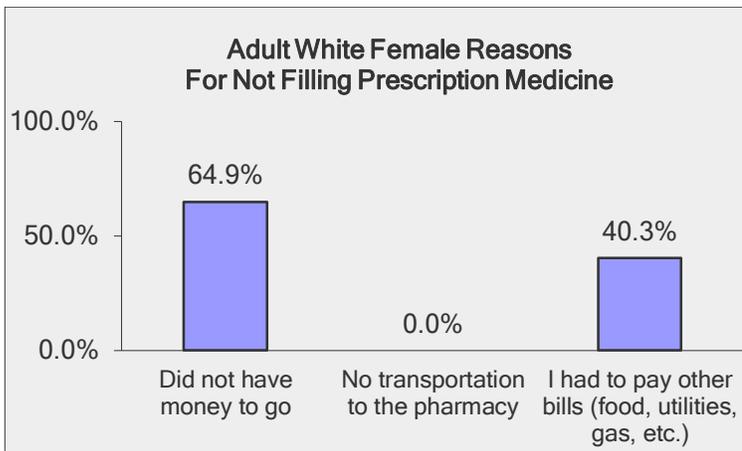
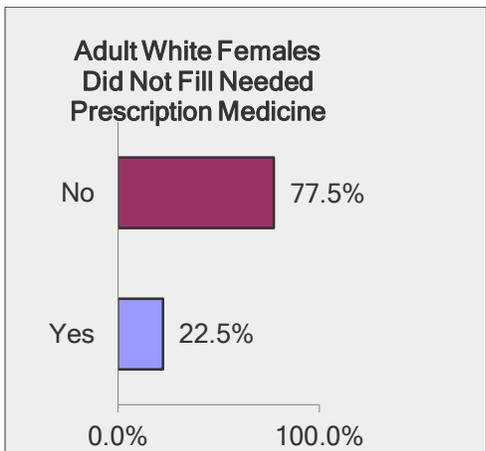
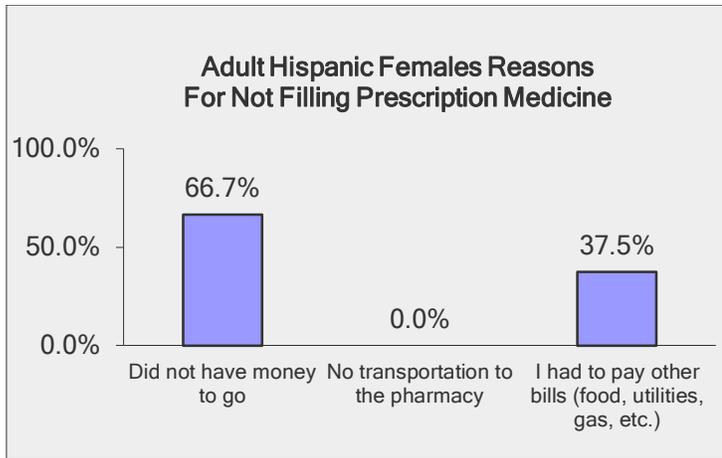
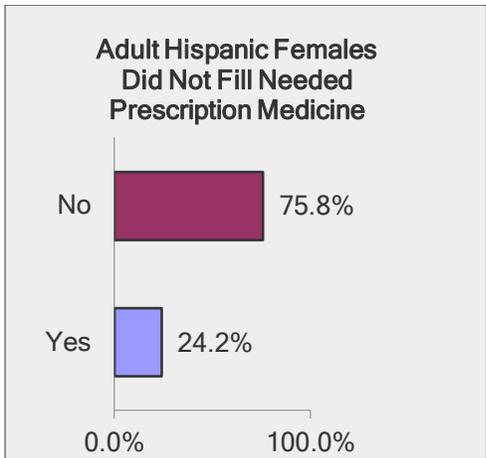
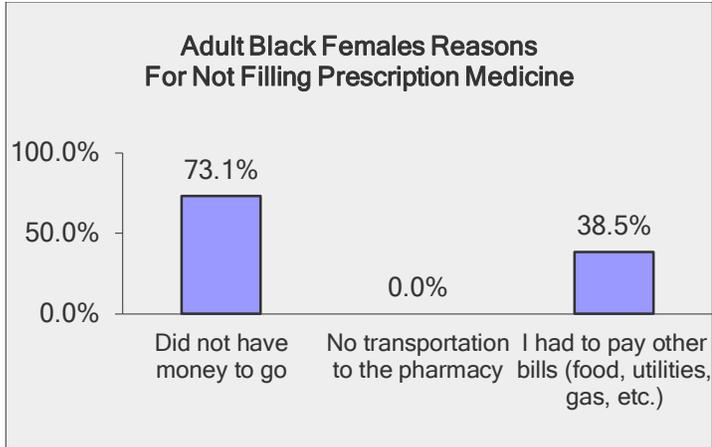
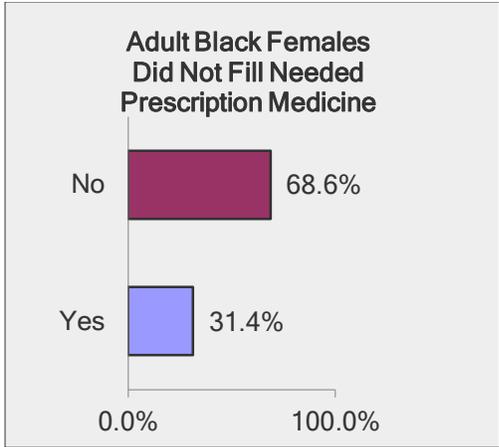
### Adult Hispanic Females Go Most Often For Medical Care



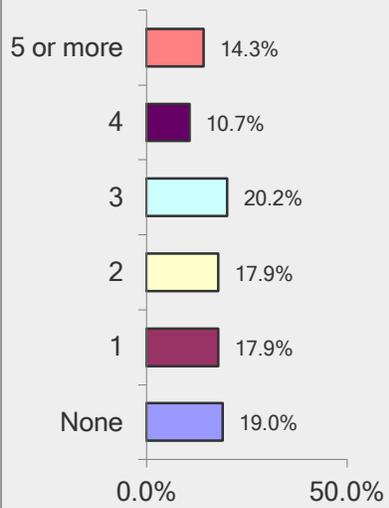
### Adult White Females Go Most Often For Medical Care



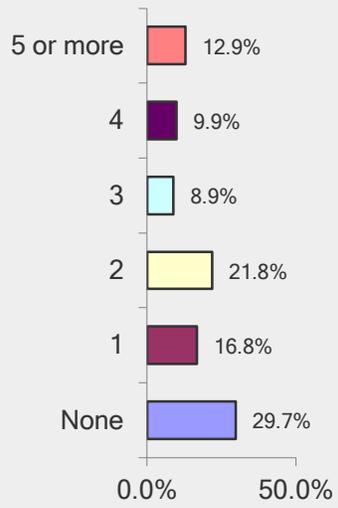




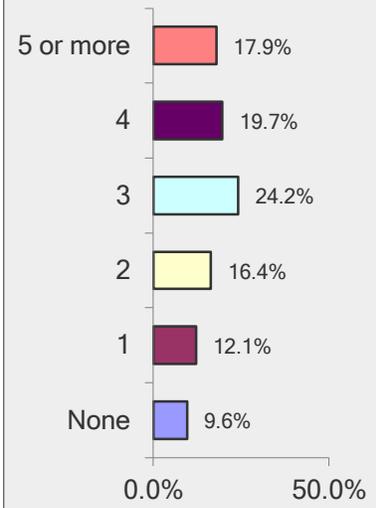
**Adult Black Females  
Weekly Exercise  
At Least 30 Minutes**

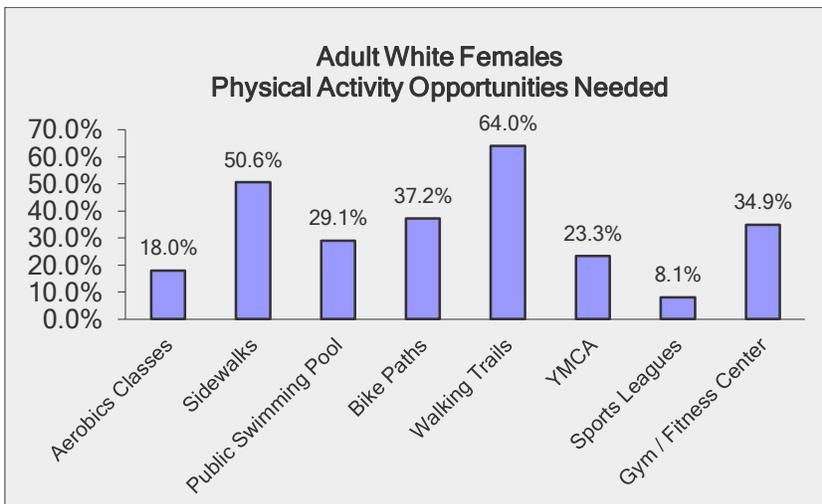
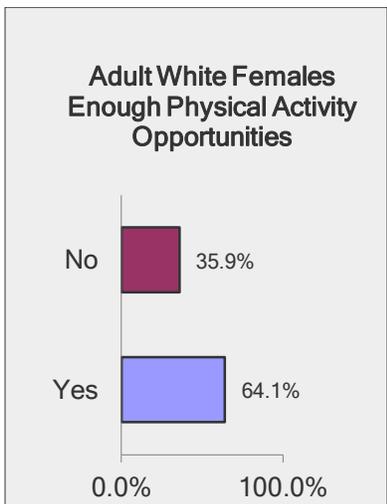
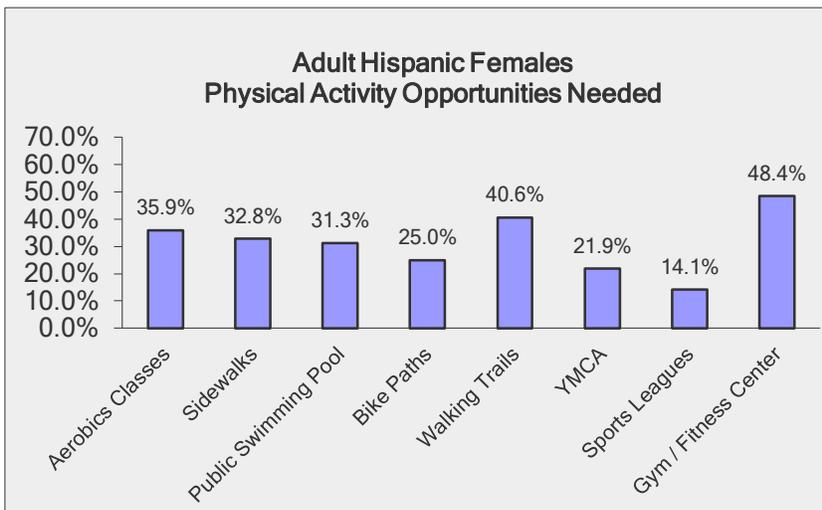
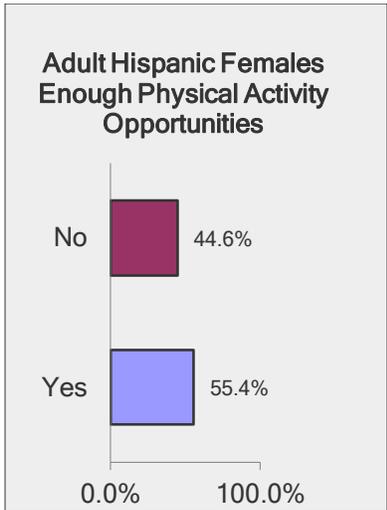
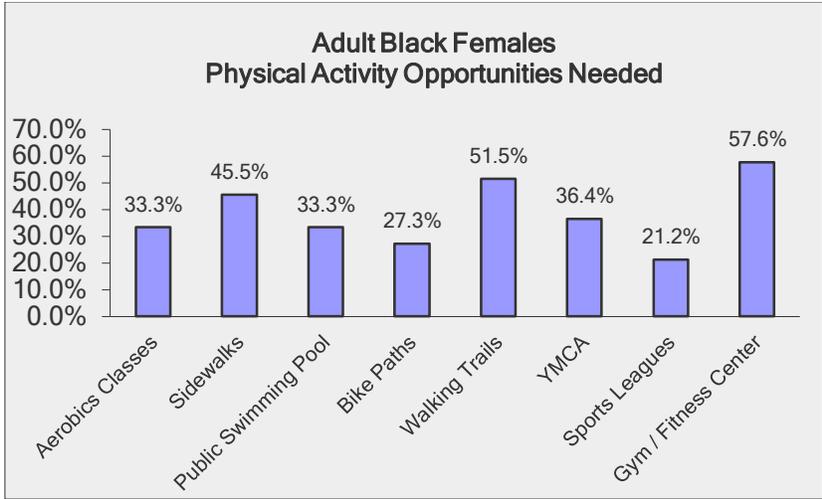
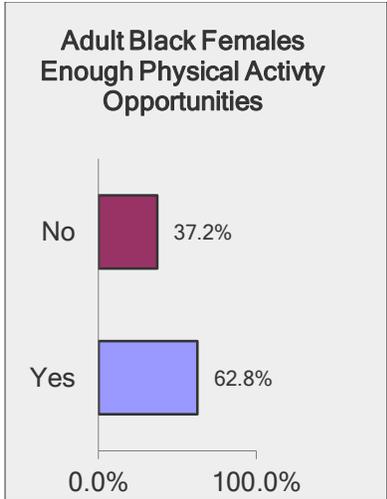


**Adult Hispanic Females  
Weekly Exercise  
At Least 30 Minutes**

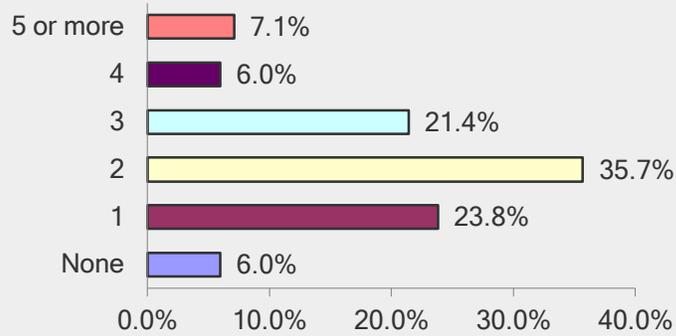


**Adult White Females  
Weekly Exercise  
At Least 30 Minutes**

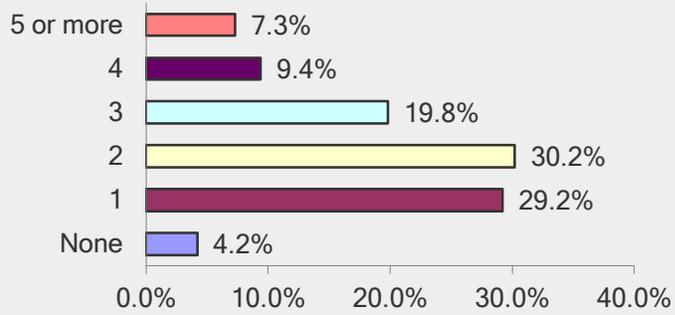




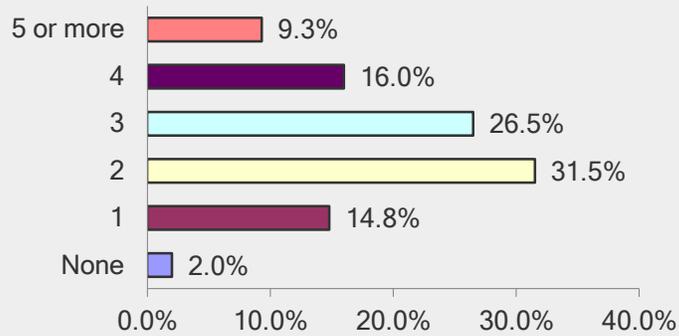
### Adult Black Females Daily Servings of Fruits and Vegetables



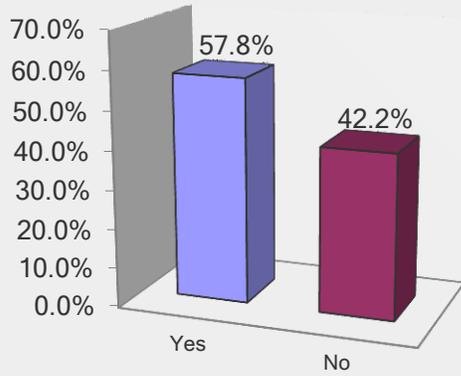
### Adult Hispanic Females Daily Servings of Fruits and Vegetables



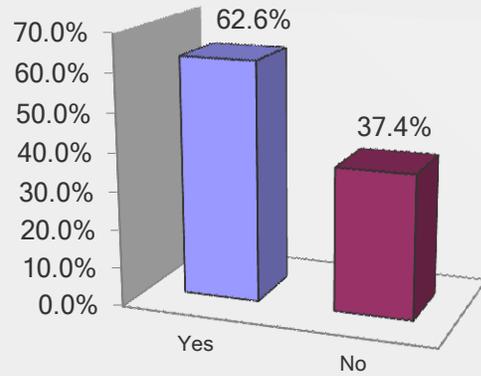
### Adult White Females Daily Servings of Fruits and Vegetables



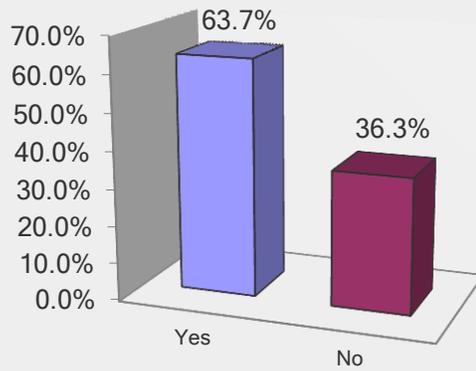
**Adult Black Females  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**



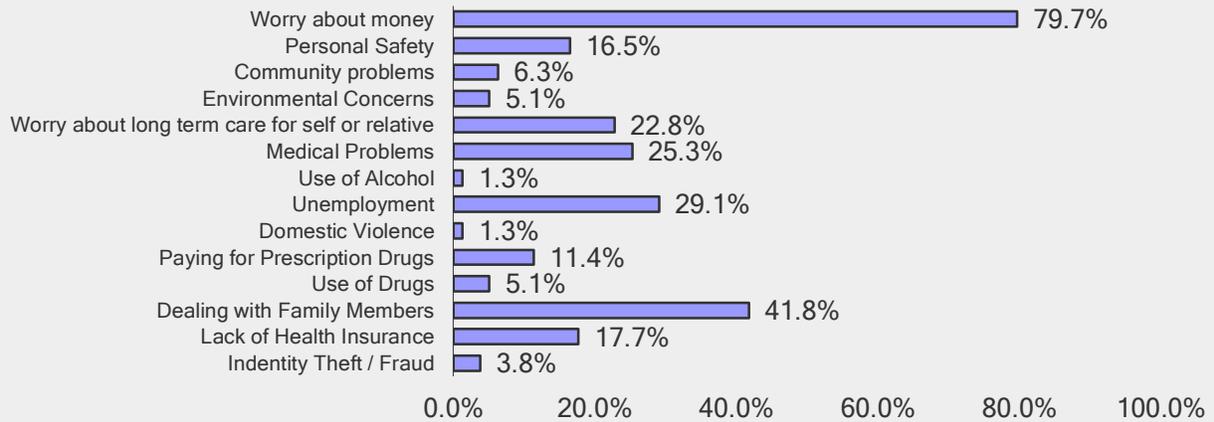
**Adult Hispanic Females  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**



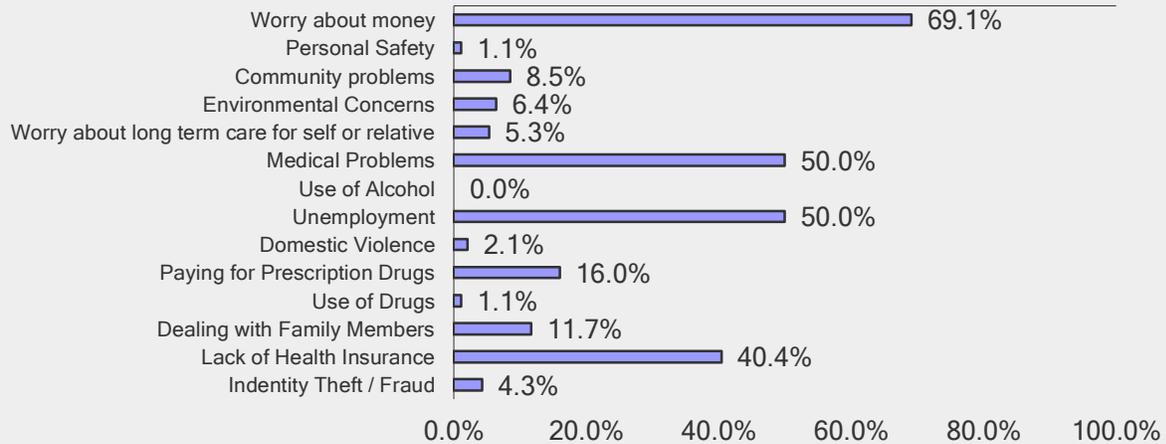
**Adult White Females  
Purchased Fruits and Vegetables  
From Union County Farmers Markets**



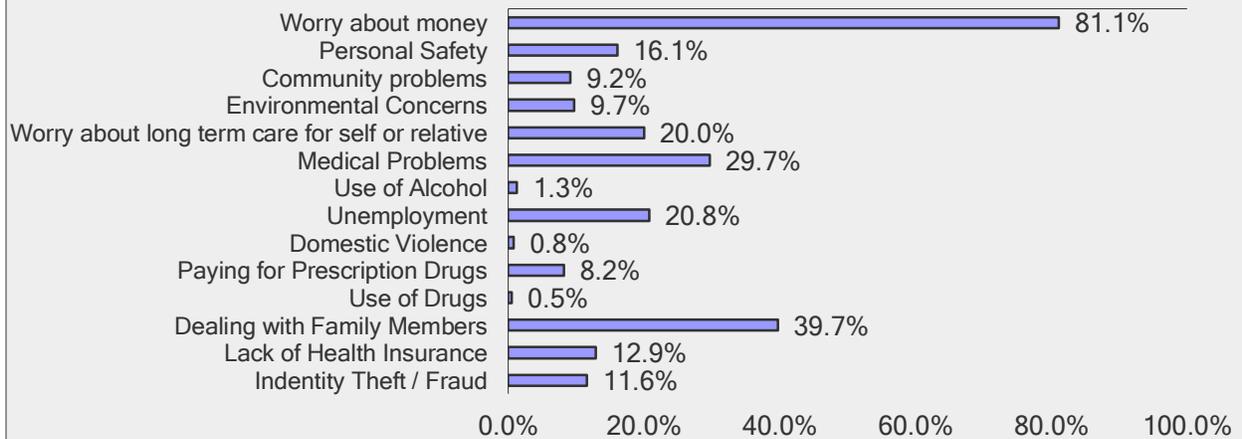
### Adult Black Females Sources of Stress

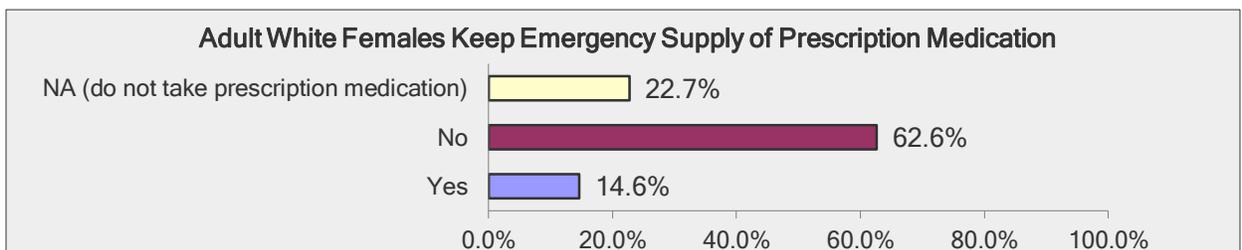
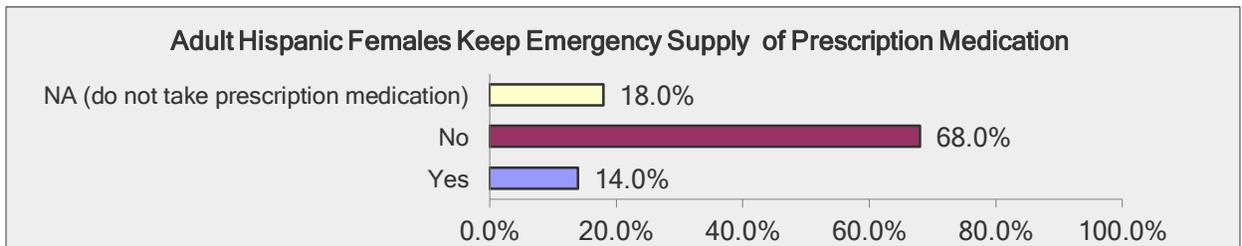
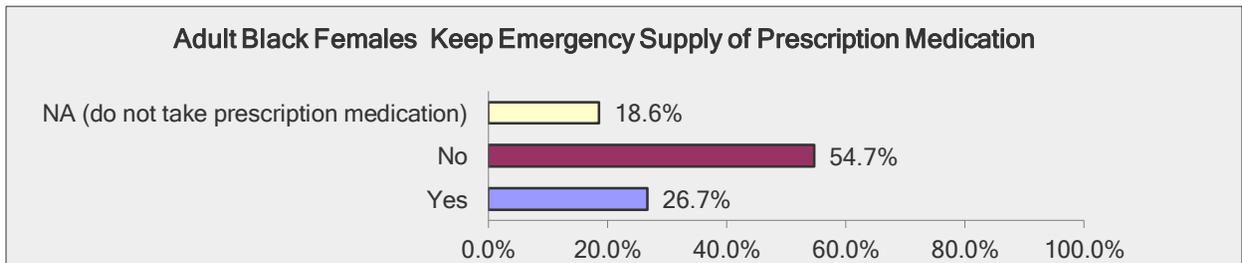
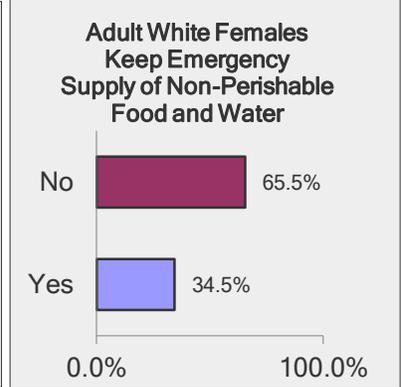
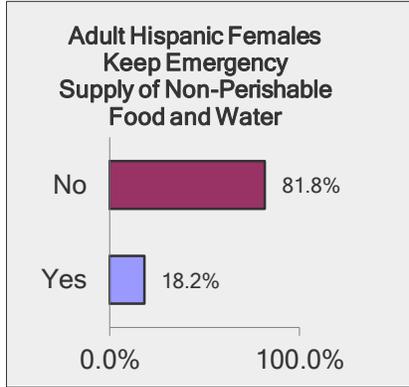
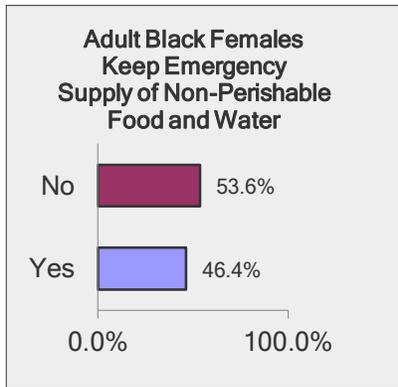
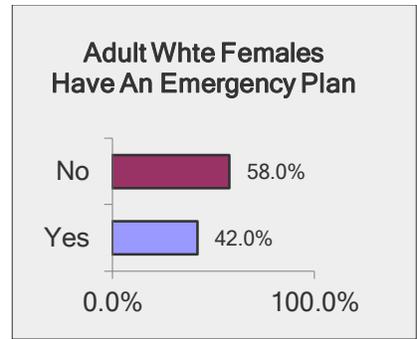
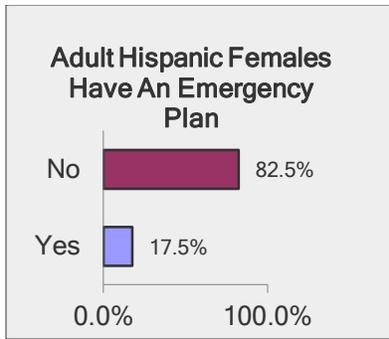
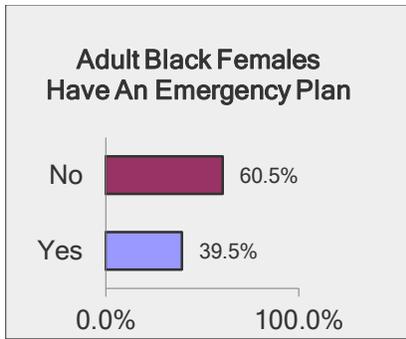


### Adult Hispanic Females Sources of Stress

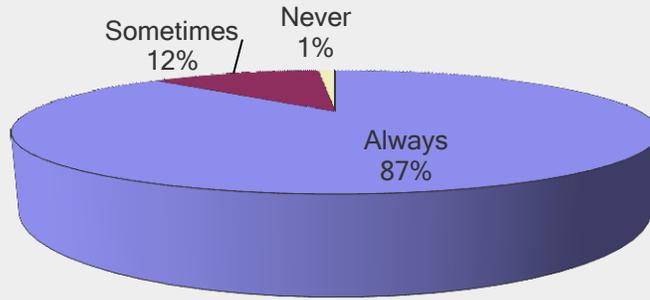


### Adult White Females Sources of Stress

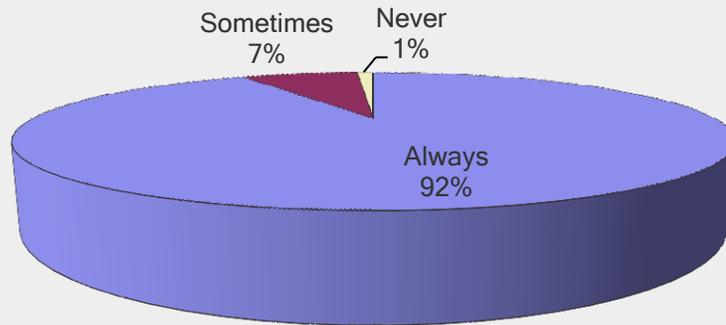




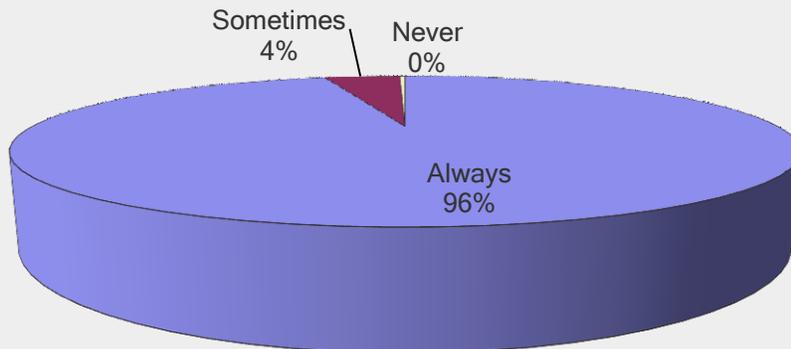
**Adult Black Females Use Seat Belts When Driving Or Riding In A Car**



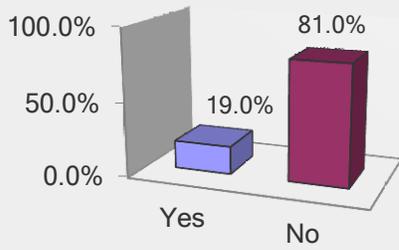
**Adult Hispanic Females Use Seat Belts When Driving Or Riding In A Car**



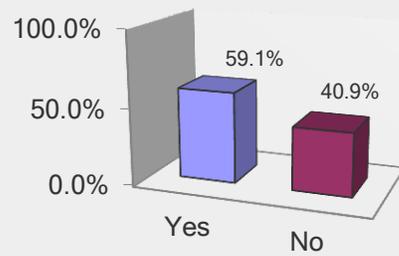
**Adult White Females Use Seat Belts When Driving Or Riding In A Car**



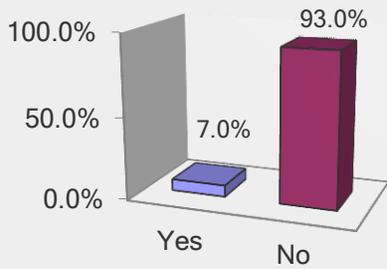
**Adult Black Females  
Have A Gun In Home**



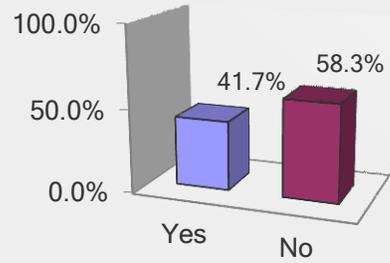
**Adult Black Females  
Have Gun and Ammo Locked Up**



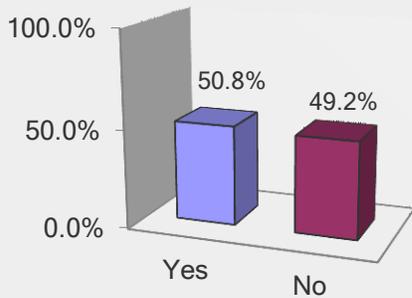
**Adult Hispanic Females  
Have A Gun In Home**



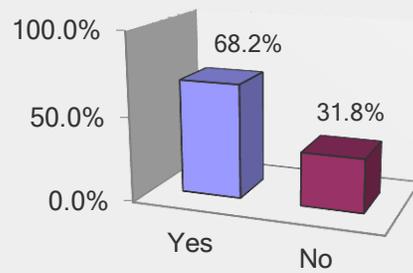
**Adult Hispanic Females  
Have Gun and Ammo Locked Up**

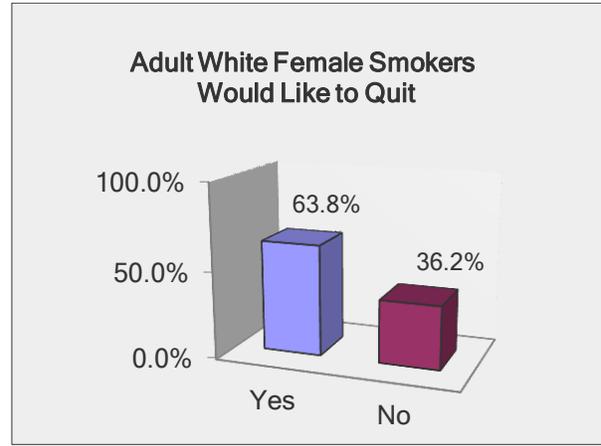
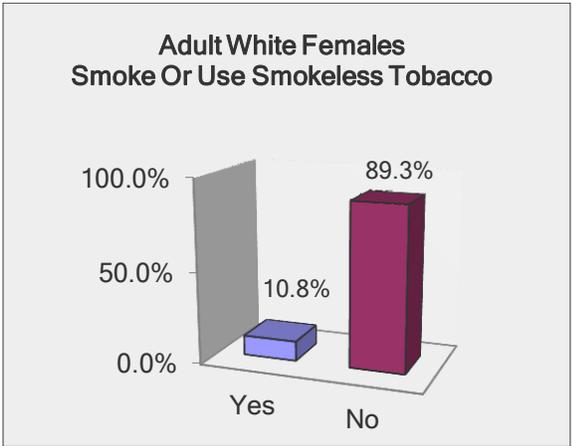
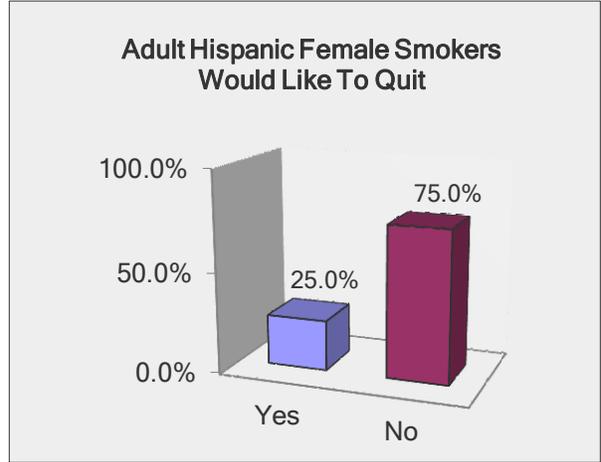
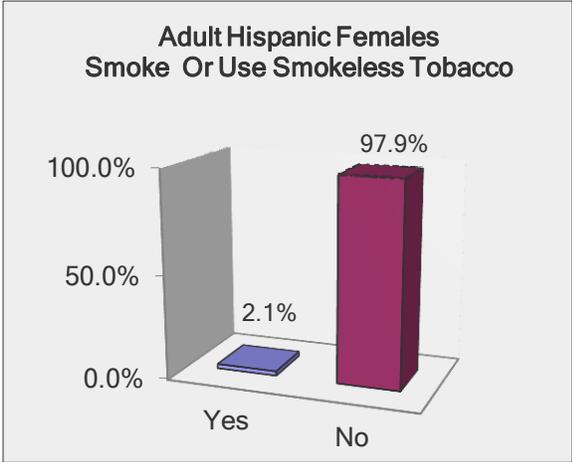
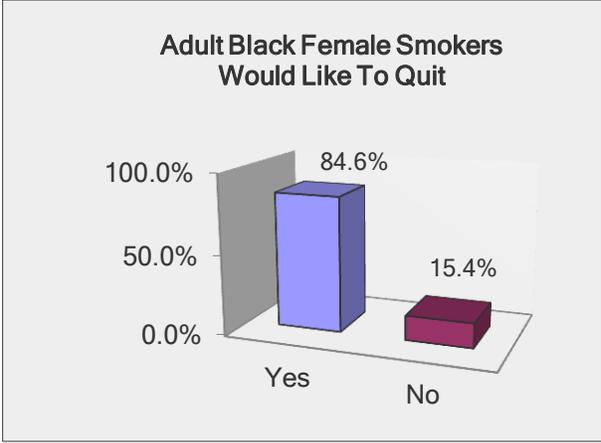
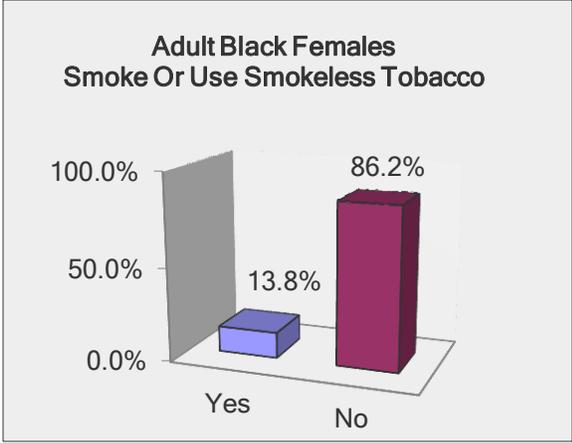


**Adult White Females  
Have A Gun In Home**

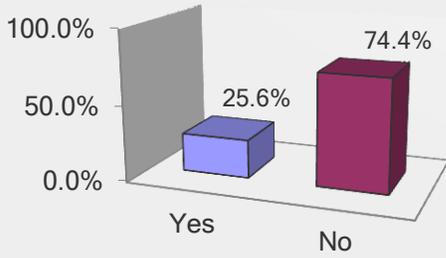


**Adult White Females  
Have Gun and Ammo Locked Up**

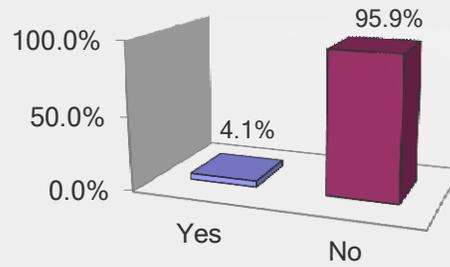




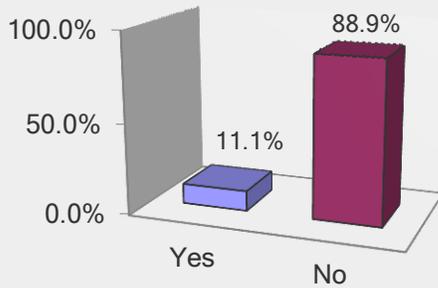
**Adult Black Females  
Drink Alcoholic Beverages**



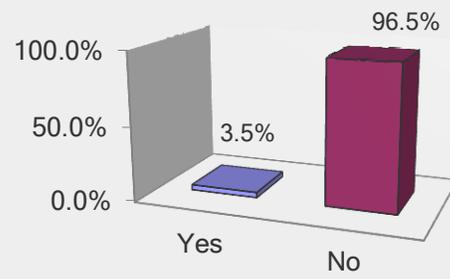
**Adult Black Females  
Drive After Drinking  
Alcoholic Beverages**



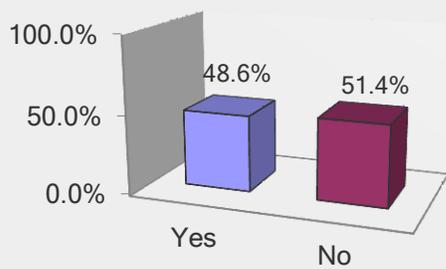
**Adult Hispanic Females  
Drink Alcoholic Beverages**



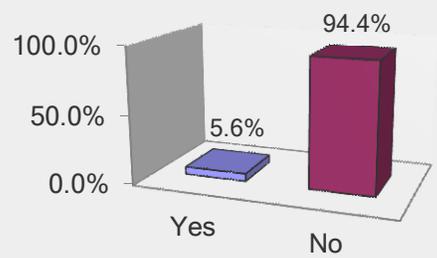
**Adult Hispanic Females  
Drive After Drinking  
Alcoholic Beverages**

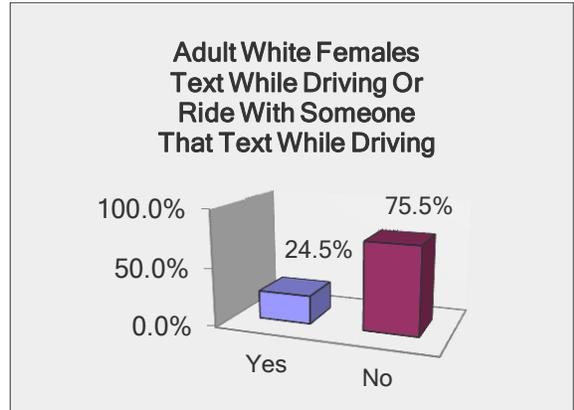
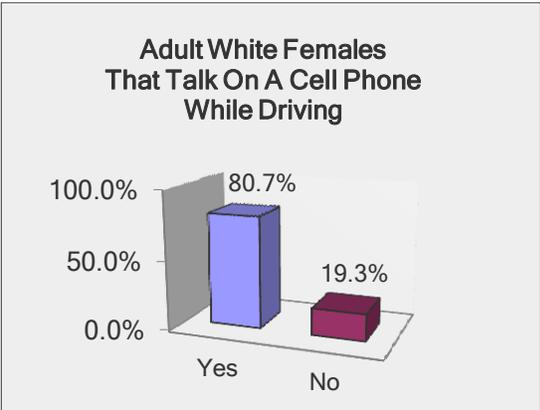
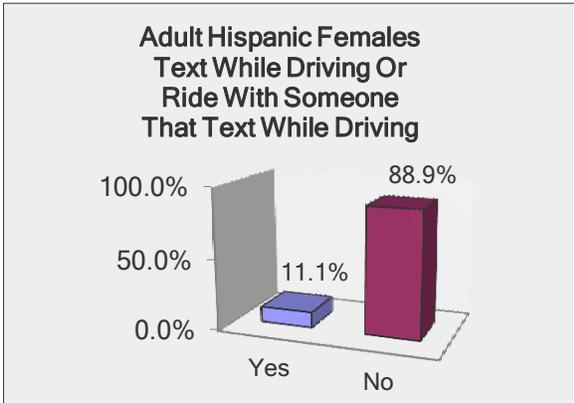
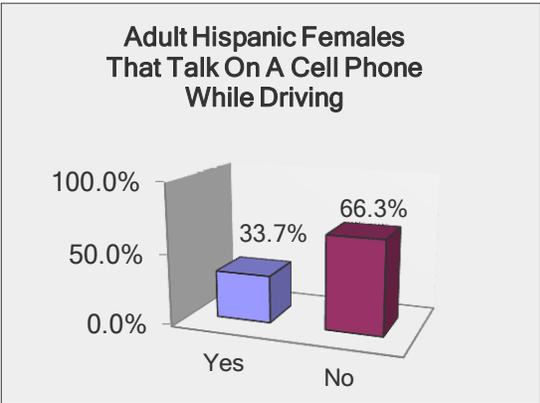
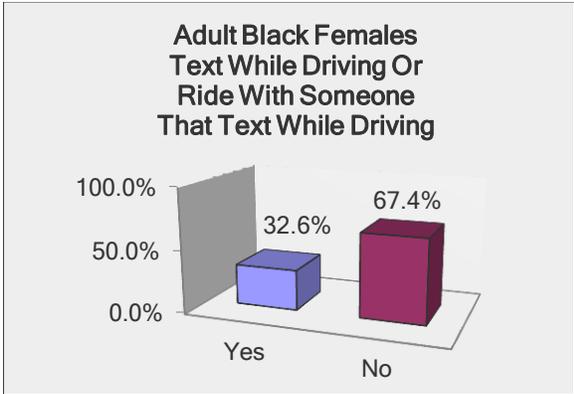
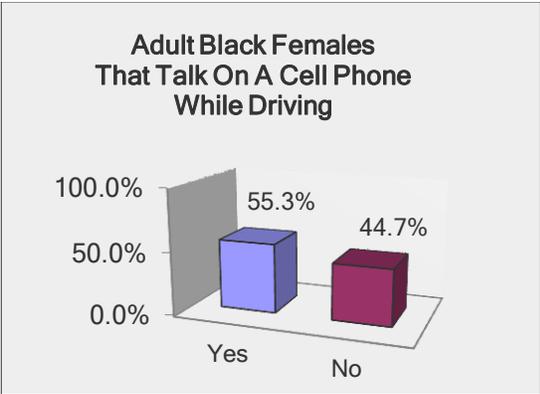


**Adult White Females  
Drink Alcoholic Beverages**

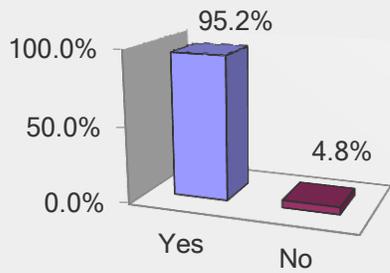


**Adult White Females  
Drive After Drinking  
Alcoholic Beverages**

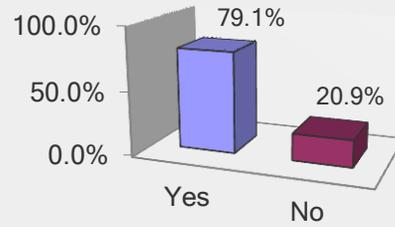




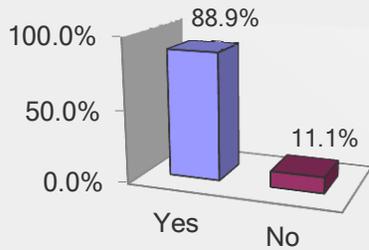
**Adult Black Females  
Have Smoke Detector In Home**



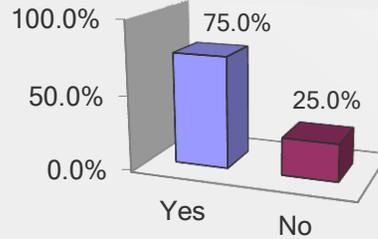
**Adult Black Females  
Check Smoke Detector  
Batteries Annually**



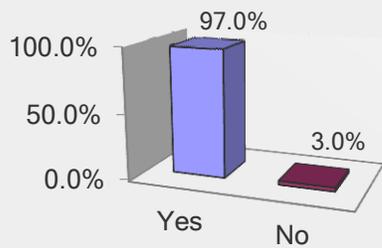
**Adult Hispanic Females  
Have Smoke Detector In Home**



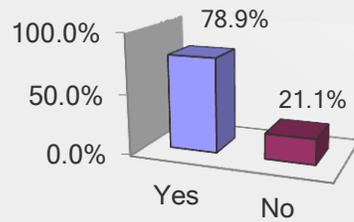
**Adult Hispanic Females  
Check Smoke Detector  
Batteries Annually**



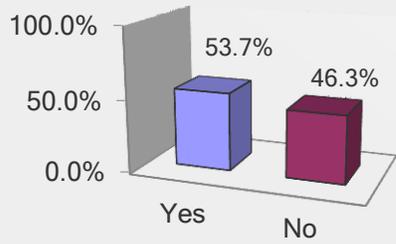
**Adult White Females  
Have Smoke Detector In Home**



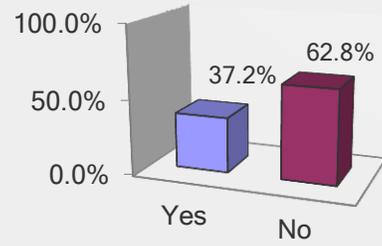
**Adult White Females  
Check Smoke Detector  
Batteries Annually**



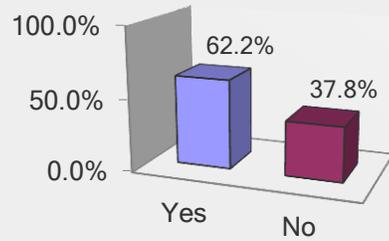
**Adult Black Females  
Have A Carbon Monoxide  
Detector In Home**



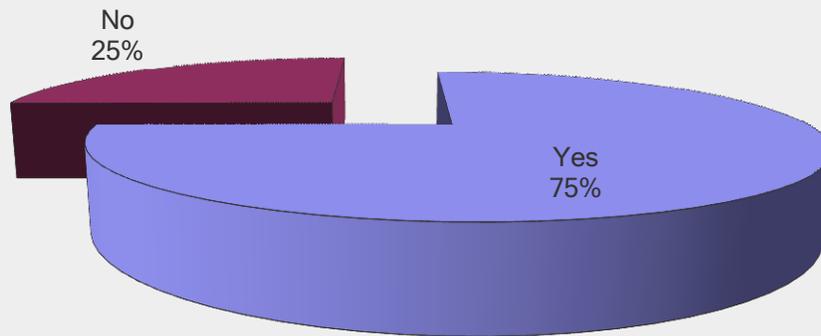
**Adult Hispanic Females  
Have A Carbon Monoxide  
Detector In Home**



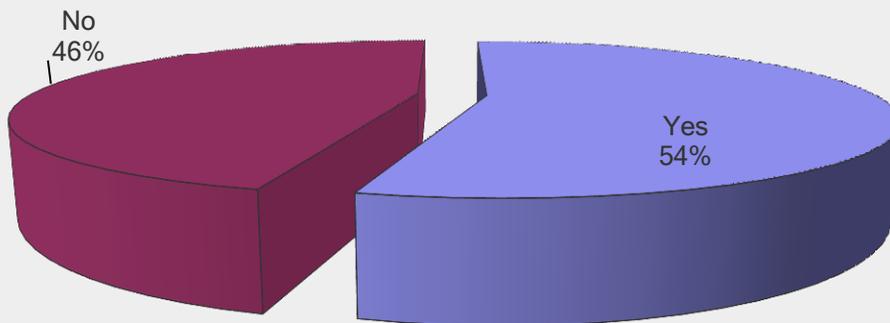
**Adult White Females  
Have A Carbon Monoxide  
Detector In Home**



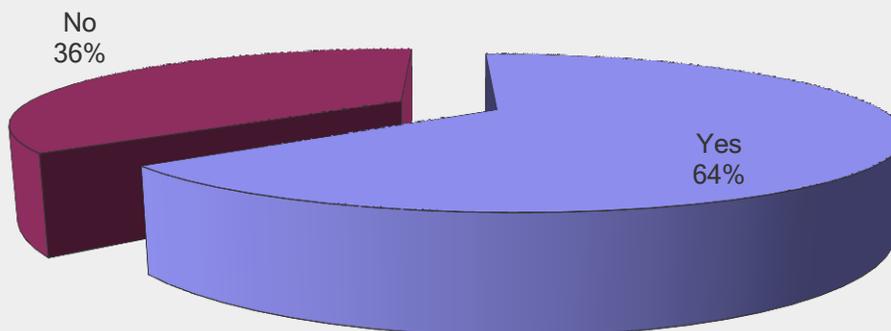
**Adult Black Females Know How To Access  
Department Of Social Service Programs For Assistance**

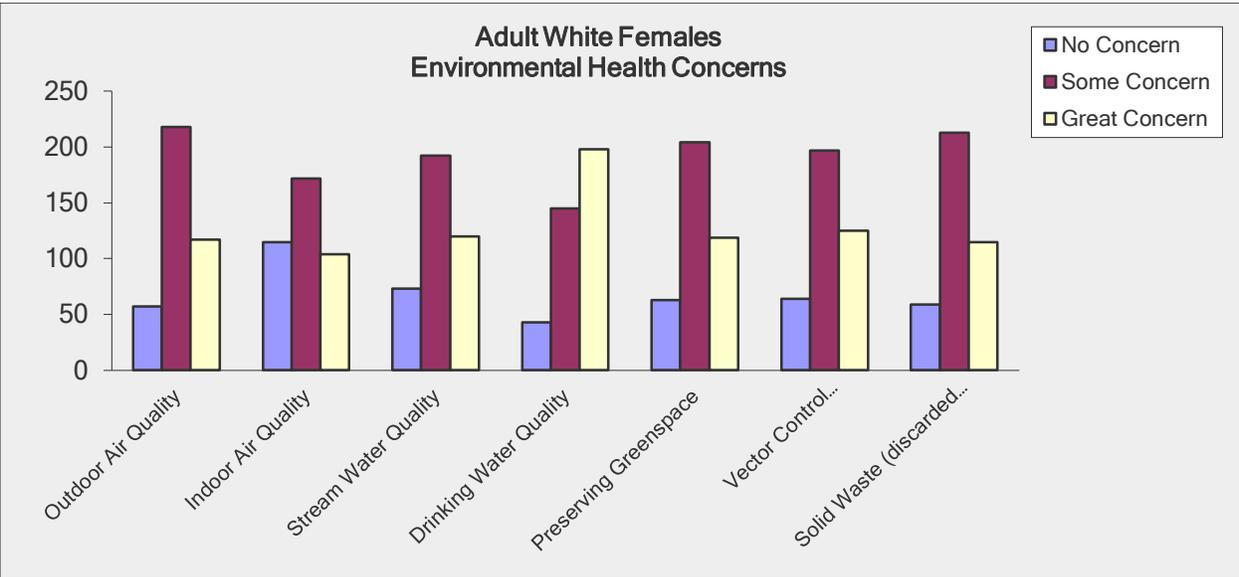
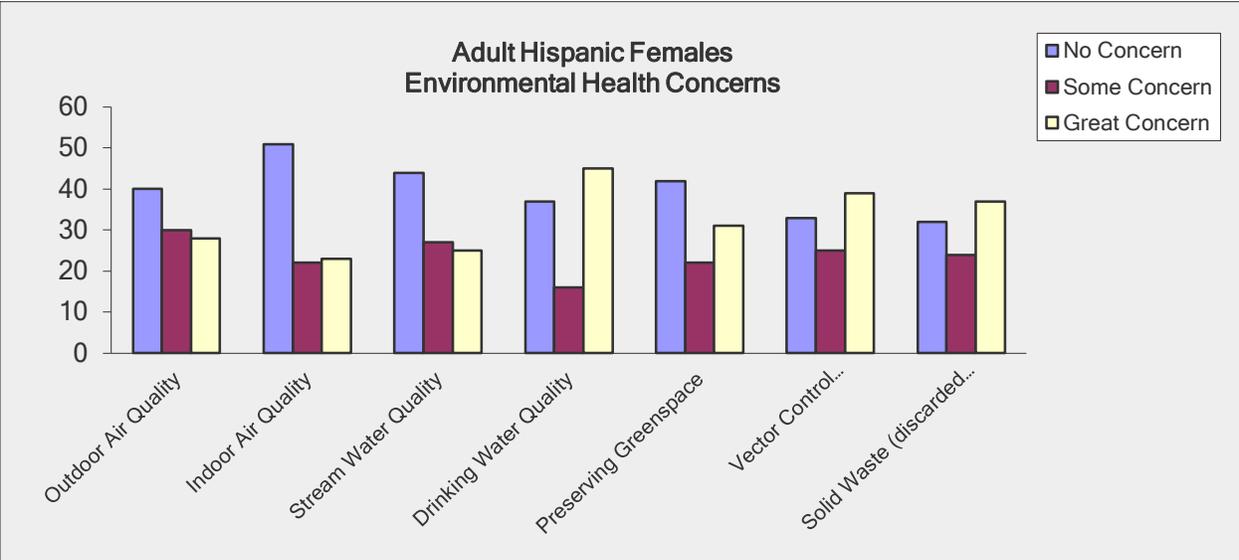
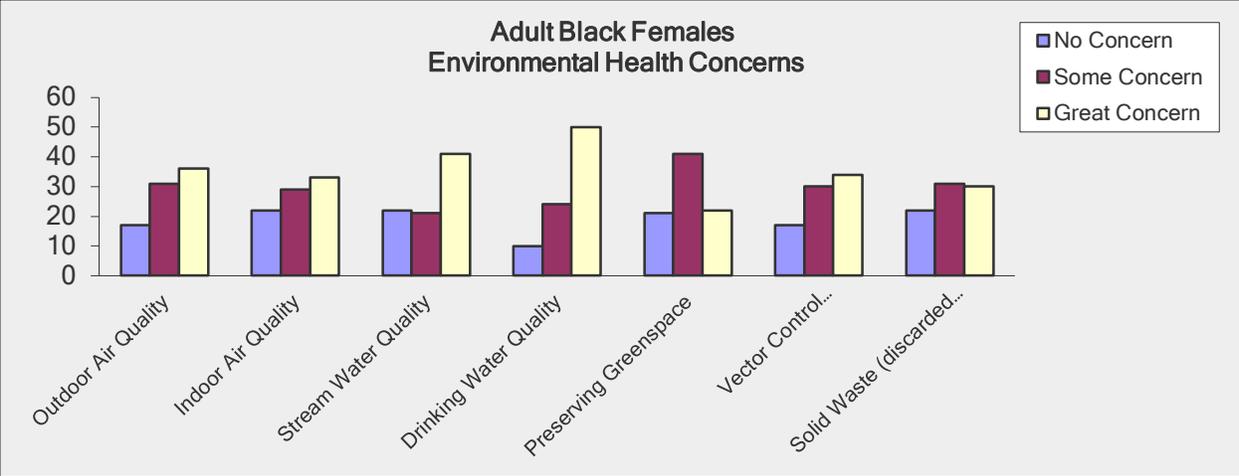


**Adult Hispanic Females Know How To Access  
Department Of Social Service Programs For Assistance**

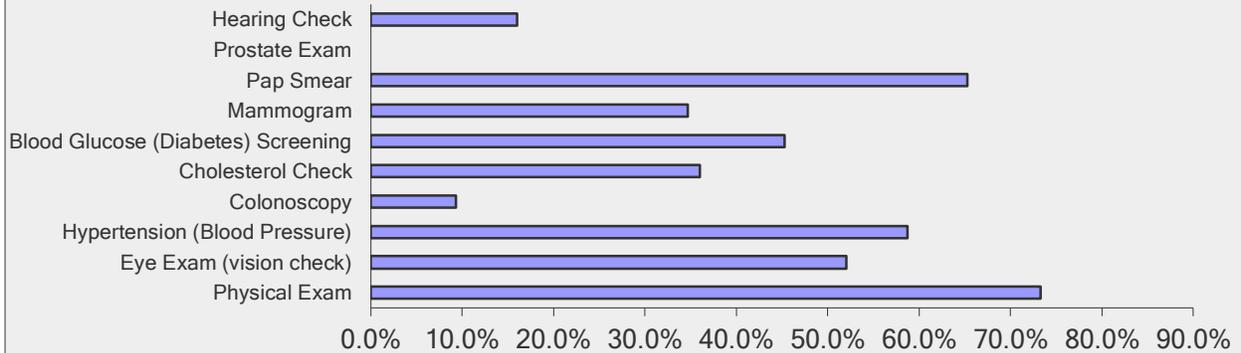


**Adult White Females Know How To Access  
Department Of Social Service Programs For Assistance**

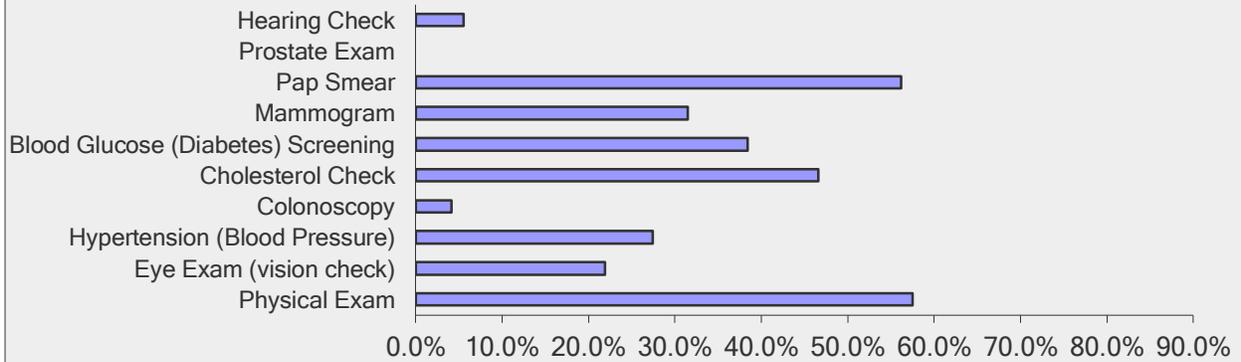




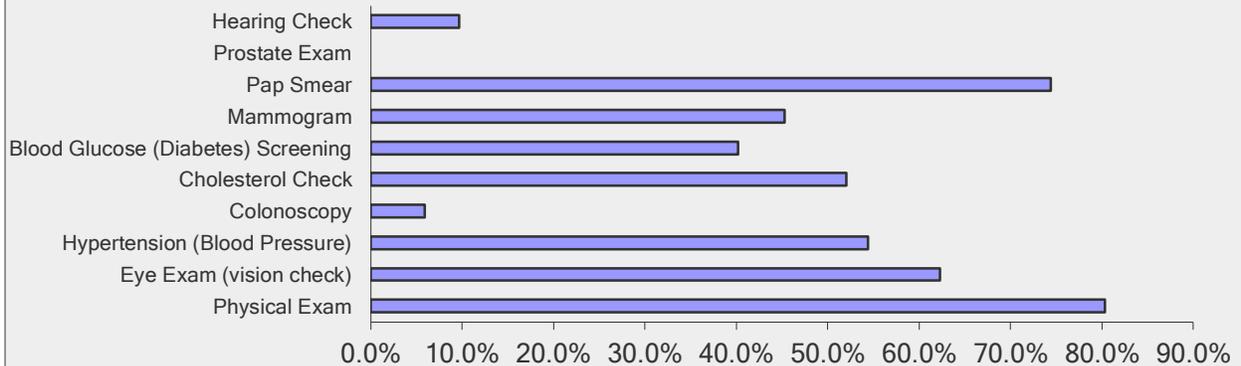
### Adult Black Females Received Preventative Health Screenings This Year



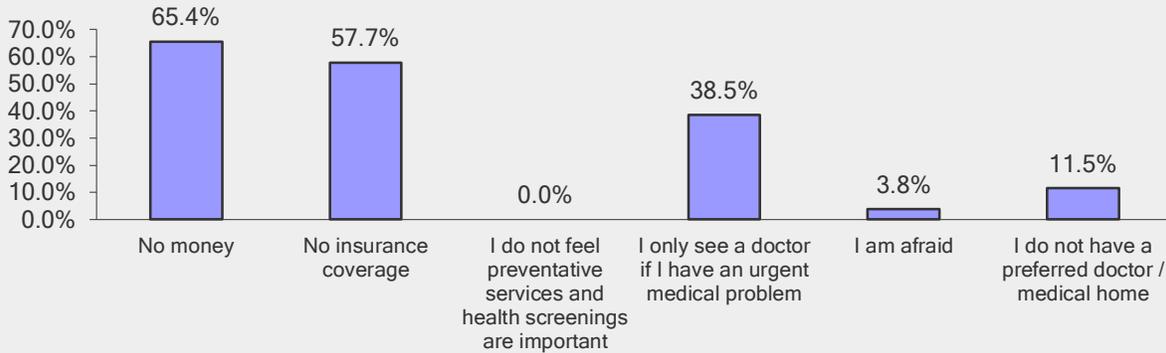
### Adult Hispanic Females Received Preventative Health Screenings This Year



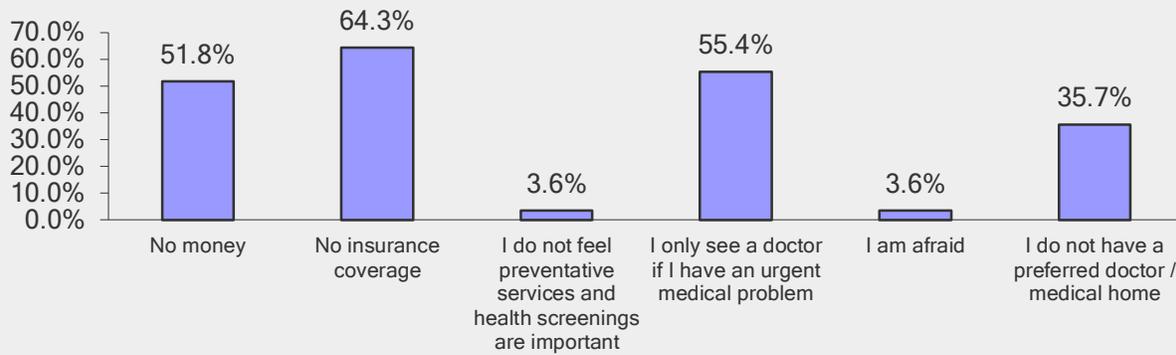
### Adult White Females That Received Preventative Health Screenings This Year



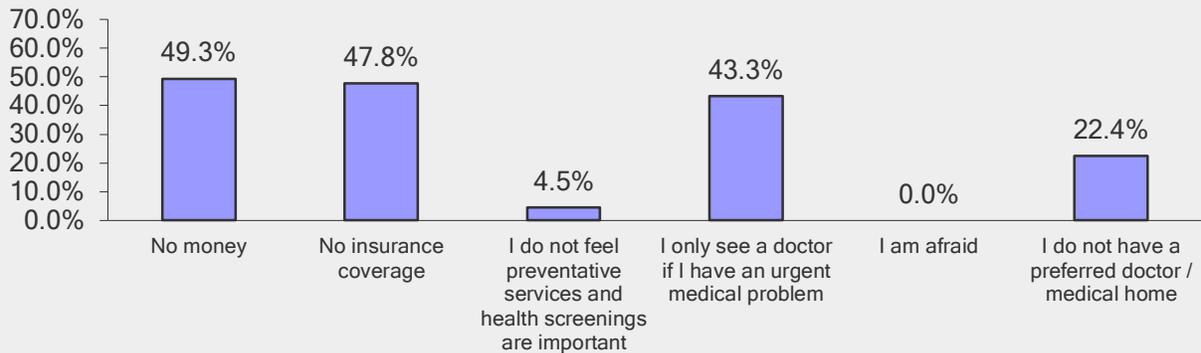
### Adult Black Females Reasons For Not Receiving Preventative Health Screenings



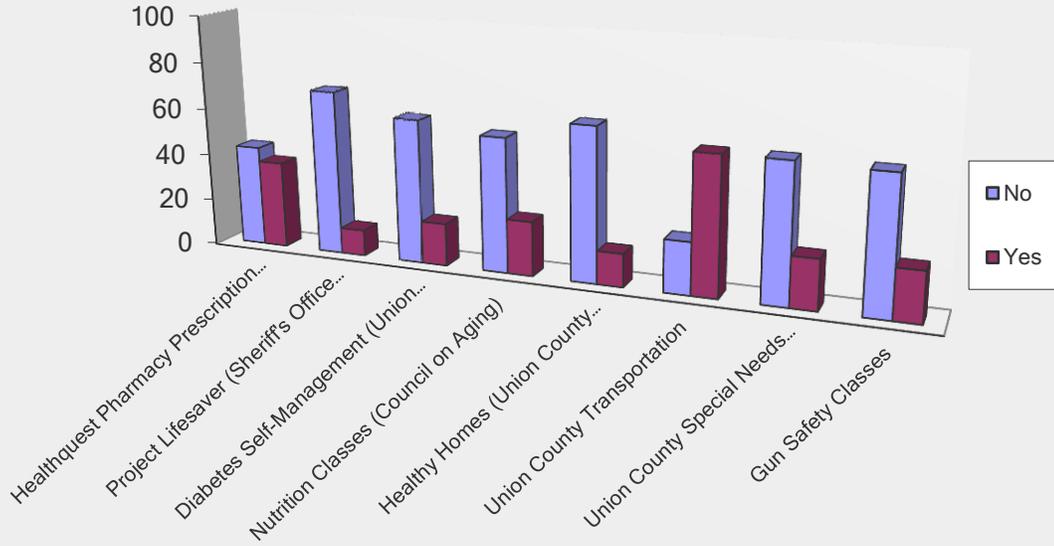
### Adult Hispanic Females Reasons For Not Receiving Preventative Health Screenings



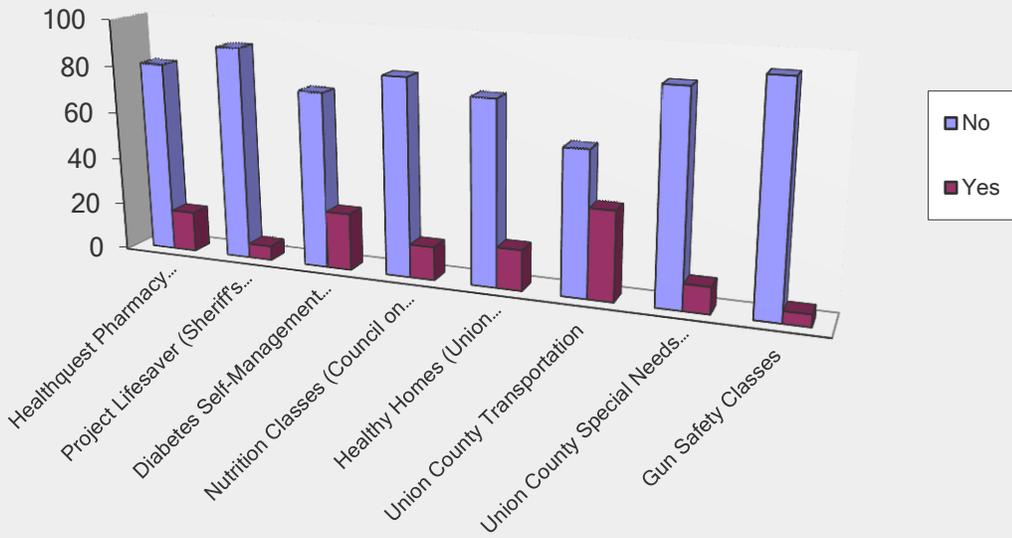
### Adult White Female Reasons For Not Receiving Preventative Health Screenings



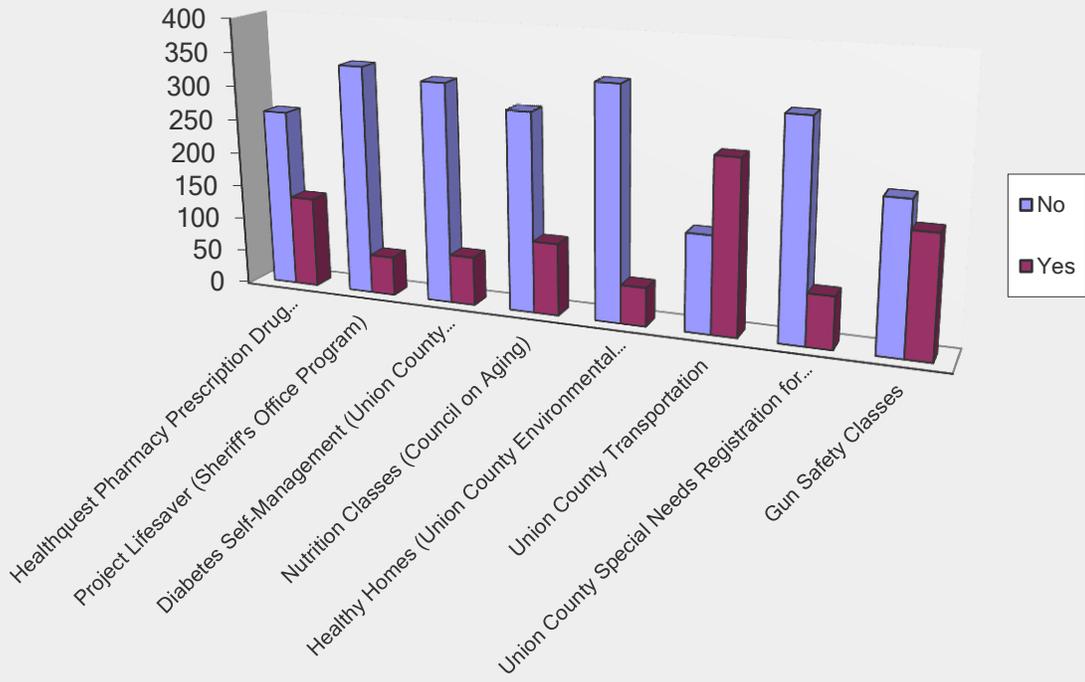
**Adult Black Females  
HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**



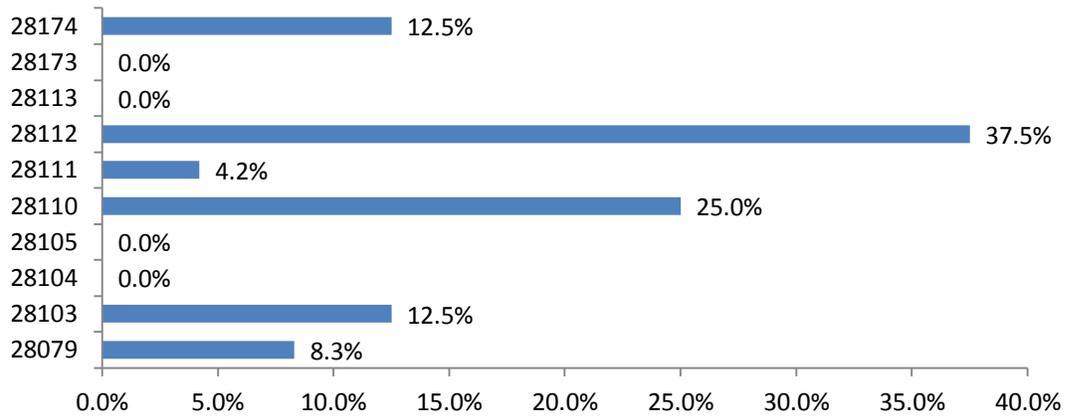
**Adult Hispanic Females  
HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**



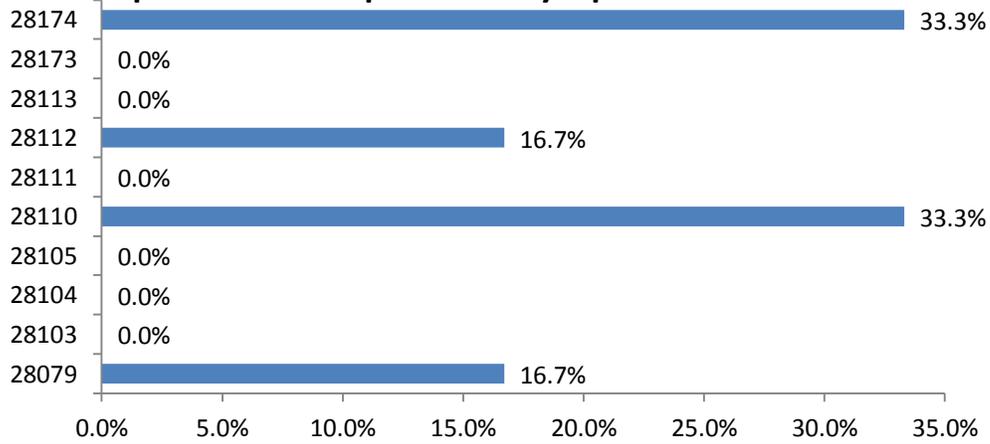
**Adult White Females**  
**HEALTH, WELLNESS and SAFETY RESOURCE AWARENESS**



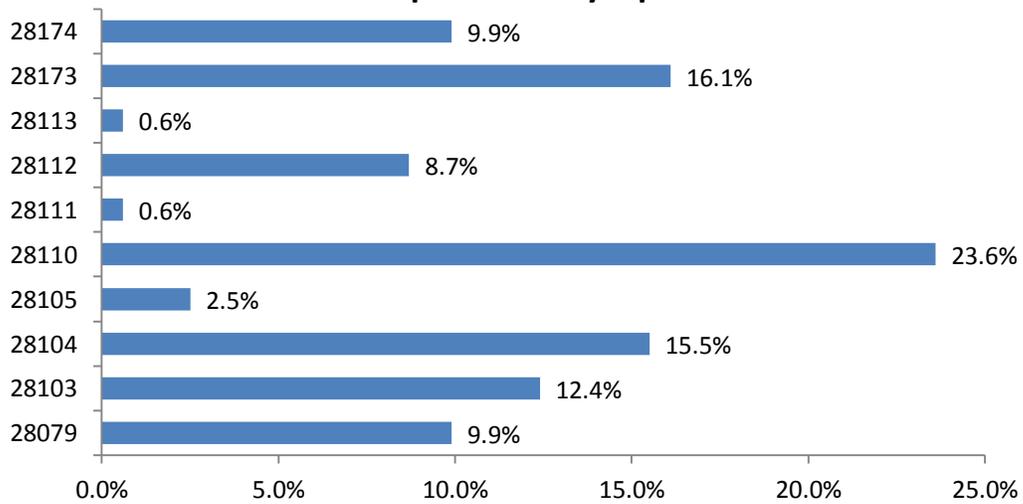
### Senior Black Male Respondents by Zip Code



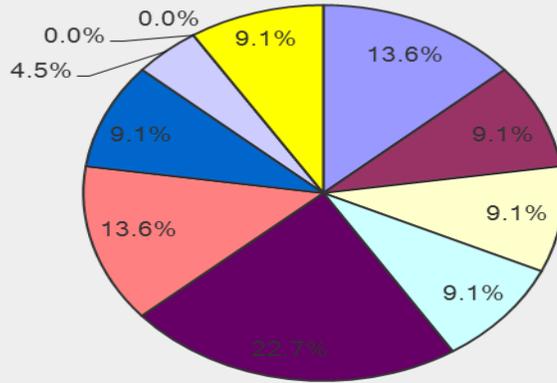
### Hispanic Male Respondents by Zip Code



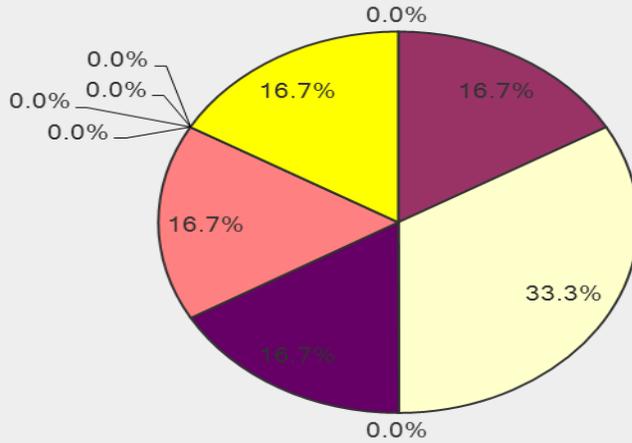
### White Male Respondents by Zip Code



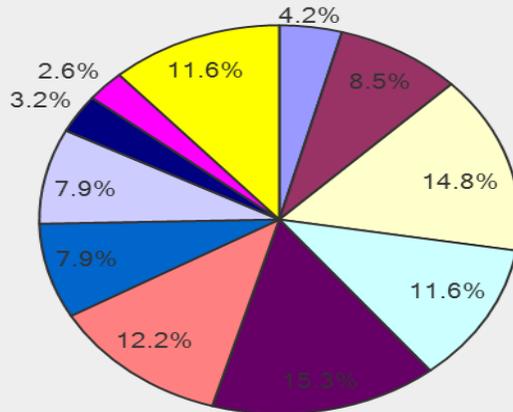
**Senior Black Male Annual Household Income**



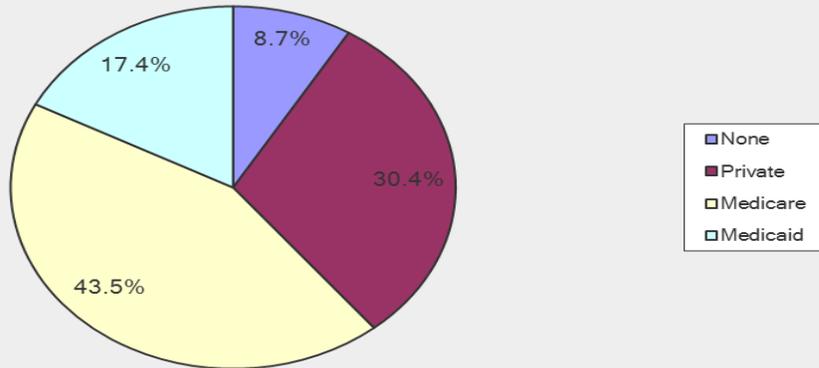
**Senior Hispanic Male Annual Household Income**



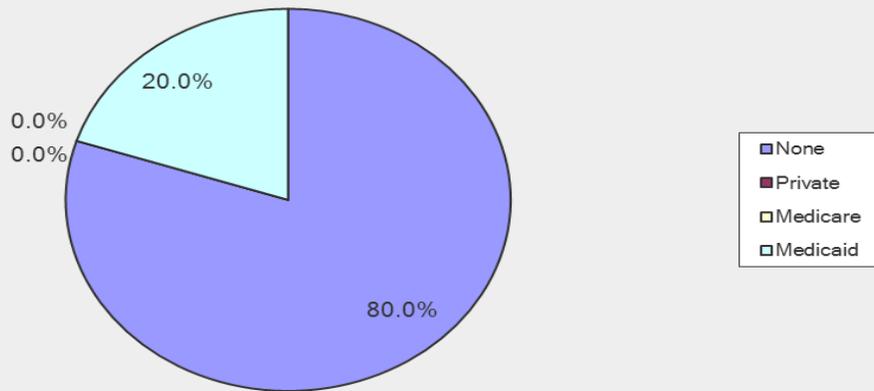
**Senior White Male Annual Household Income**



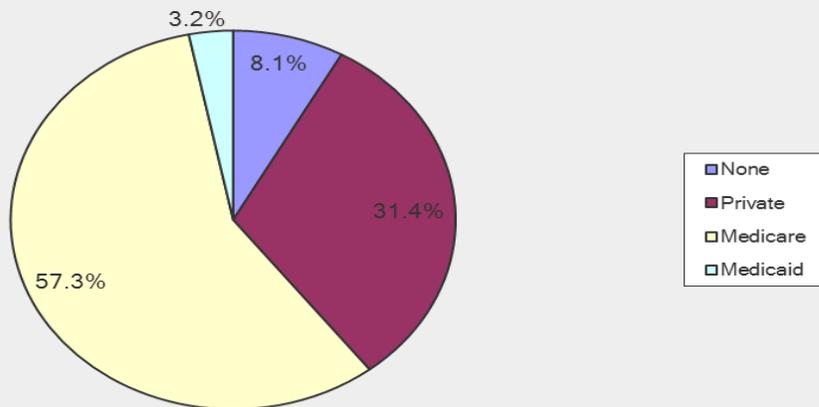
Senior Black Males Insurance Status



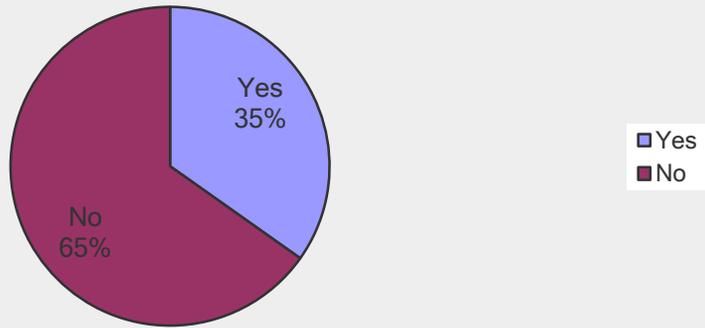
Senior Hispanic Male Health Insurance Status



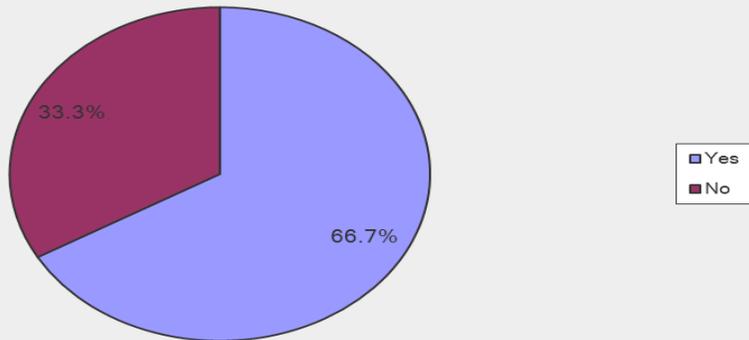
Senior White Males Insurance Status



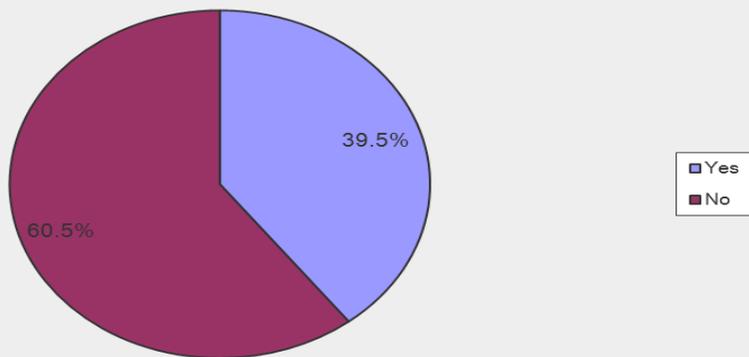
Senior Black Male Respondent Employment Status



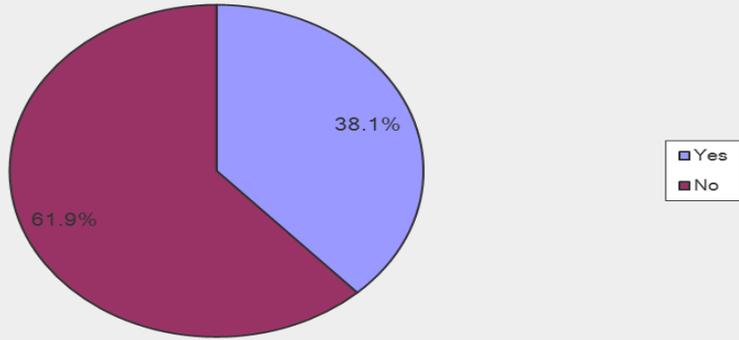
Senior Hispanic Male Employment Status



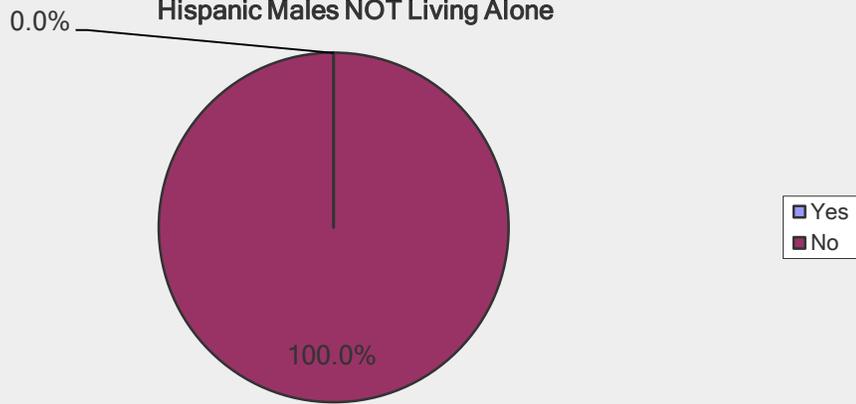
Senior White Males Employment Status



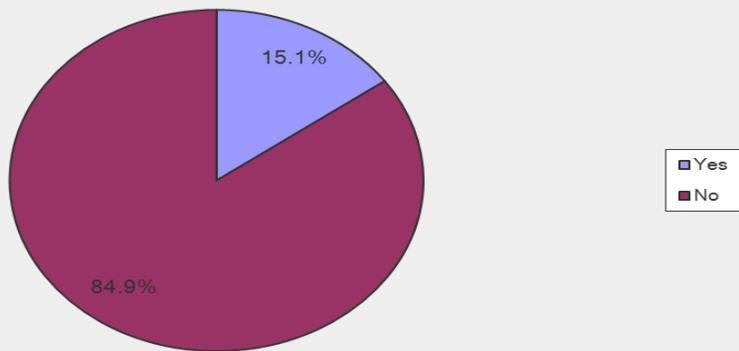
Senior Black Males that Live Alone

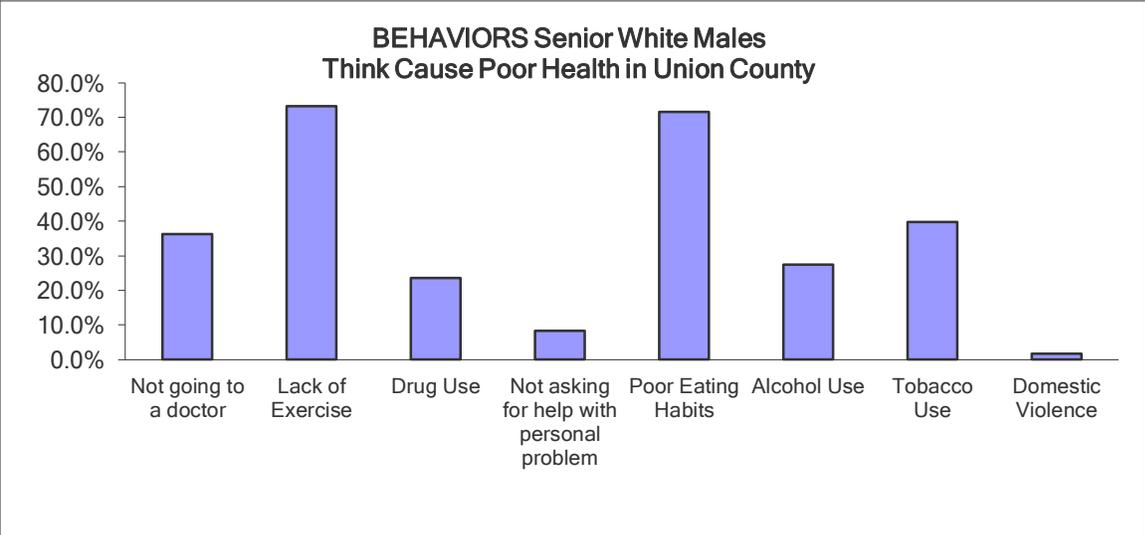
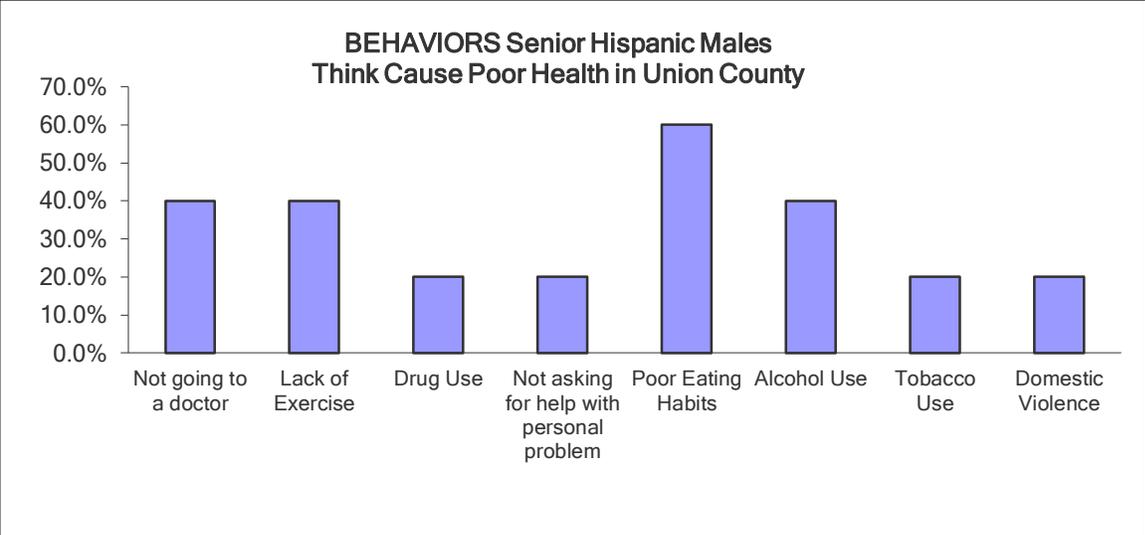
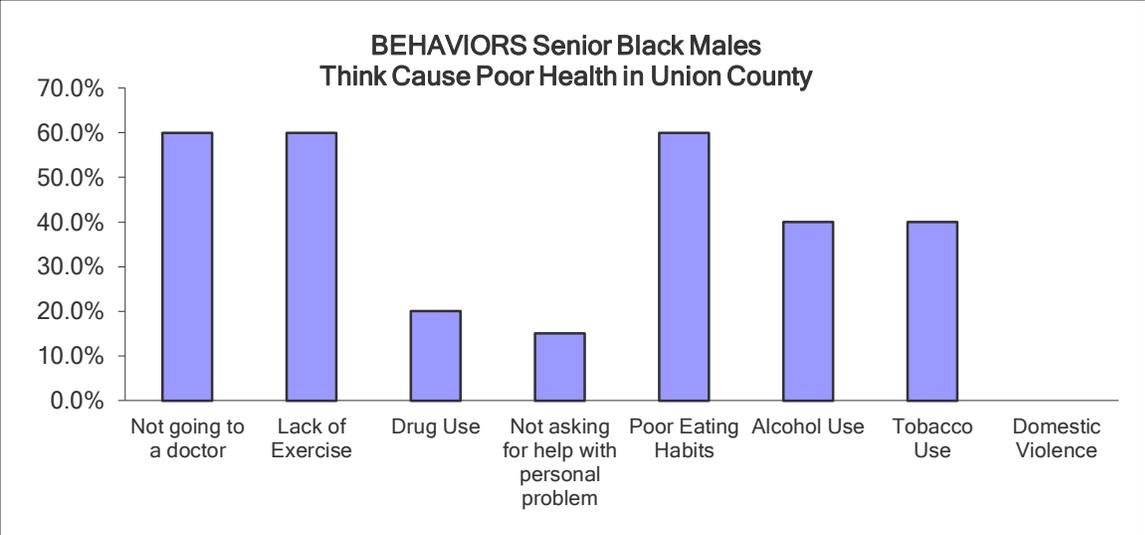


Hispanic Males NOT Living Alone

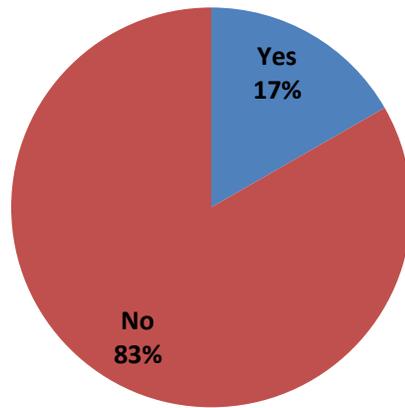


Senior White Males Living Alone

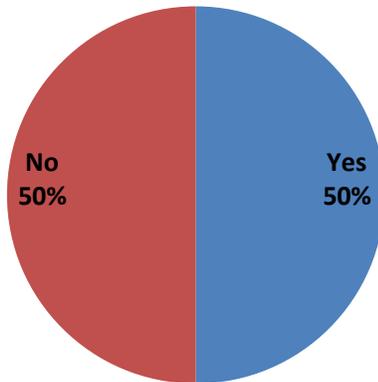




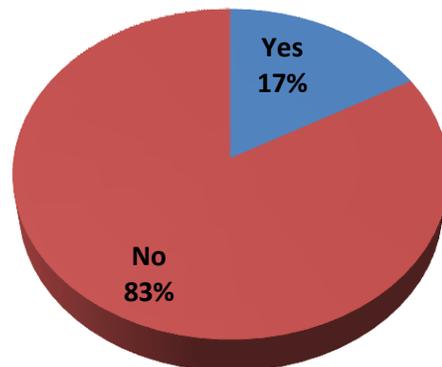
**Senior Black Males that Needed to See a Doctor But Did Not**



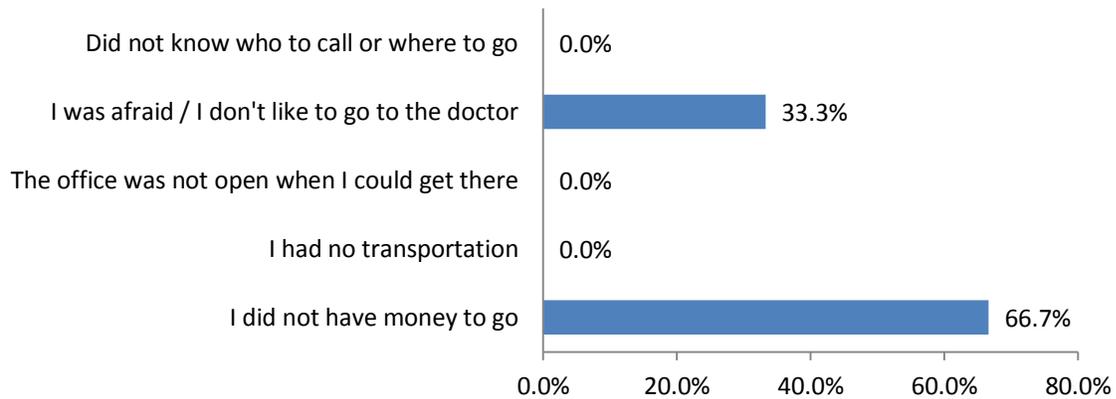
**Senior Hispanic Males that Needed to See a Doctor But Did Not**



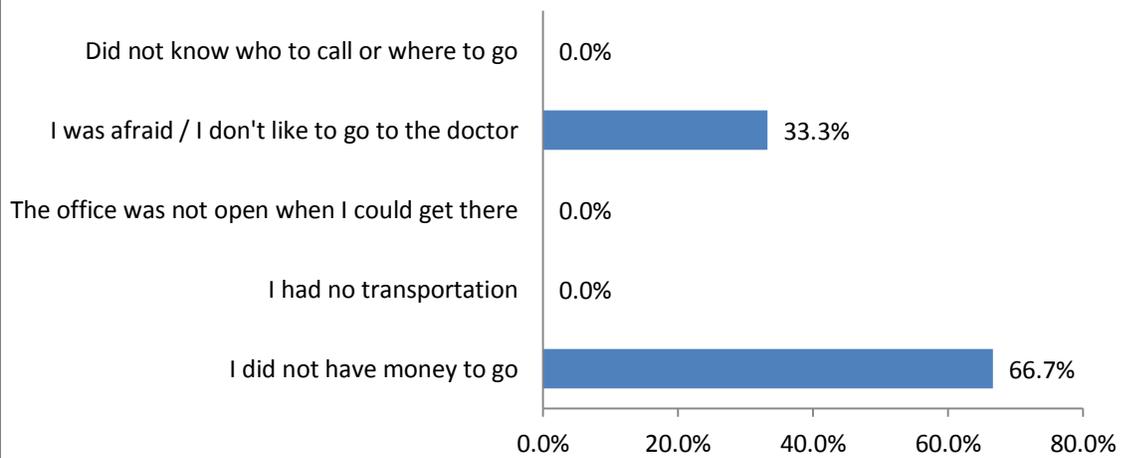
**Senior White Males that Needed to See a Doctor But Did Not**



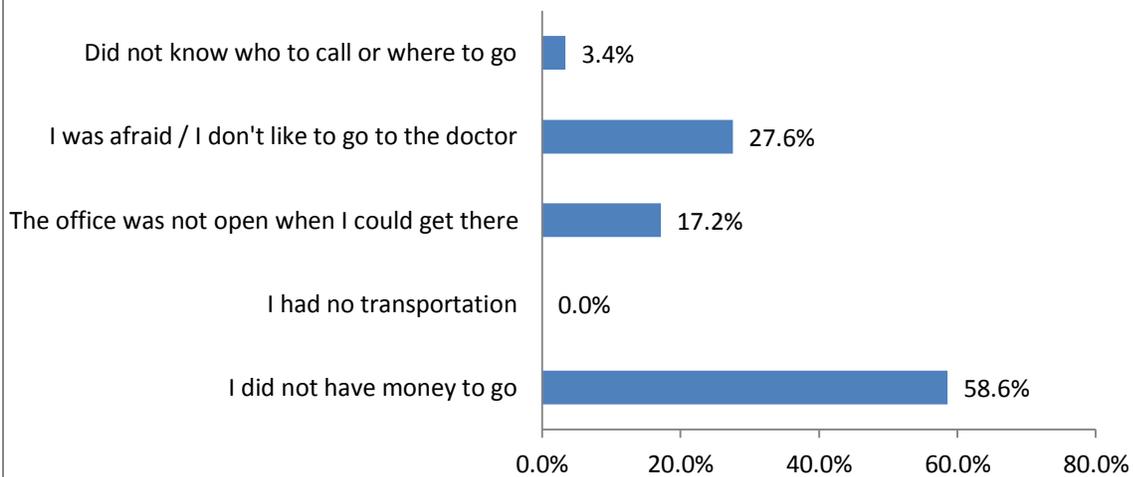
### Senior Black Male Reasons for Not Seeing a Doctor



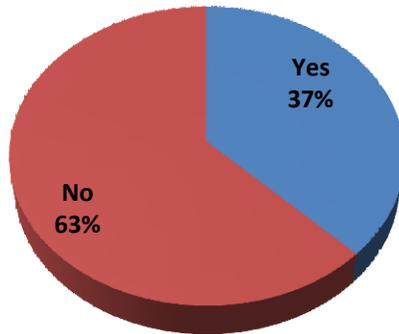
### Senior Hispanic Male Reasons for Not Seeing a Doctor



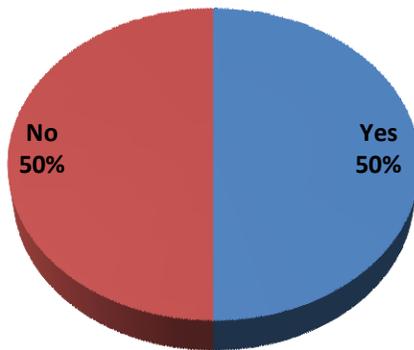
### Senior White Male Reasons for Not Seeing a Doctor



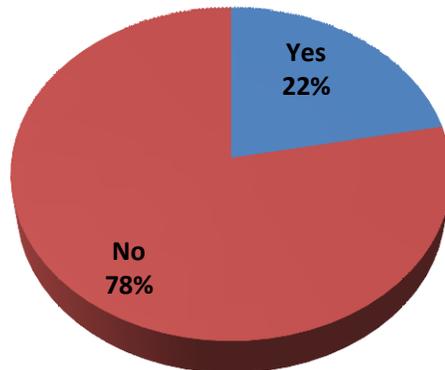
**Senior Black Males That Did Not See a Dentist  
In the Last Year**



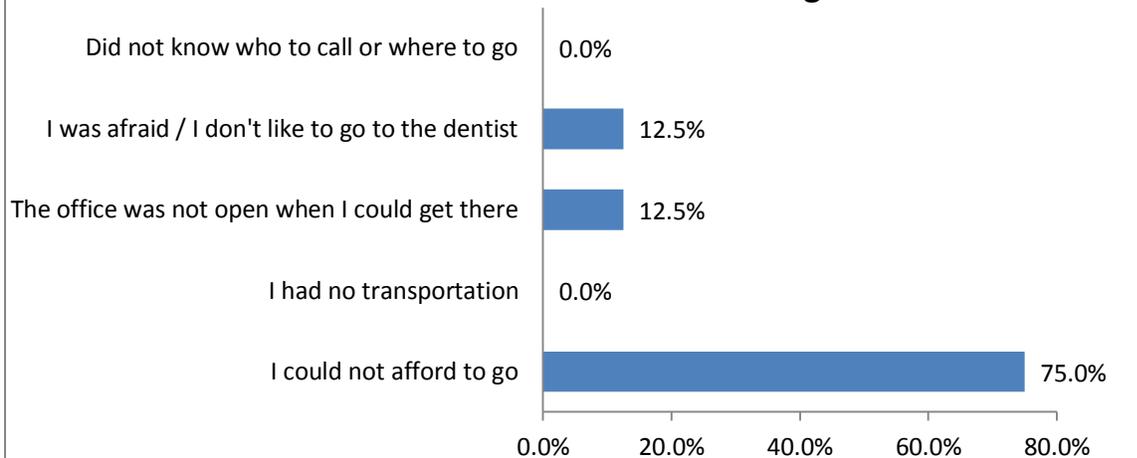
**Senior Hispanic Males That Did Not See a Dentist  
In the Last Year**



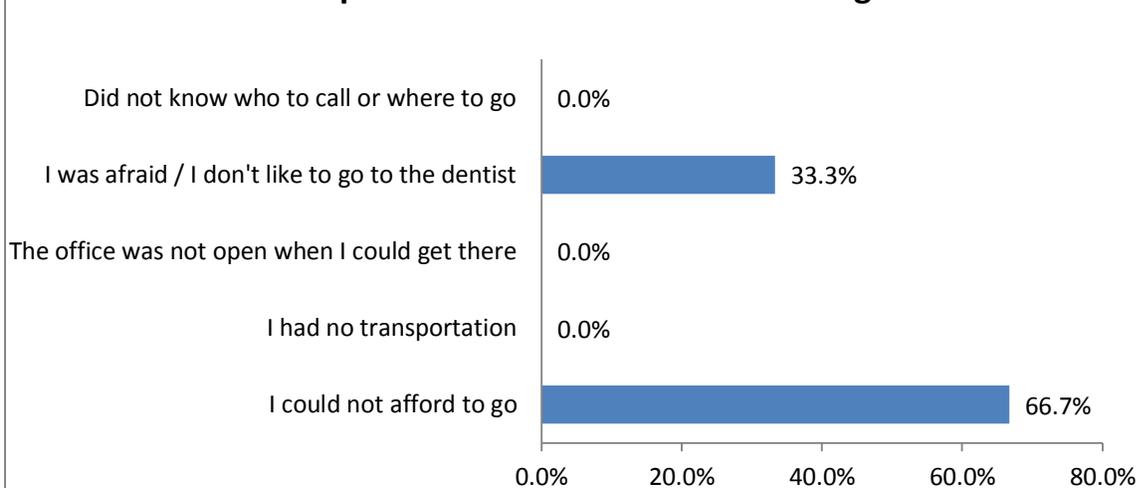
**Senior White Males that Did Not See a Dentist  
In the Last Year**



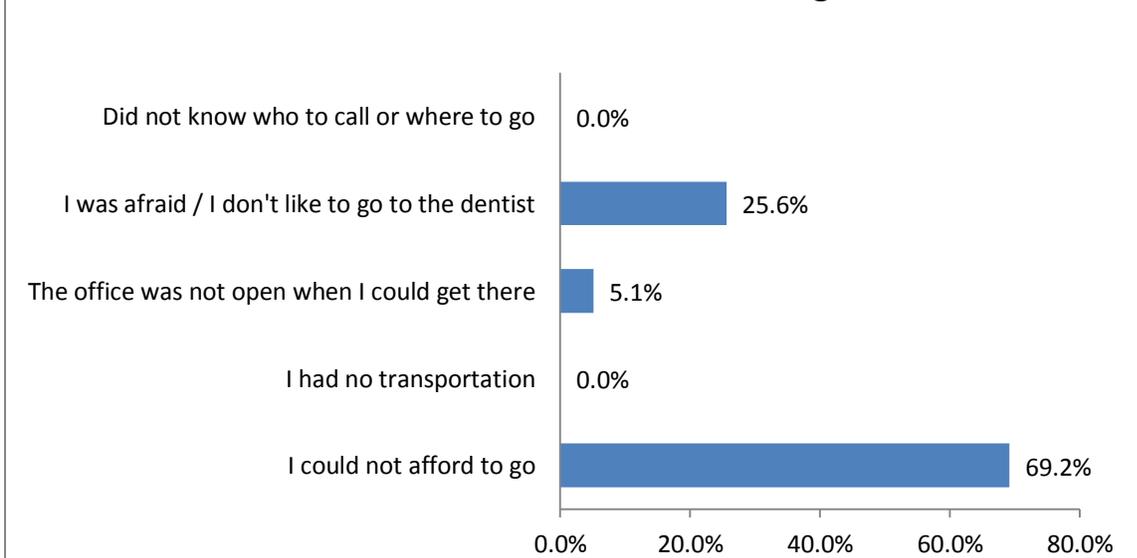
### Senior Black Male Reasons for Not Seeing a Dentist



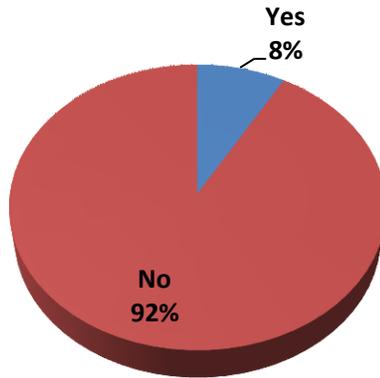
### Senior Hispanic Male Reasons for Not Seeing a Dentist



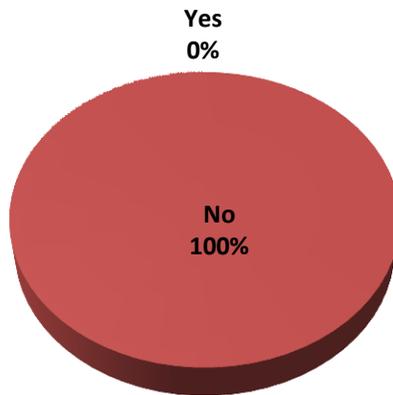
### White Senior Male Reasons for Not Seeing a Dentist



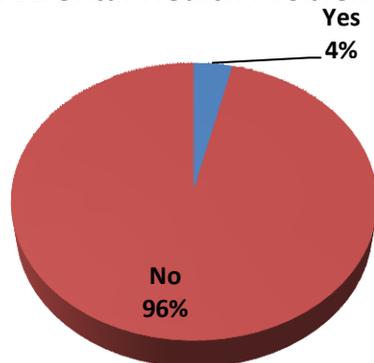
**Senior Black Males that Used a Hospital ER for  
A Dental Health Problem**



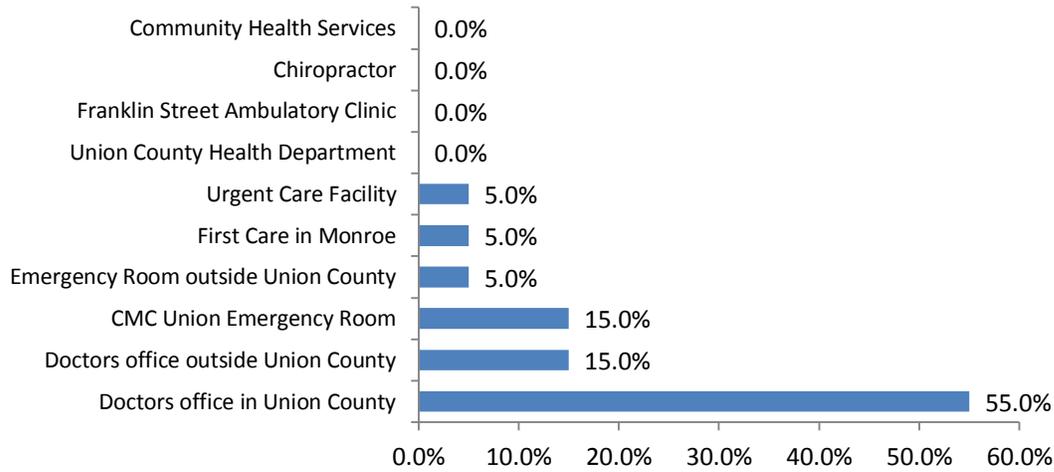
**Senior Hispanic Males that Used a Hospital ER for  
A Dental Health Problem**



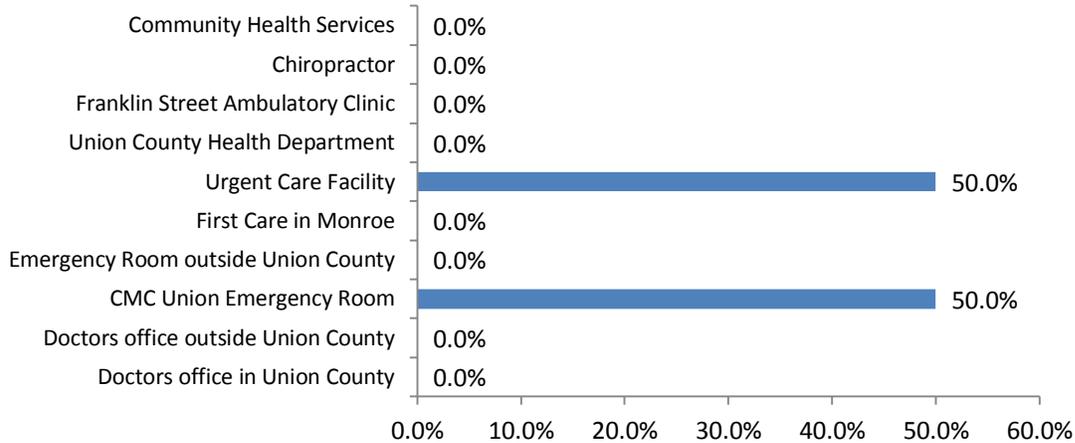
**Senior White Males that Used a Hospital ER for  
A Dental Health Problem**



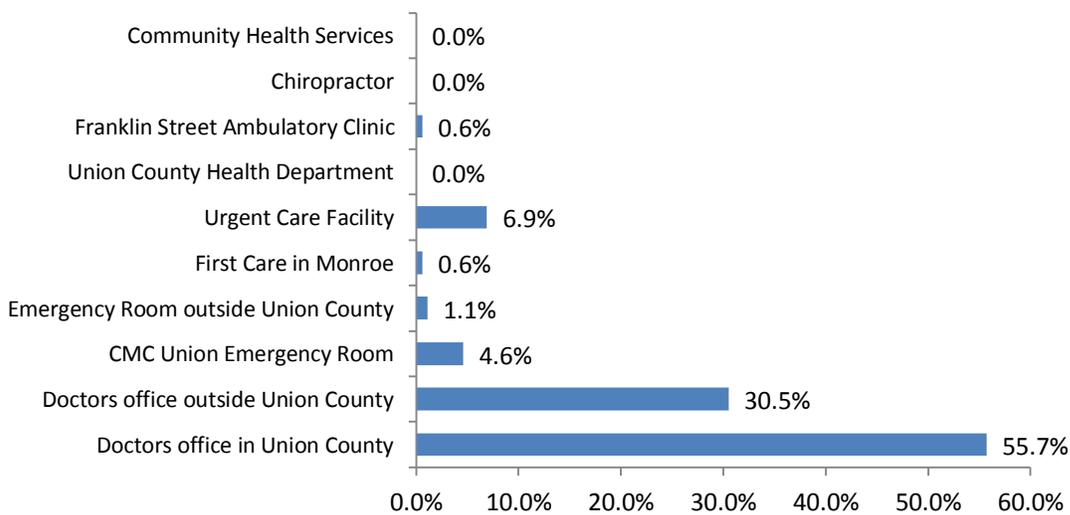
### Senior Black Males Go Most Often When Sick



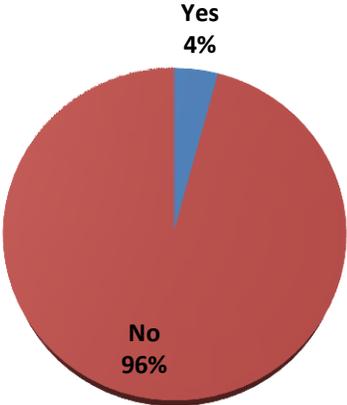
### Senior Hispanic Males Go Most Often When Sick



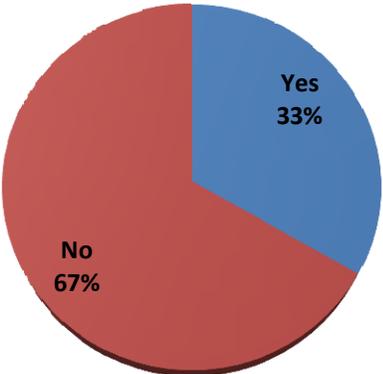
### Senior White Males Go Most Often When Sick



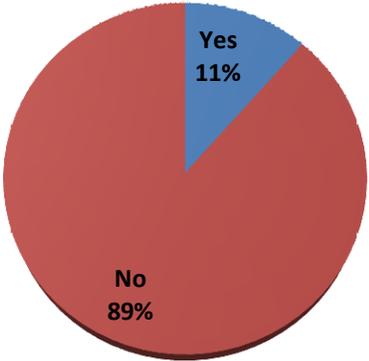
**Senior Black Males Used a Minute Clinic for Medical Services**



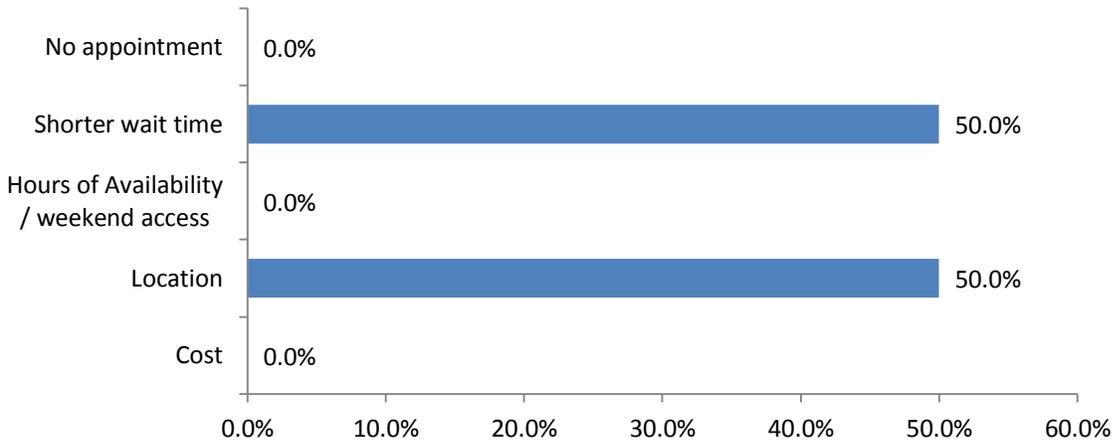
**Senior Hispanic Males Used a Minute Clinic for Medical Services**



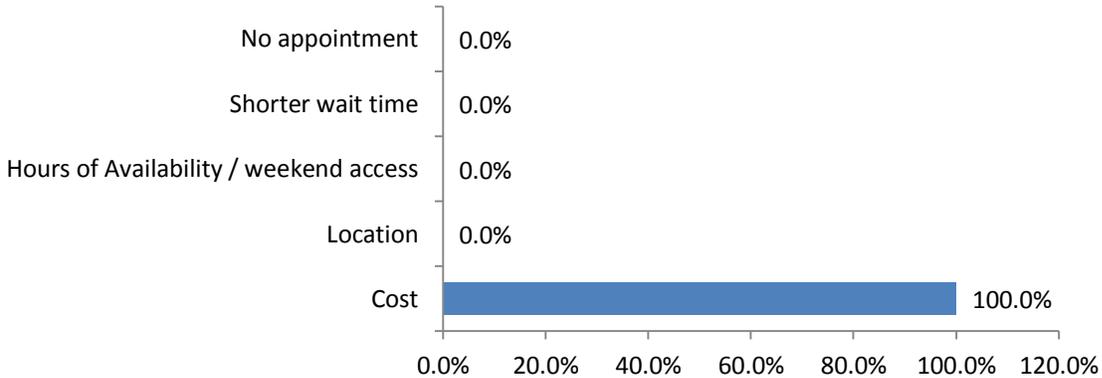
**Senior White Males Used a Minute Clinic for Medical Services**



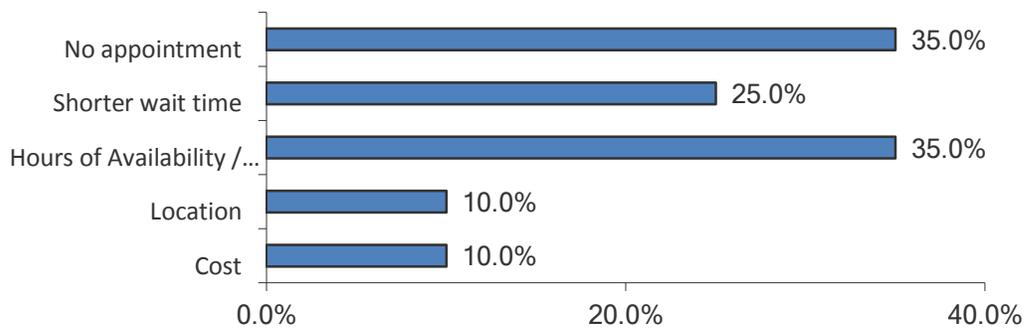
### Senior Black Males Reasons for Using Minute Clinic Medical Services



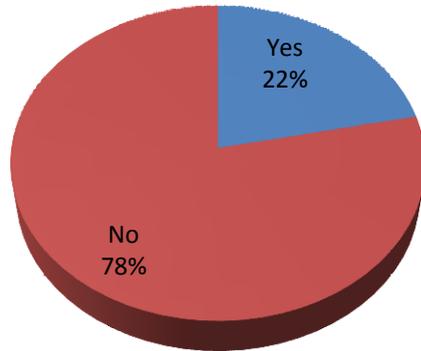
### Senior Hispanic Males Reasons for Using Minute Clinic Medical Services



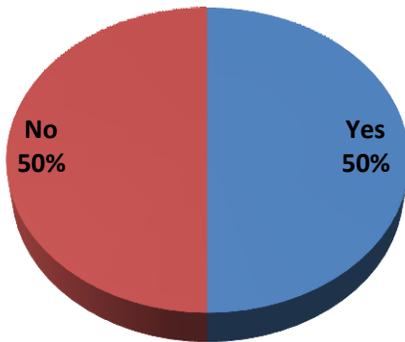
### White Senior Males Reasons for Using Minute Clinics Medical Services



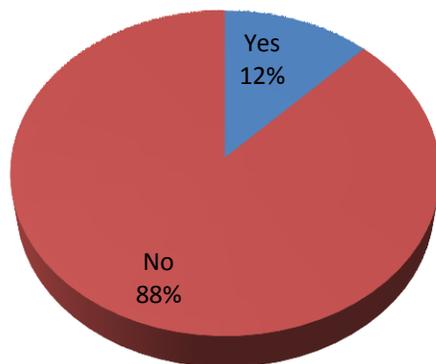
**Senior Black Males that Needed Prescription Medicine and Did Not Get It**



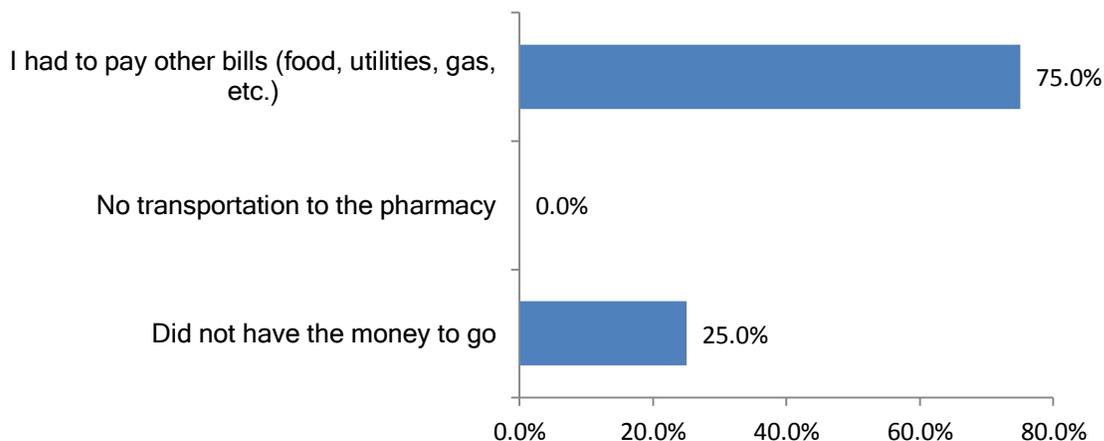
**Senior Hispanic Males that Needed Prescription Medicine and Did Not Get It**



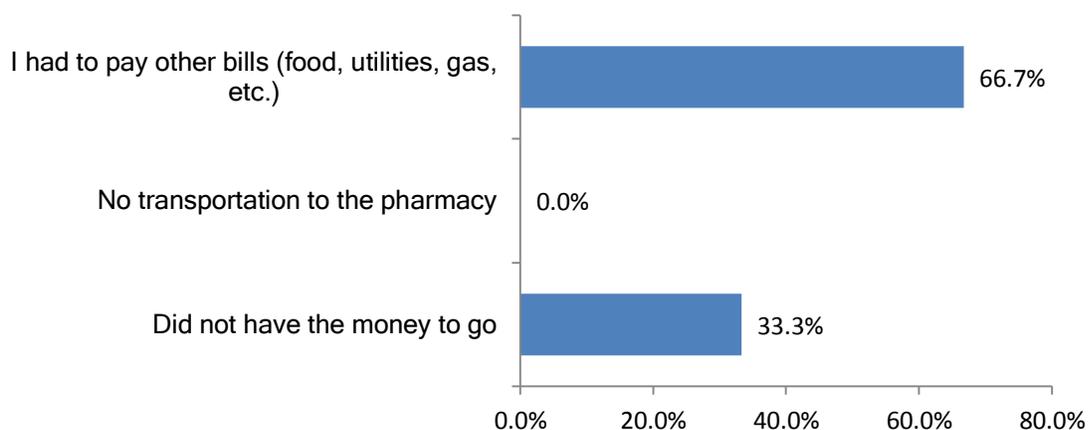
**Senior White Males that Needed Prescription Medicine and Did Not Get It**



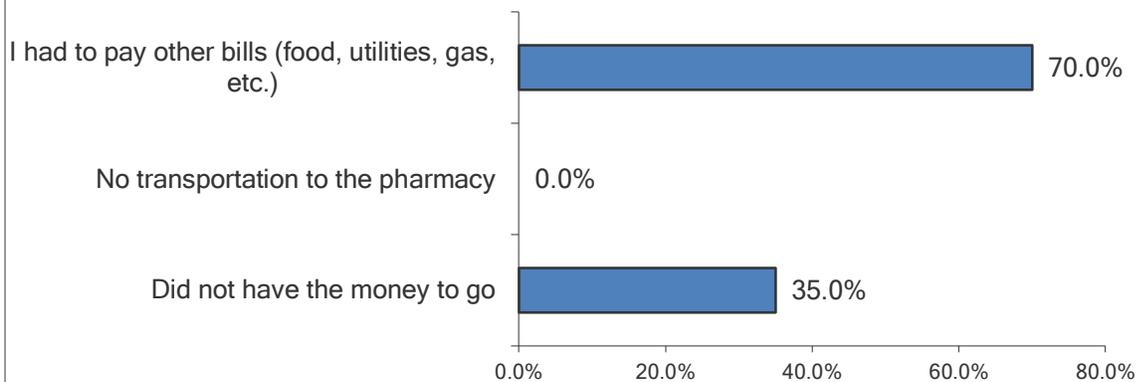
### Senior Black Males Reasons for Not Getting Medicine

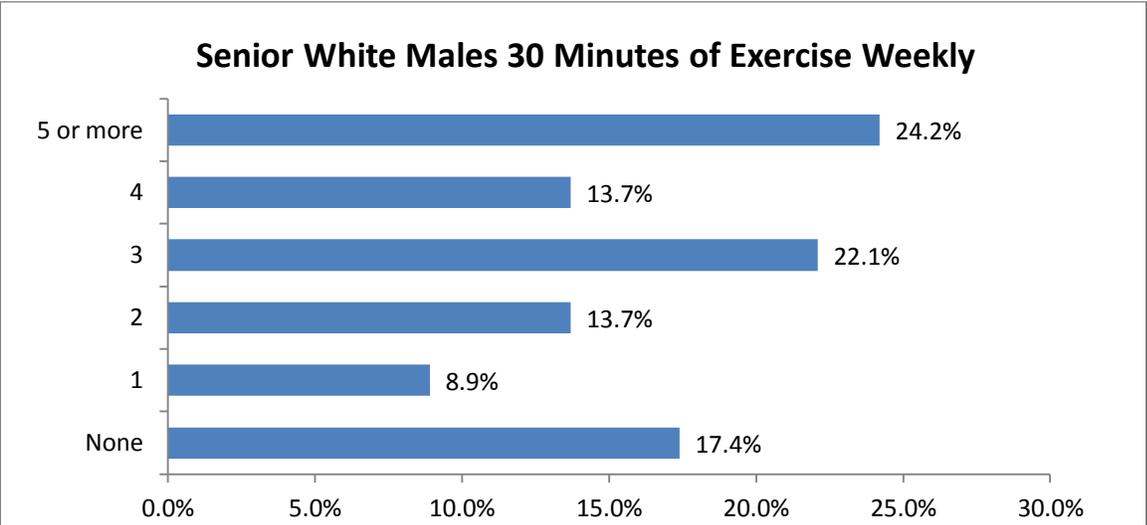
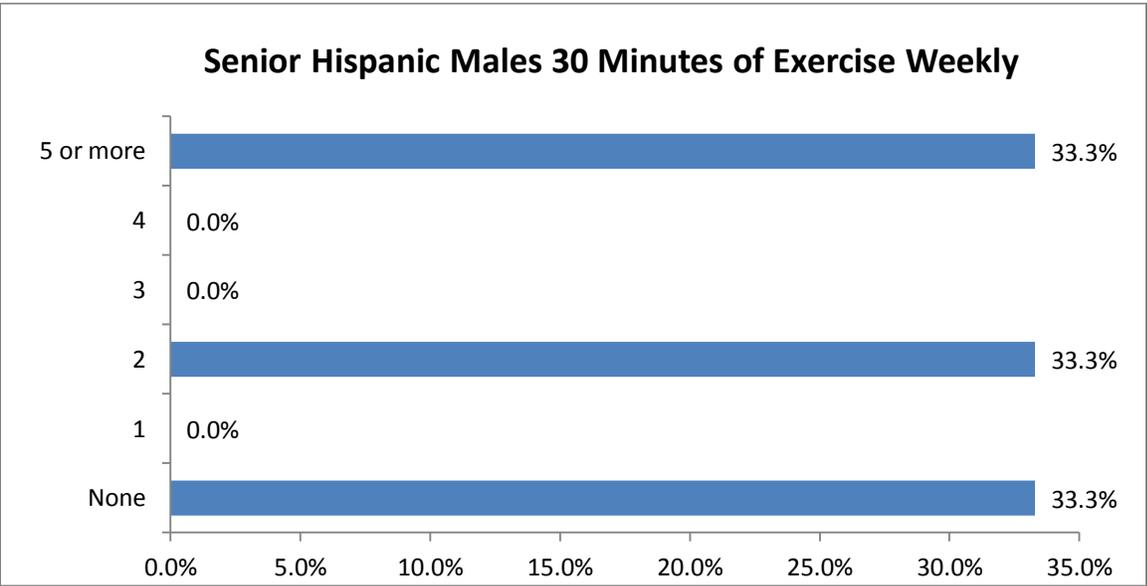
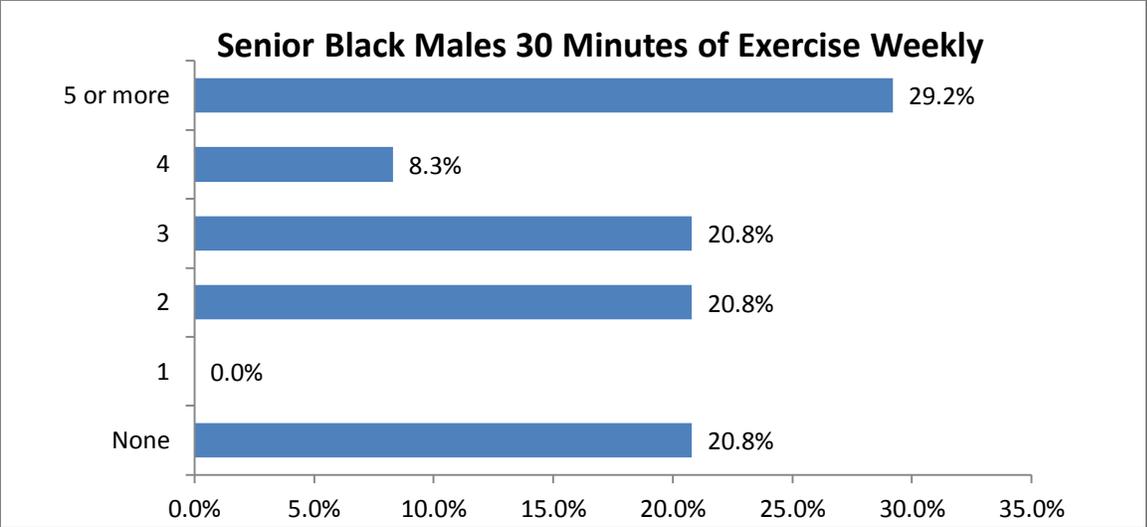


### Senior Hispanic Males Reasons for Not Getting Medicine

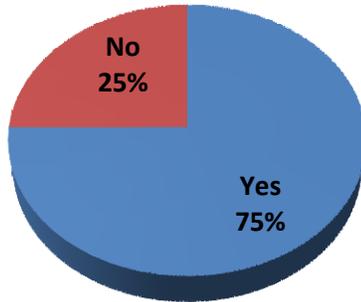


### Senior White Males Reasons for Not Getting Medicine

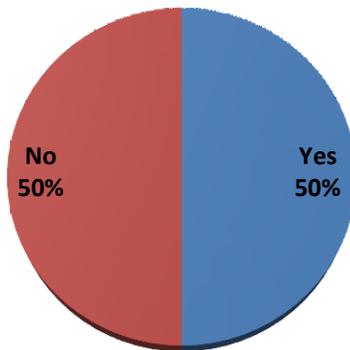




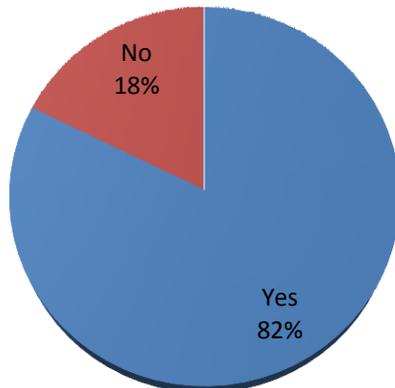
**Senior Black Males**  
**Enough Physical Activity Opportunities Near Home**

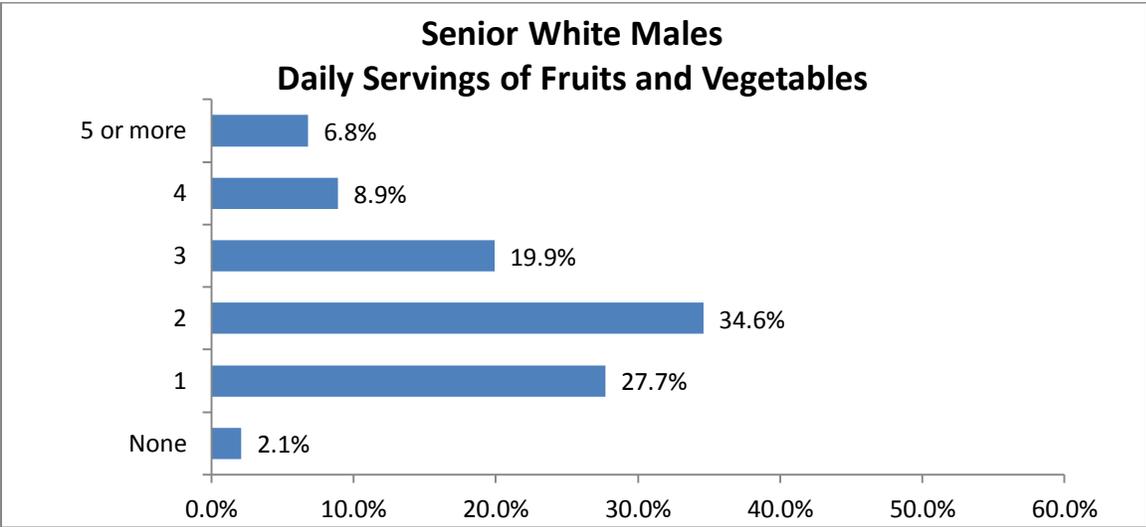
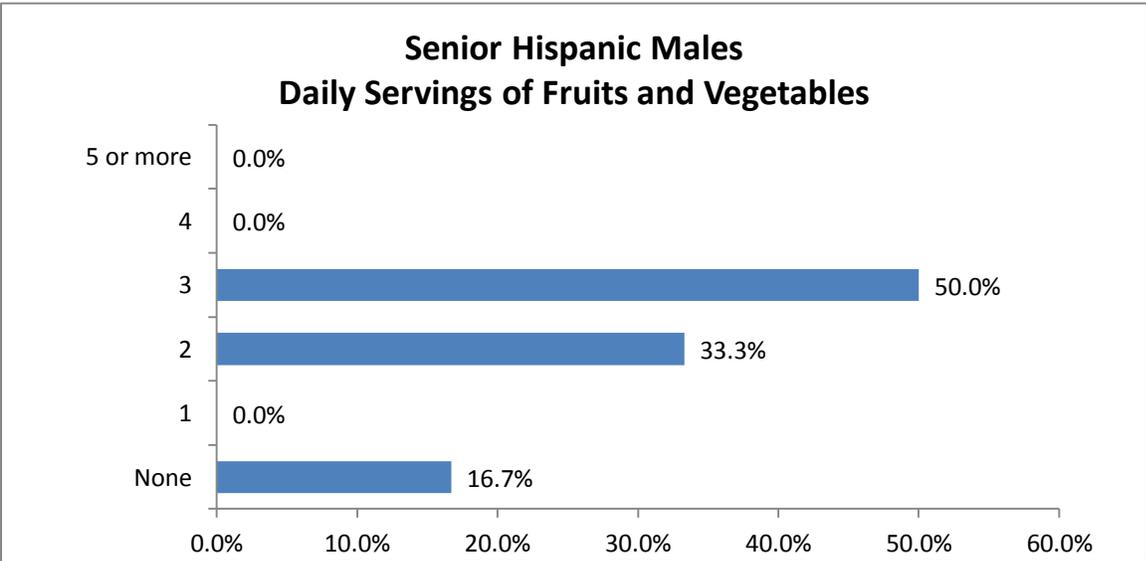
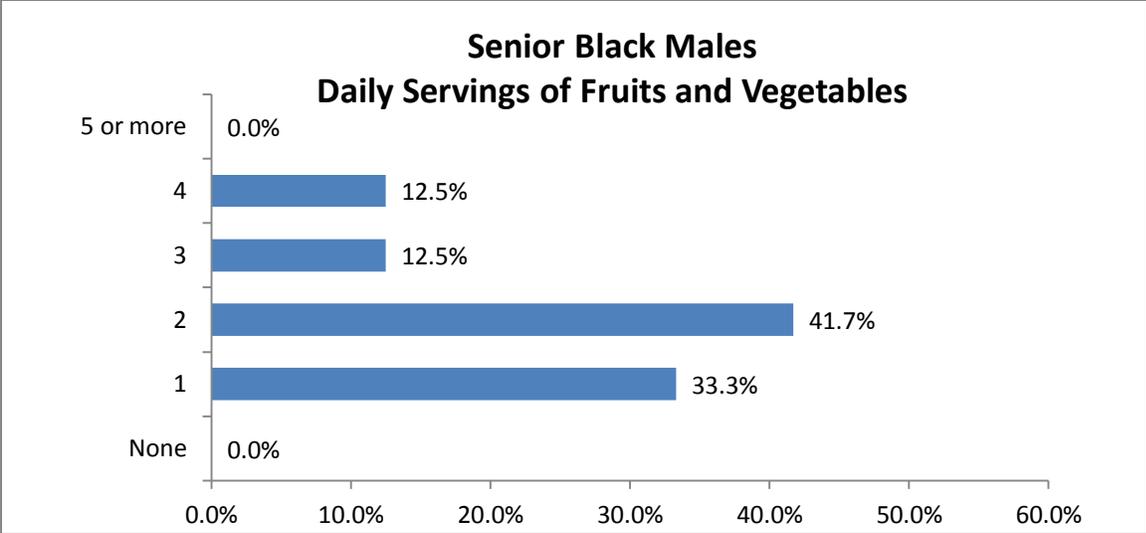


**Senior Hispanic Males**  
**Enough Physical Activity Opportunities Near Home**

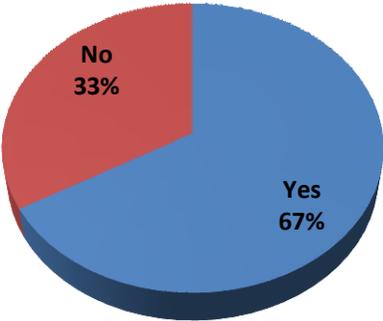


**Senior White Males**  
**Enough Physical Activity Opportunities Near Home**

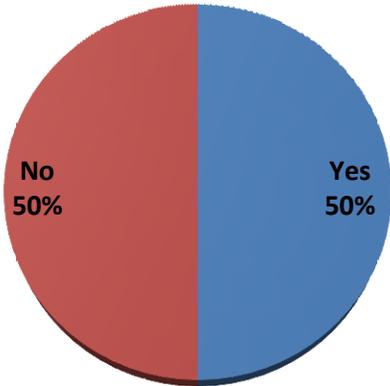




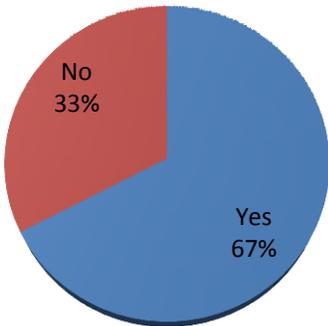
**Senior Black Males Purchased Fruits and Vegetables  
from a Farmers Market in Union County**



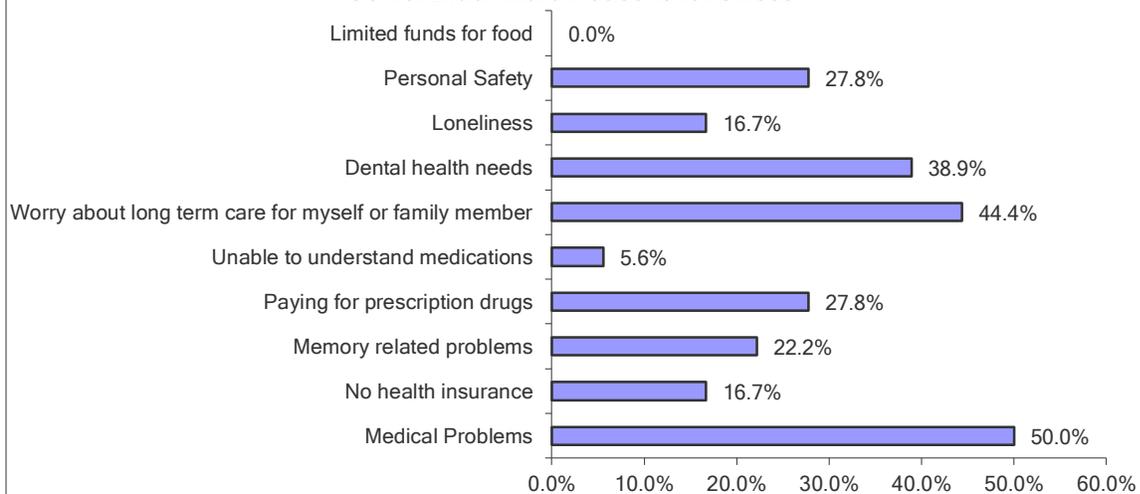
**Senior Hispanic Males Purchased Fruits and Vegetables  
from a Farmers Market in Union County**



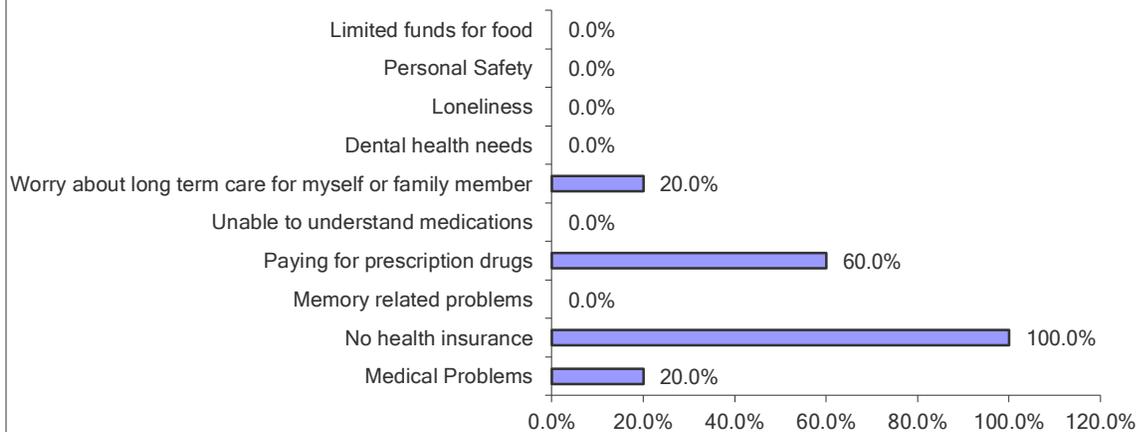
**White Senior Males Purchased Fruits and Vegetables  
from a Farmers Market in Union County**



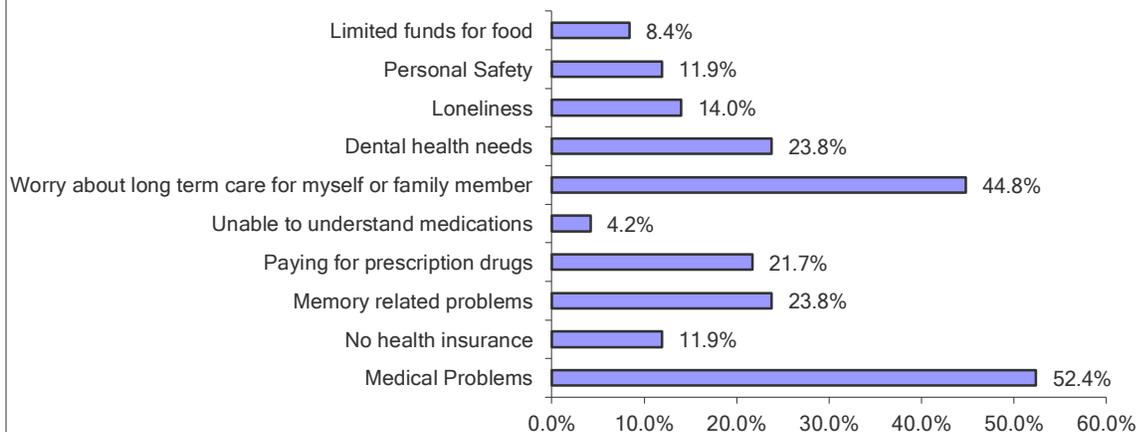
### Senior Black Male Reasons for Stress



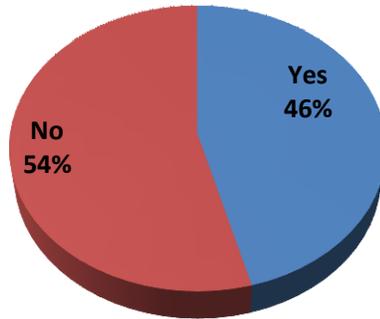
### Senior Male Hispanic Reasons for Stress



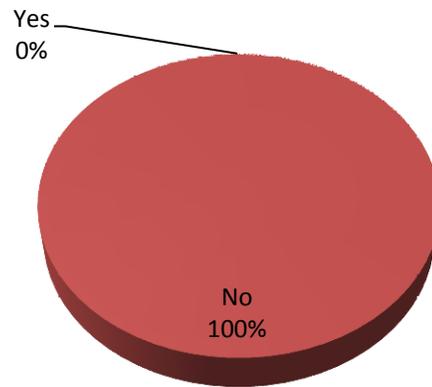
### Senior White Male Reasons for Stress



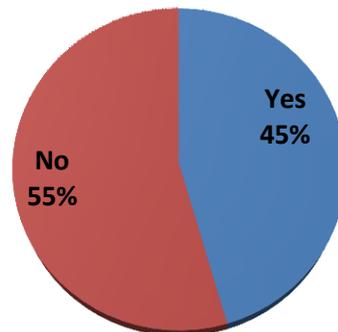
**Senior Black Males  
Have an Emergency Plan for Themselves and Family**



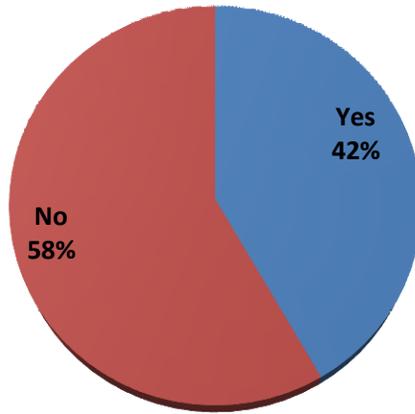
**Senior Hispanic Males  
Have an Emergency Plan for Themselves and Family**



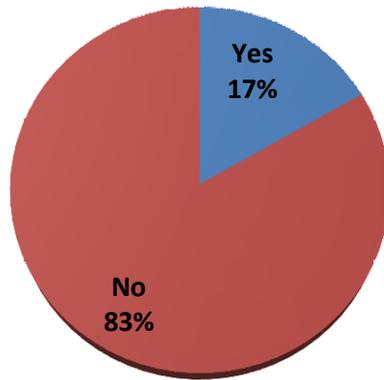
**Senior White Males  
Have an Emergency Plan for Themselves and Family**



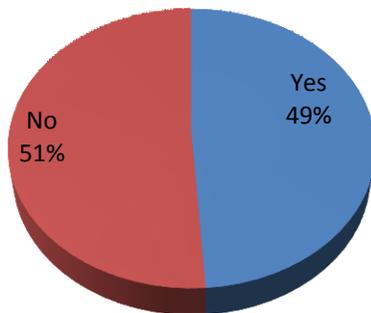
**Senior Black Males Have Emergency Supply of Water and Non-Perishable Food**



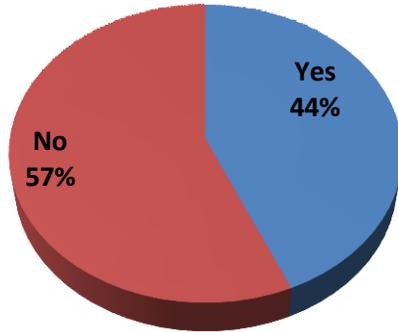
**Senior Hispanic Males Have Emergency Supply of Water and Non-Perishable Food**



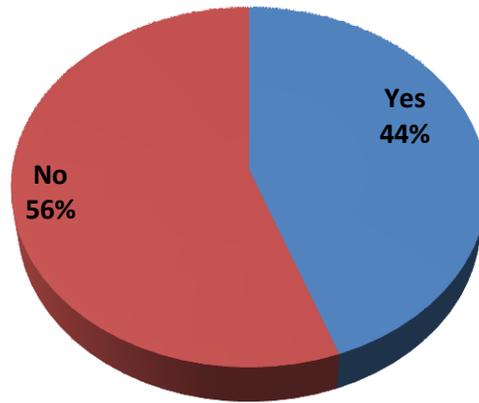
**White Senior Males Have Emergency Supply of Water and Non-Perishable Food**



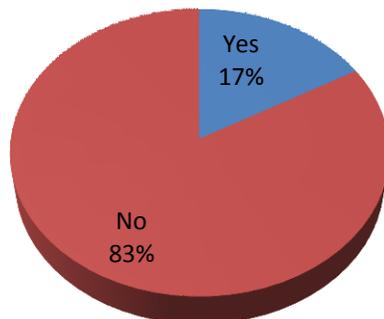
**Senior Black Males  
Have Emergency Supply of Prescription Medications**



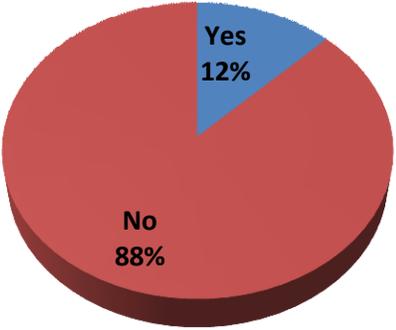
**Senior White Males  
Have Emergency Supply of Prescription Medications**



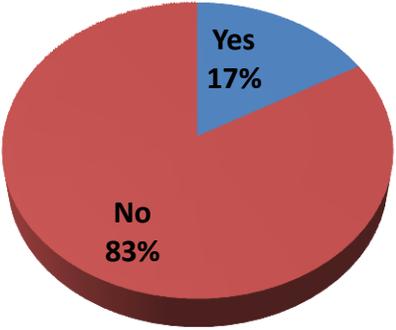
**Senior Hispanic Males  
Have Emergency Supply of Prescription Medications**



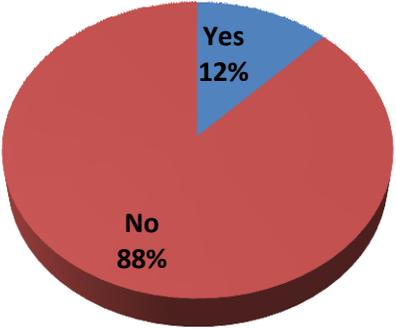
**Senior Black Males  
Receive Help Taking or Managing Medications**



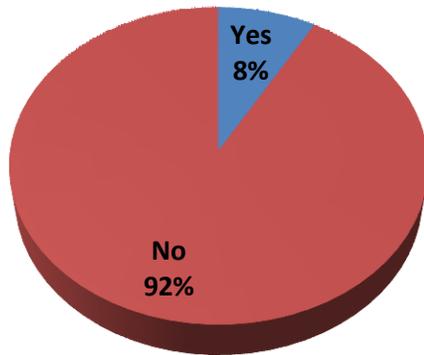
**Senior Hispanic Males  
Receive Help Taking or Managing Medications**



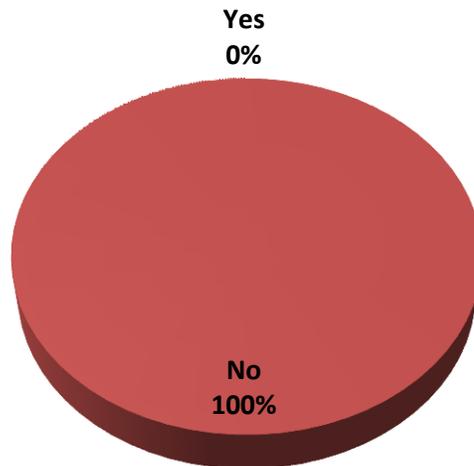
**Senior White Males  
Receive Help Taking or Managing Medications**



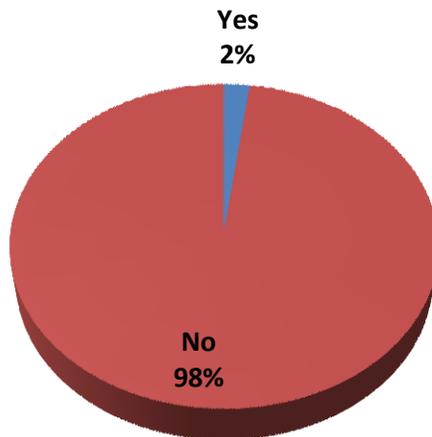
### Senior Black Males Receiving Home Health Services



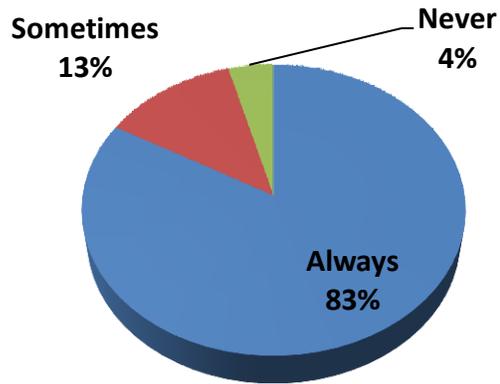
### Senior Hispanic Males Receiving Home Health Services



### Senior White Males Receiving Home Health Services



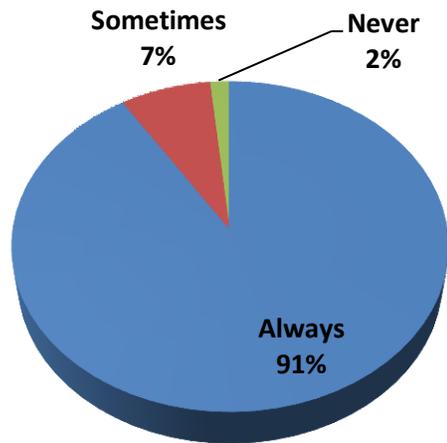
### Senior Black Male Seat Belt Use



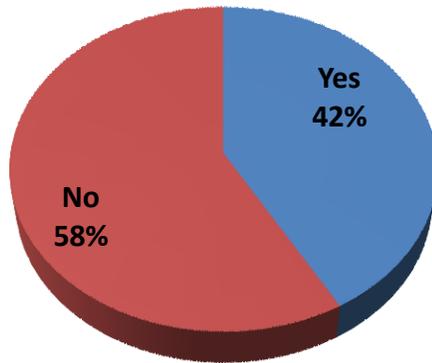
### Senior Hispanic Male Seat Belt Use



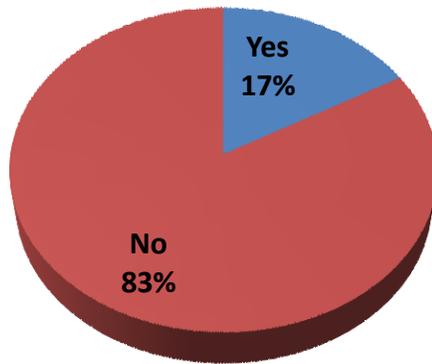
### Senior White Male Seat Belt Use



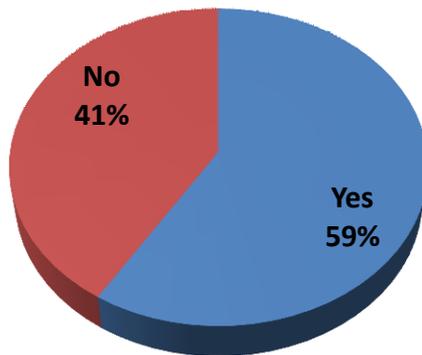
### Senior Black Males with Guns in the Home



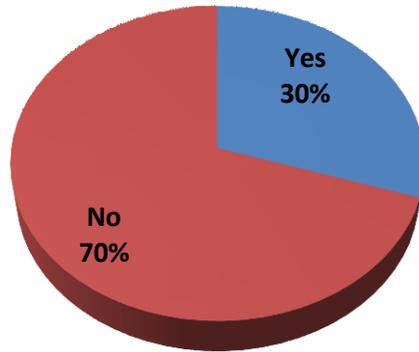
### Senior Hispanic Males with Guns in the Home



### Senior White Males with Guns in the Home

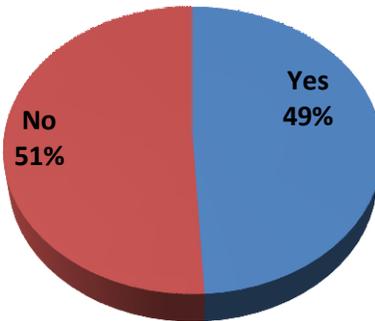


**Senior Black Males that Lock Up Guns and Ammunition**

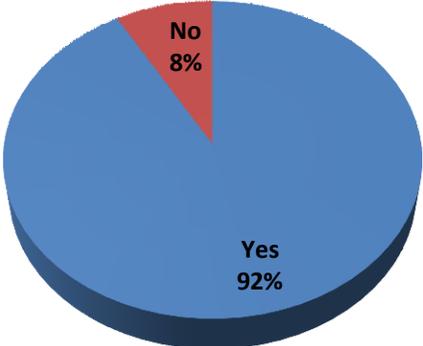


**ALL Senior Hispanic Males did not answer this question on the survey**

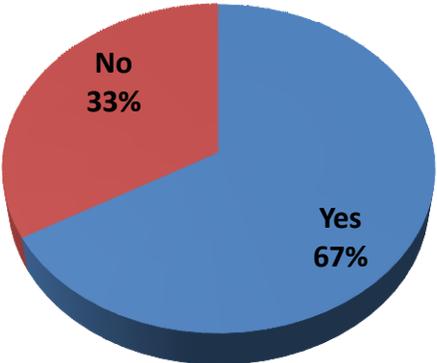
**Senior White Males that Lock Up Guns and Ammunition**



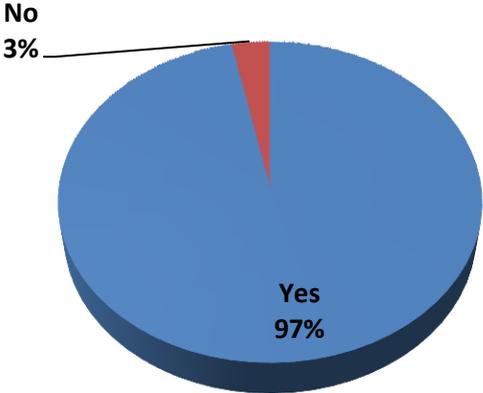
**Senior Black Males with Smoke Detector in Home**



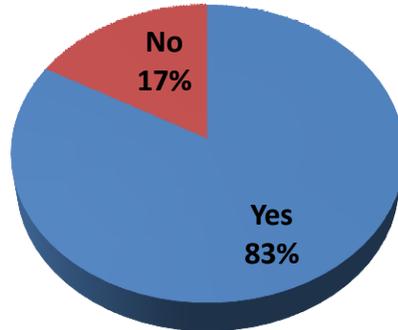
**Senior Hispanic Males with Smoke Detector in Home**



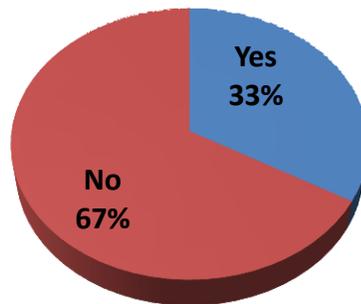
**Senior White Males with Smoke Detector in Home**



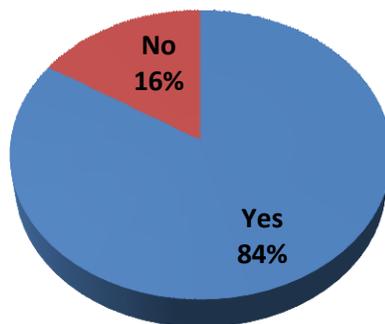
**Senior Black Males  
Check Smoke Detector Batteries Annually**



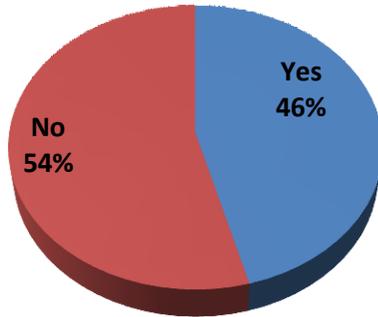
**Senior Hispanic Males  
Check Smoke Detector Batteries Annually**



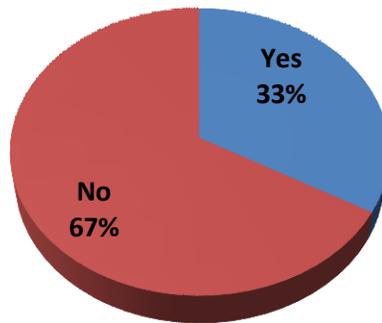
**Senior White Males  
Check Smoke Detector Batteries Annually**



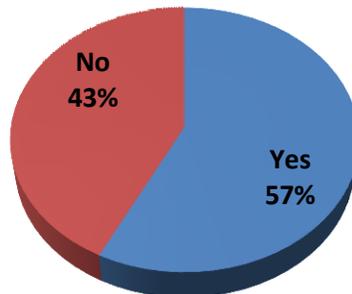
**Senior Black Males  
Have Carbon Monoxide Detector in Home**



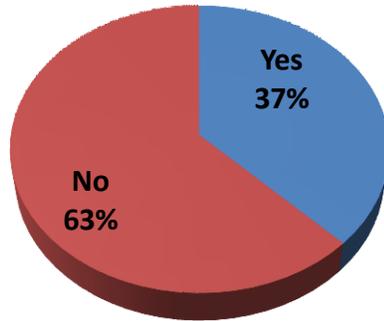
**Senior Hispanic Males  
Have Carbon Monoxide Detector in Home**



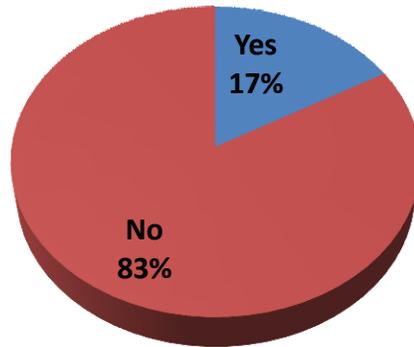
**Senior White Males  
Have Carbon Monoxide Detector in Homes**



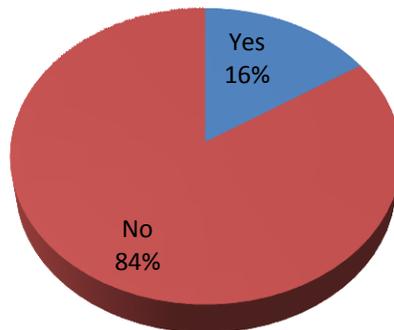
**Senior Black Males that Smoke or Use Smokeless Tobacco**



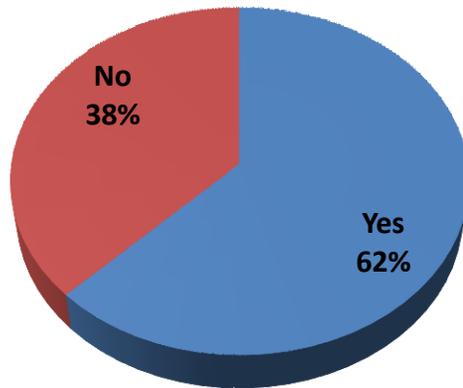
**Senior Hispanic Males that Smoke or Use Smokeless Tobacco**



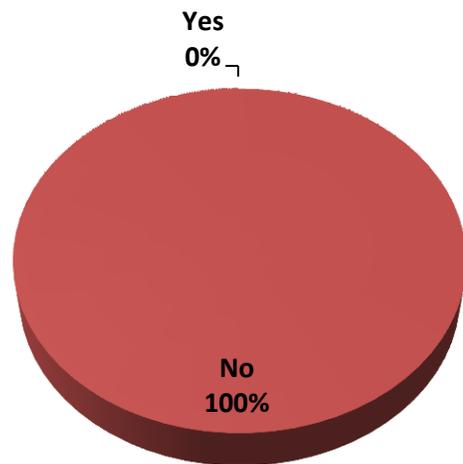
**Senior White Males that Smoke or Use Smokeless Tobacco**



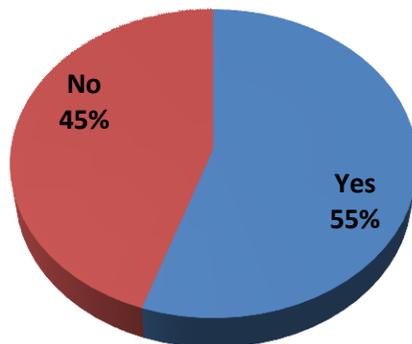
### Senior Black Males that Want to Quit Tobacco Use



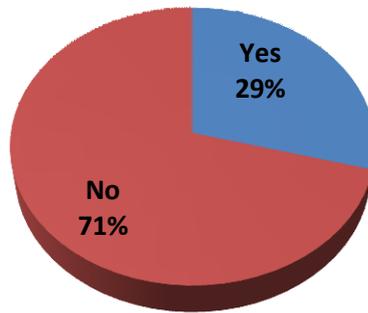
### Senior Hispanic Males that Do NOT Want to Quit Smoking



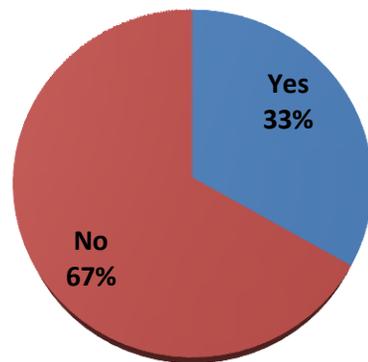
### Senior White Males that Want to Quit Tobacco Use



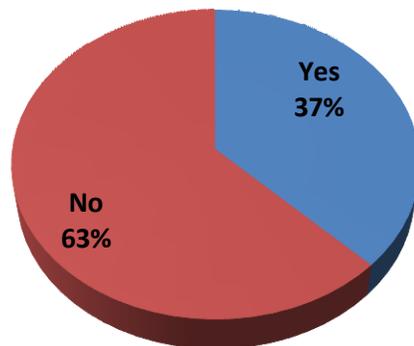
### Senior Black Males Drink Alcoholic Beverages



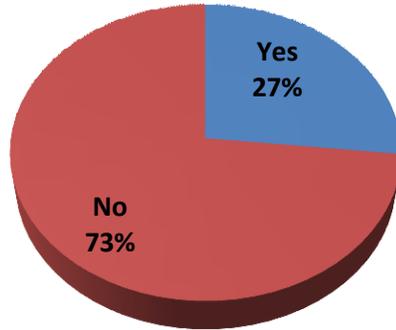
### Senior Hispanic Males Drink Alcoholic Beverages



### Senior White Males Drink Alcoholic Beverages



**Senior Black Males  
Drive After Drinking Alcoholic Beverages**



**Senior Hispanic Males that  
DO NOT Drive After Drinking Alcoholic Beverages**

Yes  
0%

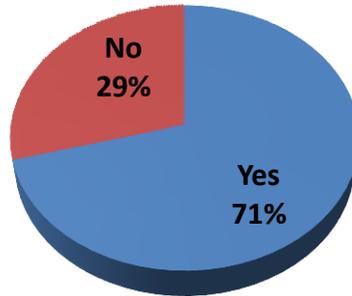


**Senior White Males  
Drive After Drinking Alcoholic Beverages**

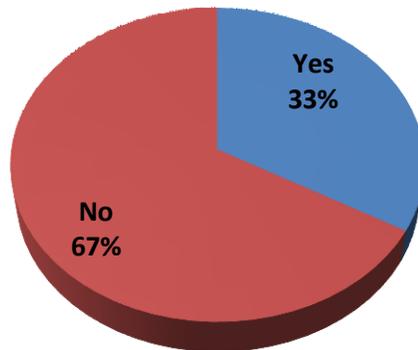
Yes  
8%



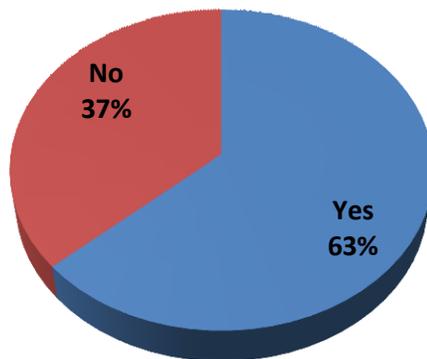
**Senior Black Males Know How to  
Access Mental Health Services if Needed**



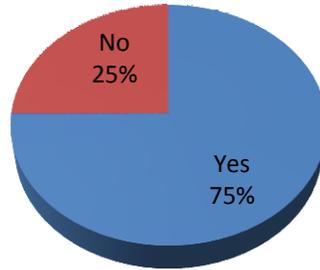
**Senior Hispanic Males Know How to  
Access Mental Health Services if Needed**



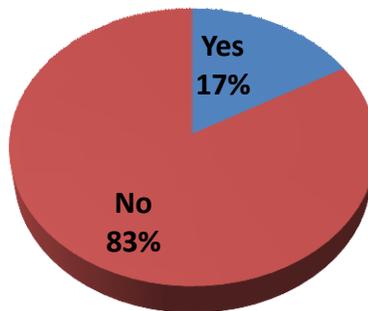
**Senior White Males Know How to  
Access Mental Health Services if Needed**



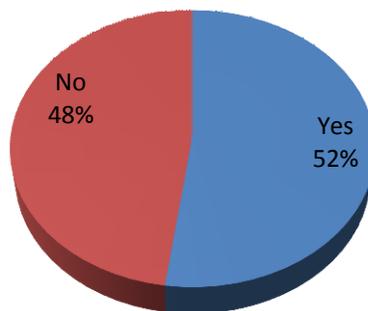
**Senior Black Males that Know How to  
Access Substance Abuse Services**



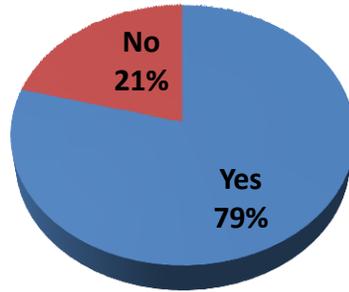
**Senior Hispanic Males that Know How to  
Access Substance Abuse Services**



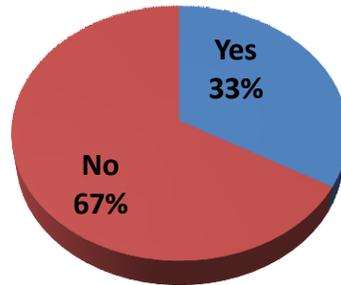
**Senior White Males that Know How to  
Access Substance Abuse Services**



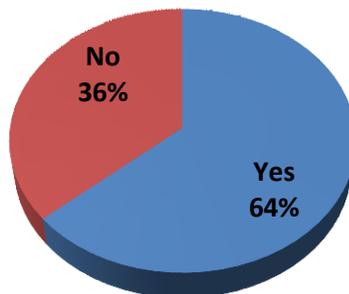
**Senior Black Males Know How to Access  
Department of Social Service Programs For Assistance**



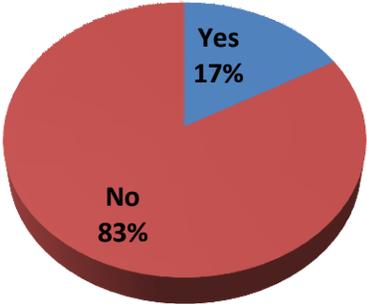
**Senior Hispanic Males Know How to Access  
Department of Social Service Programs For Assistance**



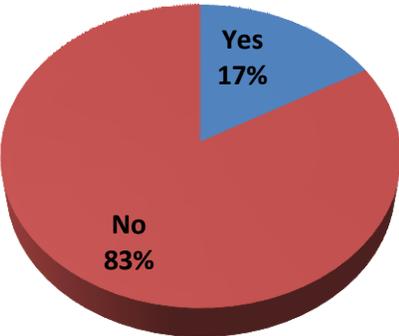
**Senior White Males Know How to Access  
Department of Social Service Programs For Assistance**



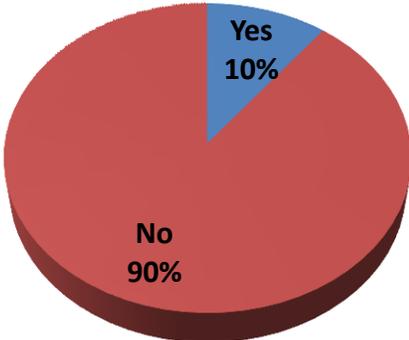
**Senior Black Males Caring for  
Elderly Parent or Family Member**



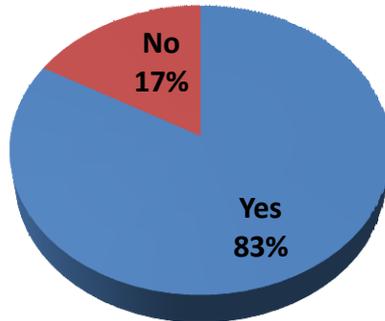
**Senior Hispanics Males Caring for  
Elderly Parent or Family Member**



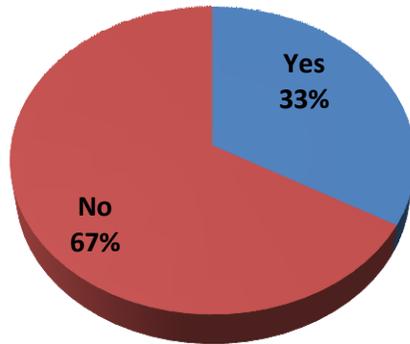
**Senior White Males Caring for  
Elderly Parent or Family Member**



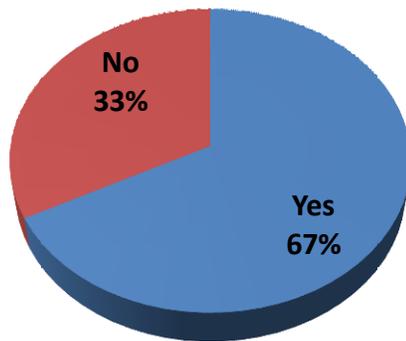
**Senior Black Males Know Who or Where to Call if Abused or Neglected**



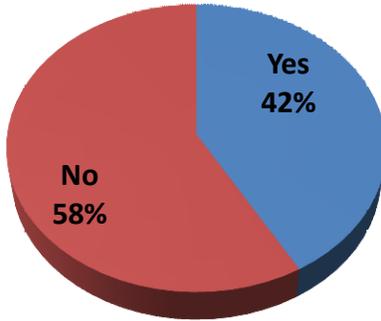
**Senior Hispanic Males Know Who or Where to Call if Abused or Neglected**



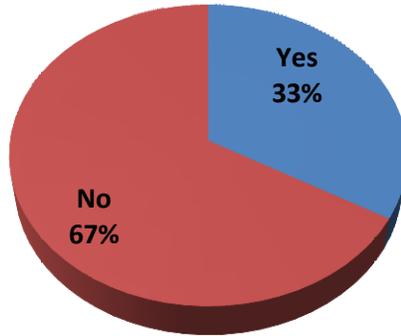
**Senior White Males Know Who or Where to Call if Abused or Neglected**



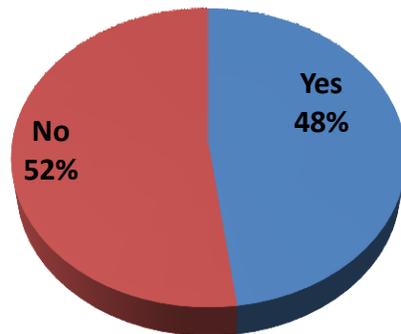
**Senior Black Males that Talk  
on a Cell Phone While Driving**



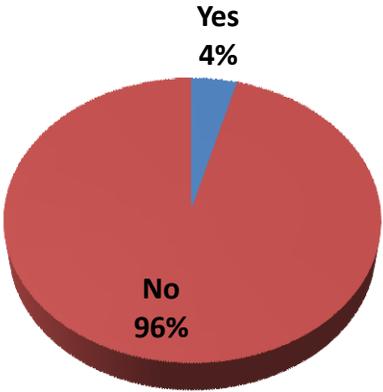
**Senior Hispanic Males that Talk  
on a Cell Phone While Driving**



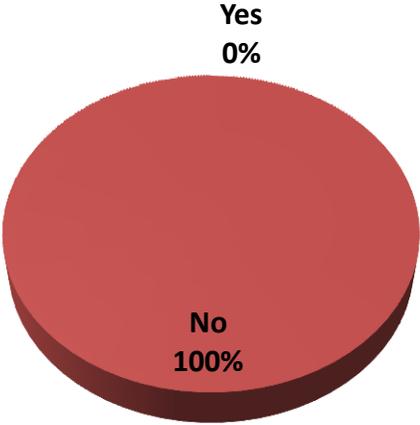
**Senior White Males that Talk  
on a Cell Phone While Driving**



**Senior Black Males Texting While Driving or Riding with Someone Texting While Driving**



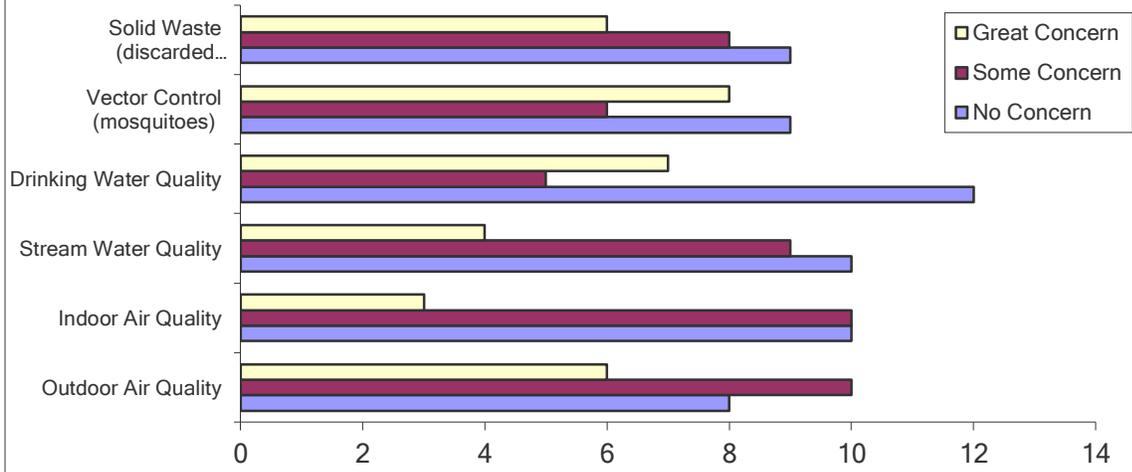
**Senior Hispanic Males Do NOT Text While Driving**



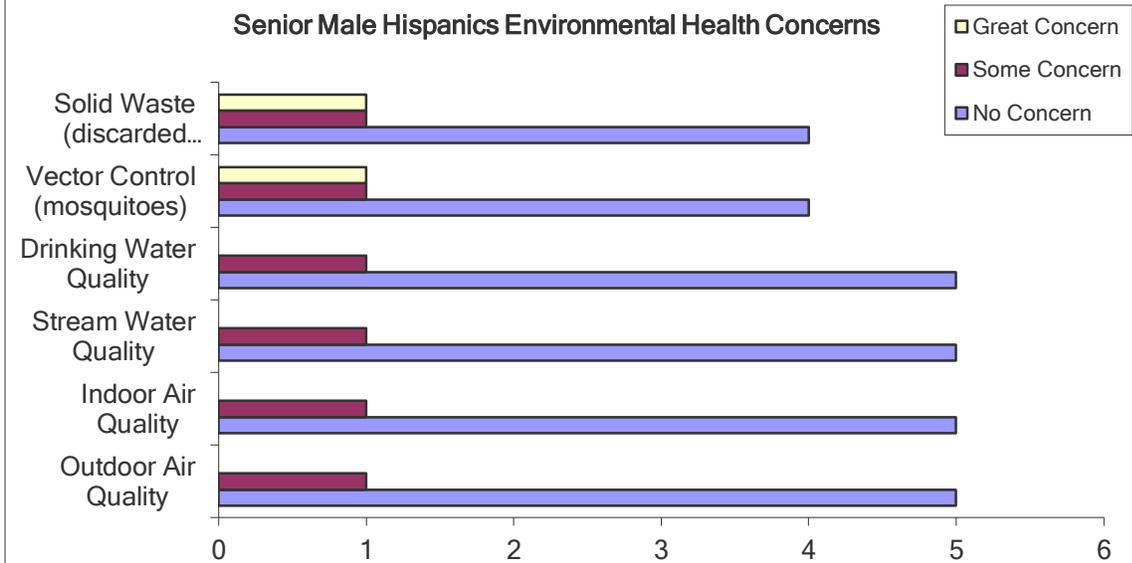
**Senior White Males Texting While Driving or Riding with Someone Texting While Driving**



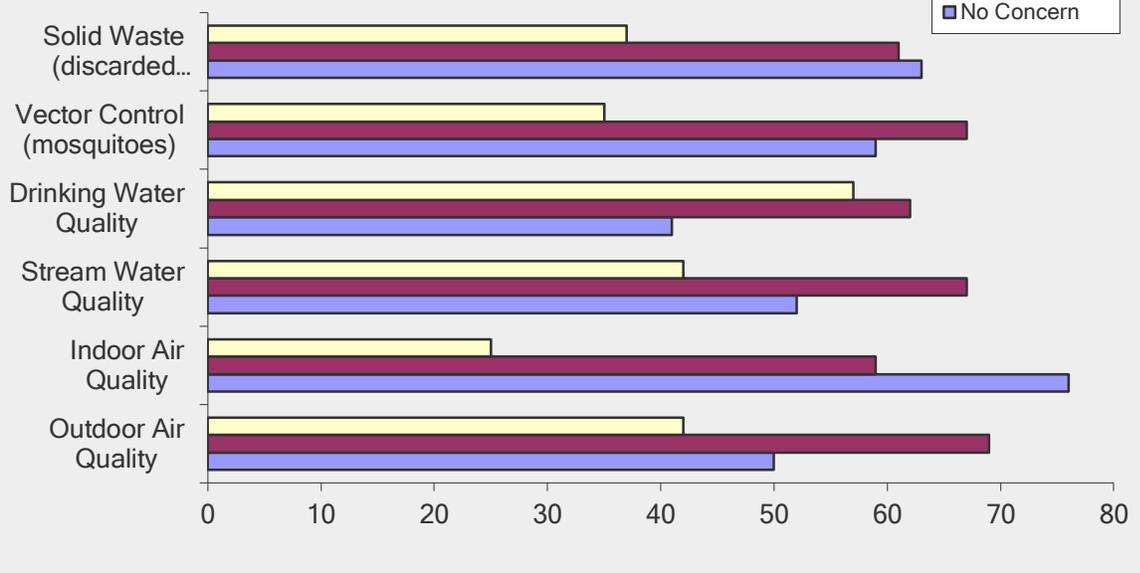
### Senior Black Males Environmental Health

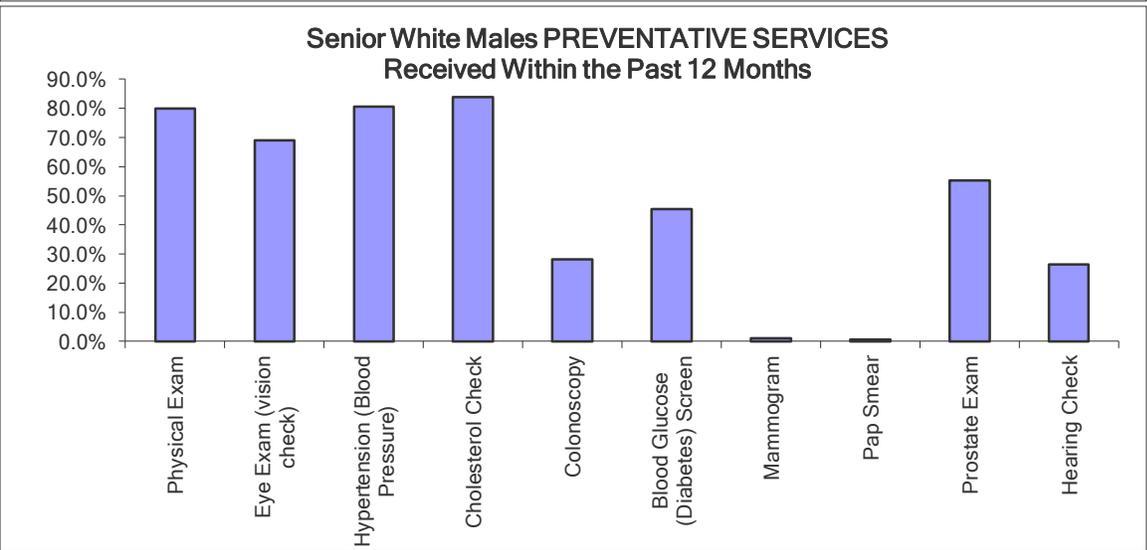
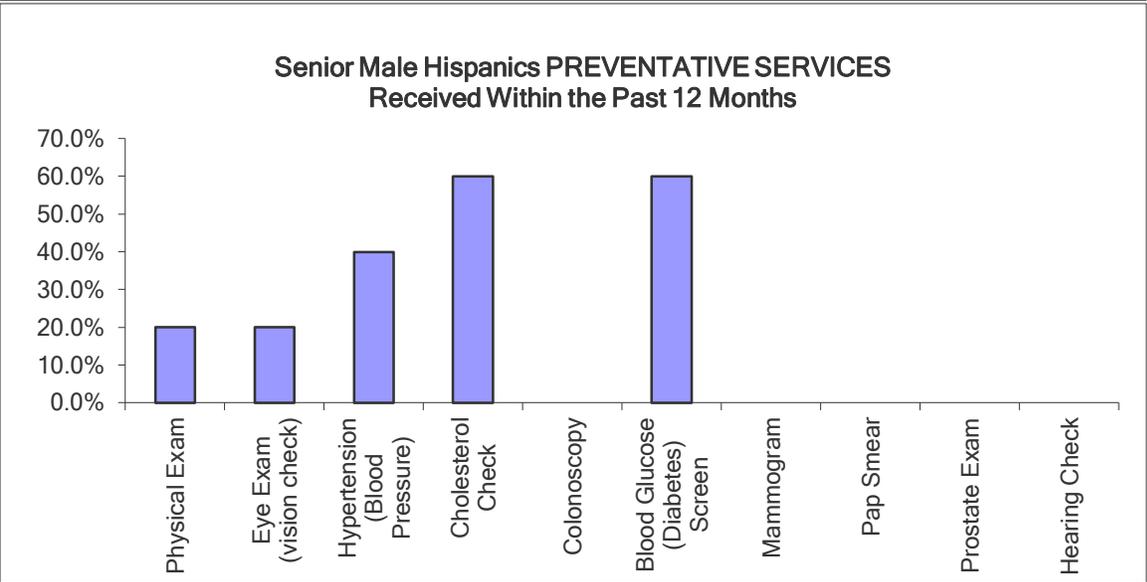
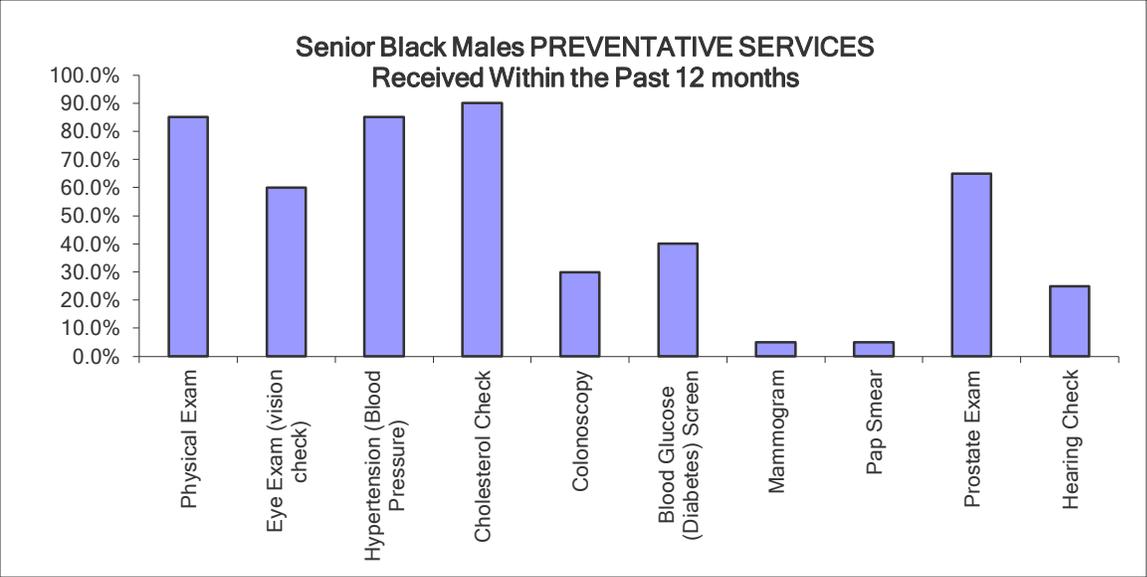


### Senior Male Hispanics Environmental Health Concerns

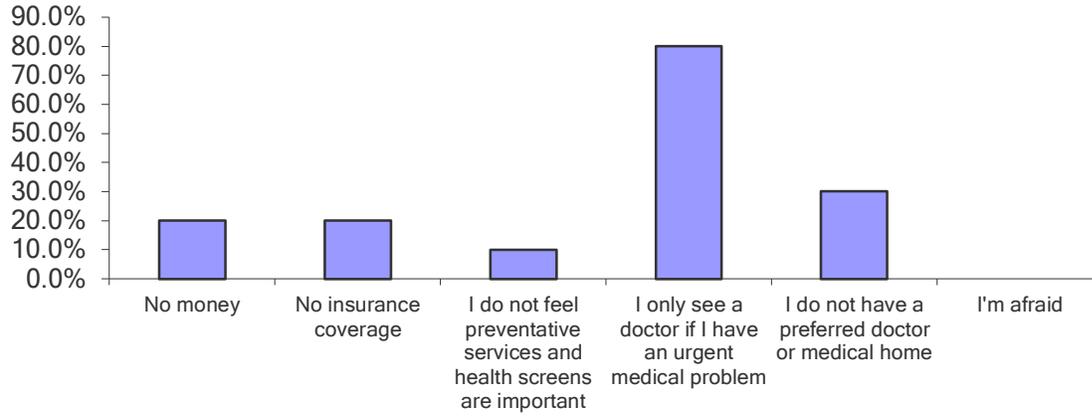


### Senior White Males Environmental Health Concerns

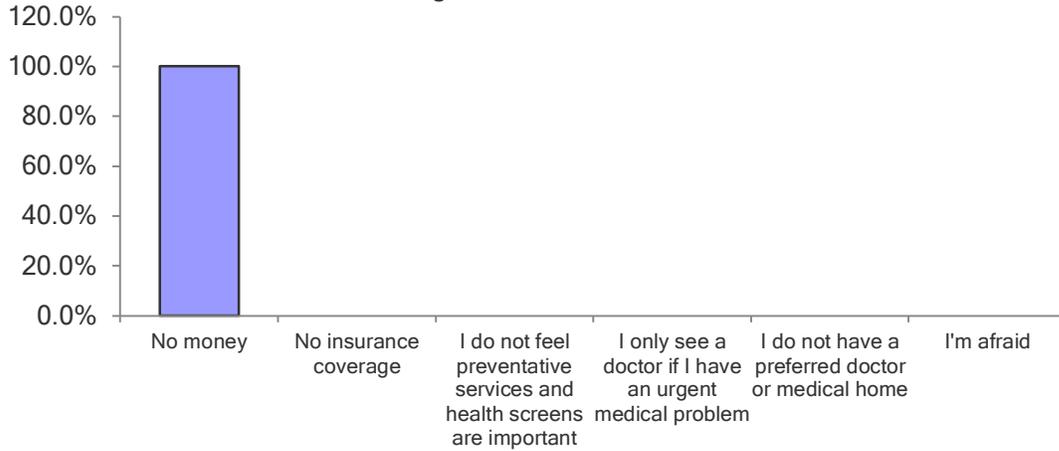




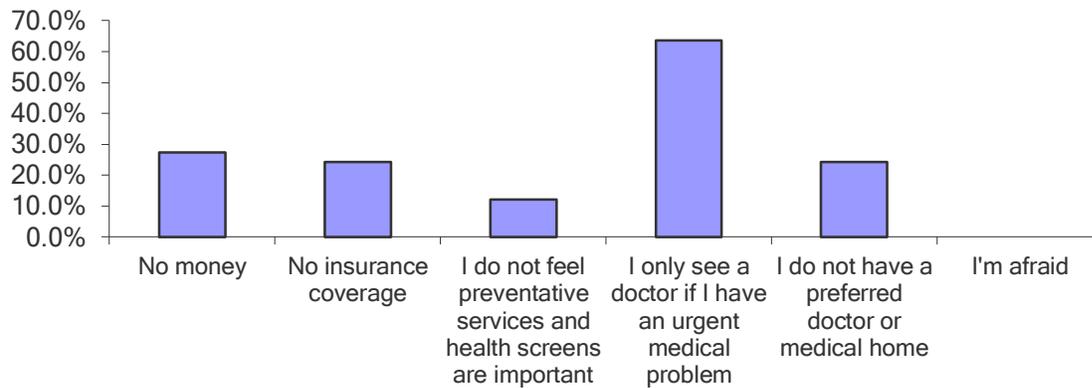
### Senior Black Males Reasons for NOT Receiving Preventative Services



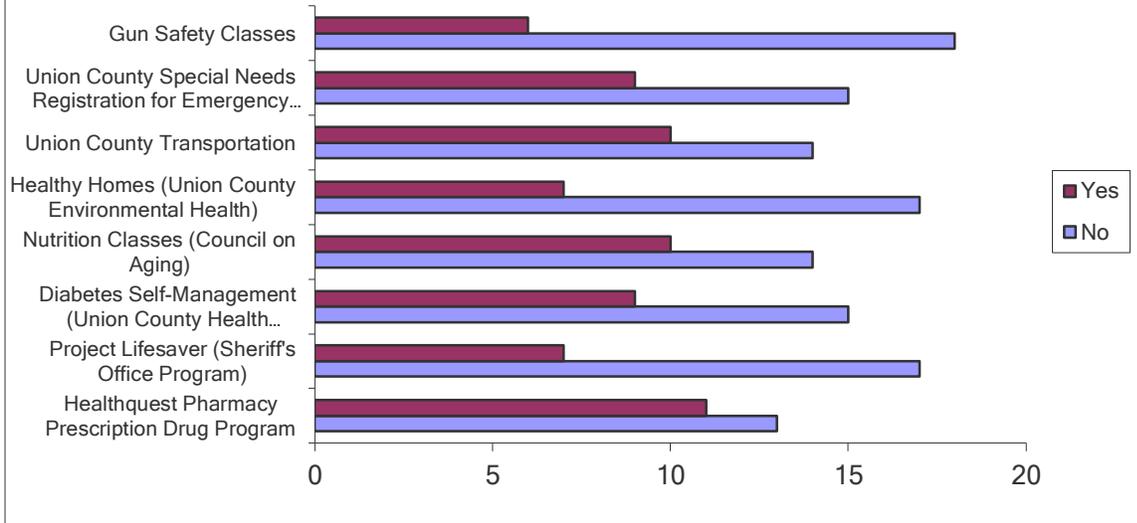
### Senior Male Hispanics Reasons for NOT Receiving Preventative Services



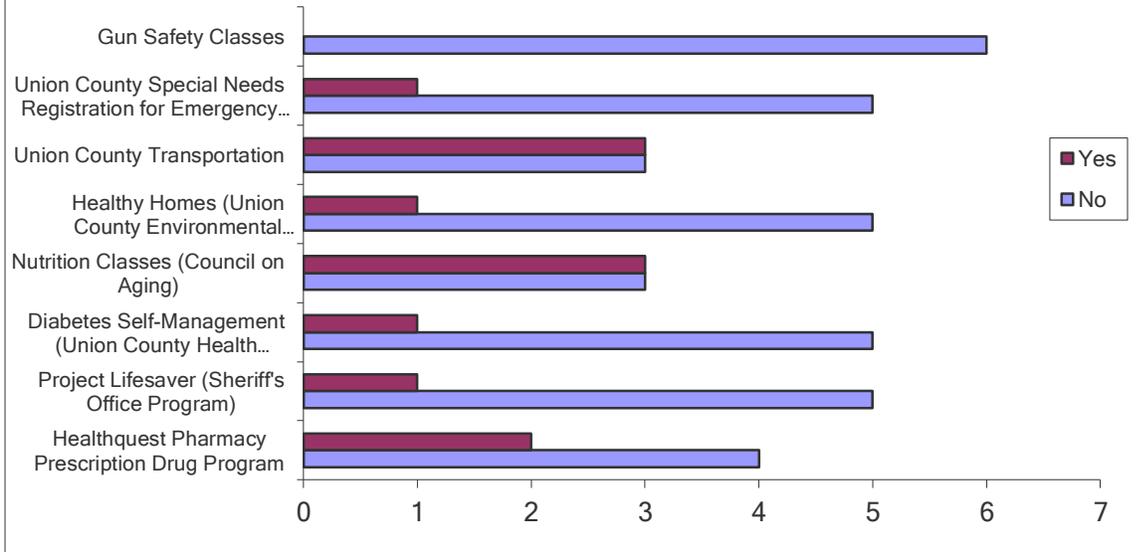
### Senior White Males Reasons for NOT Receiving Preventative Services



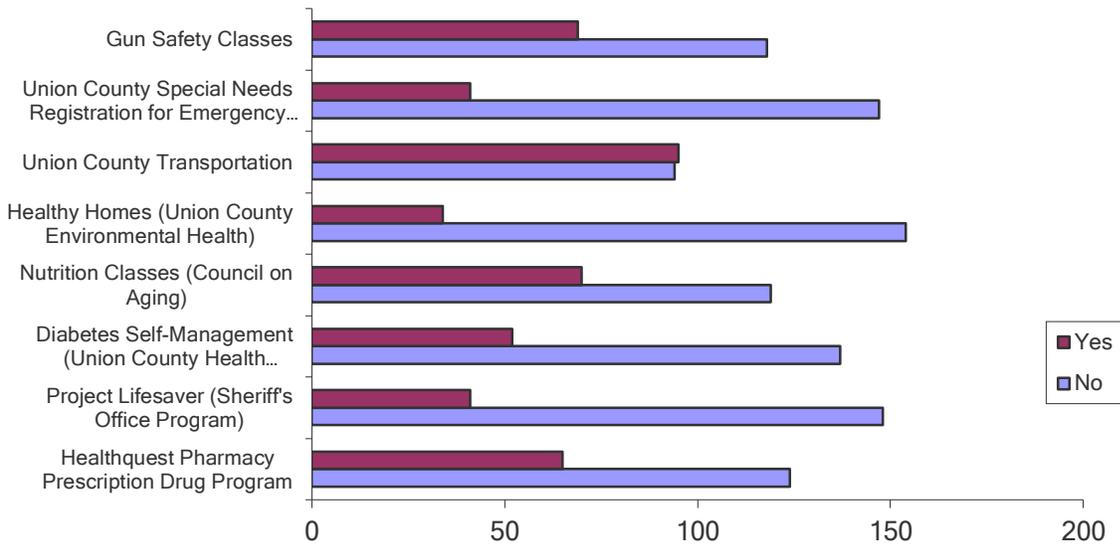
**Senior Black Males  
HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS**



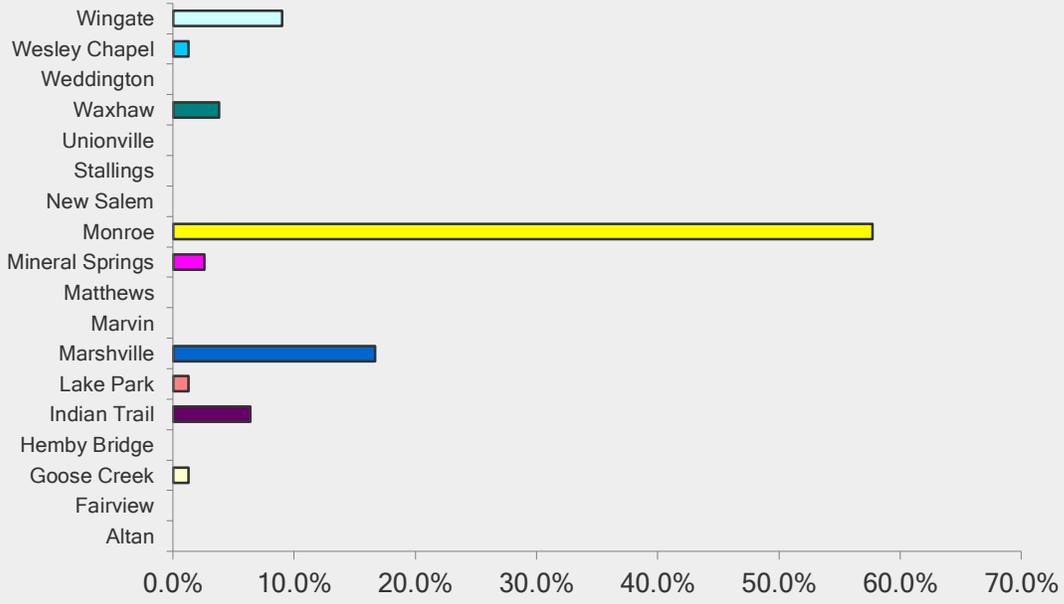
**Senior Male Hispanics  
HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS**



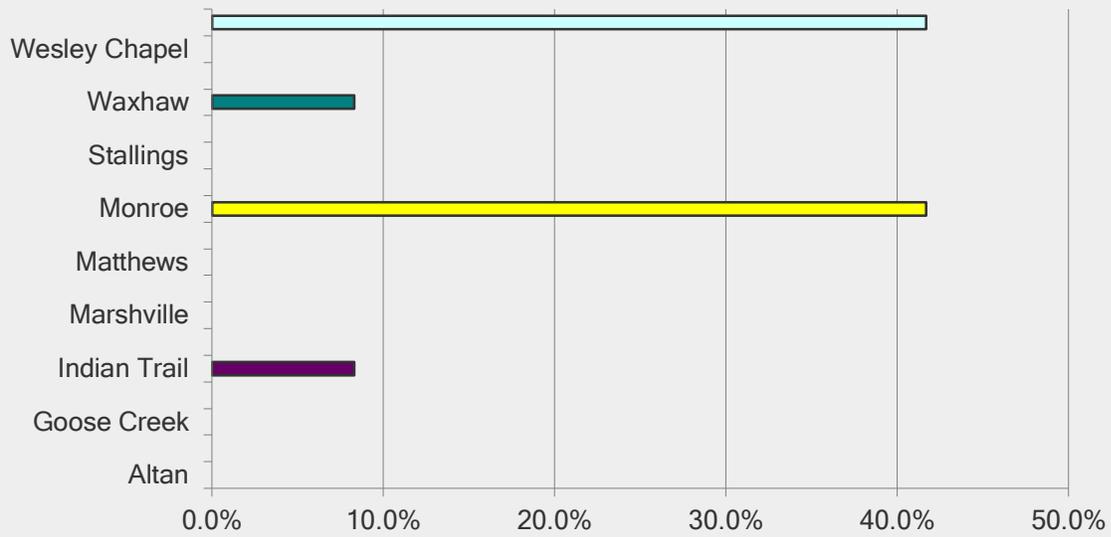
**Senior White Males**  
**HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS**



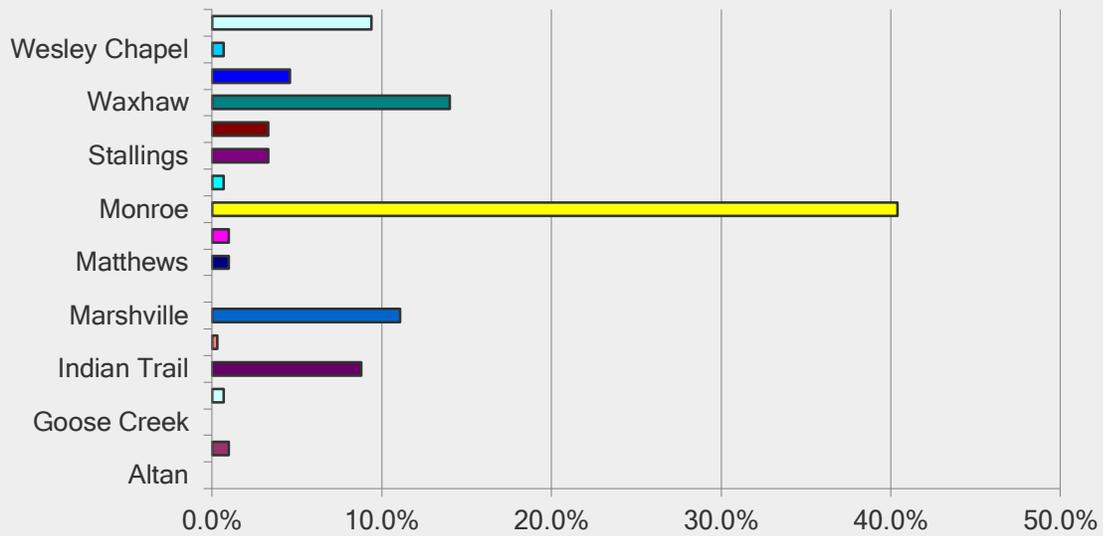
Senior Black Females by Town in Union County



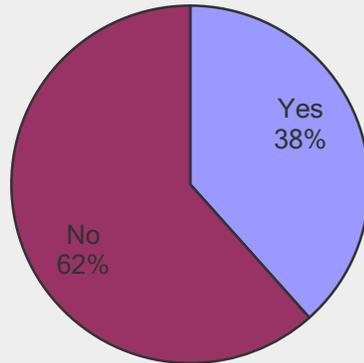
Senior Hispanic Females by Town in Union County



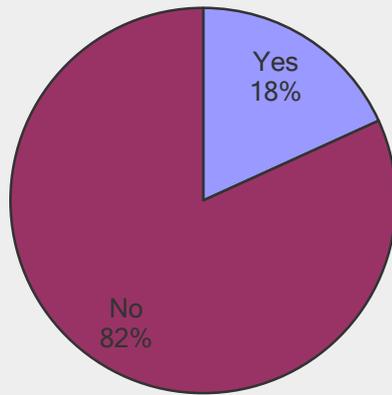
Senior White Females by Town in Union County



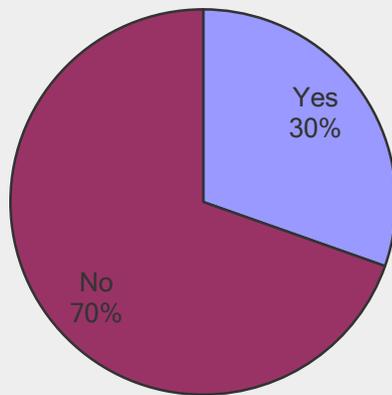
**Senior Black Females Living Alone**



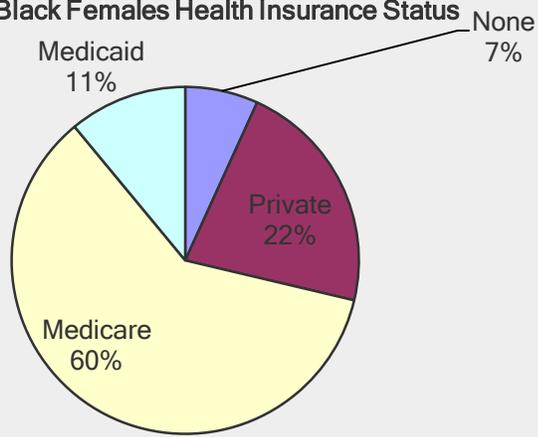
**Senior Female Hispanics Living Alone**



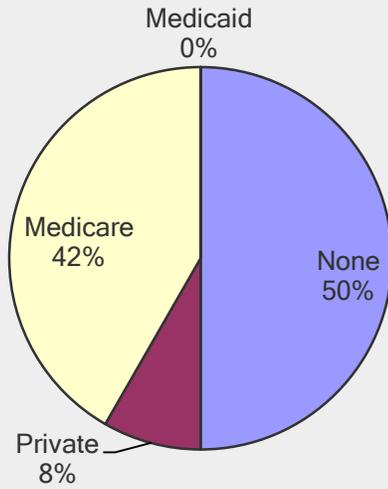
**Senior White Females Living Alone**



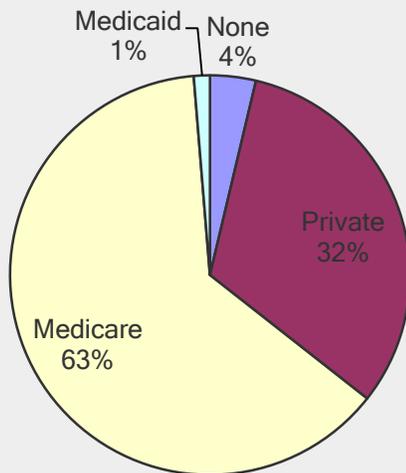
### Senior Black Females Health Insurance Status



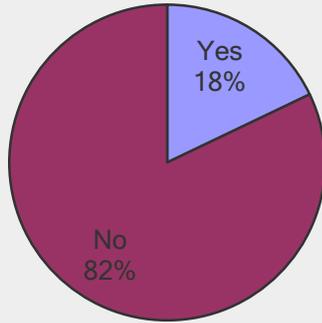
### Senior Female Hispanics Health Insurance Status



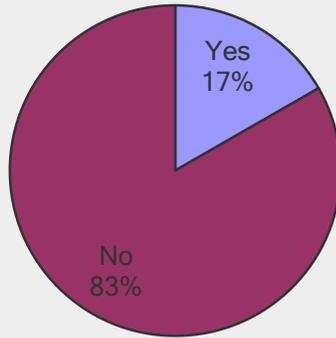
### Senior White Females Health Insurance Status



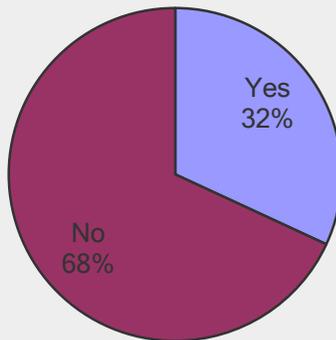
### Senior Black Females Employment Status



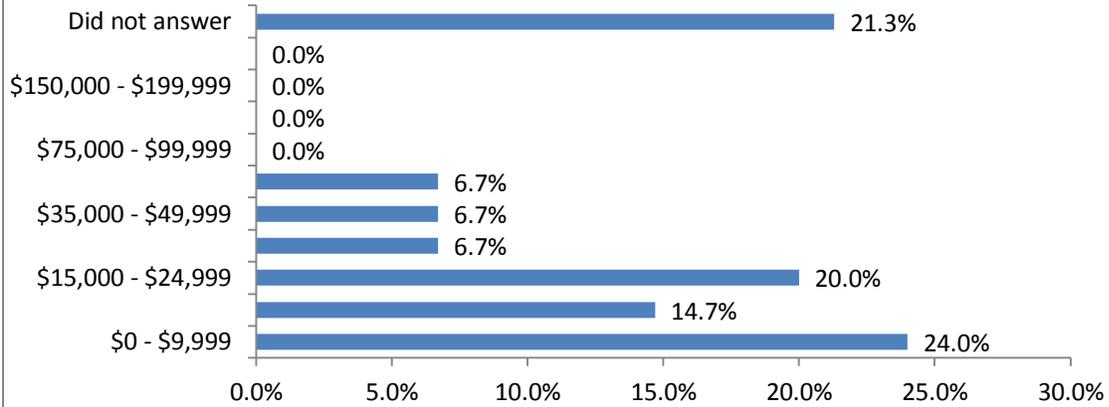
### Senior Female Hispanics Employment Status



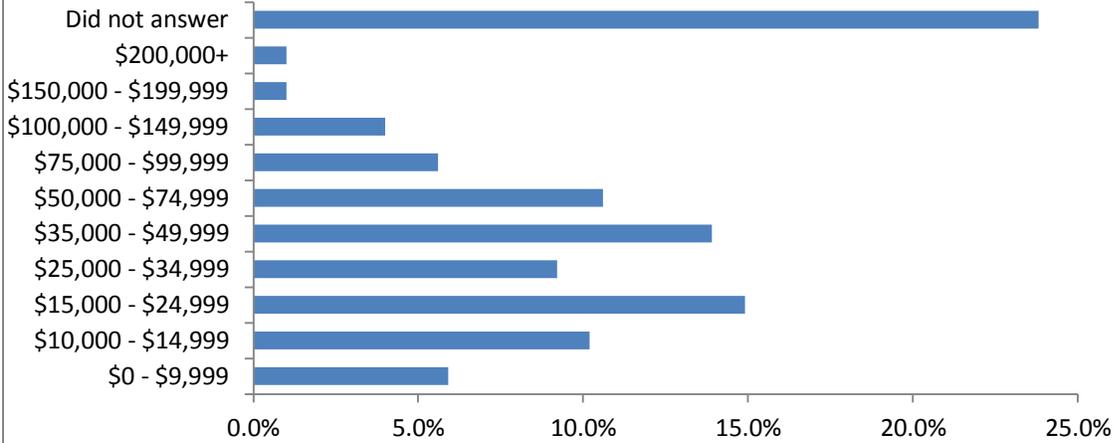
### Senior White Females Employment Status



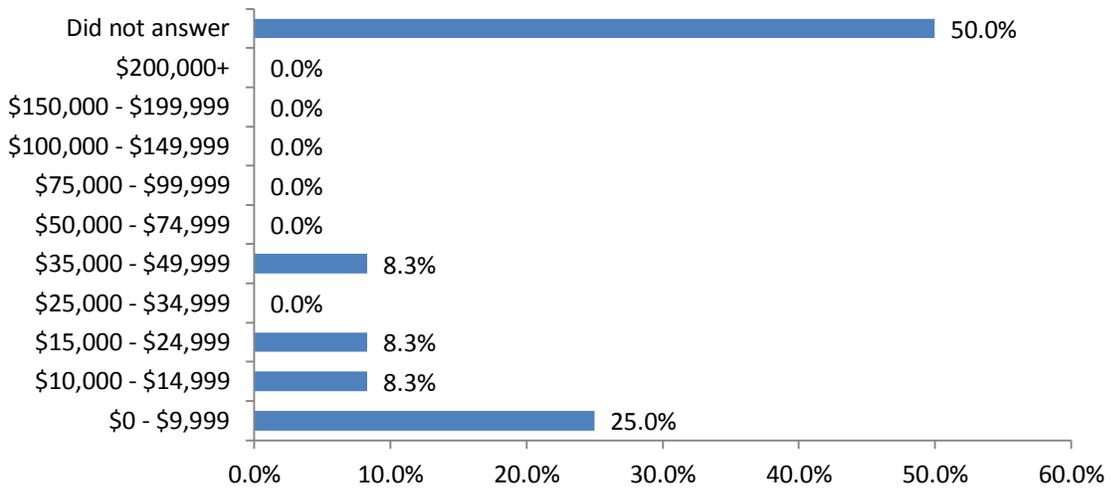
### Senior Black Females Annual Household Income



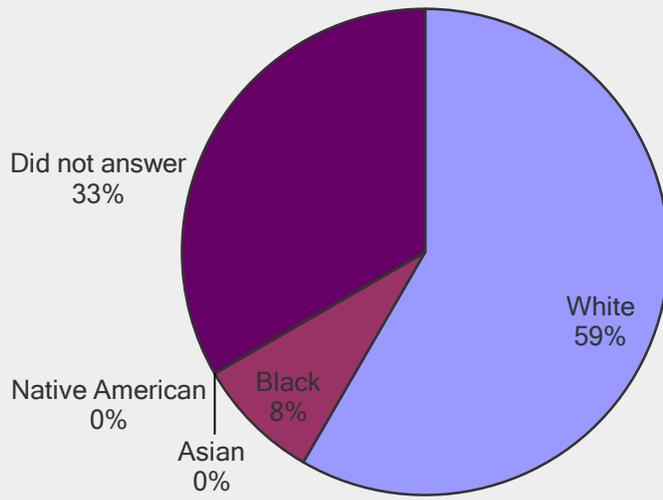
### Senior White Females Annual Household Income

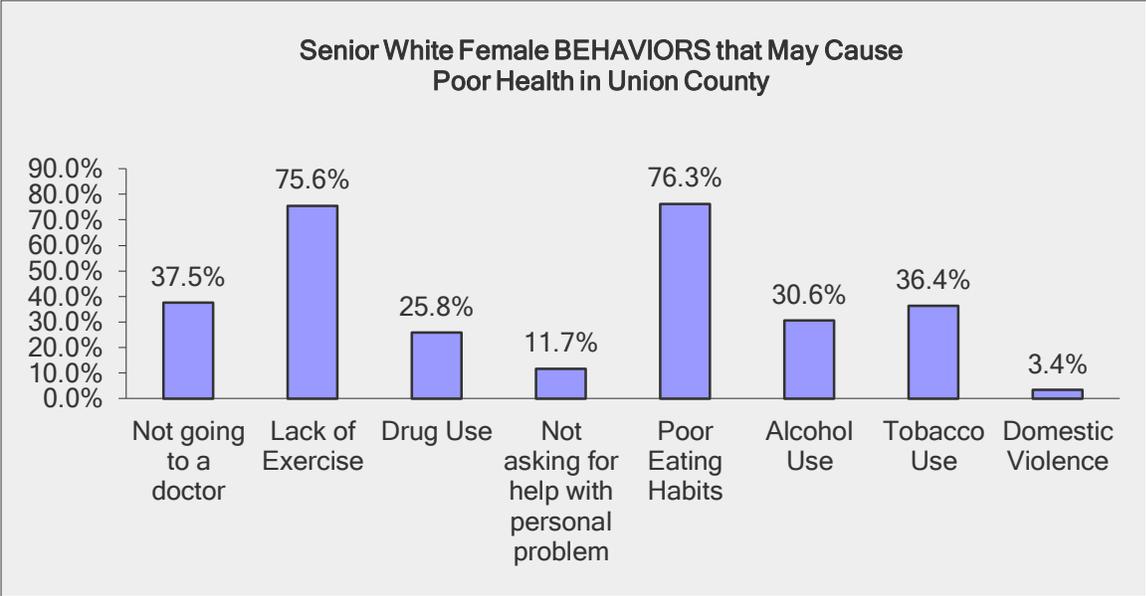
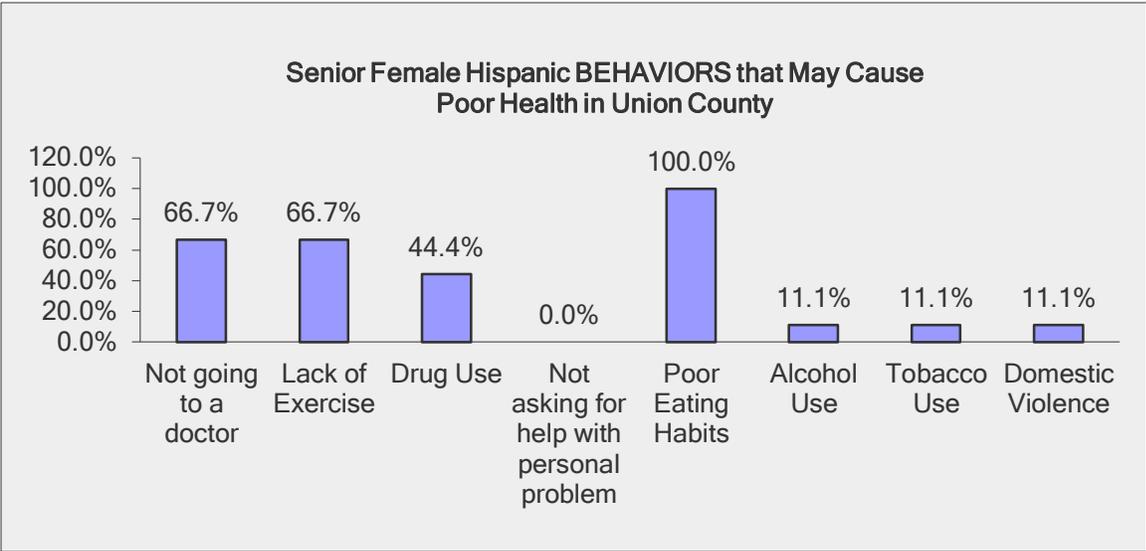
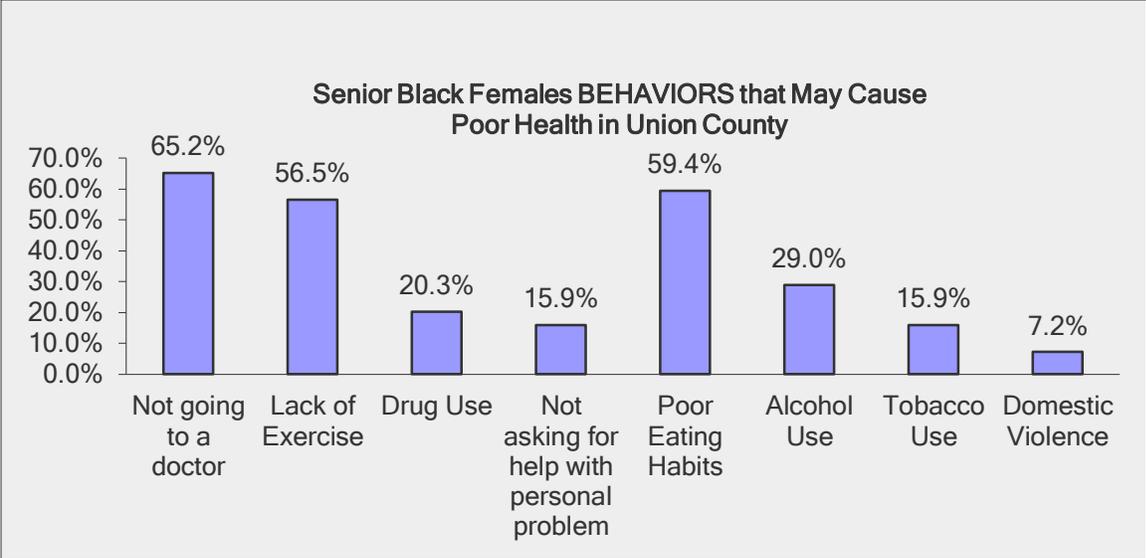


### Senior Female Hispanic Annual Household Income

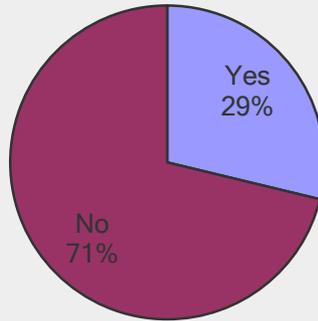


Senior Females by Race

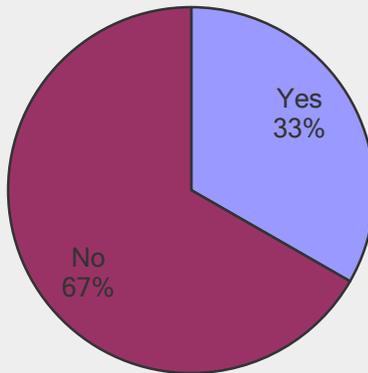




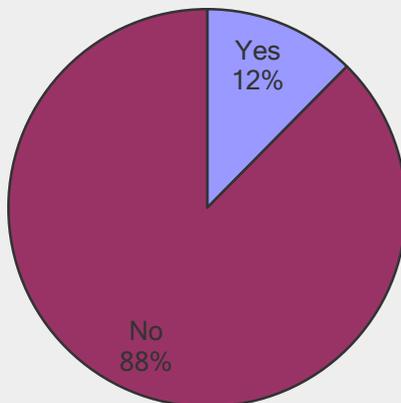
**Senior Black Females Needing to See a Doctor  
in the Past 12 Months But Did Not**



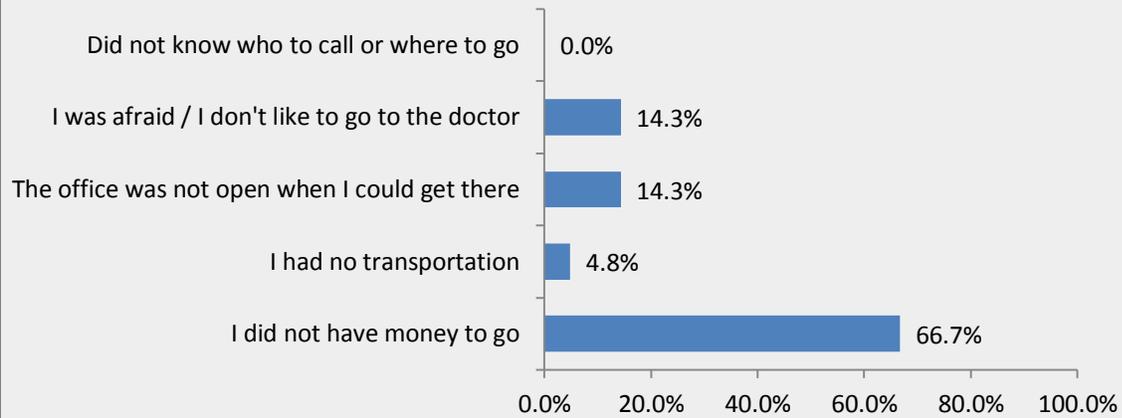
**Senior Female Hispanics Needing to See a Doctor  
in the Past 12 Months But Did Not**



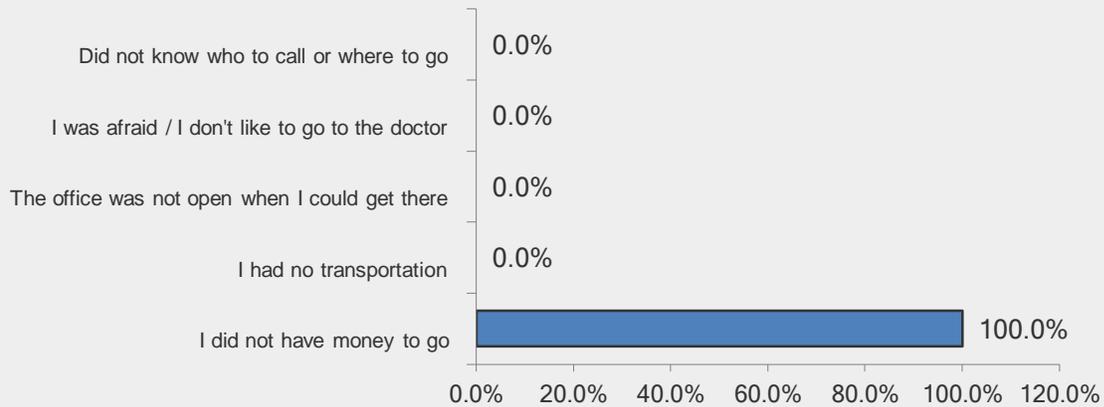
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in the Past 12 Months But Did Not**



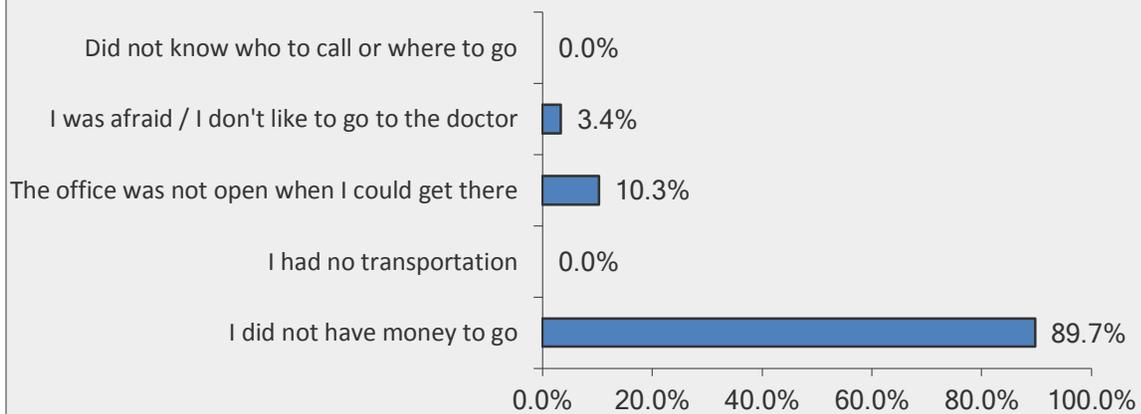
### Senior Black Females Reasons for Not Seeing a Doctor



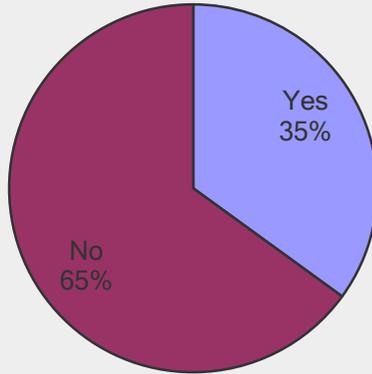
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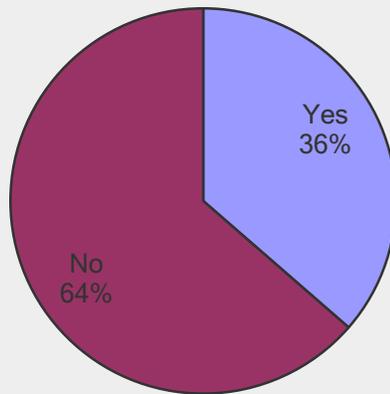
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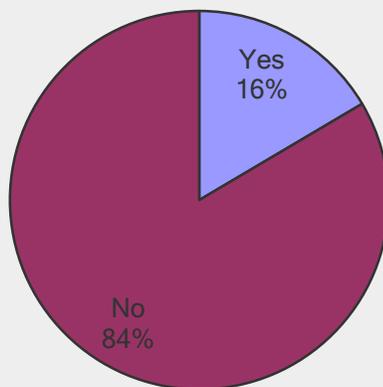
**Senior Black Females that Needed to See a Dentist But Did Not**



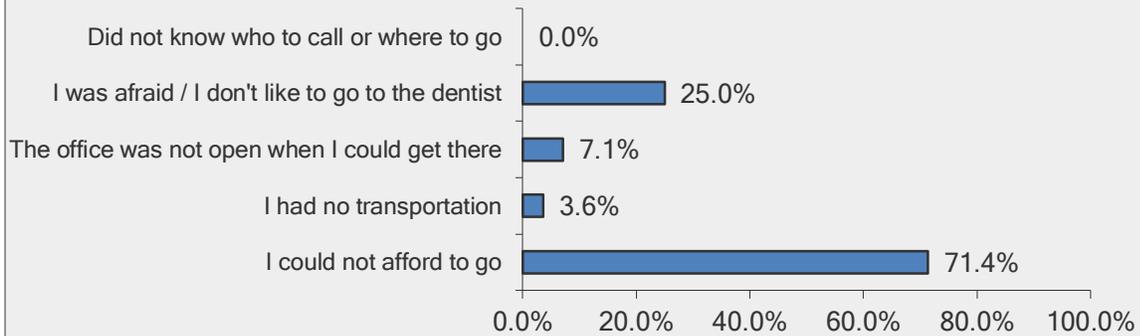
**Senior Female Hispanics that Needed to See a Dentist But Did Not**



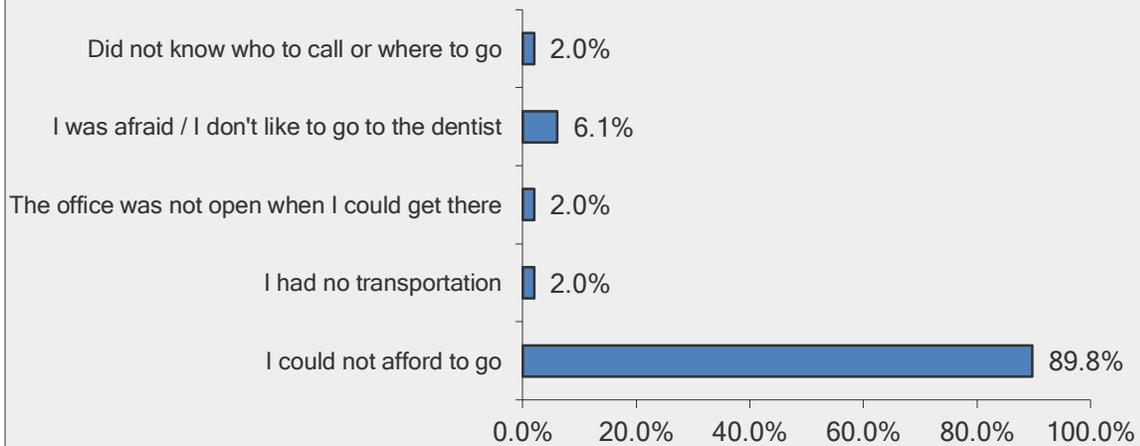
**Senior White Females that Needed to See a Dentist But Did Not**



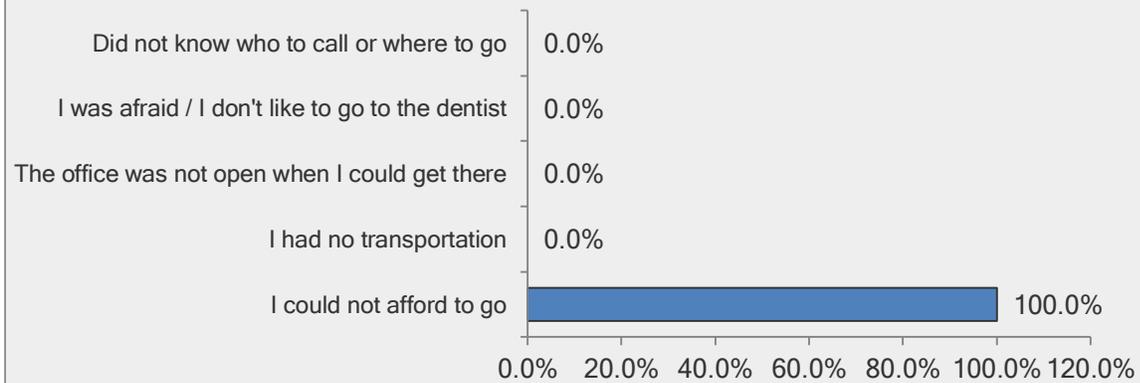
### Senior Black Female Reasons for Not Seeing a Dentist



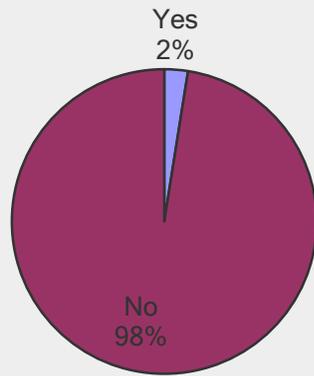
### Senior White Female Reasons for Not Seeing a Dentist



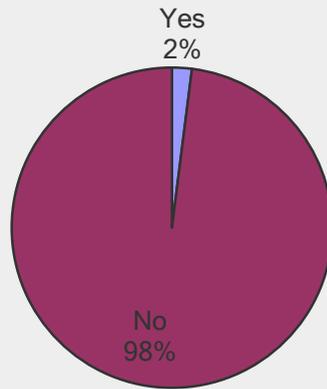
### Senior Hispanic Female Reasons For Not Seeing a Dentist



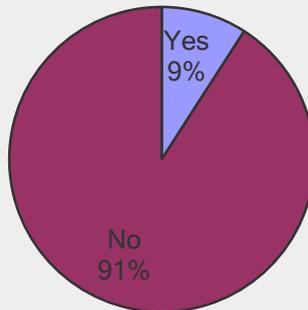
**Senior Black Females Used Hospital ER for a Dental Health Problem**



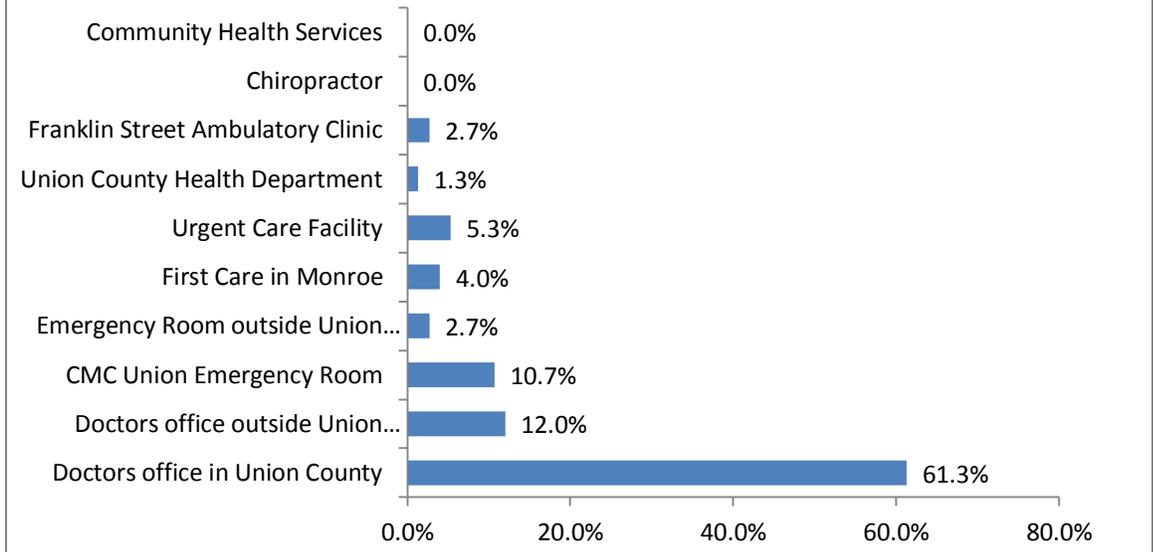
**Senior White Females Used Hospital ER for a Dental Health Problem**



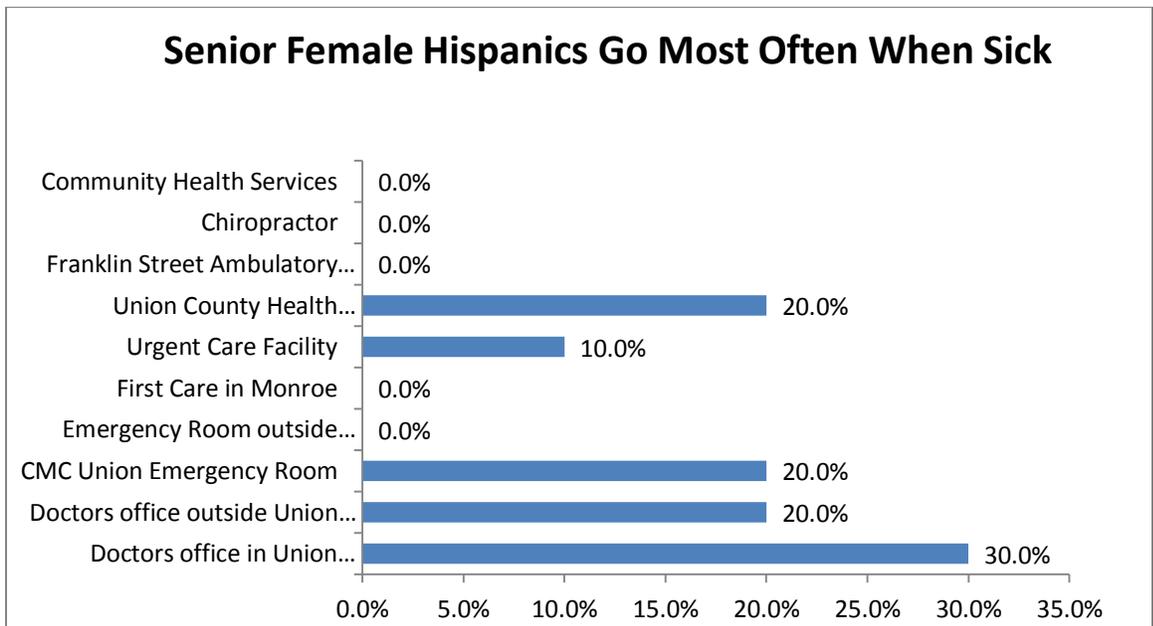
**Senior Female Hispanics Used Hospital ER for a Dental Health Problem**



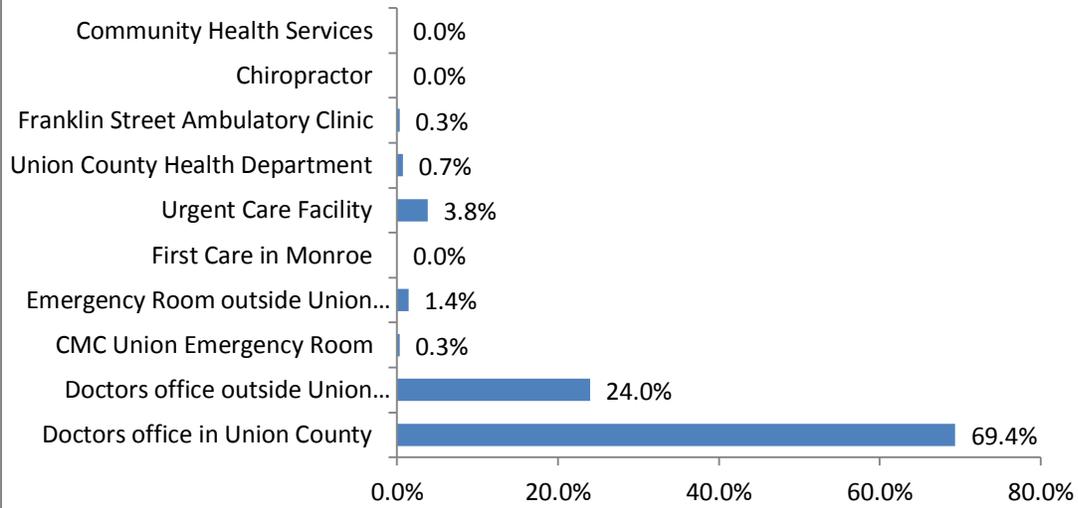
### Senior Black Females Go Most Often When Sick



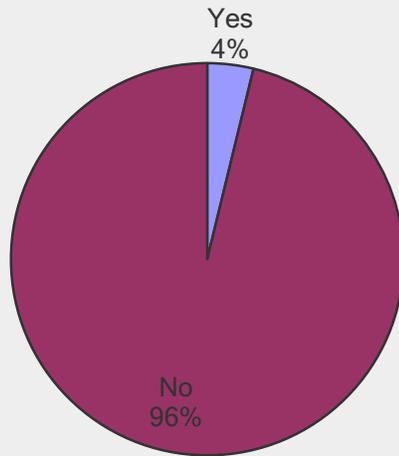
### Senior Female Hispanics Go Most Often When Sick



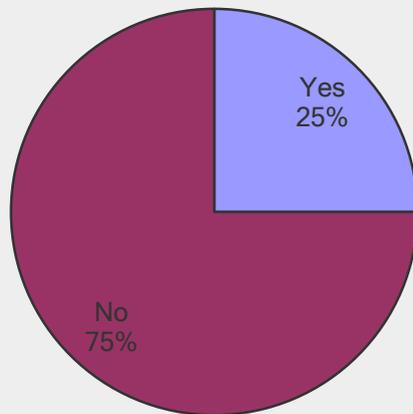
## Senior White Females Go Most Often When Sick



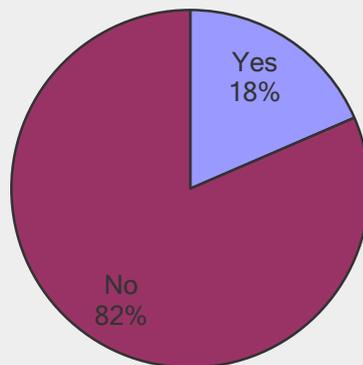
**Senior Black Females Used a Minute Clinic Within Past 12 Months**



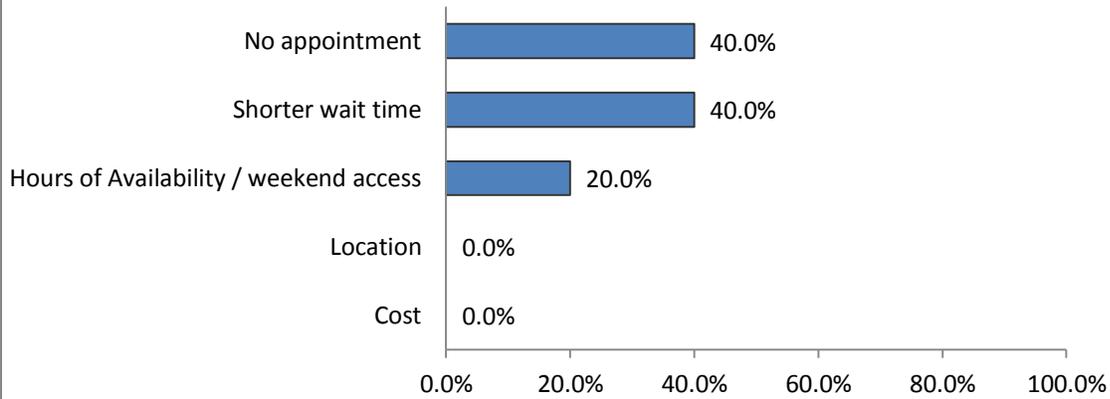
**Senior Female Hispanics Used a Minute Clinic Within Past 12 Months**



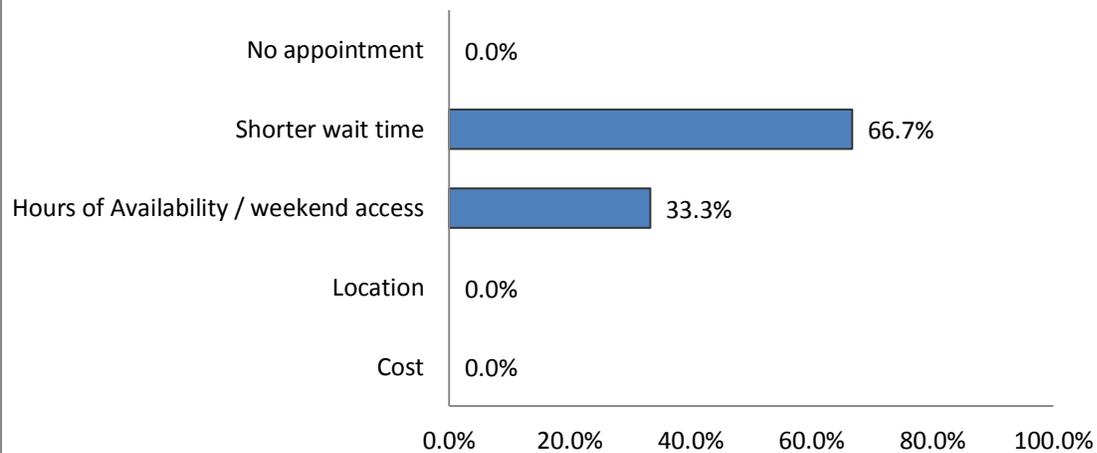
**Senior White Females Used a Minute Clinic Within Past 12 Months**



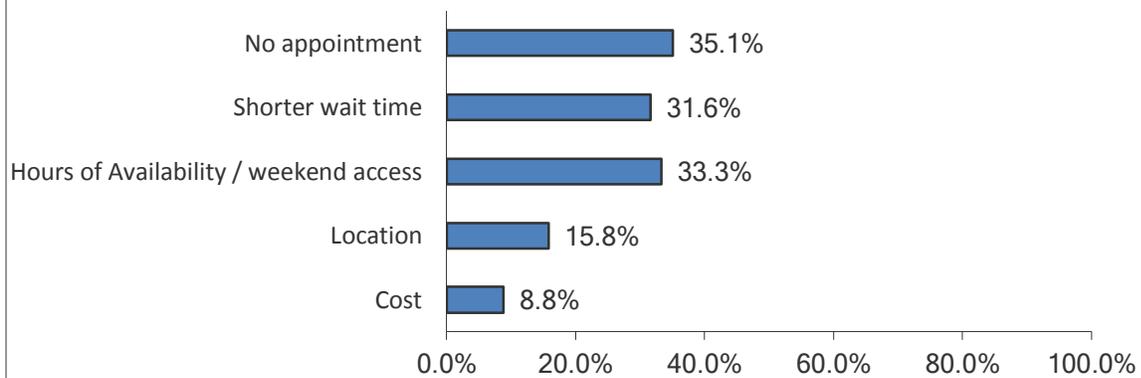
### Senior Black Females Reasons for Using Minute Clinic Medical Services



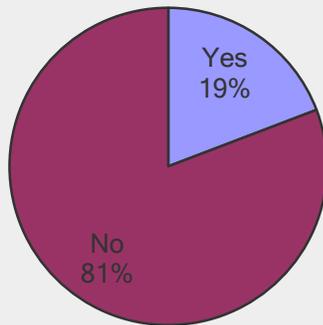
### Senior Female Hispanics Reasons for Using Minute Clinic Medical Services



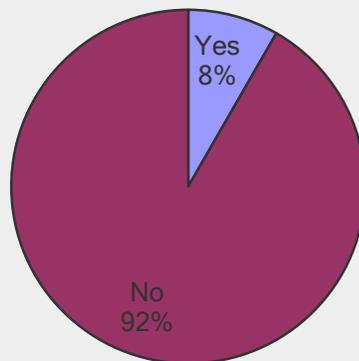
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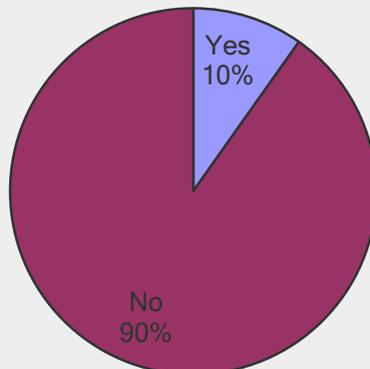
**Senior Black Females that Needed Prescription Medicine and Did Not Get It**



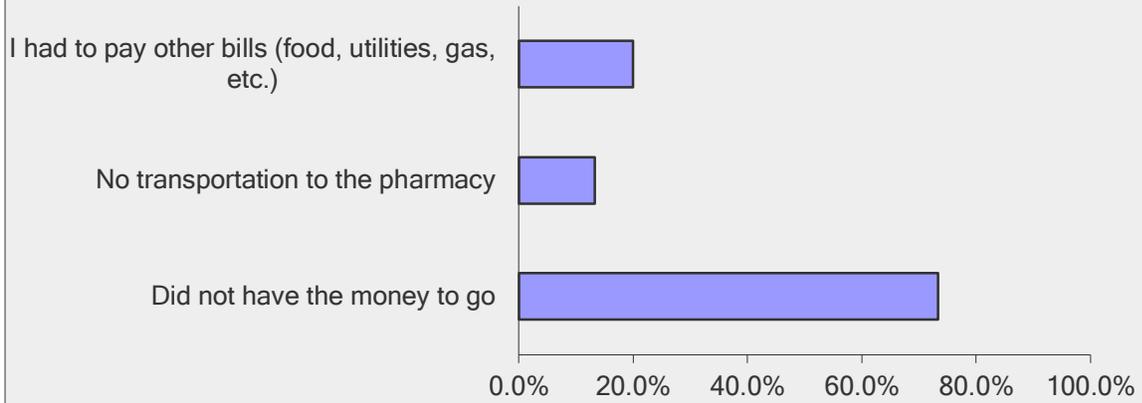
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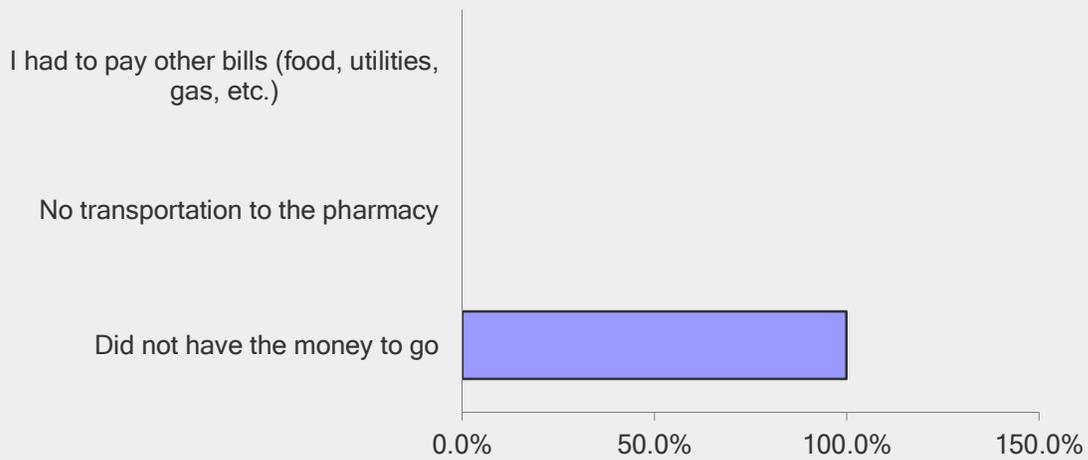
**Senior White Females that Needed Prescription Medicine and Did Not Get It**



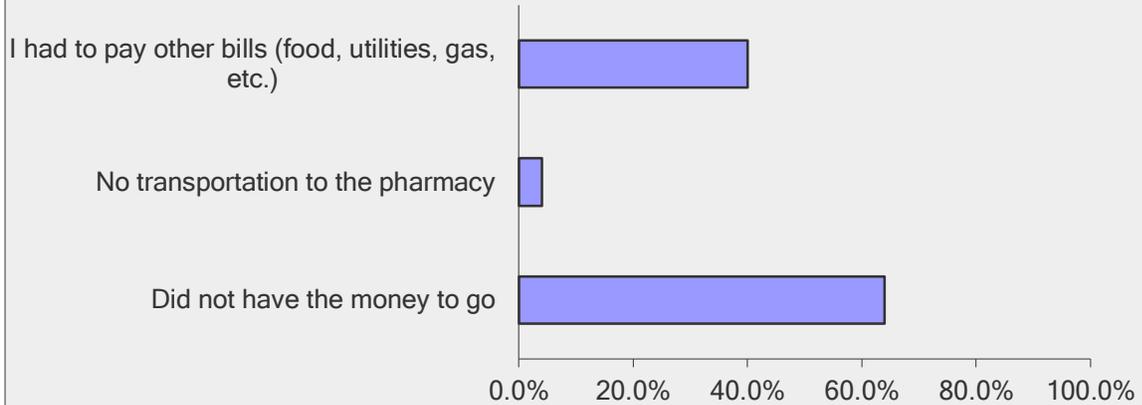
### Senior Black Females Reasons for Not Getting Medicine



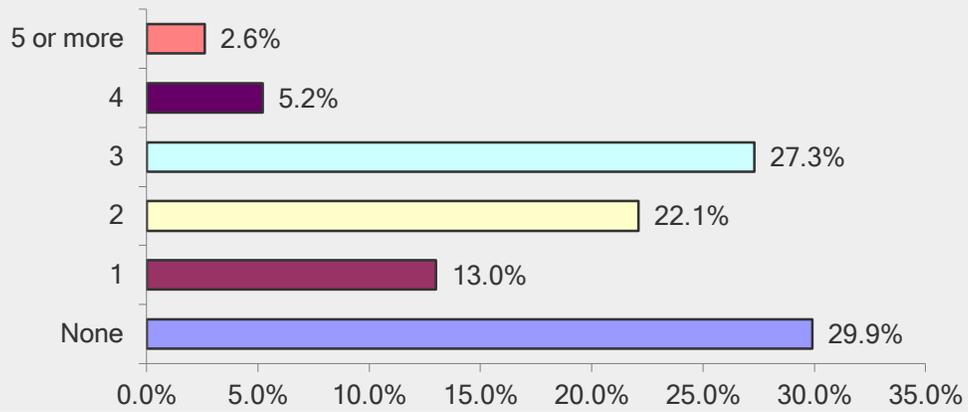
### Senior Female Hispanics Reasons for Not Getting Medicine



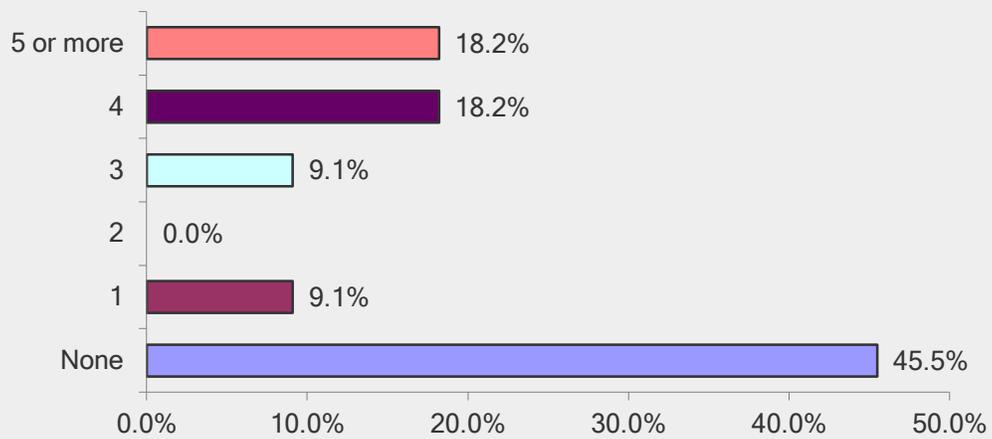
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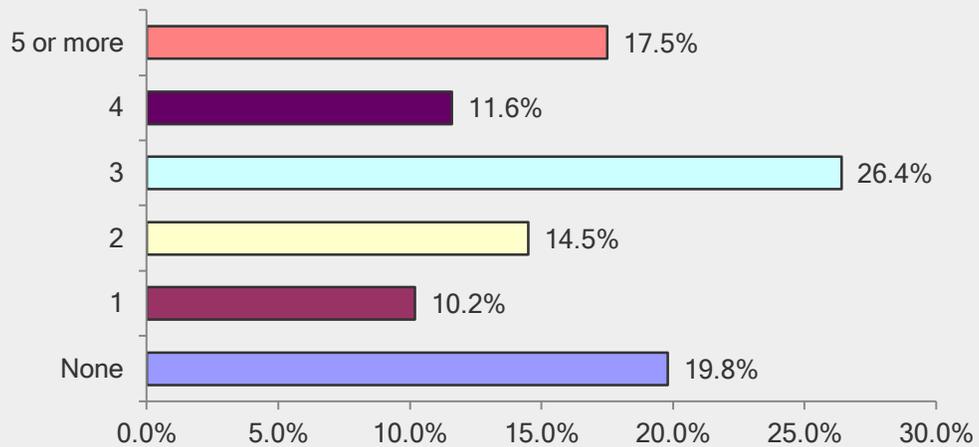
### Senior Black Females 30 Minutes of Exercise Weekly



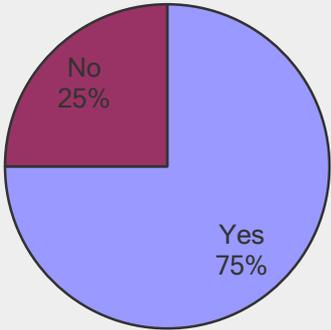
### Senior Female Hispanics 30 Minutes of Exercise Weekly



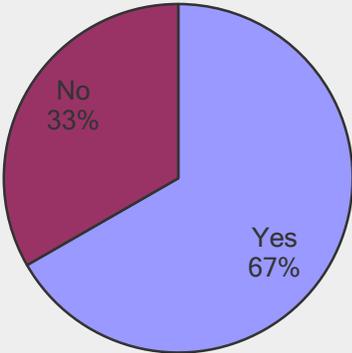
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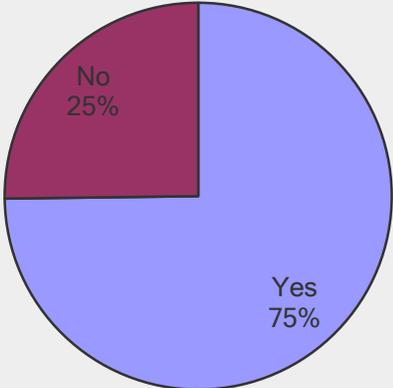
**Senior Black Females**  
**Enough Opportunities for Physical Activity Near Home**



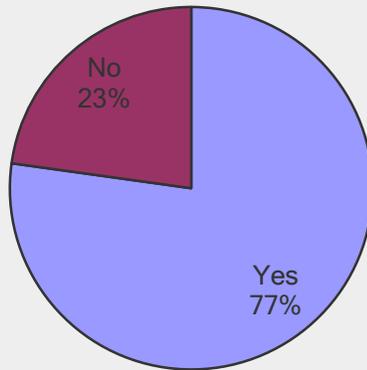
**Senior Female Hispanics**  
**Enough Opportunities for Physical Activity Near Home**



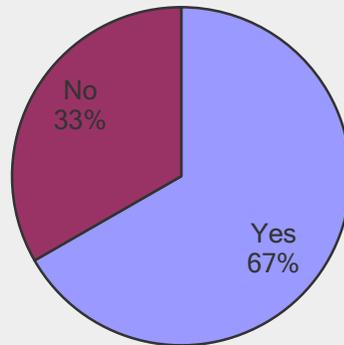
**Senior White Females**  
**Enough Opportunities for Physical Activity Near Home**



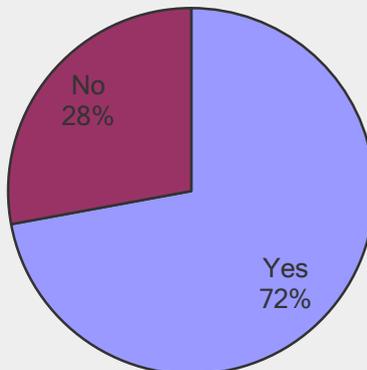
**Senior Black Female Purchased  
Fruits and Vegetables From a Farmers Market in Union County**



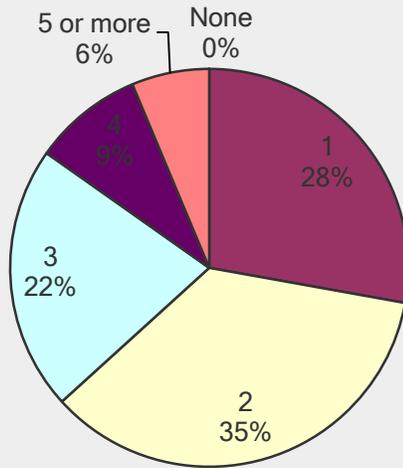
**Senior Female Hispanics Purchased  
Fruits and Vegetables From a Farmers Market in Union County?**



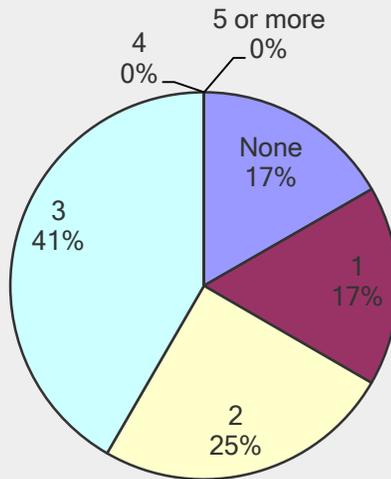
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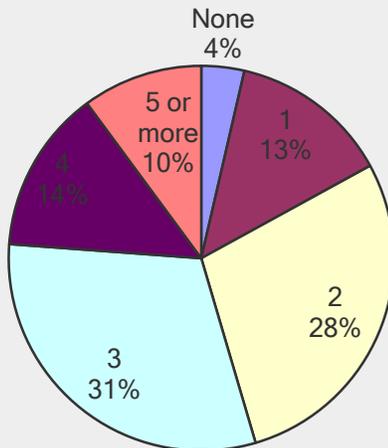
### Senior Black Females Daily Servings of Fruits and Vegetables



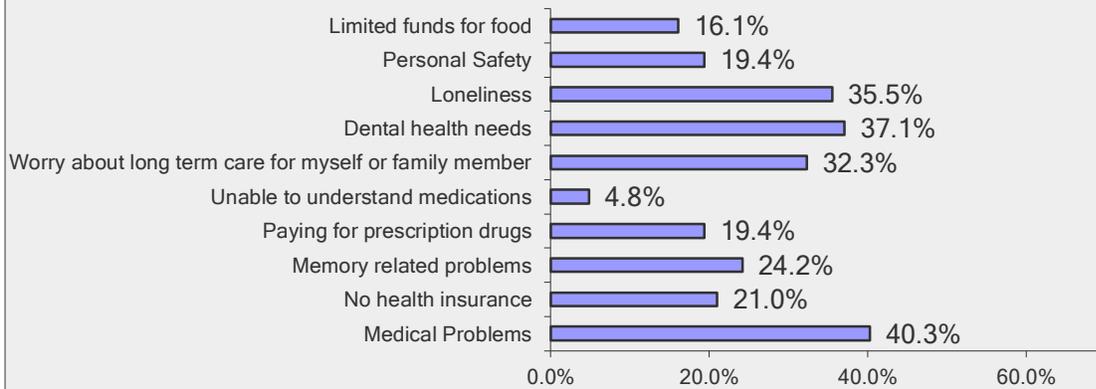
### Senior Female Hispanics Daily Servings of Fruits and Vegetables



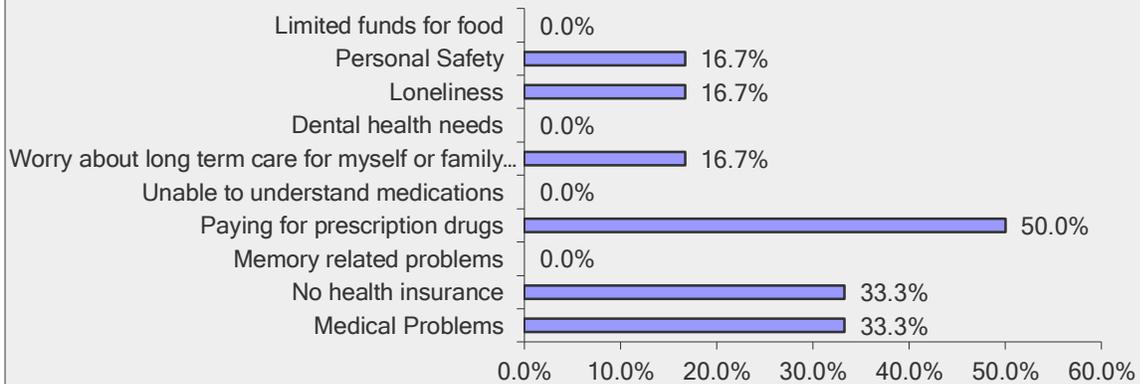
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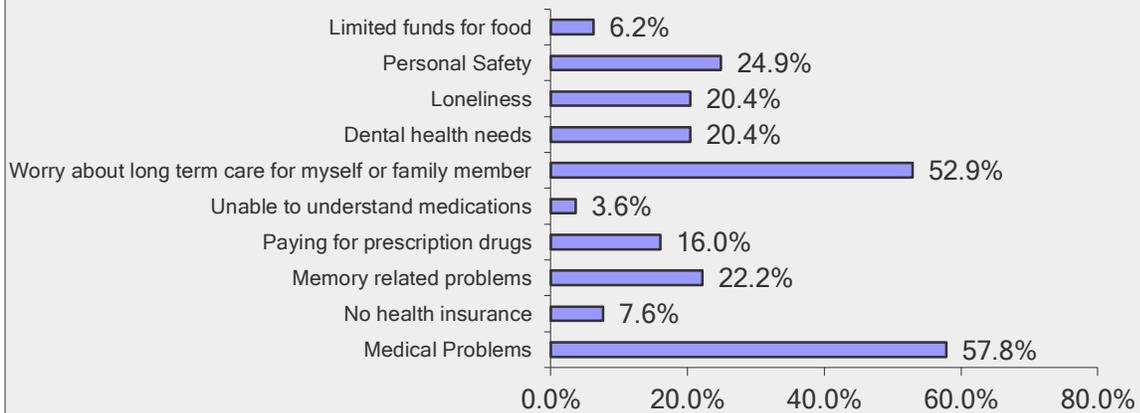
### Senior Black Females Reasons for Stress



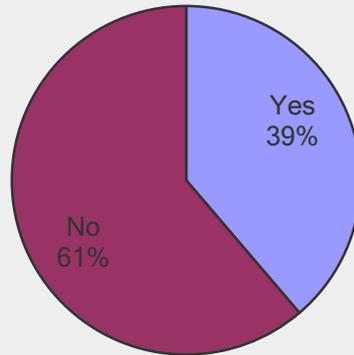
### Senior Female Hispanics Reasons for Stress



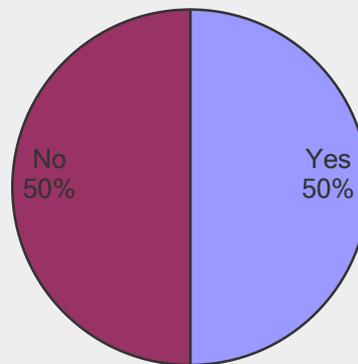
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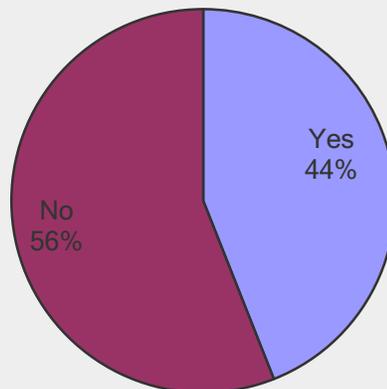
**Senior Black Females**  
**Have an Emergency Plan for Themselves and Family**



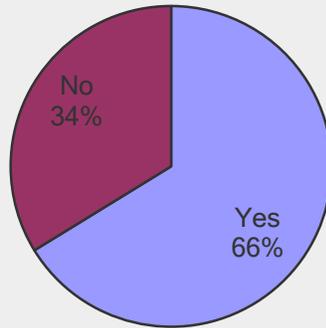
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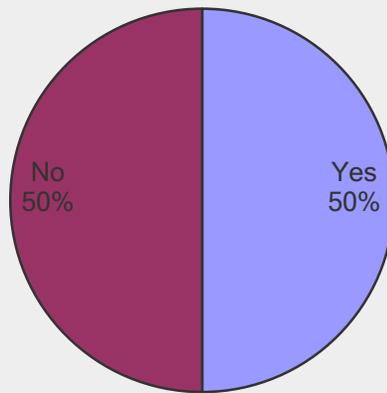
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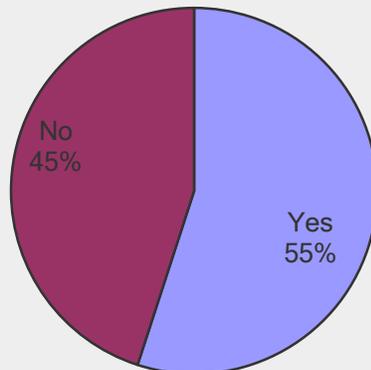
**Senior Black Females Have Emergency Supply of Water and Non-Perishable Food**



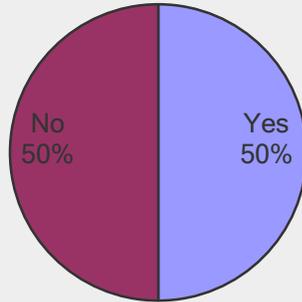
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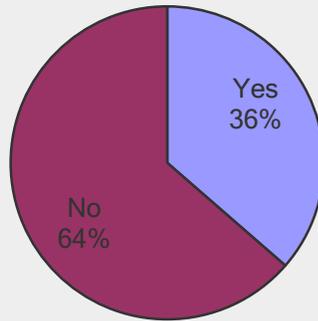
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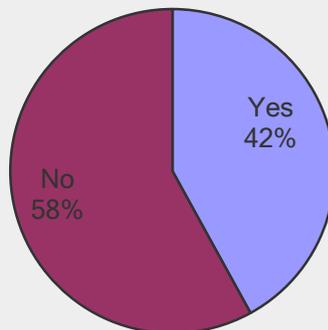
**Senior Black Females  
Have Emergency Supply of Prescription Medications**



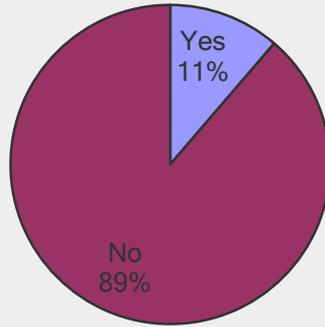
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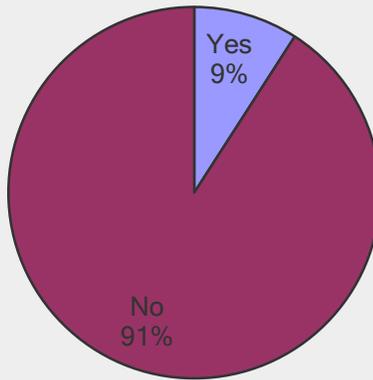
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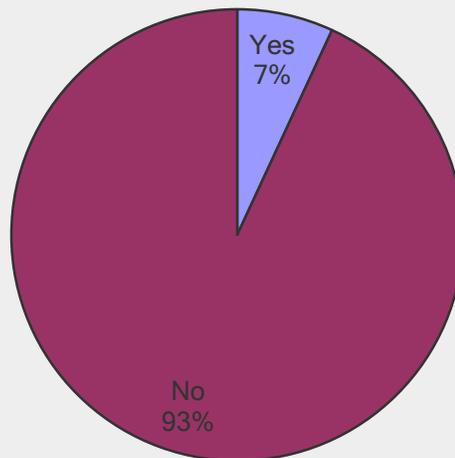
**Senior Black Females Receive Help Taking or Managing Medications**



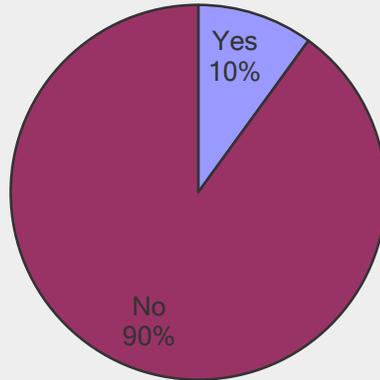
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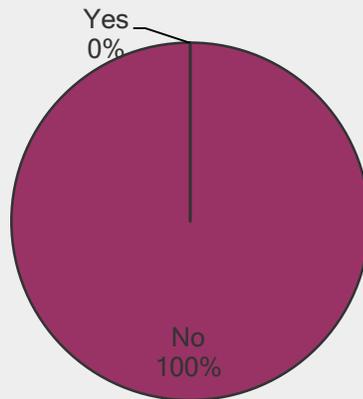
**Senior White Females Receive Help Taking or Managing Medications**



**Senior Black Females Receiving Home Health Services**



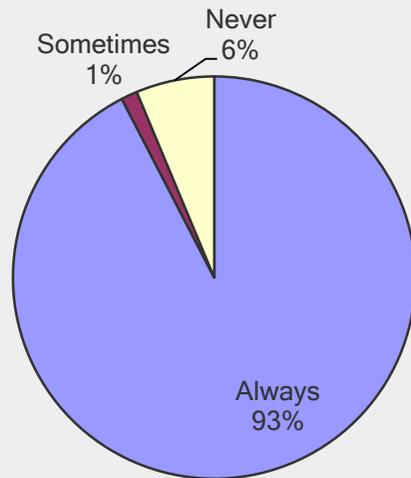
**Senior Female Hispanics Receiving Home Health Services**



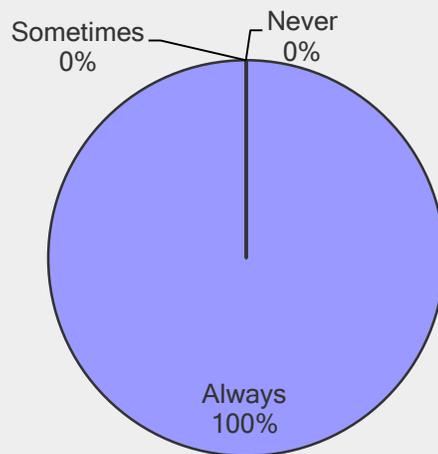
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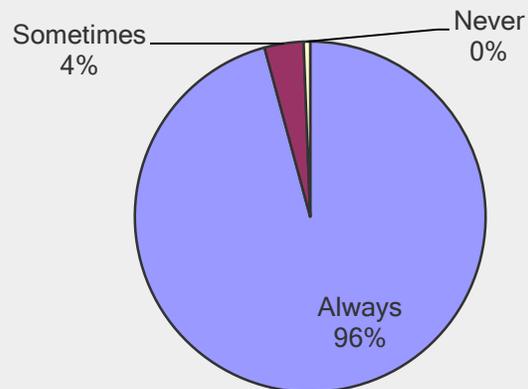
### Senior Black Females Seat Belt Use



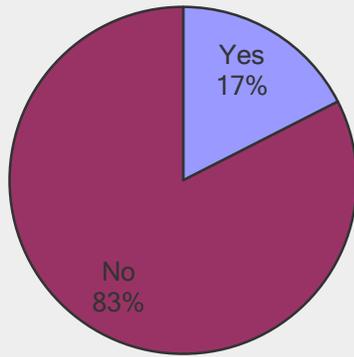
### Senior Female Hispanics Seat Belt Use



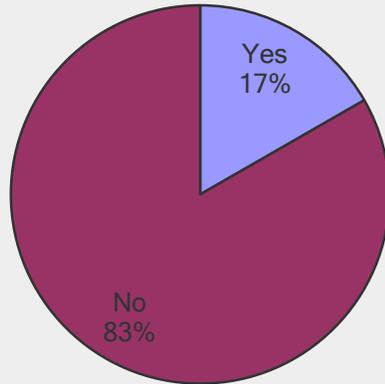
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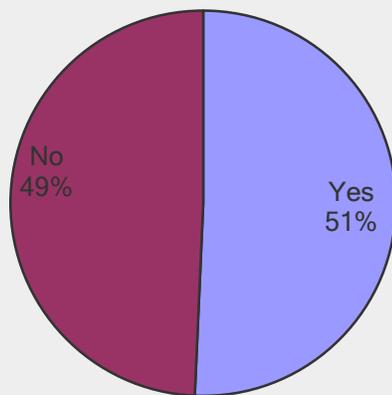
**Senior Black Females with Guns in the Home**



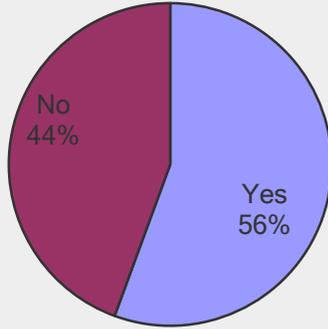
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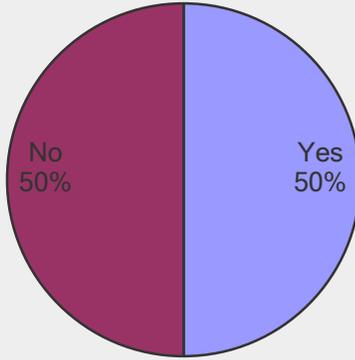
**Senior White Females with Guns in the Home**



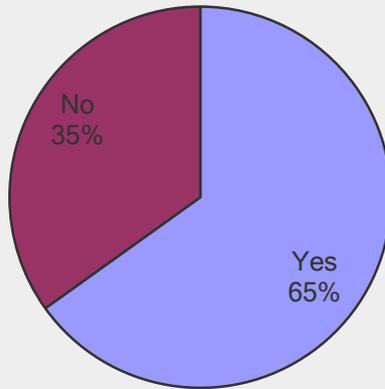
**Senior Black Females that Lock Up Guns and Ammunition**



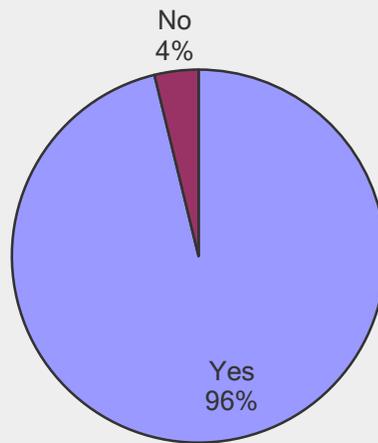
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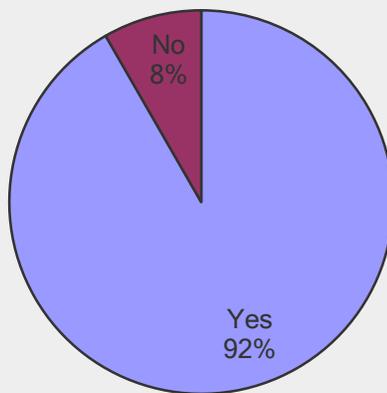
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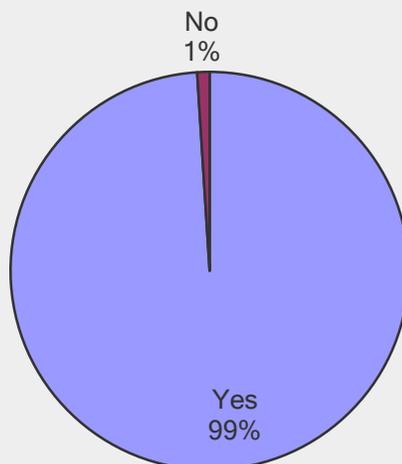
### Senior Black Females with Smoke Detector in Home



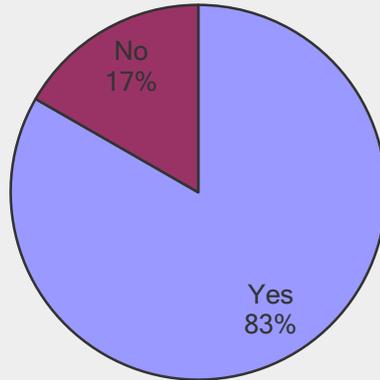
### Senior Female Hispanics with Smoke Detector in Home



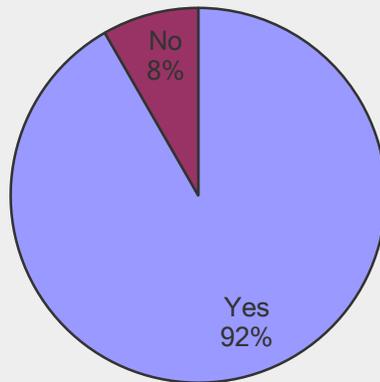
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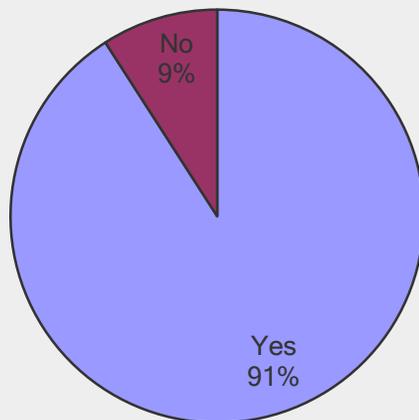
**Senior Black Females Check Smoke Detector Batteries Annually**



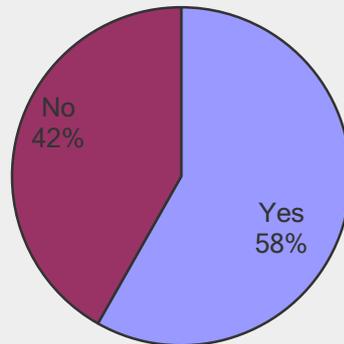
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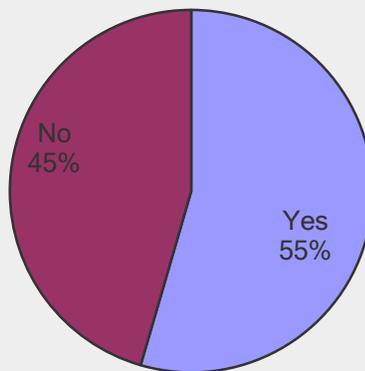
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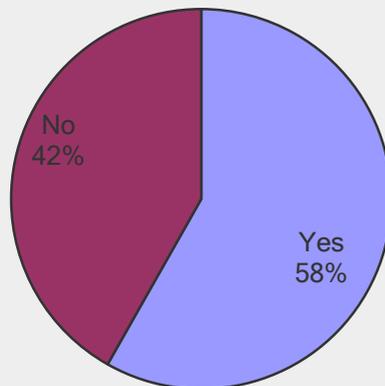
**Senior Black Females  
Have Carbon Monoxide Detector in Home**



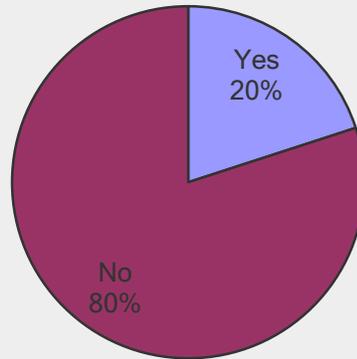
**Senior Female Hispanics  
Have Carbon Monoxide Detector in Home**



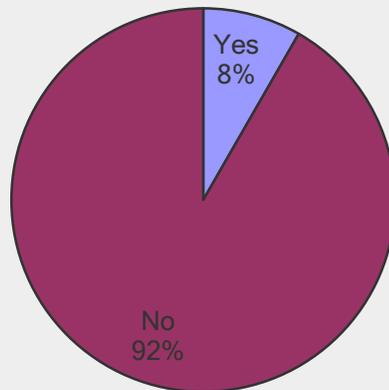
**Senior White Females  
Have Carbon Monoxide Detector in Home**



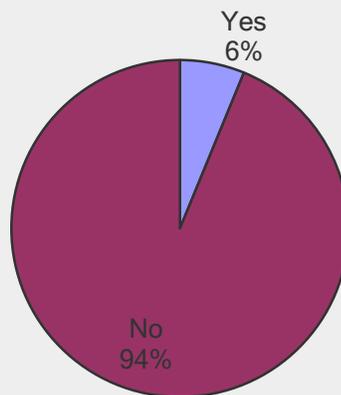
**Senior Black Females that Smoke or Use Smokeless Tobacco**



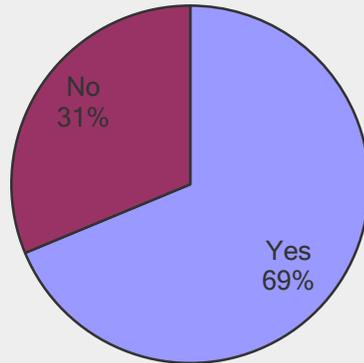
**Senior Female Hispanics that Smoke or Use Smokeless Tobacco**



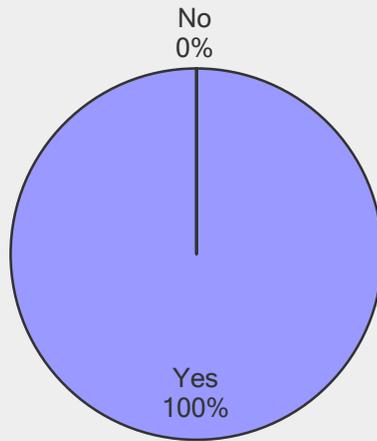
**Senior White Females that Smoke or Use Smokeless Tobacco**



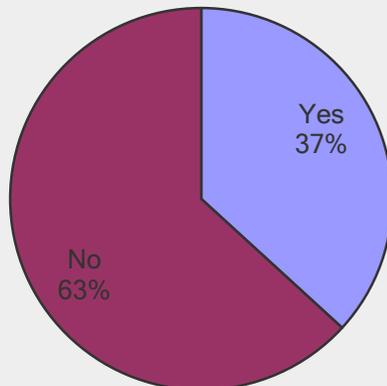
**Senior Black Females Want to Quit Tobacco Use**



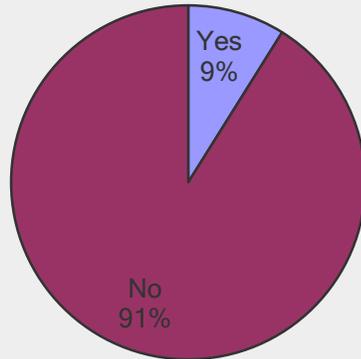
**Senior Female Hispanics Want to Quit Tobacco Use**



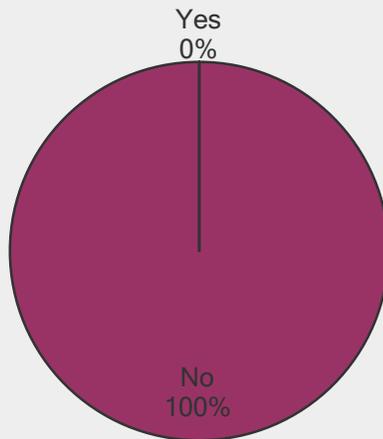
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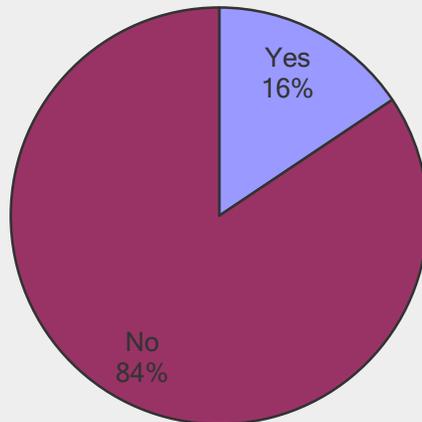
**Senior Black Females Drink Alcoholic Beverages**



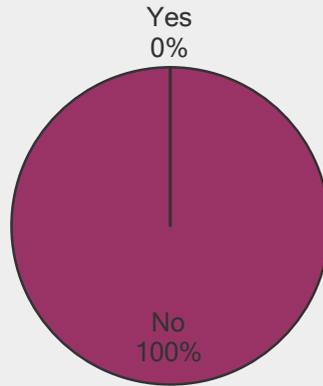
**Senior Female Hispanics Drink Alcoholic Beverages**



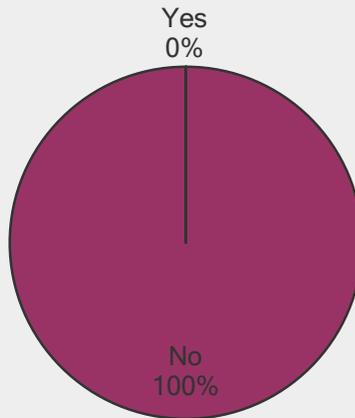
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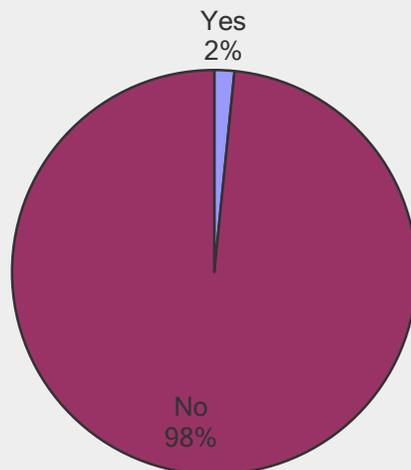
**Senior Black Females**  
**Do NOT Drive After Drinking Alcoholic Beverages**



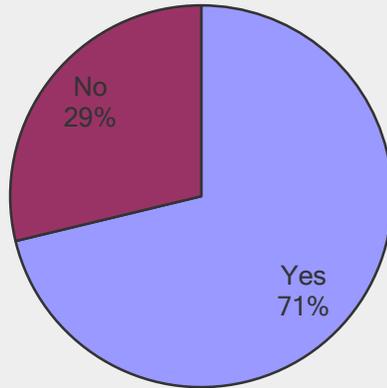
**Senior Female Hispanics**  
**Do NOT Drive After Drinking Alcoholic Beverages**



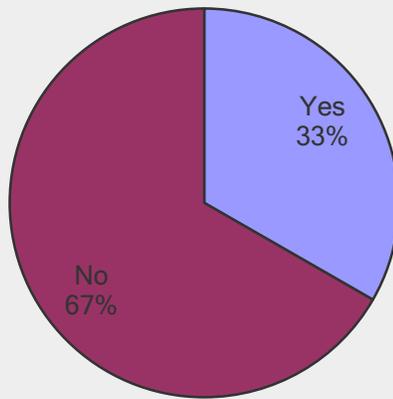
**Senior White Females**  
**Do NOT Drive After Drinking Alcoholic Beverages**



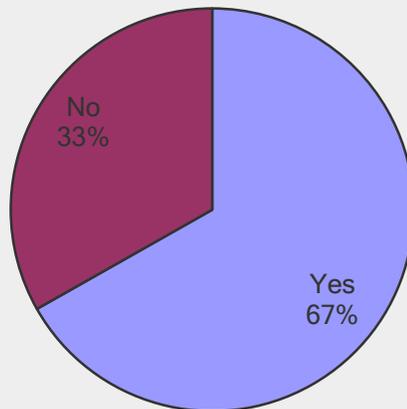
**Senior Black Females Know How to Access Mental Health Services**



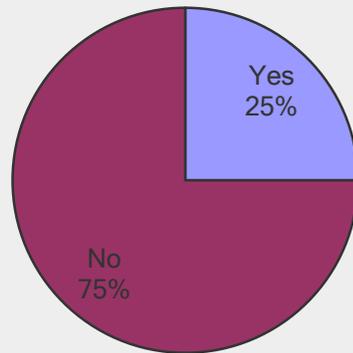
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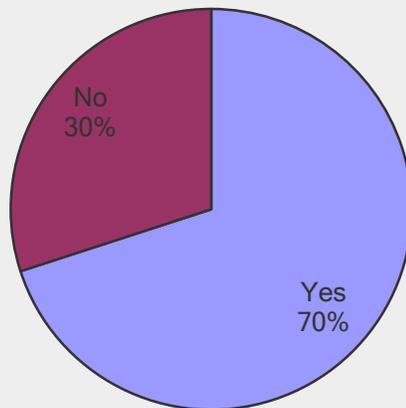
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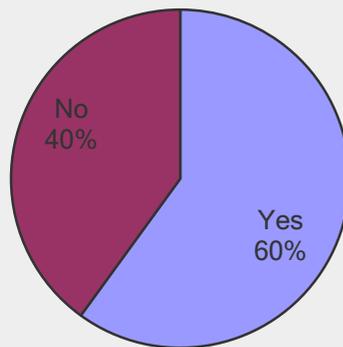
**Senior Female Hispanics Know How to Access Substance Abuse Services**



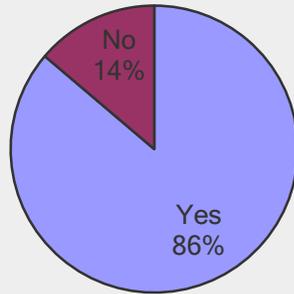
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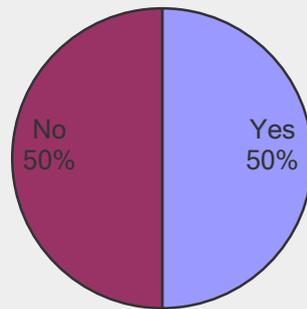
**Senior White Females Know How to Access Substance Abuse Services**



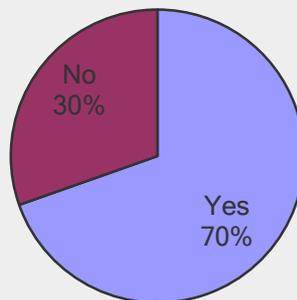
**Senior Black Females Know How to Access  
Department of Social Service Programs For Assistance**



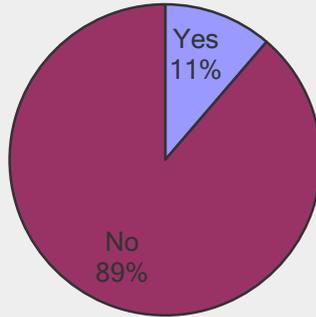
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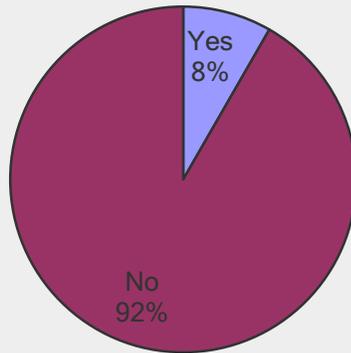
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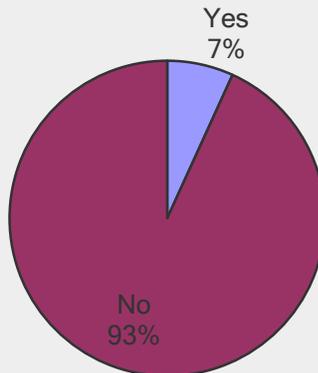
**Senior Black Females Caring for Elderly Parent or Family Member**



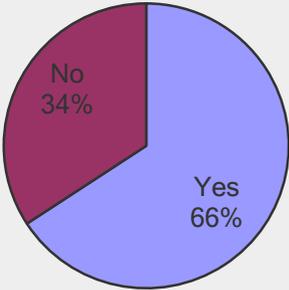
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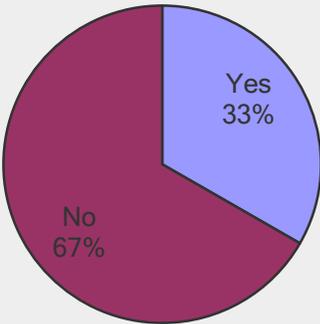
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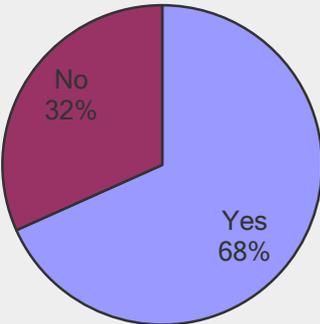
**Senior Black Females Know Who or Where to Call if Abused or Neglected**



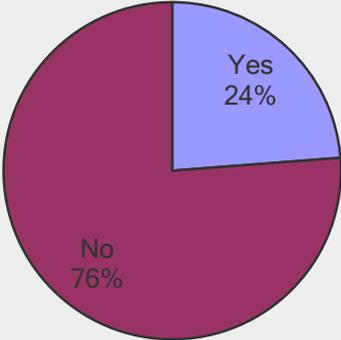
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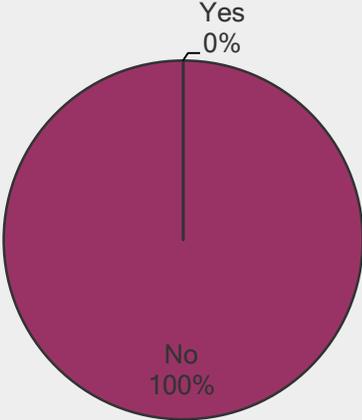
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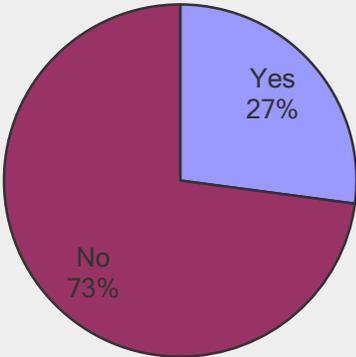
Senior Black Females that Talk on a Cell Phone While Driving



Senior Female Hispanics that Talk on a Cell Phone While Driving



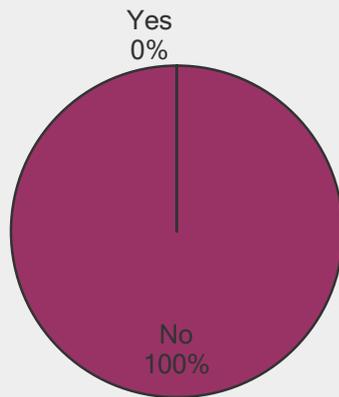
Senior White Females that Talk on a Cell Phone While Driving



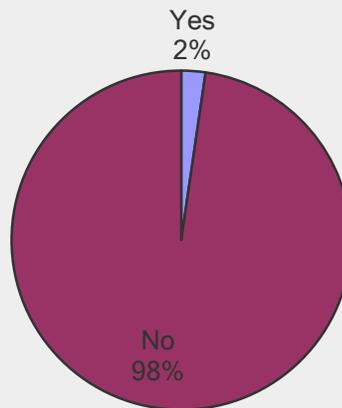
**Senior Black Females Texting While Driving or Riding With Someone Texting While Driving**



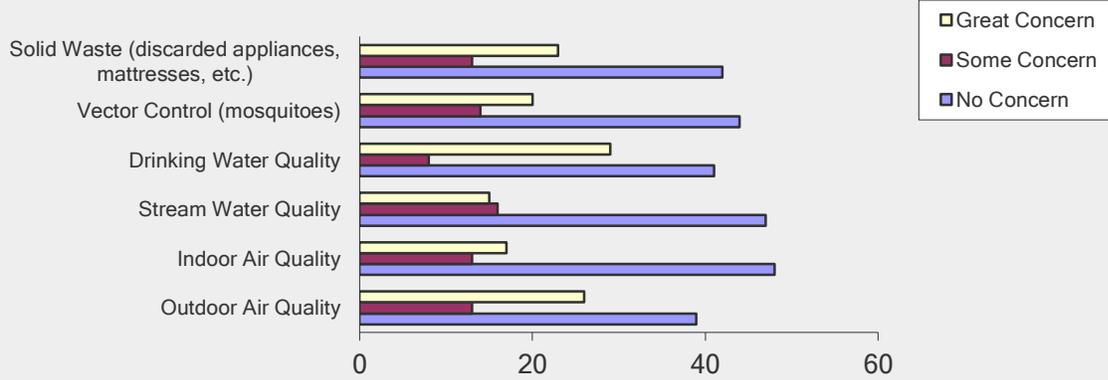
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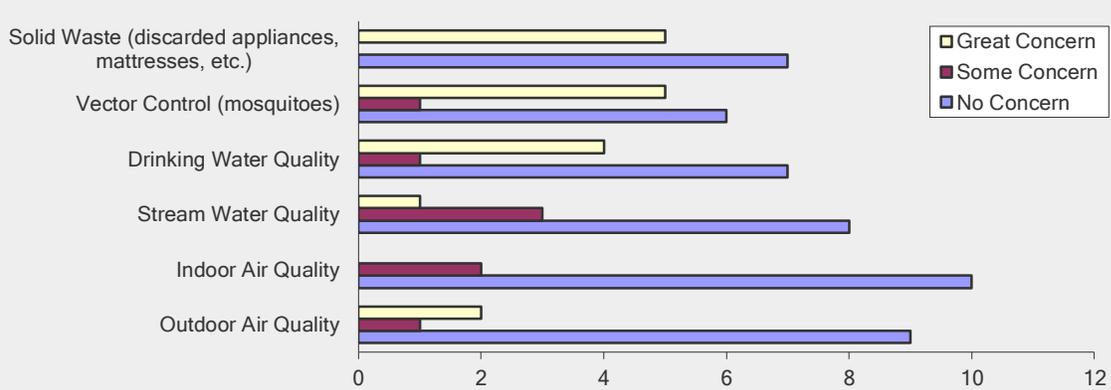
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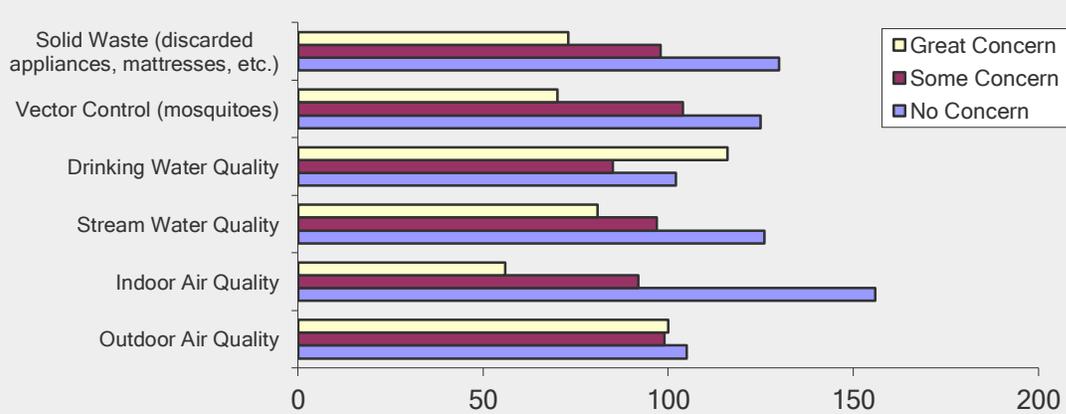
### Senior Black Females Environmental Health Concerns



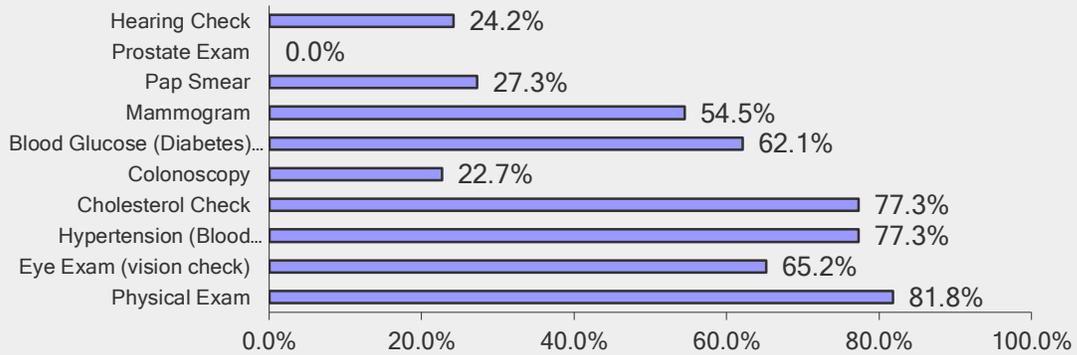
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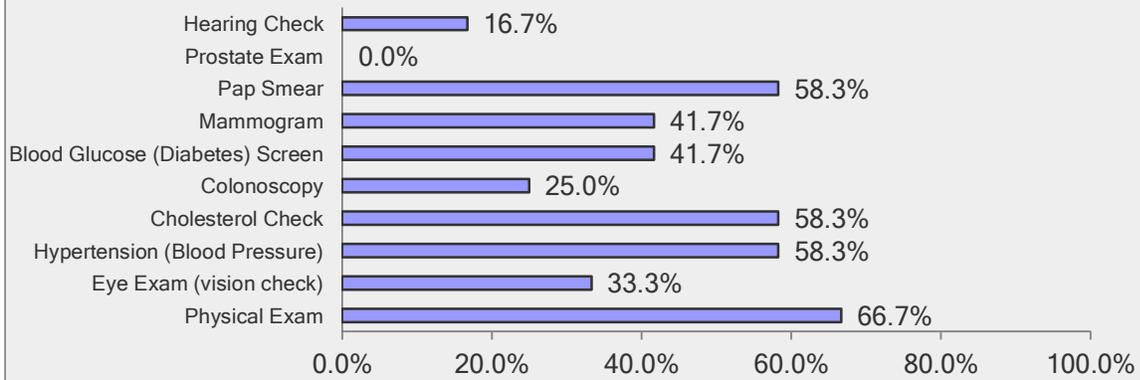
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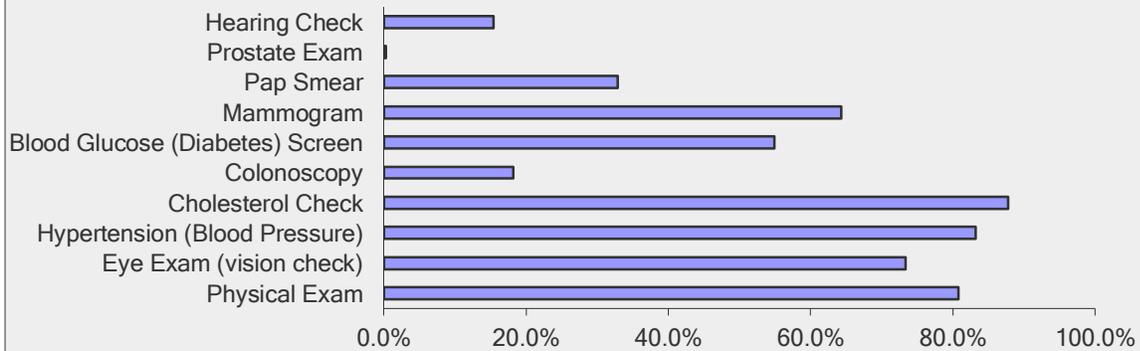
**Senior Black Females PREVENTATIVE SERVICES  
Received Within Past 12 Months.**



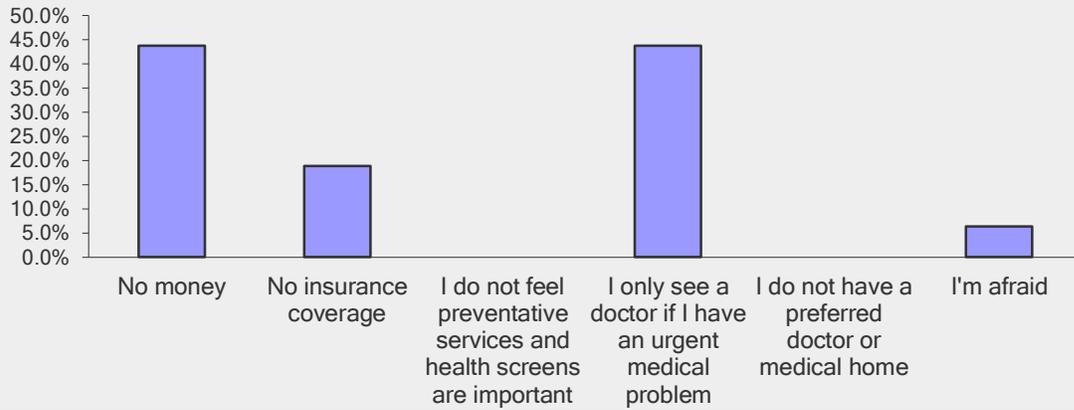
**Senior Female Hispanics PREVENTATIVE SERVICES  
Received Within Past 12 months.**



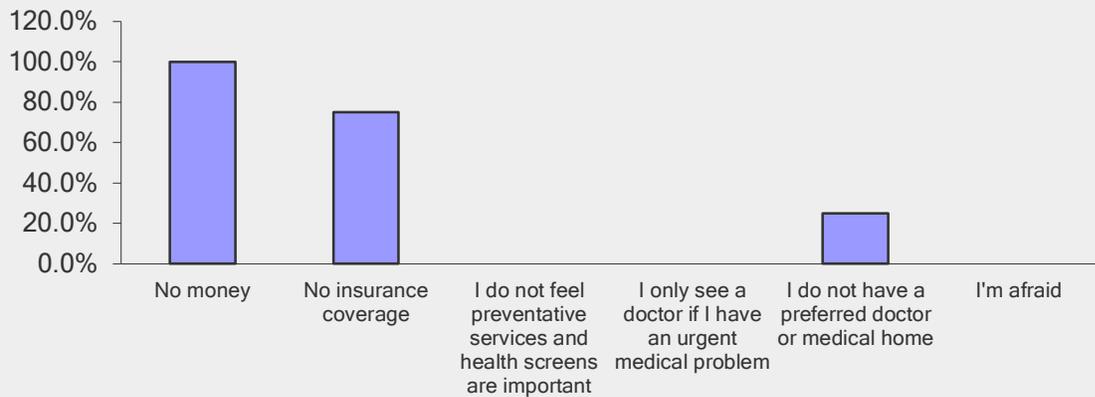
**Senior White Females PREVENTATIVE SERVICES  
Received Within Past 12 months.**



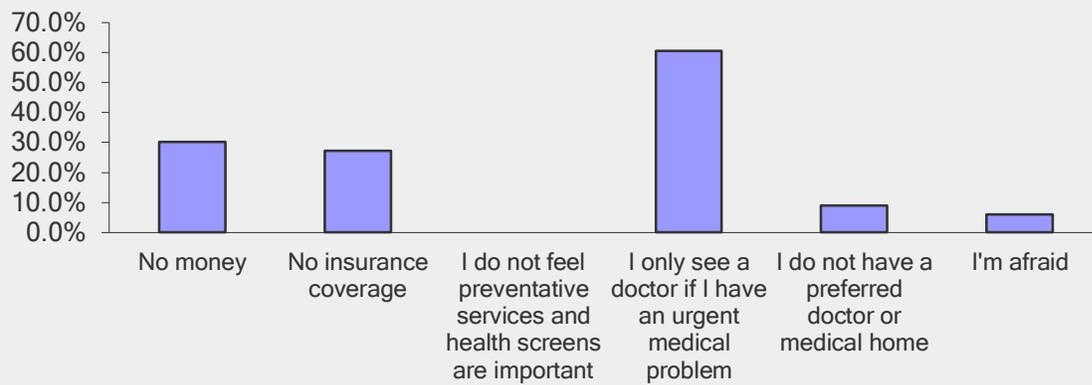
### Senior Black Females Reasons for Not Receiving Preventative Services



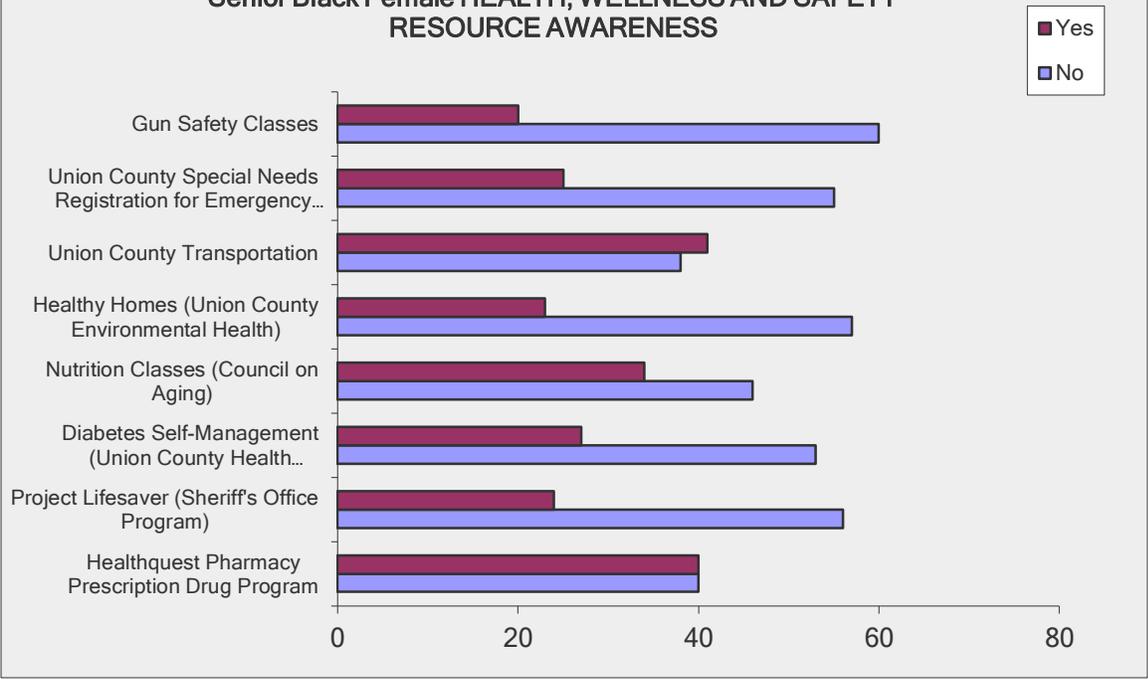
### Senior Female Hispanics Reasons for Not Receiving Preventative Services



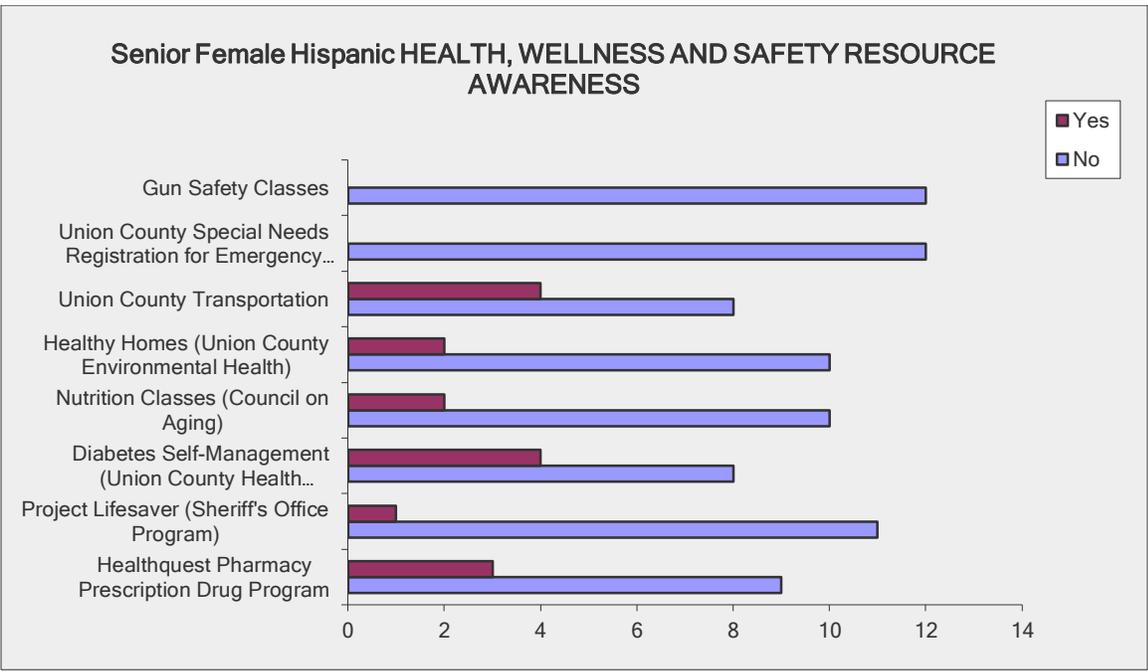
### Senior White Females Reasons for Not Receiving Preventative Services



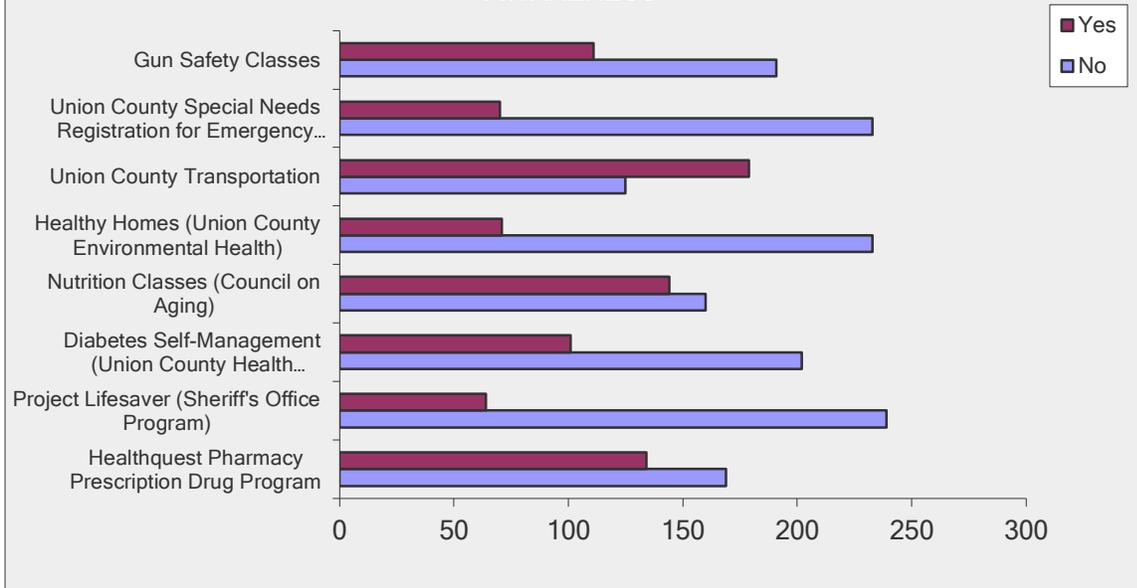
### Senior Black Female HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS



### Senior Female Hispanic HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS



### Senior White Female HEALTH, WELLNESS AND SAFETY RESOURCE AWARENESS



**APPENDIX E**

**Health and Wellness**

**Resource Guide**

# **Health Service Directory for Union County**



**January 1, 2012  
Union County Health Department  
1224 W. Roosevelt Blvd.  
Monroe, NC 28110  
(704) 296-4800**

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## **Crisis Intervention Services**

### **Operation ReachOut**

1308 Miller Street  
Monroe, NC 28110  
Phone: 704-289-4237  
Fax: 704-291-2497  
Email: opreachout@aol.com

### **Description/Purpose of Agency:**

A non-profit Christian organization dedicated to helping those less fortunate in the community who have nowhere else to turn.

### **Whom do you serve?**

Individuals and families of Union County.

### **What services do you provide?**

This agency provides emergency food, medicine, clothing, furniture, household items and funds for those in need of assistance with utility bills (as long as funds last.)

Counseling services lead by Pastor Eddie Williams.

### **Lunchtime meals served by the following agencies:**

Blacks Memorial	Union Methodist
First Baptist of Monroe	Union Academy
Siler Presbyterian	Mountain Springs Baptist
Waxhaw United Methodist	Lakeview Baptist
First Baptist of Weddington	Midway Baptist
Bethlehem United Methodist	Shiloh Advent
New Hope UMC	East Campus Baptist

## **Crisis Intervention Services**

### **Union County Community Shelter**

Executive Director: Kathy Bragg

311 E. Jefferson Street

Monroe, NC 28112

Phone: 704-289-5300

Fax: 704-296-0948

Email: [Kathy.bragg@unionshelter.org](mailto:Kathy.bragg@unionshelter.org)

[www.unionshelter.org](http://www.unionshelter.org)

#### **Description/Purpose of Agency:**

This agency provides food and shelter to the hungry and homeless population of Union County. They provide programs to help the homeless population achieve self-sufficiency.

#### **Whom do you serve?**

Residents of Union County.

#### **What services do you provide?**

This agency provides: Adult homeless transitional shelter, emergency housing for families; full service soup kitchen serving 3 meals daily to homeless and low income; monthly clothing giveaway; food boxes and hygiene kits upon referral.

Adult/Family sheltering programs require successful drug/alcohol screen prior to entry.

Average stay for adult shelter— 6 months. Average stay family motel program—4-6 weeks. Case management services for all clients to assist in accessing wide range of community services. Emergency Winter Shelter for adults open November—March.

## **Crisis Intervention Services**

### **Union County Crisis Assistance Ministry**

1333 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-225-0440

Fax: 704-296-0299

Website: [www.unioncrisis.org](http://www.unioncrisis.org)

#### **Description/Purpose of Agency:**

Union County Crisis Assistance Ministry provides short term assistance to families and individuals in crisis by supplying resources to meet their basic needs.

#### **Whom do you serve?**

Residents of Union County.

#### **What services do you provide?**

Union County Crisis Assistance Ministry provides financial aid, inter-agency referrals, and financial counseling and budget management. This agency further provides emergency financial assistance in the areas of shelter, food, utilities and prescription medicine.

## **Disabilities Services**

### **The Arc of Union County, Inc.**

1653-C Campus Park Drive

Monroe, NC 28112

Phone: 704-261-1550

Fax: 704-261-1554

Email: [Melinda@thearcofunion.com](mailto:Melinda@thearcofunion.com)

Website: [www.thearcofunion.com](http://www.thearcofunion.com)

### **Description/Purpose of Agency:**

Advocacy and support for people with developmental disabilities and their families.

### **Whom do you serve?**

Union County residents of all ages with a diagnosis of developmental disability.

### **What services do you provide?**

Advocacy

Aktion Club

Community Connections

Employer of Record Program

First in Families

Operation Arc Angel

Referrals / Information Services

## Disabilities Services

### **Pediatric Boulevard**

2814 Gray Fox Road  
Indian Trail, NC 28079 (physical address)  
2814 Gray Fox Road  
Monroe, NC 28110 (mailing address)

Phone: 704-821-0568

Fax: 704-821-0570

Website: [www.pediatricboulevard.com](http://www.pediatricboulevard.com)

### **Description/Purpose of Agency:**

Pediatric Boulevard brings Speech, Physical, Occupational, Swallowing and Aquatic Therapy services all under one roof in our 7,020 square foot facility. If you are curious or have concerns about the development of your child, please email us at [info@pediatricboulevard.com](mailto:info@pediatricboulevard.com).

### **Whom do you serve?**

**Children birth—20years**

### **What services do you provide?**

**SPEECH THERAPY:** Specialize in the treatment of a delay in: speech development including articulation (making sounds), fluency (speaking or writing smoothly, easily and effortlessly), phonological processes (sound patterns), receptive language (understand), expressive language (combinations of words to form sentences, social skills) and swallowing/feeding issues.

**PHYSICAL THERAPY:** Treat the development or strengthening of large muscle groups (gross motor skills) so that the child can roll, sit up, creep, walk, run, jump, gallop, skip, catch/throw/kick a ball, etc.

**OCCUPATIONAL THERAPY:** Treat the development or strengthening of small muscle groups (fine motor skills) in the child's hands to improve skills related to activities of daily living such as feeding, bathing, dressing, etc.

**AQUATIC THERAPY:** Using water as a medium to facilitate any of the therapies mentioned above.

**SWALLOWING THERAPY:** Using therapy techniques to make feeding and drinking safe, pleasurable and efficient.

## **Family Services**

### **American Red Cross of Union County**

608 E Franklin Street

Monroe, NC 28112

Phone: 704-283-7402

Fax: 704-282-0810

Hours of Operation: Monday - Friday  
9:00 a.m. - 5:00 p.m.

Email: [UnionNC@usa.redcross.org](mailto:UnionNC@usa.redcross.org)

Website: [www.unioncountyredcross.org](http://www.unioncountyredcross.org)

#### **Description/Purpose of Agency:**

The American Red Cross is a humanitarian organization led by volunteers. They provide relief to victims of disasters and help families prevent, prepare for, and respond to emergencies. Disaster Services involves providing food, water, clothing, and shelter to disaster victims 24 hours a day.  
emergencies.

#### **Whom do you serve?**

Services provided to Anson and Union County residents and their families.

#### **What services do you provide?**

- ◆ A variety of services are available in Preparedness Training, Disaster Services, Blood Services, and Armed Forces Emergency Services.
- ◆ Preparedness Training involves teaching multiple classes on first aid, CPR, babysitting, Automated External Defibrillation (AED) training, and pet first aid.
- ◆ Blood Services hold approximately 140 blood drives in the community throughout the year.

## Family Services

### **Child Care Resources Inc.**

105-A Cedar Street

Monroe, NC 28110

Phone: 704-238-8810

Fax: 704-238-8811

Website: [www.childcareresourcesinc.org](http://www.childcareresourcesinc.org)

Email: [mailbox@childcareresourcesinc.org](mailto:mailbox@childcareresourcesinc.org)

Hours of Operation: Monday - Friday

8:00 a.m. - 5:00 p.m.

### **Description/Purpose of Agency**

Child Care Resources Inc. (CCRI) is a private, non-profit child care resource and referral agency that works with families and communities to ensure that all children have access to high quality, affordable early learning and school-age opportunities and experiences that enable them to succeed in school and in life.

### **Whom do you serve?**

Children — Birth to 12 years of age and their families. CCRI offers a range of services for early childhood and school age care programs and professionals of Union, Mecklenburg and Cabarrus counties.

### **What services do you provide?**

- ◆ Family Information Services: Delivering information, education and support so that families select early learning and school-age child care services that promote child well being.
- ◆ Program and Business Consultation: Promoting early care and education and school-age child care program excellence through quality improvement, quality assurance services, and effective business practice.
- ◆ Financial Aid: Increasing the ability of eligible working families to afford early learning and school-age child care services and increasing the business capacity of child care programs to serve their children well. (Mecklenburg County **only**)
- ◆ Research and Policy Development: Advancing policy and public support for accessible, affordable, and improved early learning and school-age child care services for all children, birth through age 12.

## Family Services

### **Community Care Partners of Greater Mecklenburg**

1224 W. Roosevelt Blvd.

Monroe, NC, 28110

Phone: 704-226-1910

Fax: 704-282-0601

Website: [www.ccpgm.org](http://www.ccpgm.org)

Hours of Operation: Monday to Friday

Customer Service: 704-512-5555

1-888-671-7437

#### **Description/Purpose of Agency:**

Community Care Partners of Greater Mecklenburg is a Carolina Access II Medicaid Program that provides a case management approach, facilitates patient access to care, and networks with practices which provide quality care, and promotes best practices. The program addresses health issues that affect a healthy lifestyle, and provide education and information about healthcare service resources to take care of individuals and their families.

#### **Whom do you serve?**

Residents of Union , Mecklenburg and Anson Counties

#### **What services do you provide?**

Care Coordination for Medicaid clients only

- We have nurses that can help you promote a healthy lifestyle.
- We work closely with people who have diabetes, asthma, or congestive heart failure or children that are overweight.
- We provide education and information about healthcare services resources to take care of you and your family.
- We have a free 24-hour health advice line you can call at **704-512-7824 or 1-888-458-4267**

## **Family Services**

### **Community Health Services of Union County**

415-B East Windsor Street

Monroe, NC 28112

Phone: 704-296-0909

Fax: 704-296-0946

Email: [chsuc@carolina.rr.com](mailto:chsuc@carolina.rr.com)

#### **Description/Purpose of Agency:**

This agency meets healthcare needs of uninsured residents in Union County.

#### **Whom do you serve?**

Residents of Union County 18 years and older

#### **What services do you provide?**

Diabetes Free Clinic, Diabetes education for uninsured Union County residents.

Emergency Prescription Assistance available for uninsured, qualified Union County residents (excluding controlled substances).

**See agency listing under Prescription Drug Programs**

## **Family Services**

### **Department of Social Services**

1212 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-296-4300

Fax: 704-296-6151

Website: [www.co.union.nc.us](http://www.co.union.nc.us)

Hours of operation: Monday thru Friday

8:00 a.m. - 5:00 p.m.

### **Description/Purpose of Agency:**

The Union County Department of Social Services partners with families in achieving economic well-being, safety, and permanence within the community.

### **Whom do you serve?**

Individuals and families in Union County.

### **What services do you provide?**

- Family & Children's Services Program provides services to families and children for the purpose of preserving and maintaining family functioning.
- Services include: financial assistance for emergencies such as medication, utilities, food, and housing. Services to children include Child Protective Services, In-Home Services for those families needing intervention services after indication of protective services needs. Foster Care Services are provided to children who have been removed from their families for reasons of neglect, abuse, and/or dependency.
- Adult Services & Benefits provides a variety of services and benefits to adults and families. Services include: Adult Protective Services, In-Home Aide, Community Alternative Program (CAP), Adult Day Care, Guardianship, Nursing Home Placement, Adult Care Home services, Case Management services, In-Home Special Assistance services, Transportation services, General and Emergency Assistance, Crisis Intervention services, Medicaid for the Aged and Disabled Benefits, Medicaid Benefits for Medicare Recipients, Special Assistance Benefits for the Aged and Disabled and Food Stamp Benefits.
- Family Support Services & Daycare offers assistance to families with economic well-being, nutrition, medical assistance and supportive services for self-sufficiency.

## Family Services

### **Regional AIDS Interfaith Network (RAIN)**

P.O. Box 37190

Charlotte, NC 28237

Phone: 704-372-7246

Fax: 704-372-7418

Website: [www.carolinarain.org](http://www.carolinarain.org)

### **Contact Person:**

Rev. Debbie Kidd—704-372-7246, ext .111—[d.kidd@carolinarain.org](mailto:d.kidd@carolinarain.org)

### **Description/Purpose of Agency:**

RAIN engages the community to transform lives and promote respect and dignity for all people touched by HIV/AIDS, through compassionate care, education and leadership development.

### **Whom do you serve?**

Individuals infected/affected by HIV/AIDS. The general public as we seek to provide prevention education.

### **What services do you provide?**

RAIN provides a variety of services including: CARE (Compassion, Accountability, Responsibility & Education) Management; pastoral counseling; Peer2Peer Support and caring volunteers who provide practical support to persons living with HIV/AIDS. RAIN also provides HIV/AIDS awareness and prevention education to the community.

## Family Services

### Thompson Child and Family Focus

2200 East 7th Street  
Charlotte, NC 28235-5458  
Phone: 704-376-7180 ext. 127  
Fax: 704-376-0904  
Website: [www.thompsoncff.org](http://www.thompsoncff.org)

and 6800 Saint Peter's Lane  
Matthews, NC 28105  
Phone: 704-536-0375  
Fax: 704-531-9266

#### Description/Purpose of Agency:

Our mission called to serve children and families through healing, teaching, worship and play.

#### Whom do you serve?

We reach out to children of any age, up to 18yrs and to their families. We see a range of challenges from most severe cases of abuse and neglect to instances where families just need tools and education.

#### What services do you provide?

Matthews location :

- Psychiatric Residential Treatment
- Day Treatment (specializing in Reactive Attachment Disorder and sexually reactive youth).

7th Street in Charlotte location:

- Outpatient Therapy
- School Based Therapy
- Intensive In-Home
- Case Management
- Foster Care
- Family Education

1645 Clanton Road location:

- Early Childhood Outreach Services
- Thompson Child Development Center

## Family Services

### Turning Point of Union County

P.O. Box 952

Monroe, NC 28111

Phone: 704-283-9150

Crisis Hotline: 704-283-7233

Fax: 704-225-8857

Website: [www.turntoday.net](http://www.turntoday.net)

### Description/Purpose of Agency:

Turning Point's vision is that all people will have safe and healthy relationships, free from domestic abuse in their homes, schools, workplaces, and communities. Turning Point exists to break the cycle of domestic abuse through safe shelter, healing, education and social change.

### Whom do you serve?

Victims of domestic violence and their children who are residents of Union County, NC

### What services do you provide?

- Hotline Services: Staff members and trained volunteers provide immediate response 24 hours per day 7 days per week to crisis calls. This service provides confidential crisis telephone counseling
- Safe Shelter: Safe shelter is provided to victims of domestic violence and their children 24 hours a day 7 days a week.
- Women's Counseling: Individual and group counseling is provided for victims of domestic violence. It is not necessary to be residing in the shelter to receive counseling. Out of shelter groups are currently held at the Union County Public Library—Monroe Branch.
- Case Management: Each shelter resident develops a plan which addresses such needs as housing, employment, transportation, and health care.
- Victim's Advocacy: Each shelter resident is educated about their legal rights and options and is accompanied when going to court as needed. It is not necessary to be residing in the shelter to receive victim's advocacy.
- Early Childhood Program: Provides assessment and referral services for developmental delays, teaches stimulation activities to mothers, provides parenting classes, and provides the Learning Accomplishment Profile for children ages 0-3.
- Children's Program: The Children's Program consists of referrals, parent education, and an educational based group counseling program (HERO) specifically designed for child observers of domestic violence from ages 3-12/
- Teen Dating Violence Prevention Program: The Teen Dating Violence Prevention Program addresses the dynamics of teen dating violence. This program is provided in the shelter, schools, and the faith community.
- Transitional Housing: clients who successfully complete the shelter program may be eligible to reside at Cassie's Place. Women pay rent and continue to receive Turning Point services.
- Community Education: Staff and volunteers educate the community about agency services and domestic violence.

## Family Services

### United Family Services

604 Lancaster Avenue

Monroe, NC 28112

Phone: 704-226-1352

Fax: 704-282-9362

Website: [www.unitedfamilyservices.org](http://www.unitedfamilyservices.org)

Hours of Operation: Monday - Thursday 8:30 a.m. - 8:00 p.m.

Friday—Closed

### Description/Purpose of Agency:

Founded in 1909, United Family Services' mission provides hope and solutions to people in crisis. Strength-based programs such as Consumer Credit Counseling and Housing Services, Clinical Counseling Services, Employee Assistance Program and Victim Services including Rape Crisis and The Tree House Children's advocacy Center (CAC) make it possible for United Family Services to offer hope.

### Whom do you serve?

Individuals— Women, men, (Adults & Children) and families in Union County.

### What services do you provide?

United Family Services provides counseling in the following areas: human relations, marriage, family, child and individual counselors, credit and debit counseling. This agency provides a child abuse prevention program.

- A 24 hour hotline
- Crisis Intervention
- Hospital and court accompaniment
- Individual and group clinical counseling services for victims and their family members
- Community Referrals
- Advocacy in working with the medical providers, law enforcement and the judicial system

“**The Tree House**” Children's Advocacy Center (CAC) Provides a neutral, child & Teen-friendly environment for families for families to receive comprehensive services.

-

**Clinical Counseling Services:** Empowers individuals and families to improve their emotional well-being,

Mental health, self-sufficiency, problem—solving and daily productivity. Professional counselors help individuals and families learn the skills and behaviors they need to overcome their problems and lead measurable more stable and productive lives. Services include:

- Individual, family and couples counseling
- Play therapy for children
- Support groups for teen survivors & adult survivors of sexual violence
- Parent Education
- Employee Assistance Program (EAP)

**Financial Counseling: Consumer Credit & Housing Counseling Services** empowers individuals and families become financially stable through face-to-face counseling, education, advocacy & mediation which includes:

- Financial management & Education
- Debt Repayment Plans
- Credit Report Review
- Bankruptcy Certification
- Reverse Mortgage Certification
- **Housing Foreclosure and Delinquency Counseling and Mediation.**

**Are you looking to help make a difference in your community?**

For a family faced with foreclosure, credit card debt and medical expenses due to a corporate layoff; a mother overwhelmed by single parenthood and work related stress; or a 6 year old girl sexually abused by her step-father, United Family Services offers hope. That hope is helping to change the future of our community one life at a time. **But we do not do it alone!** Each year volunteers give their time to help UFS serve community needs. Whether providing general office support, painting a room, accompanying victims of sexual violence to the hospital or at The Tree House Children's Advocacy Center or serving on a committee, volunteers are bringing about positive change in the lives of those around them. Contact United Family Services about volunteer opportunities.

## **Healthcare Services**

### **Carolinas Medical Center - Union**

600 Hospital Drive

Monroe, NC 28112

Phone: 704-283-3100

Fax: 704-296-4175

Website: [www.cmc-union.org](http://www.cmc-union.org)

Hours of Operation: 24 hours, 7 days a week

#### **Description/Purpose of Agency:**

CMC-Union is a 247-bed facility with more than 125 physicians and 24 medical specialties. CMC-Union is committed to improving the health of individuals, families and communities throughout Union County and the surrounding area.

#### **Whom do you serve?**

CMC-Union provides medical services for residents of Union County and the surrounding area.

#### **What services do you provide?**

CMC-Union provides a wide range of services including treatment centers for cancer, diabetes, rehabilitation, women and children, sleep disorders, wound care and cardiovascular disease. CMC-Union also has a home-care agency, a nursing home, behavioral health center, emergency department, outpatient surgery center and several community-based physician practices.

## Healthcare Services

### Community Health Services of Union County

415-B East Windsor Street

Monroe, NC 28112

Phone: 704-296-0909

Fax: 704-296-0946

Email: chsuc@carolina.rr.com

#### **Description/Purpose of Agency:**

Community Health Services of Union County provides community outreach promoting health education awareness and preventative health care services to the community.

#### **Whom do you serve?**

Indigent and underserved persons living in Union County

#### **What services do you provide?**

##### Community Clinics

Community Health Services provides preventative health assessments including blood pressure, pulse, hemoglobin, blood sugar, and lipid profile (total cholesterol, HDL, LDL, VLDL, triglycerides and ratio). Clients receive education and counseling regarding Therapeutic Lifestyle Changes and medication compliance as well as general assistance, advocacy, and referrals as indicated.

##### Diabetes Services

A certified diabetes educator provides education and counseling geared toward self-management of diabetes. A monthly Diabetes Free Clinic is available to those patients who are prequalified. By Appointment Only for uninsured Diabetics who have no physician and are residents of Union County.

##### Prescription Assistance

Emergency Prescription Assistance available for uninsured, qualified Union County residents (excluding controlled substances)

##### Wellness

Adult immunization for influenza (flu), and pneumonia. Blood profiles are available through Lab Corp.

##### Grocery Program

A Grocery Program is available to those uninsured, qualified patients enrolled in our Diabetes Program, Diabetes Free Clinic, Diabetes education for uninsured Union County residents.

## **Healthcare Services**

### **Hospice of Union County**

700 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-292-2100

Fax: 704-292-2190

Website: [www.houc.org](http://www.houc.org)

#### **Description/Purpose of Agency:**

Hospice provides compassionate, quality care to those suffering life-limiting illnesses, regardless of ability to pay, and to serve as a clinical, ethical and spiritual resource for family members as well as others in the community affected by death and dying.

#### **Whom do you serve?**

Persons who are terminally ill with a life expectancy of six months or less.

#### **What services do you provide?**

Hospice provides specific services based upon the needs assessed of each individual patient and members of his/her family. Hospice specializes in pain and symptom management, and delivers care through a highly specialized inter disciplinary team of Physicians, Nurses, Home Health Aids, Social Workers, Chaplain, resident caregivers as well as residential care provided in the Hospice Houses. A general inpatient unit will provide care for patients with symptoms that can not be managed at home or at the Hospice Houses.

## **Healthcare Services**

### **Presbyterian Hospital Matthews**

1500 Matthews Township Parkway

Matthews, NC 28105

Phone: 704-384-6500

Website: [www.presbyterian.org](http://www.presbyterian.org)

Hours of Operation: 24 hours, 7 days a week

#### **Description/Purpose of Agency:**

Presbyterian Hospital Matthews is a not-for-profit facility providing excellence in healthcare through a full range of advanced medical treatments and procedures for patients and their families.

#### **Whom do you serve?**

Residents of Union County, and the southern piedmont region.

#### **What services do you provide?**

Presbyterian Hospital Matthews offers comprehensive medical, educational and emotional support services including the Family Maternity Center, Surgical Services, Orthopedic Services, Heart - Cardiovascular Services, Cancer Services, Outpatient Infusion Services, Emergency Services, Critical Care Unit, Radiology Services, Rehabilitation Center, and The Presbyterian Center for Sleep Disorders.

## **Healthcare Services**

### **Union County Health Department**

1224 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-296-4800

Fax: 704-296-4887

Website: [www.co.union.nc.us](http://www.co.union.nc.us)

Hours of Operation: Monday - Friday

8:00 a.m. - 5:00 p.m.

#### **Description/Purpose of Agency:**

Union County Health Department provides health prevention and primary care services. The health department provides continual surveillance of health conditions in the county and networks with the state for information vital for health program planning.

#### **Whom do you serve?**

Individuals and families of Union County.

#### **What services do you provide?**

The Union County Health Department provides a variety of services including: child and adult dental, maternal health, breast and cervical cancer control, WIC (women, infant, and children's), family planning, vital records, communicable disease control, child health, diabetes education and health promotion.

## Library Services

### **Union County Public Library**

316 E. Windsor Street

Monroe, NC 28112

Phone: 704-283-8184

Phone 704-225-8554 TDD (for the DEAF)

Website: [www.union.lib.nc.us](http://www.union.lib.nc.us)

### Lois Morgan Edwards Memorial Library

414 Hasty Street

Marshville, NC 28103

Phone: 704-624-2828

### Union West Regional Library

123 Unionville-Indian Trail Road

Indian Trail, NC 28079

Phone: 704-821-7475

### Waxhaw Branch Library

509 South Providence Street

Waxhaw, NC 28173

Phone: 704-843-3131

## **Pregnancy Services**

### **H.E.L.P Crisis Pregnancy Center**

1700 Secrest Shortcut Road

Monroe, NC 28110

Phone: 704-289-5133

Fax: 704-238-0984

Website: [www.monroehelpcpc.net](http://www.monroehelpcpc.net)

Hours of Operation: Monday and Wednesday

10:00 a.m. - 2:00 p.m.

Tuesday and Thursday

10:00 a.m. - 8:00 p.m.

### **Description/Purpose of Agency:**

The H.E.L.P Crisis Pregnancy Center is a ministry that is Life-Affirming that strives to meet physical, emotional and spiritual needs of individuals and families experiencing an unexpected pregnancy.

### **Whom do you serve?**

Women and men in Union and surrounding areas.

### **What services do you provide? All Services are free & Confidential**

The H.E.L.P Crisis Pregnancy Center provides free pregnancy tests, sexually transmitted infections (STI) testing, limited ultrasounds, classes on pregnancy, child birth, parenting, peer counseling and post-abortion peer counseling.

Additional services include used baby equipment, children's clothing size 0-6T, maternity clothes and Bible Studies.

All services are free and confidential.

## **Prescription Drug Programs**

### **Community Health Services of Union County**

415-B East Windsor Street  
Monroe, NC 28112  
Phone: 704-296-0909  
Fax: 704-296-0946

#### **Description/Purpose of Agency:**

This agency offers assistance for prescription medications (excluding controlled substances).

#### **Whom do you serve?**

Persons living in Union County

#### **What services do you provide?**

- Prescription Assistance (Emergency)
- Diabetes Free Clinic (Monthly)
- Community-based Health Screenings
- Diabetic Supplies to those in our programs
- Health Fairs
- Flu Vaccinations

**See agency listing under Family Services for a complete list of services.**

## Prescription Drug Programs

### **HealthQuest**

415 East Franklin Street

Monroe, NC 28112

Phone: 704-226-2050

Fax: 704-226-0712

Website: [www.healthquestpharmacy.org](http://www.healthquestpharmacy.org)

Hours of Operation: Monday

8:00 a.m. - 6:00 p.m.

Tuesday - Thursday

8:00 a.m. to 4:30 p.m.

### **Description/Purpose of Agency:**

HealthQuest is a licensed non-profit organization dedicated to improving the health of our community by assisting those who cannot afford prescription medications.

### **Whom do you serve?**

Citizens 18 years of age and older who live in Union, Anson, and Stanly Counties in NC; Lancaster, and Chesterfield Counties, in SC whose income is less than 200% of the Federal Poverty Level. Children 17 years of age and younger may be eligible if they are not enrolled in Medicaid or NC HealthChoice.

### **What services do you provide?**

HealthQuest provides maintenance medications to qualified individuals to help control their chronic medical conditions. We also have free monthly diabetic education classes.

## Prescription Drug Programs

### Union County Prescription Drug Program

A discount drug card program is available to Union County residents sponsored by the National Association of Counties.

Prescription drug discount cards may be used by county residents, regardless of age, income, or existing health coverage. Residents may also use the card for drugs not covered by their health plan.

The prescription discount card is FREE.

You may pick up a card at the following locations:

- \* Union County Government Center Lobby, 500 North Main Street, Monroe
- \* Union County Public Library Locations
  - Monroe - Main Branch, 316 East Windsor Street
  - Marshville - Lois Morgan Edwards Memorial, 414 Hasty Street
  - Waxhaw, 509 South Providence Street
  - Indian Trail - Union West Regional, 123 Unionville-Indian Trail Road
  - Unionville, Unionville Sub Regional, 1102 Unionville Church Road
- \* Union County Health Department - 1224 W. Roosevelt Blvd., Monroe
- \* Union County Department of Social Services - 1212 W. Roosevelt Blvd., Monroe
- \* Union County Veteran's Service - 500 North Main Street, Suite 14
- \* Union County Nutrition for the Elderly Sites (Monday - Friday)
  - Site 1** - East Campus - First Baptist Church Indian Trail  
6140 West Marshville Blvd., Marshville 7:30am-11:30am
  - Site 2** - Bragg Street Community Center  
624 North Bragg Street, Monroe 8:00am-12:00pm
  - Site 3** - Mineral Springs United Methodist Church  
5915 Old Waxhaw-Monroe Road, Mineral Springs 8:00am-12:00pm
  - Site 4**- Fairview Volunteer Fire Department  
702 Concord Highway, Monroe, 8:15am-12:15pm
  - Site 5** - Indian Trail United Methodist Church  
113 Indian Trail Road, Indian Trail, 8:30am-12:30pm

## Recreation and Fitness Services

### **Enterprise Fitness and Personal Training Center**

2585 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-289-4940

Fax: 704-289-2266

Website: [www.enterpriseworkout.com](http://www.enterpriseworkout.com)

#### **Description/Purpose of Agency:**

We are a fitness center. Our purpose is to help people of all ages to reach their fitness goals. Our center has a strong commitment to all members at all times. We want to make a difference in the community and help people to be healthy and feel good about themselves.

#### **Whom do you serve?**

We serve all ages from young children to senior citizens. We help those with disabilities. We serve everyone.

#### **What services do you provide?**

Personal Training

Yoga

Group Classes

Pilates

Zumba

Boot Camp

## **Recreation and Fitness Services**

### **Monroe Aquatics & Fitness Center**

2325 Hanover Drive

Monroe, NC 28112

Phone: 704-282-4680

Fax: 704-282-4683

Website: [www.monroeaquaticsandfitnesscenter.com](http://www.monroeaquaticsandfitnesscenter.com)

#### **Description/Purpose of Agency:**

This agency offers individuals and families a variety of fitness, aquatic and wellness programs to meet health and recreational needs. Their goal is to give members of all ages the right tools for building long-lasting and healthy lifestyles.

#### **Whom do you serve?**

Membership clients.

#### **What services do you provide?**

Aquatic and fitness center facility offers: indoor pool, training pool, fitness room, whirlpool, steam and sauna rooms, outdoor water park, aerobics studios, meeting rooms, nursery/childcare, gymnasium, indoor run/walk track, wellness center, racquetball courts, and locker rooms.

## **Recreation and Fitness Services**

### **YWCA - Willow Oaks**

Director: Suzy Rogers

3223 Walkup Avenue, Building E

Box CC

Monroe, NC 28110

Phone: 704-283-7733

Fax: 704-225-9953

Web: [www.ywcacentralcarolinas.org](http://www.ywcacentralcarolinas.org) (look up — Union County)

### **YWCA**

Old Armory

500 Johnston St.

Phone: 704-282-5765

### **Description/Purpose of Agency**

Education and support services to youth through education and life enrichment activities.

Where Children are safe and learning is fun.

### **Whom do you serve?**

Youth age 5 - 12 years from Union County. Neighborhood Youth Learning Centers

### **What services do you offer?**

After school programs - please call either phone number

Summer Camp Program - Both Locations

Summer Lunch Program - Both Locations

Youth Development Program offers children a safe, educational and fun environment, with a variety of activities from swimming and storytelling to martial arts and arts and crafts.

Nutrition Education, Life Skills, Computer Skills, Kids Café, Athletics, Tutoring and Arts.

## **Recreation and Fitness Services**

### **Union County Parks and Recreation**

5213 Harkey Road

Waxhaw, NC 28173

Phone: 704-843-3919

Fax: 704-843-4046

Website: [www.co.union.nc.us](http://www.co.union.nc.us) click on "Quality of Life"

The website provides information on athletic fields, Cane Creek Park - camping area and day use area.

## Senior Services

### **Council on Aging in Union County**

1401 Skyway Drive

Mailing:Address:PO Box 185

Monroe, NC 28111

Phone: 704-292-1797

Fax: 704-292-1776

Email: [coauc@carolina.rr.com](mailto:coauc@carolina.rr.com)

Website: [www.coaunion.org](http://www.coaunion.org)

### **Description/Purpose of Agency:**

An independent, non-profit agency supporting people 60 and over in their efforts to remain healthy, active, and in control of their own lives. The agency connects clients with the services they need to live independently for as long as possible.

### **Whom do you serve?**

Adults 60 years of age and older living in Union County

### **What services do you provide?**

#### **Information & Assistance:**

- Information about aging services
- Assistance in accessing services
- Quarterly Newsletter
- Equipment Loan/Fan-Heat Relief
- Home Repairs/Yard work
- Medicare Counseling (SHIP)
- Senior Law Project

#### **Senior Outreach:**

- Union Seniors Outreach Programs— 6 monthly
- Health Promotion/Disease Prevention Programs
- Community Outreach Information
- Chronic Disease Self Management Classes
- Matter of Balance, fall prevention classes
- Senior Wellness Expo
- Annual Meeting, Picnic, Christmas Party

#### **In Home Services**

- Chore/Household Management
- Personal Care Assistance
- Shopping/Errands
- Respite/Caregiver Relief

#### **Family Caregiver Support Program**

- Respite/Caregiver Relief
- Caregiver Classes
- Support Groups for Caregiver & Grandparents
- Grandparenting Classes

### **Senior Community Service Employment Program (Title V)**

Employment & Training program for adults 55 and older

## Senior Services

### Clare Bridge (Memory Care)

919 Fitzgerald Street

Monroe, NC 28112

Phone: 704-225-9556

Fax: 704-289-6975

Website: [www.brookdaleliving.com/clare-bridge-at-monroe-square.aspx](http://www.brookdaleliving.com/clare-bridge-at-monroe-square.aspx)

### Description/Purpose of Agency:

Clare Bridge at Monroe Square located in Monroe, provides Alzheimer's and Dementia Care for seniors and offers the promise of Daily Moments of Success. Clare Bridge is a Brookdale Senior Living community dedicated to serving the special care needs of individuals with Alzheimer's disease and other forms of dementia. From our building design to our carefully selected staff and specialized programming and management, we focus on the individual needs of each resident and family we serve.

### Whom do you serve?

Senior citizens

### Services provided:

- Personalized Service Assessment and Plan
- Assistance with Personal Needs
- Ambulation & Escort Services
- Three nutritious and appetizing meals served daily
- Snacks available throughout the day
- Housekeeping Services
- Personal Laundry Services
- Continence Management
- Nursing Services Ongoing monitoring of residents' health status
- Medication Support
- Life Enrichment Programming
- Trained Staff on site 24 hours a day
- Specialized intervention programs
- Transportation Services
- Short term stay
- Specially designed environment
- All Exterior doors are alarmed for Residents' safety
- Emergency Response system
- State of the art fire safety system
- Handicapped accessibility
- Library
- Beauty / Barber Shop
- Outdoor Gardening Areas
- Dining Room
- Family Room
- Private Dining Room
- Sun Room
- Ancillary Services

## Senior Services

### Union County Senior Nutrition

610 Patton Avenue  
Monroe, NC 28110  
Phone: 704-283-3712  
Fax: 704-292-2568

#### Description/Purpose of Agency:

Provides nutritional lunch time meal as well as informational and recreational programs.  
Provides home delivered meals to those deemed homebound.  
Provides supplemental meals to chronically or critically ill.

#### Whom do you serve?

Senior citizens 60 years or older who meet guidelines for each individual program.

#### Congregate Meals

##### Senior Nutrition Dining Sites:

Indian Trail United Methodist Church  
113 Indian Trail Road  
Indian Trail, NC 28079

Mineral Springs United Methodist Church  
5915 Old Waxhaw-Monroe Road  
Mineral Springs, NC 28108

Bragg Street Community Center  
624 N. Bragg Street  
Monroe, NC 28112

Marshville United Methodist Church  
313 Church Street  
Marshville, NC 28103

#### The Meals on Wheels/Home Delivered Meals Program

-Must meet homebound criteria

#### Supplemental Meals

-supplemental nutrition meals (Ensure Plus) are available. Physician authorization is required to participate in this service.

## Senior Services

### Union Park Assisted Living

1316 Patterson St.

Monroe, NC 28112

Phone: 704-282-0530

Fax: 704-296-9058

Website: [www.brookdaleliving.com/union-park.aspx](http://www.brookdaleliving.com/union-park.aspx)

### Description/Purpose of Agency:

At Union Park we partner with each resident to design an individualized, personal service plan. Our service planning process, which is unique to Brookdale Senior Living communities, bases service fees on delivering quality service and care to each individual.

Personalized service plans are reviewed regularly by staff to ensure that we meet the changing needs of our residents. Our trained staff is there to assist with personal needs—bathing or showering, selection of clothing, dressing assistance, grooming, hygiene, mobility and transferring and dining assistance—24 hours a day.

### Whom do you serve?

Senior citizens

### Services provided:

- Personalized Service Assessment and Plan
- Assistance with Personal Needs
- Ambulation & Escort Services
- Three nutritious and appetizing meals served daily
- Snacks available throughout the day
- Housekeeping Services
- Personal Laundry Services
- Continence Management
- Nursing Services Ongoing monitoring of residents' health status
- Medication Support
- Life Enrichment Programming
- Trained Staff on site 24 hours a day
- Specialized intervention programs
- Transportation Services
- Short term stay
- Specially designed environment
- Emergency Response system
- State of the art fire safety system
- Handicapped accessibility
- Library
- Beauty / Barber Shop
- Outdoor Courtyard
- Outdoor Gardening Areas
- Recreation and Activity Room
- Outdoor Walking Paths
- Dining Room
- Family Room

## Senior Services

### North Carolina Department of Crime Control & Public Safety

#### Silver Alert Program

**Website:** [www.nccrimecontrol.org](http://www.nccrimecontrol.org)

#### **Description/Purpose of Agency:**

A program designed to quickly disseminate descriptive information about the missing person, so that citizens in the affected area can be on the lookout for the endangered person and notify local law enforcement with any relevant information.

#### **Whom do you serve?**

Citizens suffering from dementia or other cognitively impairment regardless of age.

#### **Criteria:**

- The person is believed to be suffering from dementia or other cognitive impairment
- The person is believed to be missing - regardless of circumstance
- A legal custodian of the missing person has submitted a missing person's report to the local law enforcement agency where the person went missing.
- Law enforcement reports the incident to the NC Center for Missing Persons.

#### **Procedures:**

- A family member or caregiver must call their local law enforcement **FIRST** to report their missing loved one.
- The law enforcement agency must first investigate the case and determine if the criteria warrant a request for a Silver Alert.

## **Substance Abuse Services**

### **Daymark Recovery Services Inc.**

1190 W. Roosevelt Blvd.

Monroe, NC 28110

Phone: 704-296-6200

Fax: 704-296-4669

Website: [www.daymarkrecovery.org/](http://www.daymarkrecovery.org/)

### **Description/Purpose of Agency:**

Daymark is a provider of culturally sensitive mental health, substance abuse or developmental disability services to citizens age 3 and up and their families. Daymark offers the most current best practices and effective, research-based treatment programs to assist all citizens working toward achieving optimum health and recovery.

### **Whom do you serve?**

Residents of Union County.

### **What services do you provide?**

Daymark provides the following services: Outpatient Individual Therapy, Outpatient Group Therapy, Outpatient Family Therapy, Psychological Testing, Competency Evaluations, Forensic Evaluations, Intensive In-Home Services, Psychiatric Evaluations, Substance Abuse Assessment, , Diagnostic Assessment, Advanced Access-walk-in clinic in all locations and Mobile Crisis.

## **Substance Abuse Services**

### **First Step at CMC-Union**

1623 E. Sunset Drive

Monroe, NC 28112

Phone: 704-238-2043

Fax: 704-289-8784

Website: [www.bhc-firststepcmunion.org](http://www.bhc-firststepcmunion.org)

### **Description/Purpose of Agency:**

Our treatment programs are designed for adults 18 and older who are suffering from the debilitating effects of alcoholism and drug addiction. We utilize a 12-step recovery philosophy and focus on the mental, physical, and spiritual well being of each patient. At BHC First Step at CMC-Union we emphasize behavioral changes that are supportive of healthier lifestyles and the development of improved self-esteem.

### **Whom do you serve?**

Union county and the greater Charlotte area.

### **What services do you provide?**

BHC First Step at CMC-Union provides the following services: Detoxification, Residential Rehabilitation (inpatient treatment), Intensive Outpatient Program-Residential, Intensive Outpatient Program-Day or Evening, Substance Abuse Assessment.

## **Substance Abuse Services**

### **Friendship Home, Inc.**

2111 Stafford Street Ext.  
Monroe, NC 28110  
Phone: 704-289-4144  
Fax: 704-292-7772  
Email: FRNDSHP69@aol.com

### **Description/Purpose of Agency:**

A non-profit organization that offers substance abuse services.

### **Whom do you serve?**

Male residents of Union County

### **What services do you provide?**

Friendship Home provides group therapy, work placement, counseling, and participation in AA and work therapy to men recovering from alcohol and substance abuse.

This agency also provides referrals and information to the public regarding self-help groups, substance abuse treatment, substance abuse counseling, and meeting facility for self-help groups.

## **Substance Abuse Services**

### **Piedmont Behavioral Healthcare**

245 LePhillip Ct.

NE, Concord, NC 28025

Phone: 704-721-7000 (Area Office)

800-939-5911 (Crisis Helpline)

888-213-9687 (Concern Line)

Website: pbhcare.org

### **Description/Purpose of Agency:**

Piedmont Behavioral Healthcare establishes and maintains a System of Care for people in need of treatment for Mental Health, Developmental Disabilities, and Substance Abuse conditions.

### **Whom do you serve?**

Residents of Union County.

### **What services do you provide?**

Piedmont Behavioral Healthcare provides referrals for professional services in the areas of mental illness, developmental disabilities, addictions and substance abuse conditions.

Services are provided through a network of Provider Agencies and Licensed Practitioners that are located across the county and which are under contract with Piedmont Behavioral Healthcare.

## **Transportation Services**

### **Union County Transportation**

610 Patton Avenue  
Monroe, NC 28110

Phone: 704-283-3713 or 704-292-2511

Fax: 704-283-3551

Website: [www.co.union.nc.us](http://www.co.union.nc.us) "Select—Transportation"

Hours of Operation: Monday to Friday

7:00 a.m. - 4:30 p.m.

To make an appointment for service call between 8:00 a.m. - 12:00 p.m.

#### **Call 48 hours before service is needed.**

Passengers are responsible for having the correct amount of fare.

#### **Whom do you serve?**

Residents of Union County

Funding may vary due to age, disabilities, etc.

#### **What services do you provide?**

Transportation service within Union County, to Charlotte area, and to Veteran Medical facilities in Salisbury and Charlotte.

#### **Fees:**

Seniors funded by HCCBG—Donations only

RGP or Edtap =

-one-way trip within Union County=\$2.00

-one-way trip to Charlotte =\$10.00

-round trip to Charlotte =\$20.00

-round trip to Matthews =\$10.00

## Veterans Services

### Union County Veterans Service Office

500 N. Main Street, Suite 629

Monroe, NC 28112

Phone: 704-283-3807

Fax: 704-283-3850

Contact Person(s)-Michelle Marcano, Veterans Service Officer/Director;

Anthony Parker, Assistant Veterans Service Officer; Pat Autry, Administrative Assistant

Hours of Operation: Monday to Friday

8:00 a.m. to 5:00 p.m.

### Description/Purpose of Agency

The purpose of this agency is to provide Union County Veterans and their family members access to Federal, State, and County benefits and entitlements based on their service in the United States Armed Forces and auxiliary services.

### Whom do you serve?

Services are available for Union County Veterans and their family members.

### What services do you provide?

To assist veterans and eligible family members apply for Federal, State, or County benefits to which they are entitled.

**Federal** - Claims for service-connected diseases or disabilities incurred by active military service, pension, vocational rehabilitation, education, VA insurance, VA home loan certificates, health care from Veteran Affairs Medical Centers (VAMC), and Substance Abuse Treatment Centers, and national cemeteries.

**State** - Scholarships for the children of disabled or deceased NC veterans, special hunting and fishing license, special license plates, , and property tax relief provided to qualified veterans. State veterans cemeteries are available and state veterans nursing homes. Representation for claims at the VA Regional Office and Board of Veteran Appeals is available from the State Service Officers. **“All Services are FREE”**

**County** - Representation by a county Veterans Service Officer for filing, reopening, or appealing claims, transportation to local VAMC's, and property tax relief for qualified veterans. Military retirees and their dependents are assisted with Tricare claims and applying for military ID cards Survivors are assisted with applying for accrued benefits from the Department of Defense and Department of Veterans Affairs, Survivor's Benefits Plan, VA Survivor's Pension, burial flag, burial allowance, government marker, or VA insurance.

## **Change of Information**

Please use this page to notify us if your agency information changes.

Fax or mail this page to:

Union County Health Department  
1224 W. Roosevelt Blvd.  
Monroe, NC 28110

Phone: 704-296-4825

Fax: 704-296-4887

Attention: Health Promotion Department

Name:

Address:

Phone:

Fax:

Website:

Description/Purpose of Agency:

Whom do you serve?

What services do you provide?

## Glossary

American Red Cross of Union County  
704-283-7402

Brookdale Senior Living Communities  
704-225-9556 Clare Bridge (Memory Care)  
704-282-0530 Union Park Assisted Living

Carolinas Medical Center - Union  
704-283-3100

Child Care Resources, Inc.  
704-238-8810

Community Care Partners of Greater Mecklenburg  
704-226-1910

Community Health Services  
704-296-0909

Council on Aging in Union County  
704-292-1797

Daymark Recovery Services Inc.  
704-296-6200

Department of Social Services  
704-296-4300

Enterprise Fitness Center  
704-289-4940

First Step at CMC-Union  
704-238-2043

Friendship Home, Inc.  
704-289-4144

## Glossary

HealthQuest  
704-226-2050

H.E.L.P Crisis Pregnancy Center  
704-289-5133

Hospice of Union County, Inc.  
704-292-2100

Monroe Aquatics & Fitness Center  
704-282-4680

North Carolina Department of Crime Control & Public Safety  
Website: [www.nccrimecontrol.org](http://www.nccrimecontrol.org)

Nutrition for the Elderly  
704-283-3712

Operation ReachOut  
704-289-4237

Pediatric Boulevard  
704-821-0568

Piedmont Behavioral Healthcare  
704-721-7000

Presbyterian Hospital - Matthews  
704-384-6500

Regional AIDS Interfaith Network (RAIN)  
704-372-7246

Rural and General Public (RGP) Transportation  
704-283-3713

## Glossary

The Arc of Union County  
704-226-5111

Thompson Child and Family Focus  
704-376-7180

Turning Point of Union County  
704-283-9150

Union County Community Shelter  
704-289-5300

Union County Crisis Assistance Ministry  
704-225-0440

Union County Health Department  
704-296-4800

Union County Parks and Recreation  
704-843-3919

Union County Prescription Drug Program  
See Prescription Drug Programs for prescription drug discount card information

Union County Public Library  
704-283-8184

United Family Services  
704-226-1352

Veterans Services  
704-283-3807

YWCA - Willow Oaks  
704-283-7733

YWCA - Maurice Street  
704-225-0537

## Services

### **Digital Health Department**

Union County Digital Health Department

Website: [www.union.digitalhealthdepartment.com](http://www.union.digitalhealthdepartment.com)

#### **Description/Purpose of Agency:**

Provide digital database for all food, lodging, institution, day care, and swimming pool permits and inspections.

#### **Whom do you serve?**

Residents of Union County and surrounding areas.

#### **What services do you provide?**

Digital Health Department provides current permit and inspection data of all Union County Environmental Health permitted and inspected facilities.

**APPENDIX F**  
**SECONDARY DATA**  
**SUPPORTING DOCUMENTATION /**  
**HEALTHY NC 2020**

## HEALTHY NORTH CAROLINA 2020

### OBJECTIVES

	Current	2020 Target
<b>Tobacco Use</b>		
1. Decrease the percentage of adults who are current smokers	20.3% (2009)	13.0%
2. Decrease the percentage of high school students reporting current use of any tobacco product	25.8% (2009)	15.0%
3. Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days	14.6% (2008)	0%
<b>Physical Activity and Nutrition</b>		
1. Increase the percentage of high school students who are neither overweight nor obese	72.0% (2009)	79.2%
2. Increase the percentage of adults getting the recommended amount of physical activity	46.4% (2009)	60.6%
3. Increase the percentage of adults who consume five or more servings of fruits and vegetables per day	20.6% (2009)	29.3%
<b>Injury and Violence</b>		
1. Reduce the unintentional poisoning mortality rate (per 100,000 population)	11.0 (2008)	9.9
2. Reduce the unintentional falls mortality rate (per 100,000 population)	8.1 (2008)	5.3
3. Reduce the homicide rate (per 100,000 population)	7.5 (2008)	6.7
<b>Maternal and Infant Health</b>		
1. Reduce the infant mortality racial disparity between whites and African Americans	2.45 (2008)	1.92
2. Reduce the infant mortality rate (per 1,000 live births)	8.2 (2008)	6.3
3. Reduce the percentage of women who smoke during pregnancy	10.4% (2008)	6.8%
<b>Sexually Transmitted Disease and Unintended Pregnancy</b>		
1. Decrease the percentage of pregnancies that are unintended	39.8% (2007)	30.9%
2. Reduce the percentage of positive results among individuals aged 15 to 24 tested for chlamydia	9.7% (2009)	8.7%
3. Reduce the rate of new HIV infection diagnoses (per 100,000 population)	24.7 (2008)	22.2
<b>Substance Abuse</b>		
1. Reduce the percentage of high school students who had alcohol on one or more of the past 30 days	35.0% (2009)	26.4%
2. Reduce the percentage of traffic crashes that are alcohol-related	5.7% (2008)	4.7%
3. Reduce the percentage of individuals aged 12 years and older reporting any illicit drug use in the past 30 days	7.8% (2007-08)	6.6%
<b>Mental Health</b>		
1. Reduce the suicide rate (per 100,000 population)	12.4 (2008)	8.3
2. Decrease the average number of poor mental health days among adults in the past 30 days	3.4 (2008)	2.8
3. Reduce the rate of mental health-related visits to emergency departments (per 10,000 population)	92.0 (2008)	82.8

# HEALTHY NORTH CAROLINA 2020 OBJECTIVES

	Current	2020 Target
<b>Oral Health</b>		
1. Increase the percentage of children aged 1-5 years enrolled in Medicaid who received any dental service during the previous 12 months	46.9% (2008)	56.4%
2. Decrease the average number of decayed, missing, or filled teeth among kindergartners	1.5 (2008-09)	1.1
3. Decrease the percentage of adults who have had permanent teeth removed due to tooth decay or gum disease	47.8% (2008)	38.4%
<b>Environmental Health</b>		
1. Increase the percentage of air monitor sites meeting the current ozone standard of 0.075 ppm	62.5% (2007-09)	100.0%
2. Increase the percentage of the population being served by community water systems (CWS) with no maximum contaminant level violations (among persons on CWS)	92.2% (2009)	95.0
3. Reduce the mortality rate from work-related injuries (per 100,000 equivalent full-time workers)	3.9 (2008)	3.5
<b>Infectious Disease and Foodborne Illness</b>		
1. Increase the percentage of children aged 19-35 months who receive the recommended vaccines	77.3% (2007)	91.3%
2. Reduce the pneumonia and influenza mortality rate (per 100,000 population)	19.5 (2008)	13.5
3. Decrease the average number of critical violations per restaurant/food stand	6.1 (2009)	5.5
<b>Social Determinants of Health</b>		
1. Decrease the percentage of individuals living in poverty	16.9% (2009)	12.5%
2. Increase the four-year high school graduation rate	71.8% (2008-09)	94.6%
3. Decrease the percentage of people spending more than 30% of their income on rental housing	41.8% (2008)	36.1%
<b>Chronic Disease</b>		
1. Reduce the cardiovascular disease mortality rate (per 100,000 population)	256.6 (2008)	161.5
2. Decrease the percentage of adults with diabetes	9.6% (2009)	8.6%
3. Reduce the colorectal cancer mortality rate (per 100,000 population)	15.7(2008)	10.1
<b>Cross-cutting</b>		
1. Increase average life expectancy (years)	77.5 (2008)	79.5
2. Increase the percentage of adults reporting good, very good, or excellent health	81.9% (2009)	90.1%
3. Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years)	20.4% (2009)	8.0%
4. Increase the percentage of adults who are neither overweight nor obese	34.6% (2009)	38.1%

# HEALTHY NORTH CAROLINA 2020

## CHRONIC DISEASE

Chronic diseases such as heart disease, cancer, and diabetes are major causes of death and disability in North Carolina.<sup>17</sup>

Although genetics and other factors contribute to the development of these chronic health conditions, individual behaviors play a major role. As much as 50% of individual health can be attributed to behavior alone.<sup>226</sup> Physical inactivity, unhealthy eating, smoking, and excessive alcohol consumption are four behavioral risk factors underlying much of the burden caused by chronic disease.<sup>227</sup>

### 2020 Objectives

#### OBJECTIVE 1: REDUCE THE CARDIOVASCULAR DISEASE MORTALITY RATE (PER 100,000 POPULATION)

(KEY PERFORMANCE INDICATOR)

*Rationale for selection:* Heart disease is the second leading cause of death for men and women in North Carolina.<sup>228</sup> The risk for heart disease increases as a person ages. In addition to behavioral risk factors, obesity, high blood pressure, high cholesterol, and diabetes are other known risk factors for heart disease.<sup>229</sup>

CURRENT (2008) <sup>ppp</sup>	2020 TARGET
256.6	161.5

#### OBJECTIVE 2: DECREASE THE PERCENTAGE OF ADULTS WITH DIABETES

*Rationale for selection:* The majority (90%-95%) of all people diagnosed with diabetes have type 2 diabetes, formerly known as non-insulin dependent or adult-onset diabetes. Diabetes can lead to serious and costly health problems such as heart disease, stroke, and kidney failure. Overweight/obesity and being older are risk factors for diabetes.<sup>230</sup>

CURRENT (2009) <sup>231</sup>	2020 TARGET
9.6%	8.6%

#### OBJECTIVE 3: REDUCE THE COLORECTAL CANCER MORTALITY RATE (PER 100,000 POPULATION)

*Rationale for selection:* Colorectal cancer is the third leading cause of cancer death in both men and women in the country. Screening can reduce the number of deaths because the disease is very treatable if found early.<sup>232</sup> However, one in three North Carolinians (33.4%) aged 50 or more years report they have never been screened (by sigmoidoscopy or colonoscopy) for colorectal cancer.<sup>233</sup>

CURRENT (2008) <sup>qqq</sup>	2020 TARGET
15.7	10.1

ppp State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. July 9, 2010.

qqq State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. August 10, 2010.

## Disparities in Chronic Disease

**Cardiovascular disease (CVD) mortality:** African Americans have the highest CVD mortality rate: 316.4 deaths per 100,000 population, compared with 237.9 deaths per 100,000 population for whites (2008). In addition, men are more susceptible to CVD mortality than women, as indicated by rates of 303.7 and 209.5 deaths per 100,000 population, respectively (2008).<sup>rrr</sup>

**Diabetes:** African Americans are nearly twice as likely to have diabetes, compared with whites (15.6% versus 8.4% in 2009). Compared with whites, American Indians are more likely to have diabetes (11.7% in 2009). In general, individuals with less education and with lower incomes are also more likely to have diabetes (2009). Among individuals with less than a high school education, 15.3% report diabetes, compared with 5.5% of college graduates (2009). Of those with annual incomes less than \$15,000, 14.6% report diabetes, compared with 4.9% of individuals with incomes of \$75,000 or greater (2009).<sup>234</sup>

**Colorectal cancer mortality:** The burden of death due to colorectal cancer is greatest among African Americans. The mortality rate is 23.2 per 100,000 population for African Americans versus 14.0 per 100,000 population for whites (2008). As expected, colorectal cancer death rates increase with age. The mortality rate jumps from 1.6 per 100,000 population for individuals aged 20-44 years to 19.3 per 100,000 population for individuals aged 45-64 years (2008). The rate more than quadruples in the group aged 65 years or more (2008).<sup>sss</sup>

## Strategies to Prevent and Reduce Chronic Disease

Level of the Socioecological Model	Strategies
<b>Individual</b>	Eat more fruits and vegetables, increase physical activity level <sup>51</sup> ; be tobacco free. <sup>26</sup>
<b>Family/Home</b>	Reduce screen time <sup>52</sup> ; encourage eating healthy and physical activity <sup>51</sup> ; maintain a tobacco-free home. <sup>27</sup>
<b>Clinical</b>	Screen for colorectal cancer (in adults beginning at age 50 years), type 2 diabetes in adults with high blood pressure, cholesterol abnormalities; screen and offer intensive counseling and behavioral health interventions for obese adults; offer dietary counseling for those at risk of cardiovascular disease or other diet-related chronic diseases; prescribe aspirin for men and women aged 45-79 years to reduce the number of heart attacks <sup>34</sup> ; offer blood pressure management to individuals with diabetes <sup>235</sup> ; offer a follow-up colonoscopy within 15 months of diagnosis and treatment of an individual with colorectal cancer <sup>236</sup> ; prescribe beta-blockers for individuals with prior myocardial infarction. <sup>237</sup>
<b>Schools and Child Care</b>	Offer high-quality physical education and healthy foods and beverages <sup>17,51,53</sup> ; implement evidence-based healthful living curricula in schools. <sup>17</sup>
<b>Worksites</b>	Offer worksite wellness programs intended to improve diet and amount of physical activity. <sup>238</sup>
<b>Insurers</b>	With no cost sharing, cover colorectal cancer and diabetes screening as recommended by the USPSTF; cover obesity screening for children aged more than 6 years and adults and for counseling and behavioral interventions for those identified as obese; offer nutrition counseling for adults with hyperlipidemia and other known risk factors for cardiovascular disease <sup>34,ttt</sup> ; offer diabetes case management by appointing a professional casemanager who oversees and coordinates all of the services received by someone with diabetes. <sup>239</sup>
<b>Community</b>	Offer diabetes self-management education programs <sup>240</sup> ; implement <i>Eat Smart, Move More</i> community-wide obesity prevention strategies <sup>17</sup> ; promote menu labeling in restaurants <sup>53</sup> ; build active living communities <sup>53</sup> ; support joint use of recreational facilities <sup>17</sup> ; support school-based and school-linked health services. <sup>31</sup>
<b>Public Policies</b>	Provide community grants to promote physical activity and healthy eating <sup>53</sup> ; support community efforts to build active living communities <sup>53</sup> ; fund <i>Eat Smart, Move More</i> community-wide obesity prevention plans <sup>17</sup> ; provide funding to support school-based and school-linked health services and achieve a statewide ratio of 1 school nurse for every 750 middle and high school students. <sup>31</sup>

rrr State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. November 24, 2010. sss State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. November 24, 2010.

ttt Patient Protection and Affordable Care Act, Pub L No. 111-148, § § 1001, 4105-4106, enacting §2713 of the Public Health Service Act, 42 USC §300gg.

## Healthy People 2020 Summary of Objectives

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### Cancer

<b>Number</b>	<b>Objective Short Title</b>
C-1	Overall cancer deaths
C-2	Lung cancer deaths
C-3	Female breast cancer deaths
C-4	Uterine cervix cancer deaths
C-5	Colorectal cancer deaths
C-6	Oropharyngeal cancer deaths
C-7	Prostate cancer deaths
C-8	Melanoma deaths
C-9	Invasive colorectal cancer
C-10	Invasive uterine cervical cancer
C-11	Late-stage female breast cancer
C-12	Statewide cancer registries
C-13	Cancer survival
C-14	Mental and physical health-related quality of life of cancer survivors
C-15	Cervical cancer screening
C-16	Colorectal cancer screening
C-17	Breast cancer screening
C-18	Receipt of counseling about cancer screening
C-19	Prostate-specific antigen (PSA) test
C-20	Ultraviolet irradiation exposure

## Topic Area: Cancer

**C-1:** Reduce the overall cancer death rate.

**Target:** 160.6 deaths per 100,000 population.

**Baseline:** 178.4 cancer deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-2:** Reduce the lung cancer death rate.

**Target:** 45.5 deaths per 100,000 population.

**Baseline:** 50.6 lung cancer deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-3:** Reduce the female breast cancer death rate.

**Target:** 20.6 deaths per 100,000 females.

**Baseline:** 22.9 female breast cancer deaths per 100,000 females occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-4:** Reduce the death rate from cancer of the uterine cervix.

**Target:** 2.2 deaths per 100,000 females.

**Baseline:** 2.4 uterine cervix cancer deaths per 100,000 females occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-5:** Reduce the colorectal cancer death rate.

**Target:** 14.5 deaths per 100,000 population.

**Baseline:** 17.0 colorectal cancer deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Modeling/projection.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-6:** Reduce the oropharyngeal cancer death rate.

**Target:** 2.3 deaths per 100,000 population.

**Baseline:** 2.5 oropharyngeal cancer deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-7:** Reduce the prostate cancer death rate.

**Target:** 21.2 deaths per 100,000 males.

**Baseline:** 23.5 prostate cancer deaths per 100,000 males occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NC

**C-8:** Reduce the melanoma cancer death rate.

**Target:** 2.4 deaths per 100,000 population.

**Baseline:** 2.7 melanoma cancer deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Vital Statistics System (NVSS), CDC, NCHS.

**C-9:** Reduce invasive colorectal cancer.

**Target:** 38.6 new cases per 100,000 population.

**Baseline:** 45.4 new cases of invasive colorectal cancer per 100,000 population were reported in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Modeling/projection.

**Data sources:** National Program of Cancer Registries (NPCR), CDC; Surveillance, Epidemiology and End Results (SEER) Program, NIH, NCI.

**C-10:** Reduce invasive uterine cervical cancer.

**Target:** 7.1 new cases per 100,000 females.

**Baseline:** 7.9 new cases of invasive uterine cancer per 100,000 females were reported in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data sources:** National Program of Cancer Registries (NPCR), CDC; Surveillance, Epidemiology and End Results (SEER) Program, NIH, NCI.

**C-11:** Reduce late-stage female breast cancer.

**Target:** 41.0 new cases per 100,000 females.

**Baseline:** 43.2 new cases of late-stage breast cancer per 100,000 females were reported in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Modeling/projection.

**Data sources:** National Program of Cancer Registries (NPCR), CDC; Surveillance, Epidemiology and End Results (SEER) Program, NIH, NCI.

**C-12:** Increase the number of central, population-based registries from the 50 States and the District of Columbia that capture case information on at least 95 percent of the expected number of reportable cancers.

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 42 States had central, population-based registries that captured case information on at least 95 percent of the expected number of reportable cancers in 2006.

**Target setting method:** Total coverage.

**Data sources:** National Program of Cancer Registries (NPCR), CDC; Surveillance, Epidemiology and End Results (SEER) Program, NIH, NCI.

**C-13:** Increase the proportion of cancer survivors who are living 5 years or longer after diagnosis.

**Target:** 72.8 percent.

**Baseline:** 66.2 percent of persons with cancer were living 5 years or longer after diagnosis in 2007.

**Target setting method:** 10 percent improvement.

**Data source:** Surveillance Epidemiology and End Results (SEER) Program, NIH, NCI.

**C-14:** (Developmental) Increase the mental and physical health-related quality of life of cancer survivors.

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS

**C–15:** Increase the proportion of women who receive a cervical cancer screening based on the most recent guidelines.

**Target:** 93.0 percent.

**Baseline:** 84.5 percent of women aged 21 to 65 years received a cervical cancer screening based on the most recent guidelines in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–16:** Increase the proportion of adults who receive a colorectal cancer screening based on the most recent guidelines.

**Target:** 70.5 percent.

**Baseline:** 54.2 percent of adults aged 50 to 75 years received a colorectal cancer screening based on the most recent guidelines in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Modeling/projection.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–17:** Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines.

**Target:** 81.1 percent.

**Baseline:** 73.7 percent of females aged 50 to 74 years received a breast cancer screening based on the most recent guidelines in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–18:** Increase the proportion of adults who were counseled about cancer screening consistent with current guidelines.

**C–18.1** Increase the proportion of women who were counseled by their providers about mammograms.

**Target:** 76.8 percent.

**Baseline:** 69.8 percent of women aged 50 to 74 years were counseled by their providers about mammograms in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–18.2** Increase the proportion of women who were counseled by their providers about Pap tests.

**Target:** 65.8 percent.

**Baseline:** 59.8 percent of women aged 21 to 65 years were counseled by their providers about Pap tests in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–18.3** (Developmental) Increase the proportion of adults who were counseled by their providers about colorectal cancer screening.

**Potential data source:** National Health Interview Survey (NHIS), NCHS, CDC.

**C–19:** (Developmental) Increase the proportion of men who have discussed with their health care provider whether or not to have a prostate-specific antigen (PSA) test to screen for prostate cancer.

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**C–20:** Increase the proportion of persons who participate in behaviors that reduce their exposure to harmful ultraviolet (UV) irradiation and avoid sunburn.

**C–20.1** (Developmental) Reduce the proportion of adolescents in grades 9 through 12 who report sunburn.

**Potential data source:** Youth Risk Behavior Surveillance Survey (YRBSS), CDC.

**C–20.2** (Developmental) Reduce the proportion of adults aged 18 years and older who report sunburn.

**Potential data source:** National Health Interview Survey (NHIS), NCHS, CDC.

**C–20.3** Reduce the proportion of adolescents in grades 9 through 12 who report using artificial sources of ultraviolet light for tanning.

**Target:** 14.0 percent.

**Baseline:** 15.6 percent of adolescents in grades 9 through 12 reported using artificial sources of ultraviolet light for tanning in 2009.

**Target setting method:** 10 percent improvement.

**Data source:** Youth Risk Behavior Surveillance Survey (YRBSS), CDC.

**C–20.4** Reduce the proportion of adults aged 18 and older who report using artificial sources of ultraviolet light for tanning.

**Target:** 13.7 percent.

**Baseline:** 15.2 percent of adults aged 18 and older reported using artificial sources of ultraviolet light for tanning in 2008 (age adjusted to the year 2000 standard population). **Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), NCHS, CDC.

**C–20.5** Increase the proportion of adolescents in grades 9 through 12 who follow protective measures that may reduce the risk of skin cancer.

**Target:** 11.2 percent.

**Baseline:** 9.3 percent of adolescents in grades 9 through 12 followed protective measures that may reduce the risk of skin cancer in 2009.

**Target setting method:** 20 percent improvement.

**Data source:** Youth Risk Behavior Surveillance Survey (YRBSS), CDC.

**C–20.6** Increase the proportion of adults aged 18 years and older who follow protective measures that may reduce the risk of skin cancer.

**Target:** 80.1 percent.

**Baseline:** 72.8 percent of adults aged 18 years and older followed protective measures that may reduce the risk of skin cancer in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

\*Data Source: <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=5>

# HEALTHY NORTH CAROLINA 2020 TOBACCO USE

Tobacco use is the leading cause of preventable death in North Carolina. Approximately 30% of all cancer deaths and nearly 90% of lung cancer deaths—the leading cancer death among men and women—are caused by smoking.<sup>11</sup> In addition, those who smoke have increased risks for heart attack and stroke.<sup>12</sup> Other tobacco products also pose health risks. Smokeless tobacco, for example, is a known cause of human cancer.<sup>13</sup>

Nonsmokers also are harmed by tobacco use through their exposure to secondhand smoke, which contains more than 7,000 chemicals. About 70 of these can cause cancer, and hundreds are toxic.<sup>14</sup> Tobacco use is a costly problem in the state leading to medical expenditures of \$2.4 billion (in 2004), including \$769 million to Medicaid.<sup>15</sup> In 2006, secondhand smoke exposure alone led to excess medical costs of approximately \$293.3 million (in 2009 dollars).<sup>16</sup>

## 2020 Objectives

### OBJECTIVE 1: DECREASE THE PERCENTAGE OF ADULTS WHO ARE CURRENT SMOKERS

(KEY PERFORMANCE INDICATOR)

*Rationale for selection:* An estimated 13,000 North Carolinians aged 35 years or older died from a smoking-related cause each year during 2005-2009. North Carolina has the 14<sup>th</sup> highest smoking prevalence in the nation. Although overall smoking rates among adults in the state have dropped in the past decade, North Carolina still lags behind the national average.<sup>17</sup>

CURRENT (2009) <sup>18</sup>	2020 TARGET
20.3%	13.0%

### OBJECTIVE 2: DECREASE THE PERCENTAGE OF HIGH SCHOOL STUDENTS REPORTING CURRENT USE OF ANY TOBACCO PRODUCT<sup>k</sup>

*Rationale for selection:* Preventing youth from using tobacco is important to reducing the overall smoking rate. Most adults who use tobacco began smoking before the age of 18 years, with the average age of initiation between 12 and 14 years.<sup>19</sup> Smokers typically become addicted to nicotine before they reach age 20.<sup>20</sup> Youth who use other tobacco products (OTPs) are more likely to smoke.<sup>13</sup>

CURRENT (2009) <sup>l</sup>	2020 TARGET
25.8%	15.0%

### OBJECTIVE 3: DECREASE THE PERCENTAGE OF PEOPLE EXPOSED TO SECONDHAND SMOKE IN THE WORKPLACE IN THE PAST SEVEN DAYS<sup>m</sup>

*Rationale for selection:* Secondhand smoke exposure causes heart disease and lung cancer. In fact, the risk to nonsmokers for heart disease increases by 25%-30% and for lung cancer by 20%-30%.<sup>21</sup> There is no safe level of exposure to secondhand smoke, and exposure for even a short duration is harmful to health.<sup>22</sup>

CURRENT (2008) <sup>23</sup>	2020 TARGET
14.6%	0%

<sup>k</sup> “Any tobacco product” includes cigarettes, cigars, smokeless tobacco, pipes, or bidis.

<sup>l</sup> Tobacco Prevention and Control Branch, North Carolina Department of Health and Human Services. Written (email) communication. May 20, 2010. <sup>m</sup> Includes only individuals employed for wages or self-employed.

## Disparities in Tobacco Use

*Smoking among adults:* Individuals with less education and those with lower incomes are more likely to smoke. People with less than a high school education are three times as likely to smoke as college graduates (30.9% versus 10.1% in 2009), and those with higher incomes are less likely to smoke (10.4% among those making \$75,000 or more versus 29.4% among those making less than \$15,000 in 2009). The smoking prevalence among American Indians of 41.6% is twice that of other racial/ethnic groups (2009).<sup>24</sup> In addition, particular subsets of the population are more likely to smoke, for example, individuals with certain lifetime mental illnesses and those with serious psychological distress.<sup>25</sup>

*Tobacco use among high school students:* Males are more likely to use tobacco products than females (30.8% versus 20.2% in 2009). Use increases as age and grade increase. Students in the 12<sup>th</sup> grade are nearly twice as likely to report use than students in the ninth grade (35.9% versus 18.2% in 2009). White students report the highest use among racial/ethnic groups (28.3% for whites versus 21.8% for African American and 18.5% for Hispanics in 2009).<sup>n,o</sup>

*Secondhand smoke (SHS) exposure in the workplace:* Males are approximately two times as likely to be exposed to SHS at the workplace than women (18.7% versus 9.5% in 2008). Individuals with lower incomes are more likely to report exposure. For example, 29.4% of those earning less than \$15,000 report exposure versus 7.9% earning \$75,000 or more (2008). Exposure is also inversely related to education; individuals with more education are more likely to not be exposed (2008).<sup>23</sup>

## Strategies to Prevent and Reduce Tobacco Use

Level of the Socioecological Model	Strategies
<b>Individual</b>	Be tobacco free. <sup>26</sup>
<b>Family/Home</b>	Maintain a tobacco-free home. <sup>27</sup>
<b>Clinical</b>	Offer comprehensive cessation services (counseling and medication) to help smokers and other tobacco users quit <sup>28</sup> ; stay up-to-date on evidence-based clinical preventive screenings, counseling, and treatment guidelines. <sup>29</sup>
<b>Schools and Child Care</b>	Enforce tobacco-free school laws <sup>30</sup> ; enforce smokefree child care facility rules <sup>p</sup> ; implement evidence-based healthful living curricula in schools. <sup>17,31</sup>
<b>Worksites</b>	Institute a worksite wellness program using interventions accompanied by incentives for cessation <sup>32</sup> ; implement smoking bans or restrictions in worksites. <sup>33</sup>
<b>Insurers</b>	Provide coverage with no cost sharing for tobacco use screening and counseling for adolescents; and for screening, cessation counseling, and appropriate cessation interventions, including cessation medications, for adults; and for screening and pregnancy-tailored counseling for pregnant women <sup>34,q</sup> ; provide coverage for drug use assessment for individuals aged 11-21 years. <sup>35</sup>
<b>Community</b>	Expand smoking bans or restrictions in community spaces <sup>36</sup> ; encourage mass media campaigns (coupled with local laws directed at tobacco retailers) <sup>36,37</sup> ; support school-based and school-linked health services. <sup>31</sup>
<b>Public Policies</b>	Expand tobacco-free policies to all workplaces and in community establishments <sup>36</sup> ; increase the tobacco tax <sup>38</sup> ; provide tax incentives to encourage worksite wellness programs <sup>17</sup> ; fund and implement a Comprehensive Tobacco Control Program <sup>17</sup> ; provide funding to support school-based and school-linked health services and achieve a statewide ratio of 1 school nurse for every 750 middle and high school students. <sup>31</sup>

n Tobacco Prevention and Control Branch, North Carolina Department of Health and Human Services. Written (email) communication. December 1, 2010.

o In this report, white and African American are racial categories and do not distinguish ethnicity unless otherwise noted. African American includes African Americans and other blacks living in the United States. Hispanic is an ethnic category and does not distinguish race.

p 10A NCAC § 09.0604(g)

q Patient Protection and Affordable Care Act, Pub L No. 111-148, § 1001, 4105-4106, enacting §2713 of the Public Health Service Act, 42 USC §300gg.

## Healthy People 2020 Summary of Objectives

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### Tobacco Use

Number	Objective Short Title
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#### Tobacco Use

TU-1	Adult tobacco use
TU-2	Adolescent tobacco use
TU-3	Initiation of tobacco use
TU-4	Smoking cessation attempts by adults
TU-5	Adult success in smoking cessation
TU-6	Smoking cessation during pregnancy
TU-7	Smoking cessation attempts by adolescents

#### Health Systems Change

TU-8	Medicaid coverage for smoking cessation
TU-9	Tobacco screening in health care settings
TU-10	Tobacco cessation counseling in health care settings

#### Social and Environmental Changes

TU-11	Exposure to secondhand smoke
TU-12	Indoor worksite smoking policies
TU-13	Smoke-free indoor air laws
TU-14	Smoke-free homes
TU-15	Tobacco-free schools
TU-16	Preemptive tobacco control laws
TU-17	Tobacco tax
TU-18	Exposure of adolescents and young adults to advertising and promotion
TU-19	Enforcement of illegal sales to minors laws
TU-20	Evidence-based tobacco control programs

## Topic Area: Tobacco Use

### Tobacco Use

#### TU–1: Reduce tobacco use by adults.

##### TU–1.1 Reduce cigarette smoking by adults.

**Target:** 12.0 percent.

**Baseline:** 20.6 percent of adults aged 18 years and older were current cigarette smokers in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

##### TU–1.2 Reduce use of smokeless tobacco products by adults.

**Target:** 0.3 percent.

**Baseline:** 2.3 percent of adults aged 18 years and older were current users of snuff or chewing tobacco products in 2005 (age adjusted to the year 2000 standard population).

**Target setting method:** 2 percentage point improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

##### TU–1.3 Reduce use of cigars by adults.

**Target:** 0.2 percent.

**Baseline:** 2.2 percent of adults aged 18 years and older were current cigar smokers in 2005 (age adjusted to the year 2000 standard population).

**Target setting method:** 2 percentage point improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

#### TU–2: Reduce tobacco use by adolescents.

##### TU–2.1 Reduce use of tobacco products by adolescents (past month).

**Target:** 21.0 percent.

**Baseline:** 26.0 percent of adolescents in grades 9 through 12 used cigarettes, chewing tobacco, snuff, or cigars in the past 30 days in 2009.

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

##### TU–2.2 Reduce use of cigarettes by adolescents (past month).

**Target:** 16.0 percent.

**Baseline:** 19.5 percent of adolescents in grades 9 through 12 smoked cigarettes in the past 30 days in 2009.

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

##### TU–2.3 Reduce use of smokeless tobacco products by adolescents (past month).

**Target:** 6.9 percent.

**Baseline:** 8.9 percent of adolescents in grades 9 through 12 used smokeless (chewing tobacco or snuff) tobacco products in the past 30 days in 2009.

**Target setting method:** 2 percentage point improvement.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

##### TU–2.4 Reduce use of cigars by adolescents (past month).

**Target:** 8.0 percent.

**Baseline:** 14.0 percent of adolescents in grades 9 through 12 smoked cigars in the past 30 days in 2009.  
**Target setting method:** Retention of Healthy People 2010 target.  
**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

**TU–3: Reduce the initiation of tobacco use among children, adolescents, and young adults.**

**TU–3.1 Reduce the initiation of the use of tobacco products among children and adolescents aged 12 to 17 years.**

**Target:** 5.7 percent.

**Baseline:** 7.7 percent of children and adolescents aged 12 to 17 years who had not previously used tobacco products in their lifetime first used tobacco products in the past 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.2 Reduce the initiation of the use of cigarettes among children and adolescents aged 12 to 17 years.**

**Target:** 4.2 percent.

**Baseline:** 6.2 percent of children and adolescents aged 12 to 17 years who had not previously smoked cigarettes in their lifetime first smoked cigarettes in the past 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.3 Reduce the initiation of the use of smokeless tobacco products by children and adolescents aged 12 to 17 years.**

**Target:** 0.5 percent.

**Baseline:** 2.5 percent of children and adolescents aged 12 to 17 years who had not previously used smokeless tobacco in their lifetime first used smokeless tobacco in the previous 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.4 Reduce the initiation of the use of cigars by children and adolescents aged 12 to 17 years.**

**Target:** 2.8 percent.

**Baseline:** 4.8 percent of children and adolescents aged 12 to 17 years who had not previously smoked cigars in their lifetime first smoked cigars in the previous 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.5 Reduce the initiation of the use of tobacco products by young adults aged 18 to 25 years.**

**Target:** 8.8 percent.

**Baseline:** 10.8 percent of young adults aged 18 to 25 years who had not previously used tobacco products in their lifetime first used tobacco products in the past 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.6 Reduce the initiation of the use of cigarettes by young adults aged 18 to 25 years.**

**Target:** 6.3 percent.

**Baseline:** 8.3 percent of young adults aged 18 to 25 years who had not previously smoked cigarettes in their lifetime first smoked cigarettes in the past 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.7 Reduce the initiation of the use of smokeless tobacco products by young adults aged 18 to 25 years.**

**Target:** 0.2 percent.

**Baseline:** 2.2 percent of young adults aged 18 to 25 years who had not previously used smokeless tobacco in their lifetime first used smokeless tobacco products in the previous 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–3.8 Reduce the initiation of the use of cigars by young adults aged 18 to 25 years**

**Target:** 4.1 percent.

**Baseline:** 6.1 percent of young adults aged 18 to 25 years who had not previously smoked cigars in their lifetime first smoked cigars in the previous 12 months in 2008.

**Target setting method:** 2 percentage point improvement.

**Data source:** National Survey on Drug Use and Health (NSDUH), SAMHSA.

**TU–4: Increase smoking cessation attempts by adult smokers.**

**TU–4.1 Increase smoking cessation attempts by adult smokers.**

**Target:** 80.0 percent.

**Baseline:** 48.3 percent of adult smokers aged 18 years and older attempted to stop smoking in the past 12 months in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**TU–4.2 (Developmental) Increase smoking cessation attempts using evidence- based strategies by adult smokers.**

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**TU–5: Increase recent smoking cessation success by adult smokers.**

**TU-5.1 Increase recent smoking cessation success by adult smokers.**

**Target:** 8.0 percent.

**Baseline:** 6.0 percent of adult smokers aged 18 years and older last smoked 6 months to 1 year ago in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** 2 percentage point improvement.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**TU–5.2 (Developmental) Increase recent smoking cessation success by adult smokers using evidence-based strategies.**

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**TU–6: Increase smoking cessation during pregnancy.**

**Target:** 30.0 percent.

**Baseline:** 11.3 percent of females aged 18 to 49 years (who reported having a live birth in the past 5 years and smoking at any time during their pregnancy with their last child), stopped smoking during the first trimester of their pregnancy and stayed off cigarettes for the rest of their pregnancy in 2005.

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**TU–7: Increase smoking cessation attempts by adolescent smokers.**

**Target:** 64.0 percent.

**Baseline:** 58.5 percent of adolescent smokers in grades 9 through 12 tried to stop smoking in the past 12 months in 2009.

**Target setting method:** Retention of Healthy People 2010 target.

**Data source:** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

**Health Systems Change**

**TU–8: Increase comprehensive Medicaid insurance coverage of evidence-based treatment for nicotine dependency in States and the District of Columbia.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 6 States had comprehensive Medicaid insurance coverage of evidence-based treatment for nicotine dependency in 2007.

**Target setting method:** Total coverage.

**Data source:** State Medicaid Coverage Survey for Tobacco-Dependence Treatments, Berkeley, Center for Health and Public Policy Studies (CHPPS).

**TU–9: Increase tobacco screening in health care settings.**

**TU–9.1 Increase tobacco screening in office-based ambulatory care settings.**

**Target:** 69.1 percent.

**Baseline:** 62.8 percent of office-based ambulatory care setting visits among patients aged 18 years and older had tobacco screening in 2007.

**Target setting method:** 10 percent improvement.

**Data source:** National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS.

**TU–9.2 Increase tobacco screening in hospital ambulatory care settings.**

**Target:** 66.3 percent.

**Baseline:** 60.3 percent of hospital ambulatory care setting visits among patients aged 18 years and older had tobacco screening in 2007.

**Target setting method:** 10 percent improvement.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**TU–9.3 (Developmental) Increase tobacco screening in dental care settings.**

**Potential data source:** Survey of Dental Practice, American Dental Association (ADA).

**TU–9.4 (Developmental) Increase tobacco screening in substance abuse care settings.**

**Potential data source:** National Survey of Substance Abuse Treatment Services (N-SSATS), SAMHSA.

**TU–10: Increase tobacco cessation counseling in health care settings.**

**TU–10.1 Increase tobacco cessation counseling in office-based ambulatory care settings.**

**Target:** 21.2 percent.

**Baseline:** 19.3 percent of visits to an office-based ambulatory care setting among current tobacco users aged 18 years and older had tobacco cessation counseling ordered or provided during that visit in 2007.

**Target setting method:** 10 percent improvement.

**Data source:** National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS.

**TU–10.2 Increase tobacco cessation counseling in hospital ambulatory care settings.**

**Target:** 24.8 percent.

**Baseline:** 22.5 percent of visits to a hospital ambulatory care setting among current tobacco users aged 18 years and older had tobacco cessation counseling ordered or provided during that visit in 2007.

**Target setting method:** 10 percent improvement.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**TU–10.3 (Developmental) Increase tobacco cessation counseling in dental care settings.**

**Potential data source:** Survey of Dental Practice, American Dental Association (ADA).

**TU–10.4 (Developmental) Increase tobacco cessation counseling in substance abuse care settings.**

**Potential data source:** National Survey of Substance Abuse Treatment Services (N-SSATS), SAMHSA.

**Social and Environmental Changes**

**TU–11: Reduce the proportion of nonsmokers exposed to secondhand smoke.**

**TU–11.1 Reduce the proportion of children aged 3 to 11 years exposed to secondhand smoke.**

**Target:** 47.0 percent.

**Baseline:** 52.2 percent of children aged 3 to 11 years were exposed to secondhand smoke in 2005–08.

**Target setting method:** 10 percent improvement.

**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**TU–11.2 Reduce the proportion of adolescents aged 12 to 17 years exposed to secondhand smoke.**

**Target:** 41.0 percent.

**Baseline:** 45.5 percent of nonsmoking adolescents aged 12 to 17 years were exposed to secondhand smoke in 2005–08.

**Target setting method:** 10 percent improvement.

**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**TU–11.3 Reduce the proportion of adults aged 18 years and older exposed to secondhand smoke.**

**Target:** 33.8 percent.

**Baseline:** 37.6 percent of nonsmoking adults aged 18 years and older were exposed to

secondhand smoke in 2005–08 (age adjusted to the year 2000 standard population).

**Target setting method:** 10 percent improvement.

**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**TU–12: Increase the proportion of persons covered by indoor worksite policies that prohibit smoking.**

**Target:** 100.0 percent.

**Baseline:** 75.3 percent of employed persons aged 18 years and older (who worked in indoor public worksites) were covered by indoor worksite policies that prohibited smoking in 2006–07.

**Target setting method:** Project/trend analysis.

**Data source:** Tobacco Use Supplement to the Current Population Survey (TUS–CPS), U.S. Census Bureau; DOL, BLS.

**TU–13: Establish laws in States, District of Columbia, Territories, and Tribes on smoke-free indoor air that prohibit smoking in public places and worksites.**

**TU–13.1 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in private worksites.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 30 had smoke-free indoor air laws that prohibit smoking in private worksites in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.2 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in public worksites.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 34 had smoke-free indoor air laws that prohibit smoking in public worksites in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.3 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in restaurants.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 28 (27 States and the District of Columbia) had smoke-free indoor air laws that prohibit smoking in restaurants in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.4 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in bars.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 22 (21 States and the District of Columbia) had smoke-free indoor air laws that prohibit smoking in bars in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.5 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in gaming halls.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 20 States had smoke-free indoor air laws prohibiting smoking in gaming halls in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.6 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in commercial daycare centers.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 38 (37 States and the District of Columbia) had smoke-free indoor air laws that prohibit smoking in commercial daycare centers in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.7 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in home-based daycare centers.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 37 (36 States and the District of Columbia) had smoke-free indoor air laws that prohibit smoking in home-based daycare centers in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.8 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in public transportation.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 38 (37 States and the District of Columbia) had smoke-free indoor air laws that prohibit smoking in public transportation in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.9 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in hotels and motels.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 0 States or the District of Columbia had smoke-free indoor air laws that prohibit smoking in hotels and motels in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.10 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in multiunit housing.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 0 States or the District of Columbia had smoke-free indoor air laws that prohibit smoking in multiunit housing in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.11 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in vehicles with children.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 4 States had smoke-free indoor air laws that prohibit smoking in vehicles with children in 2009.

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.12 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in prisons and correctional facilities.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 8 States had smoke-free indoor air laws that prohibit smoking in prisons and

**Target setting method:** Total coverage.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU– 13.13 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in substance abuse treatment facilities.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 9 States had smoke-free indoor air laws prohibiting smoking in substance abuse treatment facilities in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.14 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in mental health treatment facilities.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 9 States had smoke-free indoor air laws prohibiting smoking in mental health treatment facilities in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU– 13.15 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking in entrances and exits of all public places.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 1 State had a smoke-free indoor air law prohibiting smoking in entrances and exits of restaurants, bars, private worksites, and government worksites in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.16 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking on hospital campuses.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 0 States and the District of Columbia had smoke-free indoor air laws prohibiting smoking on hospital campuses in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–13.17 Establish laws in States and the District of Columbia on smoke-free indoor air that prohibit smoking on college and university campuses.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 1 State had a smoke-free indoor air law prohibiting smoking on college and university campuses in 2009.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–14: Increase the proportion of smoke-free homes.**

**Target:** 87.0 percent.

**Baseline:** 79.1 percent of adults aged 18 years and older reported that no smoking is allowed in their home in 2006–07.

**Target setting method:** 10 percent improvement

**Data source:** Tobacco Use Supplement to the Current Population Survey (TUS-CPS), U.S. Census Bureau; DOL, BLS.

**TU–15: Increase tobacco-free environments in schools, including all school facilities, property, vehicles, and school events.**

**15.1 Increase tobacco-free environments in junior high schools, including all school facilities, property, vehicles, and school events.**

**Target:** 100 percent.

**Baseline:** 65.4 percent of junior high schools had tobacco-free environments, including all school facilities, property, vehicles, and school events, in 2006.

**Target setting method:** Total coverage.

**Data source:** School Health Policies and Practices Study (SHPPS), CDC, NCCDPHP.

**TU–15.2 Increase tobacco-free environments in middle schools, including all school facilities, property, vehicles, and school events.**

**Target:** 100 percent.

**Baseline:** 58.7 percent of middle schools had tobacco-free environments, including all school facilities, property, vehicles, and school events, in 2006.

**Target setting method:** Total coverage.

**Data source:** School Health Policies and Practices Study (SHPPS), CDC, NCCDPHP.

**TU–15.3 Increase tobacco-free environments in high schools, including all school facilities, property, vehicles, and school events.**

**Target:** 100 percent.

**Baseline:** 66.1 percent of high schools had tobacco-free environments, including all school facilities, property, vehicles, and school events, in 2006.

**Target setting method:** Total coverage.

**Data source:** School Health Policies and Practices Study (SHPPS), CDC, NCCDPHP.

**TU–15.4 (Developmental) Increase tobacco-free environments in Head Start, including all school facilities, property, vehicles, and school events.**

**Potential data sources:** To be determined.

**TU–16: Eliminate State laws that preempt stronger local tobacco control laws.**

**TU–16.1 Eliminate State laws that preempt stronger local tobacco control laws on smoke-free indoor air.**

**Target:** 0 States and the District of Columbia.

**Baseline:** 12 States preempted stronger local tobacco control laws on smoke-free indoor air in 2009.

**Target setting method:** Total elimination.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–16.2 Eliminate State laws that preempt stronger local tobacco control laws on advertising. Target: 0 States and the District of Columbia.**

**Baseline:** 18 States preempted stronger local tobacco control laws on advertising in 2009.

**Target setting method:** Total elimination.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–16.3 Eliminate State laws that preempt stronger local tobacco control laws on youth access.**

**Target:** 0 States and the District of Columbia.

**Baseline:** 22 States preempted stronger local tobacco control laws on youth access to tobacco products in 2009.

**Target setting method:** Total elimination.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–17: Increase the Federal and State tax on tobacco products.**

**TU–17.1 Increase the Federal and State tax cigarettes.**

**Target:** 52 (50 States, the District of Columbia, and the Federal Government).

**Baseline:** 0 States, the District of Columbia, and the Federal Government increased tax on cigarettes by \$1.50 over the tracking period beginning in 2010.

**Target setting method:** Maintain consistency with national programs, regulations, policies, and laws.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–17.2 Increase the Federal and State tax smokeless tobacco products.**

**Target:** 52 (50 States, the District of Columbia, and the Federal Government).

**Baseline:** 0 States, the District of Columbia, and the Federal Government increased tax on smokeless tobacco products by \$1.50 over the tracking period beginning in 2010.

**Target setting method:** Maintain consistency with national programs, regulations, policies, and laws.

**Data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–17.3 (Developmental) Increase the Federal and State tax on other smoked tobacco products.**

**Potential data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–18: Reduce the proportion of adolescents and young adults in grades 6 through 12 who are exposed to tobacco advertising and promotion.**

**TU–18.1 Reduce the proportion of adolescents and young adults in grades 6 through 12 who are exposed to tobacco advertising and promotion on the Internet.**

**Target:** 33.1 percent.

**Baseline:** 36.8 percent of adolescents and young adults in grades 6 through 12 were exposed to tobacco advertising and promotion on the Internet in 2009.

**Target setting method:** 10 percent improvement.

**Data source:** National Youth Tobacco Survey (NYTS), CDC.

**TU–18.2 Reduce the proportion of adolescents and young adults in grades 6 through 12 who are exposed to tobacco advertising and promotion in magazines and newspapers.**

**Target:** 19.3 percent.

**Baseline:** 48.6 percent of adolescents and young adults in grades 6 through 12 were exposed to tobacco advertising and promotion in magazines and newspapers in 2009.

**Target setting method:** Projection/trend analysis.

**Data source:** National Youth Tobacco Survey (NYTS), CDC.

**TU– 18.3 (Developmental) Reduce the proportion of adolescents and young adults in grades 6 through 12 who are exposed to tobacco advertising and promotion in movies.**

**Potential data source:** To be determined.

**TU– 18.4 (Developmental) Reduce the proportion of adolescents and young adults in grades 6 through 12 who are exposed to tobacco advertising and promotion at point of purchase (convenience store, supermarket, or gas station).**

**Potential data source:** To be determined.

**TU–19: Reduce the illegal sales rate to minors through enforcement of laws prohibiting the sale of tobacco products to minors.**

**TU–19.1 Reduce the illegal sales rate to minors through enforcement of laws prohibiting the sale of tobacco products to minors in States and the District of Columbia.**

**Target:** 51 (50 States and the District of Columbia).

**Baseline:** 5 States reported an illegal sales rate to minors of 5 percent or less in compliance checks in 2009.

**Target setting method:** Total coverage.

**Data source:** State Synar Enforcement Reporting, SAMHSA, CSAP.

**TU–19.2 Reduce the illegal sales rate to minors through enforcement of laws prohibiting the sale of tobacco products to minors in Territories.**

**Target:** 8 Territories.

**Baseline:** 1 Territory reported an illegal sales rate to minors of 5 percent or less in compliance checks in 2009.

**Target setting method:** Total coverage.

**Data source:** State Synar Enforcement Reporting, SAMHSA, CSAP.

**TU–20: (Developmental) Increase the number of States and the District of Columbia, Territories, and Tribes with sustainable and comprehensive evidence-based tobacco control programs.**

**TU–20.1 (Developmental) Increase the number of States and the District of Columbia with sustainable and comprehensive evidence-based tobacco control programs.**

**Potential data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU– 20.2 (Developmental) Increase the number of Territories with sustainable and comprehensive evidence-based tobacco control programs.**

**Potential data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

**TU–20.3 (Developmental) Increase the number of Tribes with sustainable and comprehensive evidence-based tobacco control programs.**

**Potential data source:** State Tobacco Activities Tracking and Evaluation System, CDC, NCCDPHP.

### Heart Disease and Stroke Number

	Objective Short Title
HDS-1	Cardiovascular health
HDS-2	Coronary heart disease deaths
HDS-3	Stroke deaths
HDS-4	Blood pressure screening
HDS-5	Hypertension
HDS-6	Blood cholesterol screening
HDS-7	High total blood cholesterol levels
HDS-8	Mean total blood cholesterol levels
HDS-9	Prehypertension lifestyle guidelines
HDS-10	Hypertension lifestyle guidelines
HDS-11	Hypertension medication compliance
HDS-12	High blood pressure control
HDS-13	Advice on elevated LDL cholesterol treatment
HDS-14	Compliance with elevated LDL cholesterol treatment
HDS-15	Aspirin use for primary cardiovascular disease prevention
HDS-16	Awareness of and response to early warning symptoms of heart attack
HDS-17	Awareness of and response to early warning symptoms of stroke
HDS-18	Bystander and emergency medical services response to cardiac arrest
HDS-19	Timely artery-opening therapy
HDS-20	Adults with heart disease or stroke who meet recommended low-density lipoprotein cholesterol levels
HDS-21	Aspirin or antiplatelet therapy for secondary cardiovascular disease prevention
HDS-22	Referral to cardiac rehabilitation program at discharge
HDS-23	Referral to stroke rehabilitation program at discharge
HDS-24	Heart failure hospitalizations

## Topic Area: Heart Disease and Stroke

**HDS–1:** (Developmental) Increase overall cardiovascular health in the U.S. population.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–2:** Reduce coronary heart disease deaths.

Target: 100.8 deaths per 100,000 population.

Baseline: 126.0 coronary heart disease deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

Target setting method: Projection/trend analysis.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**HDS–3:** Reduce stroke deaths.

Target: 33.8 deaths per 100,000 population.

Baseline: 42.2 stroke deaths per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

Target setting method: Projection/trend analysis.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**HDS–4:** Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high.

Target: 92.6 percent.

Baseline: 90.6 percent of adults aged 18 years and older had their blood pressure measured within the preceding 2 years and could state their blood pressure level in 2008 (age adjusted to the year 2000 standard population).

Target setting method: 2 percentage point improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–5:** Reduce the proportion of persons in the population with hypertension.

**HDS–5.1** Reduce the proportion of adults with hypertension.

Target: 26.9 percent.

Baseline: 29.9 percent of adults aged 18 years and older had high blood pressure/hypertension in 2005–08 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–5.2** Reduce the proportion of children and adolescents with hypertension.

Target: 3.2 percent.

Baseline: 3.5 percent of children and adolescents aged 8 to 17 years had high blood pressure/hypertension in 2005–08.

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–6:** Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.

Target: 82.1 percent.

Baseline: 74.6 percent of adults aged 18 years and older had their blood cholesterol checked within the preceding 5 years in 2008 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–7:** Reduce the proportion of adults with high total blood cholesterol levels.

Target: 13.5 percent.

Baseline: 15.0 percent of adults aged 20 years and older had total blood cholesterol levels of 240 mg/dL or greater in 2005–08 (age adjusted to the year 2000 standard population).  
Target setting method: 10 percent improvement.  
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–8:** Reduce the mean total blood cholesterol levels among adults.

Target: 177.9 mg/dl (mean).

Baseline: 197.7 mg/dl was the mean total blood cholesterol level for adults aged 20 years and older in 2005–08 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–9:** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines.

**HDS–9.1** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for body mass index (BMI).

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–9.2** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for saturated fat consumption.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–9.3** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for sodium intake.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–9.4** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for physical activity.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–9.5** (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for moderate alcohol consumption.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–10:** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines.

**HDS–10.1** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for body mass index (BMI).

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–10.2** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for saturated fat consumption.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–10.3** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for sodium intake.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–10.4** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for physical activity.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–10.5** (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for moderate alcohol consumption.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–11:** Increase the proportion of adults with hypertension who are taking the prescribed medications to lower their blood pressure.

Target: 69.5 percent.

Baseline: 63.2 percent of adults aged 18 years and older with high blood pressure/hypertension were taking the prescribed medications to lower their blood pressure in 2005–08 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–12:** Increase the proportion of adults with hypertension whose blood pressure is under control.

Target: 61.2 percent.

Baseline: 43.7 percent of adults aged 18 years and older with high blood pressure/hypertension had it under control in 2005–08 (age adjusted to the year 2000 standard population).

Target setting method: Projection/trend analysis.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–13:** (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol lowering management including lifestyle changes and, if indicated, medication.

**HDS–13.1** (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding a cholesterol-lowering diet.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–13.2** (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering physical activity.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–13.3** (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering weight control.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–13.4** (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering prescribed drug therapy.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–14:** (Developmental) Increase the proportion of adults with elevated LDL-cholesterol who adhere to the prescribed LDL-cholesterol lowering management lifestyle changes and, if indicated, medication.

**HDS–14.1** (Developmental) Increase the proportion of adults with elevated LDL-cholesterol who adhere to the prescribed cholesterol-lowering diet.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–14.2** (Developmental) Increase the proportion of adults with elevated LDL-cholesterol who adhere to the prescribed cholesterol-lowering physical activity.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–14.3** (Developmental) Increase the proportion of adults with elevated LDL-cholesterol who adhere to the prescribed cholesterol-lowering weight control.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–14.4** (Developmental) Increase the proportion of adults with elevated LDL-cholesterol who adhere to the prescribed cholesterol-lowering drug therapy.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–15:** (Developmental) Increase aspirin use as recommended among adults with no history of cardiovascular disease.

**HDS– 15.1** (Developmental) Increase aspirin use as recommended among women aged 55 to 79 years with no history of cardiovascular disease.

Potential data sources: National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS;  
National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**HDS– 15.2** (Developmental) Increase aspirin use as recommended among men aged 45 to 79 years with no history of cardiovascular disease.

Potential data sources: National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS;  
National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**HDS–16:** Increase the proportion of adults aged 20 years and older who are aware of, and respond to, early warning symptoms and signs of a heart attack.

**HDS–16.1** Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 9–1–1 or another emergency number.

Target: 40.9 percent.

Baseline: 37.2 percent of adults aged 20 years and older were aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 9–1–1 or another emergency number in 2008 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–16.2** Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack.

Target: 43.6 percent.

Baseline: 39.6 percent of adults aged 20 years and older were aware of the early warning symptoms and signs of a heart attack in 2008 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–16.3** Increase the proportion of adults aged 20 years and older who are aware of the importance of accessing rapid emergency care for a heart attack by calling 9–1–1 or another emergency number.

Target: 93.8 percent.

Baseline: 91.8 percent of adults aged 20 years and older were aware of the importance of accessing rapid emergency care by calling 9–1–1 or another emergency number in 2008 (age adjusted to the year 2000 standard population).

Target setting method: 2 percentage point improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–17:** (Developmental) Increase the proportion of adults aged 20 years and older who are aware of and respond to early warning symptoms and signs of a stroke.

**HDS– 17.1** Increase the proportion of adults who are aware of the early

warning symptoms and signs of a stroke and the importance of accessing rapid emergency care by calling 9–1–1 or another emergency number.

Baseline: 51.3 percent of adults aged 20 years and older were aware of the early warning symptoms and signs of a stroke and the importance of accessing rapid emergency care by calling 9–1–1 or another emergency number in 2009 (age adjusted to the year 2000 standard population).

Target: 56.4 percent.

Target Setting Method: 10 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–17.2** Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a stroke.

Baseline: 53.9 percent of adults aged 20 years and older were aware of the early warning symptoms and signs of a stroke in 2009 (age adjusted to the year 2000 standard population).

Target: 59.3 percent.

Target-Setting Method: 10 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–17.3** Increase the proportion of adults aged 20 years and older who

are aware of the importance of accessing rapid emergency care for a stroke by calling 9–1–1 or another emergency number.

Baseline: 92.7 percent of adults aged 20 years and older were aware of the importance of accessing rapid emergency care for a stroke by calling 9–1–1 or another emergency number in 2009 (age adjusted to the year 2000 standard population).

Target: 94.7 percent.

Target-Setting Method: 2 percentage point improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**HDS–18:** (Developmental) Increase the proportion of out-of-hospital cardiac arrests in which appropriate bystander and emergency medical services (EMS) were administered.

Potential data source: National Emergency Medical Services Information System (NEMSIS), National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**HDS–19:** Increase the proportion of eligible patients with heart attacks or strokes who receive timely artery-opening therapy as specified by current guidelines.

**HDS–19.1** Increase the proportion of eligible patients with heart attacks who receive fibrinolytic therapy within 30 minutes of hospital arrival.

Target: 75.1 percent.

Baseline: 68.3 percent of eligible heart attack patients received fibrinolytics within 30 minutes of hospital arrival in 2009.

Target setting method: 10 percent improvement.

Data Source: Acute Coronary Treatment and Intervention Outcomes Network Registry–Get with the Guidelines (ACTION Registry–GWTG), American College of Cardiology Foundation and American Heart Association.

**HDS–19.2** Increase the proportion of eligible patients with heart attacks who receive percutaneous intervention (PCI) within 90 minutes of hospital arrival.

Target: 97.5 percent.

Baseline: 88.6 percent of eligible heart attack patients received percutaneous intervention within 90 minutes of hospital arrival in 2009.

Target setting method: 10 percent improvement.

Data source: Acute Coronary Treatment and Intervention Outcomes Network Registry–Get with the Guidelines (ACTION Registry–GWTG), American College of Cardiology Foundation and American Heart Association.

**HDS–19.3** (Developmental) Increase the proportion of eligible patients with strokes who receive acute reperfusion therapy within 3 hours from symptom onset.

Potential data sources: Get with The Guidelines–Stroke Module (GWTG–Stroke), American Heart Association/American Stroke Association.

**HDS–20:** (Developmental) Increase the proportion of adults with coronary heart disease or stroke who have their low-density lipoprotein (LDL) cholesterol level at or below recommended levels.

**HDS– 20.1** (Developmental) Increase the proportion of adults with coronary heart disease who have their low-density lipoprotein (LDL) cholesterol at or below recommended levels.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS– 20.2** (Developmental) Increase the proportion of adults who have had a stroke who have their low-density lipoprotein (LDL) cholesterol at or below recommended levels.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**HDS–21:** (Developmental) Increase the proportion of adults with a history of cardiovascular disease who are using aspirin or antiplatelet therapy to prevent recurrent cardiovascular events.

Potential data sources: National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**HDS–22:** (Developmental) Increase the proportion of adult heart attack survivors who are referred to a cardiac rehabilitation program at discharge.

Potential data source: Acute Coronary Treatment and Intervention Outcomes Network Registry–Get with the Guidelines (ACTION Registry–GWTG), American College of Cardiology Foundation and American Heart Association.

**HDS–23:** (Developmental) Increase the proportion of adult stroke survivors who are referred to a stroke rehabilitation program at discharge.

Potential data source: Acute Coronary Treatment and Intervention Outcomes Network Registry—Get with the Guidelines Program—Stroke Module (GWTG—Stroke), American Heart Association/American Stroke Association.

**HDS—24:** Reduce hospitalizations of older adults with heart failure as the principal diagnosis.

**HDS—24.1** Reduce hospitalizations of adults aged 65 to 74 years with heart failure as the principal diagnosis.

Target: 8.8 hospitalizations per 1,000 population.

Baseline: 9.8 hospitalizations for heart failure per 1,000 population aged 65 to 74 years occurred in 2007.

Target setting method: 10 percent improvement.

Data source: Chronic Conditions Warehouse (CCW), CMS.

**HDS—24.2** Reduce hospitalizations of adults aged 75 to 84 years with heart failure as the principal diagnosis.

Target: 20.2 hospitalizations per 1,000 population.

Baseline: 22.4 hospitalizations for heart failure per 1,000 population aged 75 to 84 years occurred in 2007.

Target setting method: 10 percent improvement.

Data source: Chronic Conditions Warehouse (CCW), CMS.

**HDS—24.3** Reduce hospitalizations of adults aged 85 years and older with heart failure as the principal diagnosis.

Target: 38.6 hospitalizations per 1,000 population.

Baseline: 42.9 hospitalizations for heart failure per 1,000 population aged 85 years and older occurred in 2007.

Target setting method: 10 percent improvement.

Data source: Chronic Conditions Warehouse (CCW), CMS.

## Healthy People 2020 Summary of Objectives

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### Dementias, including Alzheimer's Disease

Number	Objective Short Title
DIA-1	Diagnosis awareness
DIA-2	Preventable hospitalizations

#### Topic Area: Dementias, Including Alzheimer's Disease

**DIA-1:** (Developmental) Increase the proportion of persons with diagnosed Alzheimer's disease and other dementias, or their caregiver, who are aware of the diagnosis.

Potential data sources: Medicare Current Beneficiary Survey (MCBS) and Medicare Beneficiary Annual Summary File, CMS.

**DIA-2:** (Developmental) Reduce the proportion of preventable hospitalizations in persons with diagnosed Alzheimer's disease and other dementias.

Potential data sources: Health and Retirement Study (HRS) cohort linked to Medicare Part A and Part B claims, CMS.

## Healthy People 2020 Summary of Objectives

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### **Respiratory Diseases Number**

#### **Objective Short Title**

#### **Asthma**

RD-1	Deaths from asthma
RD-2	Hospitalizations for asthma
RD-3	Emergency department (ED) visits for asthma
RD-4	Asthma activity limitations
RD-5	School or workdays missed
RD-6	Patient education
RD-7	Appropriate asthma care
RD-8	Asthma surveillance systems

#### **Chronic Obstructive Pulmonary Disease (COPD)**

RD-9	Chronic obstructive pulmonary disease activity limitations
RD-10	Deaths from chronic obstructive pulmonary disease
RD-11	Hospitalizations for chronic obstructive pulmonary disease
RD-12	Emergency department (ED) visits for chronic obstructive pulmonary disease
RD-13	Diagnosis of underlying obstructive disease

## Topic Area: Respiratory Diseases

### Asthma

**RD-1:** Reduce asthma deaths.

**RD-1.1** Reduce asthma deaths among children and adults under age 35 years.

**Target:** Not applicable.

**Baseline:** 3.4 asthma deaths per million children and adults under age 35 years occurred in 2007.

**Target setting method:** This measure is being tracked for informational purposes. If warranted, a target will be set during the decade.

**Data source:** National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**RD-1.2** Reduce asthma deaths among adults aged 35 to 64 years old.

**Target:** 6.0 deaths per million.

**Baseline:** 11.0 asthma deaths per million adults aged 35 to 64 years occurred in 2007.

**Target setting method:** Projection/trend analysis.

**Data source:** National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**RD-1.3** Reduce asthma deaths among adults aged 65 years and older.

**Target:** 22.9 deaths per million.

**Baseline:** 43.3 asthma deaths per million adults aged 65 years and older occurred in 2007.

**Target setting method:** Projection/trend analysis.

**Data source:** National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**RD-2:** Reduce hospitalizations for asthma.

**RD-2.1** Reduce hospitalizations for asthma among children under age 5 years.

**Target:** 18.1 hospitalizations per 10,000.

**Baseline:** 41.4 hospitalizations for asthma per 10,000 children under age 5 years occurred in 2007.

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

**RD-2.2** Reduce hospitalizations for asthma among children and adults aged 5 to 64 years.

**Target:** 8.6 hospitalizations per 10,000.

**Baseline:** 11.1 hospitalizations for asthma per 10,000 children and adults aged 5 to 64 years occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

**RD-2.3** Reduce hospitalizations for asthma among adults aged 65 years and older.

**Target:** 20.3 hospitalizations per 10,000.

**Baseline:** 25.3 hospitalizations for asthma per 10,000 adults aged 65 years and older occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

**RD-3:** Reduce emergency department (ED) visits for asthma.

**RD–3.1** Reduce emergency department (ED) visits for asthma among children under age 5 years.  
**Target:** 95.6 ED visits per 10,000.  
**Baseline:** 132.8 ED visits for asthma per 10,000 children under age 5 years.

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**RD–3.2** Reduce emergency department (ED) visits for asthma among children and adults aged 5 to 64 years.

**Target:** 49.7 ED visits per 10,000.

**Baseline:** 57.0 ED visits for asthma per 10,000 children and adults aged 5 to 64 years occurred in 2005–2007.

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**RD–3.3** Reduce emergency department (ED) visits for asthma among adults aged 65 years and older.

**Target:** 13.8 ED visits per 10,000.

**Baseline:** 21.9 ED visits for asthma per 10,000 adults aged 65 years and older occurred in 2005–07.

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**RD–4:** Reduce activity limitations among persons with current asthma.

**Target:** 10.2 percent.

**Baseline:** 12.7 percent of persons with current asthma experienced activity limitations due to chronic lung and breathing problems in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–5:** Reduce the proportion of persons with asthma who miss school or work days.

**RD–5.1** Reduce the proportion of children aged 5 to 17 years with asthma who miss school days.

**Target:** 48.7 percent.

**Baseline:** 58.7 percent of children aged 5 to 17 years who had an asthma episode or attack in the past 12 months missed school days due to asthma in the past 12 months in 2008.

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–5.2** Reduce the proportion of adults aged 18 to 64 years with asthma who miss work days.

**Target:** 26.8 percent.

**Baseline:** 33.2 percent of adults aged 18 to 64 years who had an asthma episode or attack in the past 12 months missed work days due to asthma in the past 12 months in 2008.

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–6:** Increase the proportion of persons with current asthma who receive formal patient education.

**Target:** 14.4 percent.

**Baseline:** 12.1 percent of persons with current asthma received formal patient education in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–7:** Increase the proportion of persons with current asthma who receive appropriate asthma care according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**RD–7.1** Increase the proportion of persons with current asthma who receive written asthma management plans from their health care provider according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Target:** 36.8 percent.

**Baseline:** 33.4 percent of persons with current asthma received written asthma management plans from their health care provider in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–7.2** Increase the proportion of persons with current asthma with prescribed inhalers who receive instruction on their use according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Target:** Not applicable.

**Baseline:** 95.9 percent of persons with current asthma with prescribed inhalers received instruction on their use in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** This measure is being tracked for informational purposes. If warranted, a target will be set during the decade.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–7.3** Increase the proportion of persons with current asthma who receive education about appropriate response to an asthma episode, including recognizing early signs and symptoms or monitoring peak flow results, according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Target:** 68.5 percent.

**Baseline:** 64.8 percent of persons with current asthma received education about appropriate response to an asthma episode, including recognizing early signs and symptoms or monitoring peak flow results in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD-7.4** Increase the proportion of persons with current asthma who do not use more than one canister of short-acting inhaled beta agonist per month according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Target:** 90.2 percent.

**Baseline:** 87.9 percent of persons with current asthma did not use more than one canister of short-acting inhaled beta agonist per month in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD-7.5** Increase the proportion of persons with current asthma who have been advised by a health professional to change things in their home, school, and work environments to reduce exposure to irritants or allergens to which they are sensitive according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Target:** 54.5 percent.

**Baseline:** 50.8 percent of persons with current asthma were advised by a health professional to change things in their home, school, and work environments to reduce exposure to irritants or allergens to which they are sensitive in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD- 7.6** (Developmental) Increase the proportion of persons with current asthma who have had at least one routine follow-up visit in the past 12 months according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD- 7.7** (Developmental) Increase the proportion of persons with current asthma whose doctor assessed their asthma control in the past 12 months according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD- 7.8** (Developmental) Increase the proportion of persons adults with current asthma who have discussed with a doctor or other health professional whether their asthma was work related according to National Asthma Education and Prevention Program (NAEPP) guidelines.

**Potential data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD-8:** Increase the number of States, Territories, and the District of Columbia with a comprehensive asthma surveillance system for tracking asthma cases, illness, and disability at the State level.

**Target:** 47 areas.

**Baseline:** 43 areas (41 States, the District of Columbia, and Puerto Rico) had a comprehensive asthma surveillance system for tracking asthma cases, illness, and disability at the State level in 2009.

**Target setting method:** 10 percent improvement.

**Data source:** National Asthma Control Program, CDC, NCEH.

## **Chronic Obstructive Pulmonary Disease (COPD)**

**RD–9:** Reduce activity limitations among adults with chronic obstructive pulmonary disease (COPD).

**Target:** 18.7 percent.

**Baseline:** 23.2 percent of adults with COPD aged 45 years and older experienced activity limitations due to chronic lung and breathing problems in 2008 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Health Interview Survey (NHIS), CDC, NCHS.

**RD–10:** Reduce deaths from chronic obstructive pulmonary disease (COPD) among adults.

**Target:** 98.5 deaths per 100,000.

**Baseline:** 112.4 COPD deaths per 100,000 adults aged 45 years and older occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Projection/trend analysis.

**Data source:** National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**RD–11:** Reduce hospitalizations for chronic obstructive pulmonary disease (COPD).

**Target:** 50.1 hospitalizations per 10,000.

**Baseline:** 56.0 hospitalizations for COPD per 10,000 adults aged 45 years and older occurred in 2007 (age adjusted to the year 2000 standard population).

**Target setting method:** Minimal statistical significance.

**Data source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

**RD–12:** Reduce emergency department (ED) visits for chronic obstructive pulmonary disease (COPD).

**Target:** 57.3 ED visits per 10,000.

**Baseline:** 81.7 ED visits for COPD per 10,000 adults aged 45 years and older occurred in 2007 (age adjusted to the year 2000 standard population). Target setting method: Minimal statistical significance.

**Data source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**RD–13:** (Developmental) Increase the proportion of adults with abnormal lung function whose underlying obstructive disease has been diagnosed.

**Potential data source:** National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

# INFECTIOUS DISEASE AND FOODBORNE ILLNESS

## 2020 Objectives

The prevention of infectious diseases is part of the historic bedrock of public health practice. Fortunately, many infectious diseases such as chicken pox, measles, influenza, and hepatitis B can now be prevented through immunizations. However, people do not always receive the recommended vaccinations and therefore still become sick, become disabled, or die from infectious diseases that are entirely preventable. Foodborne illnesses are among the most common of infectious diseases. They can lead to acute illnesses, hospitalizations, and even deaths.<sup>184</sup> Foodborne illnesses are not vaccine preventable but nonetheless are potentially preventable through safe food preparation and storage tactics.<sup>185</sup>

### OBJECTIVE 1: INCREASE THE PERCENTAGE OF CHILDREN AGED 19-35 MONTHS WHO RECEIVE THE RECOMMENDED VACCINES

(KEY PERFORMANCE INDICATOR)

*Rationale for selection:* Vaccines are described as one of the 10 great public health achievements of the 20th century.<sup>186</sup> For every dollar spent on the US childhood immunization program, 5 dollars in direct costs and 11 dollars in additional costs to society are saved.<sup>187</sup>

CURRENT (2007) <sup>188</sup>	2020 TARGET
77.3%	91.3%

### OBJECTIVE 2: REDUCE THE PNEUMONIA AND INFLUENZA MORTALITY RATE (PER 100,000 POPULATION)

*Rationale for selection:* In 2008, pneumonia and influenza yielded the eighth leading cause of death among North Carolinians, causing approximately 1,750 deaths.<sup>189</sup> Individuals aged more than 65 years, those with chronic health conditions, pregnant women, and young children are at higher risk of developing complications such as pneumonia from the flu.<sup>190</sup>

CURRENT (2008) <sup>ggg</sup>	2020 TARGET
19.5	13.5

### OBJECTIVE 3: DECREASE THE AVERAGE NUMBER OF CRITICAL VIOLATIONS PER RESTAURANT/FOOD STAND<sup>hhh</sup>

*Rationale for selection:* Foodborne diseases cause about 47.8 million illnesses, 127,839 hospitalizations, and 3,037 deaths every year in the United States.<sup>191</sup> Improper holding temperatures, poor personal hygiene of food handlers, unsafe food sources, inadequate cooking, and contaminated equipment are the top five food safety risk factors identified by the Centers for Disease Control and Prevention (CDC).<sup>185</sup> Critical violations are based upon these identified risk factors.

CURRENT (2009) <sup>iii</sup>	2020 TARGET
6.1	5.5

ggg State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. May 13, 2010.

hhh As defined in 15A NCAC §18A.2601, a restaurant is a food service establishment which prepares or serves food and provides seating. A food stand is a food service establishment, which prepares or serves foods, but does not provide seating for customers to use while eating or drinking.

iii Food Protection Branch, North Carolina Department of Environment and Natural Resources. Written (email) communication. September 29, 2010.

## Disparities in Infectious Disease and Foodborne Illness

*Vaccines among children aged 19-35 months:* National data indicate that poverty is a contributing factor to disparities seen in immunization rates. The immunization rate among children living below the poverty threshold is 75% versus the national rate of 77.4% (for children receiving the 4:3:1:3:3:1 series in 2007).<sup>192</sup>

*Pneumonia and influenza mortality:* Pneumonia and influenza mortality most greatly affects individuals aged 65 years or more. The mortality rate for this age group is 127.5 deaths per 100,000 population versus 9.0 deaths per 100,000 population in the 45- to 64-year-old age group and 1.2 deaths per 100,000 population in the 20- to 44-year-old age group (2008).<sup>jjj</sup>

### Strategies to Prevent and Reduce Infectious Disease and Foodborne Illness

Level of the Socioecological Model	Strategies
<b>Individual</b>	Get the recommended immunizations <sup>193</sup> ; wash your hands often. <sup>194,195</sup>
<b>Family/Home</b>	Make sure your children are immunized. <sup>193</sup>
<b>Clinical</b>	Offer patients age-appropriate immunizations and counsel them to receive age-appropriate immunizations <sup>193,194,196</sup> ; offer home visits for vaccination delivery; vaccinate health care workers against influenza. <sup>197</sup>
<b>Schools and Child Care</b>	Offer vaccination programs in schools or organized child care centers that include education and promotion, assessment and tracking of vaccination status, referral of school or child care attendees to vaccination providers when needed, and provision of vaccines. <sup>198</sup>
<b>Worksites</b>	Offer worksite immunizations for influenza <sup>199</sup> ; restaurants should reduce risk factors for food-borne illness identified by the CDC and as outlined in North Carolina Administrative Code. <sup>200,kkk</sup>
<b>Insurers</b>	Provide coverage with no cost sharing for all vaccinations recommended by the Advisory Committee on Immunization Practices. <sup>193,iii</sup>
<b>Community</b>	Provide community interventions in combination to increase vaccine use among targeted populations <sup>201</sup> ; create programs to improve access to influenza vaccines for children aged 6 months to 18 years, individuals more than 50 years old, and those at high risk because of medical conditions. <sup>202</sup>
<b>Public Policies</b>	Fund outreach efforts to increase immunization rates for all recommended vaccines <sup>17</sup> ; strengthen laws and procedures to prevent foodborne illnesses, particularly in food service and retail establishments. <sup>203</sup>

## Healthy People 2020 Summary of Objectives

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### Immunization and Infectious Diseases

Number	Objective Short Title
IID-1	Vaccine-preventable diseases
IID-2	Group B streptococcal disease among newborns
IID-3	Meningococcal disease
IID-4	Invasive pneumococcal infections
IID-5	Antibiotics misuse for ear infections
IID-6	Antibiotics misuse for common cold
IID-7	Vaccination coverage among young children
IID-8	Complete vaccination coverage among young children
IID-9	Zero doses of vaccination
IID-10	Vaccination coverage among kindergartners
IID-11	Vaccination coverage among adolescents
IID-12	Seasonal influenza vaccination coverage
IID-13	Pneumococcal vaccination coverage
IID-14	Shingles vaccination coverage
IID-15	Hepatitis B vaccination coverage among high-risk populations
IID-16	Vaccine safety
IID-17	Provider vaccination coverage assessment
IID-18	Immunization Information Systems (IISs)
IID-19	States collecting kindergarten vaccination records
IID-20	State participation in Immunization Information Systems (IISs)
IID-21	Electronic surveillance of rabies
IID-22	Monitoring of influenza-virus resistance to antiviral agents
IID-23	Hepatitis A
IID-24	Chronic hepatitis B perinatal infections
IID-25	Hepatitis B
IID-26	Hepatitis C
IID-27	Awareness of hepatitis C infection status in minority communities
IID-28	Hepatitis B testing
IID-29	TB
IID-30	Curative therapy for TB
IID-31	Treatment for latent TB
IID-32	Timeliness of TB test confirmation

## Topic Area: Immunization and Infectious Diseases

**IID-1:** Reduce, eliminate, or maintain elimination of cases of vaccine-preventable diseases.

**IID-1.1** Maintain elimination of cases of vaccine-preventable congenital rubella syndrome (CRS) among children under 1 year of age (U.S.-acquired cases).

Target: 0 cases.

Baseline: 0 cases of confirmed and probable U.S.-acquired cases of congenital rubella syndrome.

Target setting method: Total elimination.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-1.2** Reduce serotype b cases of *Haemophilus influenzae* (Hib) invasive disease among children aged 5 years and under.

Target: 0.27 cases per 100,000 children under age 5 years.

Baseline: 0.3 confirmed and probable cases of *Haemophilus influenzae* invasive disease were reported per 100,000 children under age 5 years in 2008.

Target setting method: 10 percent improvement.

Data sources: National Notifiable Diseases Surveillance System (NNDSS), CDC; Active Bacterial Core Surveillance (ABCs), Emerging Infections Programs (EIP) Network, CDC, NCIRD.

**IID-1.3** Reduce new hepatitis B cases among persons aged 2 to 18 years.

Target: 0 cases per 100,000 persons aged 2 to 18 years.

Baseline: 0.06 cases of new symptomatic hepatitis B per 100,000 population aged 2 to 18 years were reported in 2007.

Target setting method: Total elimination.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-1.4** Reduce cases of measles (U.S.-acquired cases).

Target: 30 cases.

Baseline: 115 confirmed U.S.-acquired measles cases were reported in 2008.

Target setting method: Projection/trend analysis.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-1.5** Reduce cases of mumps (U.S.-acquired cases).

Target: 500 cases.

Baseline: 421 confirmed and probable U.S.-acquired cases of mumps were reported in 2008.

Target setting method: Projection/trend analysis.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-1.6** Reduce cases of pertussis among children under 1 year of age.

Target: 2,500 cases.

Baseline: An annual average of 2,777 confirmed and probable cases of pertussis (including cases identified in outbreak settings) were reported among children under age 1 year during 2004–08.

Target setting method: 10 percent improvement.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-1.7** Reduce cases of pertussis among adolescents aged 11 to 18 years.

Target: 2,000 cases among adolescents aged 11 to 18 years.

Baseline: An annual average of 3,995 confirmed and probable cases of pertussis (including cases identified in outbreak settings) was reported among adolescents aged 11 to 18 years during 2000–04.

Target setting method: Projection.

Data source: National Notifiable Disease Surveillance System (NNDSS), CDC.

**IID-1.8** Maintain elimination of acute paralytic poliomyelitis (U.S.-acquired cases).

Target: 0 cases.

Baseline: 0 cases of U.S.-acquired acute paralytic poliomyelitis were reported in 2008.

Target setting method: Total elimination

Data source: National Notifiable Disease Surveillance System (NNDSS), CDC.

**IID-1.9** Maintain elimination of rubella (U.S.-acquired cases).

Target: 10 cases.

Baseline: 10 confirmed U.S.-acquired cases of rubella were reported in 2008.

Target setting method: Projection/trend analysis.

Data source: National Notifiable Disease Surveillance System (NNDSS), CDC.

**IID-1.10** Reduce cases of varicella (chicken pox) among persons aged 17 years of age and under.

Target: 100,000 persons aged 17 years of age and under.

Baseline: 582,535 persons aged 17 years of age and under were reported to have had chicken pox (varicella) in the past year in 2008.

Target setting method: Projection/trend analysis.

Data sources: National Health Interview Survey (NHIS), CDC, NCHS.

**IID-2:** Reduce early onset group B streptococcal disease.

Target: 0.25 new cases among newborns aged 0 through 6 days per 1,000 live births. Baseline: 0.28 newly reported cases of laboratory-confirmed early onset group B streptococcal disease were diagnosed among newborns aged 0 to 6 days per 1,000 live births in 2008.

Target setting method: 10 percent improvement.

Data sources: National Notifiable Diseases Surveillance System (NNDSS), CDC; Active Bacterial Core surveillance (ABCs), Emerging Infections Programs (EIP) Network, CDC, NCIRD.

**IID-3:** Reduce meningococcal disease.

Target: 0.3 cases per 100,000 population.

Baseline: An annual average of 0.34 cases of new laboratory-confirmed meningococcal disease per 100,000 population were reported in 2004–08.

Target setting method: 10 percent improvement.

Data sources: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-4:** Reduce invasive pneumococcal infections.

**IID-4.1** Reduce new invasive pneumococcal infections among children under age 5 years.

Target: 12 cases per 100,000 children under age 5 years.

Baseline: 20.3 cases of laboratory-confirmed invasive pneumococcal infection were reported per 100,000 children under age 5 years in 2008.

Target setting method: Projection/trend analysis.

Data sources: National Notifiable Diseases Surveillance System (NNDSS), CDC; Active Bacterial Core surveillance (ABCs), Emerging Infections Programs (EIP) Network, CDC, NCIRD.

**IID-4.2** Reduce new invasive pneumococcal infections among adults aged 65 years and older.

Target: 31 new cases per 100,000 adults aged 65 years and older.

Baseline: 40.4 new cases of laboratory-confirmed invasive pneumococcal infection per 100,000 adults aged 65 years and older were diagnosed in 2008.

Target setting method: Projection/trend analysis.

Data source: Active Bacterial Core Surveillance (ABCs), Emerging Infections Program (EIP) Network, CDC, NCIRD.

**IID-4.3** Reduce invasive antibiotic-resistant pneumococcal infections among children under age 5 years.

Target: 6 new cases per 100,000 children under age 5 years.

Baseline: 8.2 new cases of laboratory-confirmed invasive antibiotic-resistant pneumococcal infection per 100,000 children under age 5 years were diagnosed in 2008.

Target setting method: Projection/trend analysis.

Data source: Active Bacterial Core surveillance (ABCs), Emerging Infections Program (EIP) Network, CDC, NCIRD.

**IID-4.4** Reduce invasive antibiotic-resistant pneumococcal infections among adults aged 65 years and older.

Target: 9 new cases per 100,000 adults aged 65 years and older.

Baseline: 12.2 new cases of laboratory-confirmed invasive antibiotic-resistant pneumococcal infection per 100,000 adults aged 65 years and older were diagnosed in 2008.

Target setting method: Projection/trend analysis.

Data sources: Active Bacterial Core Surveillance (ABCs), Emerging Infections Program (EIP) Network, CDC, NCIRD.

**IID-5:** Reduce the number of courses of antibiotics for ear infections for young children.

Target: 35 courses per 100 children under age 5 years.

Baseline: 47 percent of children under age 5 years who had an ear infection were prescribed antibiotic courses in 2007.

Target setting method: Projection/trend analysis.

Data sources: National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**IID-6:** Reduce the number of courses of antibiotics prescribed for the sole diagnosis of the common cold.

Target: 864 courses of antibiotics per 100,000 population.

Baseline: An annual average of 1,728 courses of antibiotics per 100,000 persons diagnosed with the common cold was prescribed in 2007.

Target setting method: Projection/trend analysis.

Data sources: National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

**IID-7:** Achieve and maintain effective vaccination coverage levels for universally recommended vaccines among young children.

**IID-7.1** Maintain an effective vaccination coverage level of 4 doses of the diphtheria-tetanus-acellular pertussis (DTaP) vaccine among children by age 19 to 35 months.

Target: 90 percent.

Baseline: 85 percent of children aged 19 to 35 months received 4 or more doses of the combination of diphtheria, tetanus, and acellular pertussis antigens in 2008.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.2** Achieve and maintain an effective vaccination coverage level of 3 or 4 doses of *Haemophilus influenzae* type b (Hib) vaccine among children by age 19 to 35 months.

Target: 90 percent.

Baseline: 90.9 percent of children aged 19 to 35 months in 2009 received 3 or more, or 4 or more doses of Hib antigen, depending on product type received.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: Program Annual Progress Assessments, CDC, NCIRD.

**IID-7.3** Maintain an effective vaccination coverage level of 3 doses of hepatitis B (hep B) vaccine among children by age 19 to 35 months.

Target: 90 percent.

Baseline: 92 percent of children aged 19 to 35 months in 2009 received at least 3 doses of hepatitis B antigen.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.4** Maintain an effective coverage level of 1 dose of measles-mumps-rubella (MMR) vaccine among children by age 19 to 35 months.

Target: 90 percent.

Baseline: 90 percent of children aged 19 to 35 months in 2009 received at least 1 dose of measles-mumps-rubella (MMR) vaccine

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.5** Maintain an effective coverage level of 3 doses of polio vaccine among children by age 19 to 35 months.  
Target: 90 percent.  
Baseline: 93 percent of children aged 19 to 35 months in 2009 received at least 3 doses of polio vaccine.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.6** Maintain an effective coverage level of 1 dose of varicella vaccine among children by age 19 to 35 months.  
Target: 90 percent.  
Baseline: 90 percent of children aged 19 to 35 months in 2009 received at least 1 dose of the varicella antigen.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.7** Achieve and maintain an effective coverage level of 4 doses of pneumococcal conjugate vaccine (PCV) among children by age 19 to 35 months.  
Target: 90 percent.  
Baseline: 80 percent of children aged 19 to 35 months received at least 4 doses of pneumococcal conjugate vaccine in 2008.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.8** Achieve and maintain an effective coverage level of 2 doses of hepatitis A vaccine among children by age 19 to 35 months.  
Target: 85 percent.  
Baseline: 47 percent of children aged 19 to 35 months in 2009 received 2 or more doses of hepatitis A vaccine.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.9** Achieve and maintain an effective coverage level of a birth dose of hepatitis B vaccine (0 to 3 days between birth date and date of vaccination, reported by annual birth cohort).  
Target: 85 percent.  
Baseline: 58 percent of the 2006 birth cohort received the first dose of hepatitis B vaccine within 3 days of birth based on National Immunization Survey data from 2007-09.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-7.10** Achieve and maintain an effective coverage level of 2 or more or 3 or more doses rotavirus vaccine among children by age 19 to 35 months.  
Target: 80 percent.  
Baseline: 44 percent of children aged 19 to 35 months in 2009 received 2 or more, or 3 or more doses of rotavirus vaccine by age 19 to 35 months, depending on product type received.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD.

**IID-8:** Increase the percentage of children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella, and pneumococcal conjugate vaccine (PCV).  
Target: 80 percent.  
Baseline: 44 percent children aged 19 to 35 months in 2009 received the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella, and PCV.  
Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS), CDC, NCIRD, and NC

**IID-9:** Decrease the percentage of children in the United States who receive 0 doses of recommended vaccines by age 19 to 35 months.

Target: Not applicable.

Baseline: 0.6 percent of children age 19 to 35 months in 2009 in the United States received 0 doses of recommended vaccines by age 19 to 35 months.

Target setting method: This measure is being tracked for informational purposes. If warranted, a target will be set during the decade.

Data source: National Immunization Survey (NIS), CDC, NCIRD and NCHS.

**IID-10:** Maintain vaccination coverage levels for children in kindergarten.

**IID-10.1** Maintain the vaccination coverage level of 4 doses of diphtheria-tetanus-acellular pertussis (DTaP) vaccine for children in kindergarten.

Target: 95 percent.

Baseline: 95 percent of children enrolled in kindergarten for the 2009–10 school year received 4 or more doses of DTaP vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-10.2** Maintain the vaccination coverage level of 2 doses of measles-mumps-rubella (MMR) vaccine for children in kindergarten. Target: 95 percent.

Baseline: 95 percent of children enrolled in kindergarten for the 2009–10 school year received 2 or more doses of MMR vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-10.3** Maintain the vaccination coverage level of 3 doses of polio vaccine for children in kindergarten.

Target: 95 percent.

Baseline: 96 percent of children enrolled in kindergarten for the 2009–10 school year received 3 or more doses of polio vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-10.4** Maintain the vaccination coverage level of 3 doses of hepatitis B vaccine for children in kindergarten.

Target: 95 percent.

Baseline: 97 percent of children enrolled in kindergarten for the 2009–10 school year received 3 or more doses of hepatitis B vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data Source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-10.5** Maintain the vaccination coverage level of 2 doses of varicella vaccine for children in kindergarten.

Target: 95 percent.

Baseline: 96 percent of children enrolled in kindergarten for the 2009–10 school year received 2 or more doses of varicella vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-11:** Increase routine vaccination coverage levels for adolescents.

**IID-11.1** Increase the vaccination coverage level of 1 dose of tetanus-diphtheria-acellular pertussis (Tdap) booster vaccine for adolescents by age 13 to 15 years.

Target: 80 percent.

Baseline: 62 percent of adolescents aged 13 to 15 years in 2009 received 1 or more doses of a Tdap booster.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS)–Teen, CDC, NCIRD and NCHS.

**IID–11.2** Increase the vaccination coverage level of 2 doses of varicella vaccine for adolescents by age 13 to 15 years (excluding children who have had varicella).

Target: 90 percent.

Baseline: 52 percent of adolescents aged 13 to 15 years in 2009 received at least 2 doses of varicella vaccine (excluding adolescents who had had varicella).

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS)–Teen, CDC, NCIRD and NCHS.

**IID–11.3** Increase the vaccination coverage level of 1 dose meningococcal conjugate vaccine for adolescents by age 13 to 15 years.

Target: 80 percent.

Baseline: 55 percent of adolescents aged 13 to 15 years in 2009 received 1 or more doses of meningococcal conjugate vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS)–Teen, CDC, NCIRD and NCHS.

**IID–11.4** Increase the vaccination coverage level of 3 doses of human papillomavirus (HPV) vaccine for females by age 13 to years.

Target: 80 percent.

Baseline: 23 percent of females aged 13 to 15 years in 2009 received 3 or more doses of human papillomavirus (HPV) vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS)–Teen, CDC, NCIRD and NCHS.

**IID–12:** Increase the percentage of children and adults who are vaccinated annually against seasonal influenza.

**IID–12.1** Increase the percentage of children aged 6 to 23 months who are vaccinated annually against seasonal influenza (1 or 2 doses, depending on age-appropriateness and previous doses received).

Target: 80 percent.

Baseline: 25 percent of children aged 6 to 23 months received 1 or 2 doses of influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Immunization Survey (NIS), CDC, NCIRD and NCHS.

**IID–12.2** Increase the percentage of children aged 2 to 4 years who are vaccinated annually against seasonal influenza.

Target: 80 percent.

Baseline: 43 percent of children aged 2 to 4 years received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.3** Increase the percentage of children aged 5 to 12 years who are vaccinated annually against seasonal influenza.

Target: 80 percent.

Baseline: 30 percent of children aged 5 to 12 years received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.4** Increase the percentage of children aged 13 to 17 years who are vaccinated annually against seasonal influenza.

Target: 80 percent.

Baseline: 13 percent of children aged 13 to 17 years received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Immunization Survey (NIS) –Teen, CDC.

**IID–12.5** Increase the percentage of non-institutionalized adults aged 18 to 64 years who are vaccinated annually against seasonal influenza.

Target: 80 percent.

Baseline: 27 percent of non-institutionalized adults aged 18 to 64 years received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.6** Increase the percentage of non-institutionalized high-risk adults aged 18 to 64 years who are vaccinated annually against seasonal influenza.

Target: 90 percent.

Baseline: 42 percent of non-institutionalized high-risk adults aged 18 to 64 years received influenza vaccine for the 2008–09 influenza season.

Target setting method: Retention of Healthy People 2010 target.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.7** Increase the percentage of non-institutionalized adults aged 65 years and older who are vaccinated annually against seasonal influenza.

Target: 90 percent.

Baseline: 66 percent of non-institutionalized adults aged 65 years and older received influenza vaccine for the 2008–09 influenza season.

Target setting method: Retention of Healthy People 2010 target. Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.8** Increase the percentage of institutionalized adults aged 18 years and older in long-term or nursing homes who are vaccinated annually against seasonal influenza.

Target: 90 percent.

Baseline: 70 percent of institutionalized adults 18 years and older in long-term or nursing homes received influenza vaccine for the 2008–09 influenza season.

Target setting method: Retention of Healthy People 2010 target. Data source: Minimum Data Set (MDS), CMS.

**IID–12.9** Increase the percentage of health care personnel who are vaccinated annually against seasonal influenza.

Target: 90 percent.

Baseline: 53 percent of health care personnel received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–12.10** Increase the percentage of pregnant women who are vaccinated against seasonal influenza.

Target: 80 percent.

Baseline: 11 percent of pregnant women received influenza vaccine for the 2008–09 influenza season.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID–13:** Increase the percentage of adults who are vaccinated against pneumococcal disease.

**IID–13.1** Increase the percentage of non-institutionalized adults aged 65 years and older who are vaccinated against pneumococcal disease.

Target: 90 percent.

Baseline: 61 percent of persons aged 65 years and older in 2009 had ever received a pneumococcal vaccination.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID-13.2** Increase the percentage of non-institutionalized high-risk adults aged 18 to 64 years who are vaccinated against pneumococcal disease.

Target: 60 percent.

Baseline: 17 percent of high-risk persons aged 18 to 64 years in 2009 had ever received a pneumococcal vaccination.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID-13.3** Increase the percentage of institutionalized adults (persons aged 18 years and older in long-term or nursing homes) who are vaccinated against pneumococcal disease.

Target: 90 percent.

Baseline: 72 percent of persons in long-term care facilities and nursing homes certified by the Centers for Medicare and Medicaid Services (CMS) in 2009 had ever received a pneumococcal vaccination.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: Minimum Data Set (MDS), CMS.

**IID-14:** Increase the percentage of adults who are vaccinated against zoster (shingles).

Target: 30 percent.

Baseline: 10 percent of adults aged 60 years and older in 2009 had received zoster (shingles) vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID-15:** (Developmental) Increase hepatitis B vaccine coverage among high-risk populations.

**IID-15.1** (Developmental) Increase hepatitis B vaccine coverage among long-term hemodialysis patients.

Potential data source: Healthcare Quality Survey, DHQP, CDC.

**IID-15.2** (Developmental) Increase hepatitis B vaccine coverage among men who have sex with men. Potential data source: National Notifiable Disease Surveillance System (NNDSS) CDC.

**IID-15.3** Increase hepatitis B vaccine coverage among health care personnel.

Target: 90 percent.

Baseline: 74 percent of health care personnel in 2009 had received at least 3 doses of hepatitis B vaccine.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

**IID-15.4** (Developmental) Increase hepatitis B vaccine coverage among injection drug users.

Potential data sources: National HIV Behavioral Surveillance System (NHBS) CDC.

**IID-16:** (Developmental) Increase the scientific knowledge on vaccine safety and adverse events.

Potential data sources: FDA Sentinel Initiative, FDA; Vaccine Adverse Event Reporting System (VAERS), CDC and FDA; Vaccine Safety Datalink Project (VSD), CDC; and Vaccine Analytic Unit (VAU), CDC, DHQP.

**IID-17:** Increase the percentage of providers who have had vaccination coverage levels among children in their practice population measured within the past year.

**IID-17.1** Increase the percentage of public health providers who have had vaccination coverage levels among children in their practice population measured within the past year.

Target: 50 percent.

Baseline: 40 percent of public provider sites that routinely provided immunizations to children aged 6 years and under participated in a provider assessment at least once in the past year in 2009.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: Annual Immunization Assessment Reports, CDC, NCIRD

**IID-17.2** Increase the percentage of private providers who have had vaccination coverage levels among children in their practice population measured within the past year.

Target: 50 percent.

Baseline: 33 percent of private provider sites that routinely provided immunizations to children aged 6 years and under participated in a provider assessment at least once in the past year in 2009.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: Annual Immunization Assessment Reports, CDC, NCIRD.

**IID-18:** Increase the percentage of children under age 6 years of age whose immunization records are in a fully operational, population-based immunization information system (IIS).

Target: 95 percent.

Baseline: 75 percent of children under 6 years of age had two or more immunizations recorded in immunization information system (IIS) in 2008.

Target setting method: Projection/trend analysis.

Data source: Immunization Program Annual Reports, CDC, NCIRD.

**IID-19:** Increase the number of States collecting kindergarten vaccination coverage data according to CDC minimum standards.

Target: 51 (States and the District of Columbia).

Baseline: 13 States (including the District of Columbia) collected kindergarten vaccination coverage data according to CDC minimum standards in 2009.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: School Immunization Assessment Survey, CDC, NCIRD.

**IID-20:** Increase the number of States that have 80 percent of adolescents with 2 or more age-appropriate immunizations recorded in an immunization information (IIS) system among adolescents aged 11 to 18 years.

Target: 40 (States and the District of Columbia).

Baseline: 14 States (including the District of Columbia) recorded 80 percent of among adolescents aged 11 to 18 years with 2 or more age-appropriate immunizations in an immunization information system (IIS) in 2009.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: Immunization Program Annual Reports, CDC, NCIRD.

**IID-21:** Increase the number of States that use electronic data from rabies animal surveillance to inform public health prevention programs.

Target: 49 States (excluding Hawaii), the District of Columbia, Puerto Rico, and New York City.

Baseline: 8 States used electronic data from rabies animal surveillance to inform public health prevention programs in 2010.

Target setting method: Projection/trend analysis.

Data source: Rabies Surveillance Network (RSN), CDC, NCEZID.

**IID-22:** Increase the number of public health laboratories monitoring influenza-virus resistance to antiviral agents.

Target: 25 public health laboratories.

Baseline: 3 public health laboratories monitored influenza virus resistance to antiviral agents in 2009.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: State Laboratory Reports, Influenza Division, National Center for Immunization and Respiratory Diseases, CDC.

**IID-23:** Reduce hepatitis A.

Target: 0.3 cases per 100,000 population.

Baseline: 1.0 cases of hepatitis A virus per 100,000 population were reported in 2007.

Target setting method: Projection/trend analysis.

Data source: National Notifiable Diseases Surveillance System (NNDSS), CDC.

**IID-24:** Reduce chronic hepatitis B virus infections in infants and young children (perinatal infections).

Target: 400 cases

Baseline: 799 cases of chronic hepatitis B virus (HBV) infection were estimated among infants and children aged 1 to 24 months who were born to mothers with HBV infections in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data sources: Perinatal Hepatitis B Prevention Program, CDC, NCHHSTP; National Vital Statistics System-Nativity (NVSS-N), CDC, NCHS.

**IID-25:** Reduce hepatitis B.

**IID-25.1** Reduce new hepatitis B infections in adults aged 19 and older.

Target: 1.5 cases per 100,000.

Baseline: 2.0 symptomatic cases of hepatitis B per 100,000 persons aged 19 years and older were reported in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data sources: National Notifiable Diseases Surveillance System (NNDSS).

**IID-25.2** Reduce new hepatitis B infections among high-risk populations—Injection drug users.

Target: 215 cases.

Baseline: 285 symptomatic cases of hepatitis B were reported among injection drug users in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data sources: National Notifiable Diseases Surveillance System (NNDSS); Viral Hepatitis Active Surveillance Sites.

**IID-25.3** Reduce new hepatitis B infections among high-risk populations—Men who have sex with men.

Target: 45 new infections.

Baseline: 62 new hepatitis B infections were reported among men who indicated homosexual or bisexual preference in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data sources: National Notifiable Diseases Surveillance System (NNDSS).

**IID-26:** Reduce new hepatitis C infections.

Target: 0.2 new cases per 100,000.

Baseline: 0.3 new symptomatic hepatitis C cases per 100,000 population were reported in the past 12 months in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data sources: National Notifiable Disease Surveillance System (NNDSS), CDC, Funded Viral Hepatitis Surveillance Sites.

**IID-27:** Increase the proportion of persons aware they have a hepatitis C infection.

Target: 60 percent.

Baseline: 49 percent of National Health and Nutrition Examination Survey respondents who tested positive for chronic hepatitis C reported that they were aware of their hepatitis C infection status prior to the laboratory confirmation in 2002–07.

Target setting method: Projection/trend analysis.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**IID-28:** (Developmental) Increase the proportion of persons who have been tested for hepatitis B virus within minority communities experiencing health disparities.

Potential data source: Racial and Ethnic Approaches to Community Health (REACH) U.S. Risk Factor Survey.

**IID-29:** Reduce tuberculosis (TB).

Target: 1.0 new case per 100,000 population.

Baseline: 4.9 confirmed new cases of tuberculosis per 100,000 population were reported to CDC by local health departments in all 50 States and the District of Columbia in 2005.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.  
Data source: National Tuberculosis Indicators Project (NTIP), NCHHSTP, CDC.

**IID-30:** Increase treatment completion rate of all tuberculosis patients who are eligible to complete therapy.

Target: 93 percent.

Baseline: 83.8 percent of persons with confirmed tuberculosis completed curative therapy in 2006.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National TB Surveillance System and national Tuberculosis Indicators Project (NTIP), CDC, NCHHSTP.

**IID-31:** Increase the treatment completion rate of contacts to sputum smear-positive cases who are diagnosed with latent tuberculosis infection and started LTBI treatment.

Target: 79.0 percent.

Baseline: 68.1 percent of contact to sputum smear-positive patients who are diagnosed with latent tuberculosis infection completed a course of treatment in 2007.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: National TB Surveillance System and National Tuberculosis Indicators Project (NTIP), CDC, NCHHSTP

**IID-32:** Reduce the average time for a laboratory to confirm and report tuberculosis cases.

Target: 75 percent.

Baseline: 32 percent of patients with a positive nucleic acid amplification test (NAAT) had their test results confirmed within 2 days of specimen collection in 2008.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: CDC Electronic Report of Verified Case of Tuberculosis, NCHHSTP, CDC.

### Food Safety

Number	Objective Short Title
FS-1	Infections caused by key foodborne pathogens
FS-2	Outbreak-associated infections associated with food commodity groups
FS-3	Antimicrobial resistance
FS-4	Allergic reactions to food
FS-5	Consumer food safety practices
FS-6	Safe food preparation practices in foodservice and retail establishments

### Topic Area: Food Safety

**FS-1:** Reduce infections caused by key pathogens transmitted commonly through food.

**FS-1.1** Reduce infections caused by *Campylobacter* species transmitted commonly through food.

**Target:** 8.5 cases per 100,000.

**Baseline:** 12.7 cases, on average, of laboratory-confirmed *Campylobacter* species infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.2** Reduce infections caused by Shiga toxin-producing *Escherichia coli* (STEC) O157 transmitted commonly through food.

**Target:** 0.6 cases per 100,000.

**Baseline:** 1.2 cases, on average, of laboratory-confirmed Shiga toxin-producing *Escherichia coli* (STEC) O157 infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.3** Reduce infections caused by *Listeria monocytogenes* transmitted commonly through food.

**Target:** 0.2 cases per 100,000.

**Baseline:** 0.3 cases, on average, of laboratory-confirmed *Listeria monocytogenes* infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.4** Reduce infections caused by *Salmonella* species transmitted commonly through food.

**Target:** 11.4 cases per 100,000.

**Baseline:** 15.2 cases, on average, of laboratory-confirmed *Salmonella* species infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.5** Reduce post-diarrheal hemolytic uremic syndrome (HUS) in children under 5 years of age.

**Target:** 0.9 cases per 100,000.

**Baseline:** 1.8 cases, on average, of post-diarrheal hemolytic uremic syndrome (HUS) per 100,000 children under 5 years of age per year were reported in 2005–07.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.6** Reduce infections caused by *Vibrio* species transmitted commonly through food.

**Target:** 0.2 cases per 100,000.

**Baseline:** 0.3 cases, on average, of laboratory-confirmed *Vibrio* species infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-1.7** Reduce infections caused by *Yersinia* species transmitted commonly through food.

**Target:** 0.3 cases per 100,000.

**Baseline:** 0.4 cases, on average, of laboratory-confirmed *Yersinia* species infections per 100,000 population per year were reported in 2006–08.

**Target setting method:** Projection/trend analysis.

**Data source:** Foodborne Diseases Active Surveillance Network (FoodNet), CDC, NCEZID.

**FS-2:** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with food commodity groups:

**FS-2.1** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with beef.

**Target:** 180 cases per year.

**Baseline:** 200 reported outbreak-associated infections, on average, per year due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species were associated with beef in 2005–07.

**Target setting method:** 10 percent improvement.

**Data source:** National Outbreak Reporting System (NORS), CDC, NCEZID.

**FS-2.2** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with dairy.

**Target:** 707 cases per year.

**Baseline:** 786 reported outbreak-associated infections, on average, per year due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species were associated with dairy products in 2005–07.

**Target setting method:** 10 % improvement.

**Data source:** National Outbreak Reporting System (NORS), CDC, NCEZID.

**FS-2.3** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with fruits and nuts.

**Target:** 280 cases per year.

**Baseline:** 311 reported outbreak-associated infections, on average, per year due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species were associated with fruits and nuts in 2005–07.

**Target setting method:** 10 % improvement.

**Data source:** National Outbreak Reporting System (NORS), CDC, NCEZID.

**FS-2.4** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with leafy vegetables.

**Target:** 185 cases per year.

**Baseline:** 205 reported outbreak-associated infections, on average, per year due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species were associated with leafy vegetables in 2005–07.

**Target setting method:** 10 % improvement.

**Data source:** National Outbreak Reporting System (NORS), CDC, NCEZID.

**FS–2.5** Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with poultry.

**Target:** 232 cases per year.

**Baseline:** 258 reported outbreak-associated infections, on average, per year due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species were associated with poultry in 2005–07.

**Target setting method:** 10 % improvement.

**Data source:** National Outbreak Reporting System (NORS), CDC, NCEZID.

**FS–3:** Prevent an increase in the proportion of nontyphoidal *Salmonella* and *Campylobacter jejuni* isolates from humans that are resistant to antimicrobial drugs.

**FS–3.1** Prevent an increase in the proportion of nontyphoidal *Salmonella* isolates from humans that are resistant to nalidixic acid (quinolone).

**Target:** 2 percent.

**Baseline:** 2 percent of nontyphoidal *Salmonella* isolates from humans were resistant to nalidixic acid (quinolone) in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC, NCEZID.

**FS–3.2** Prevent an increase in the proportion of nontyphoidal *Salmonella* isolates from humans that are resistant to ceftriaxone (third-generation cephalosporin).

**Target:** 3 percent.

**Baseline:** 3 percent of nontyphoidal *Salmonella* isolates from humans were resistant to ceftriaxone (third-generation cephalosporin) in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC, NCEZID.

**FS–3.3** Prevent an increase in the proportion of nontyphoidal *Salmonella* isolates from humans that are resistant to gentamicin.

**Target:** 2 percent.

**Baseline:** 2 percent of nontyphoidal *Salmonella* isolates from humans were resistant to gentamicin in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC, NCEZID.

**FS–3.4** Prevent an increase in the proportion of nontyphoidal *Salmonella* isolates from humans that are resistant to ampicillin.

**Target:** 10 percent.

**Baseline:** 10 percent of nontyphoidal *Salmonella* isolates from humans were resistant to ampicillin in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System (NARMS), CDC, NCEZID.

**FS–3.5** Prevent an increase in the proportion of nontyphoidal *Salmonella* isolates from humans that are resistant to three or more classes of antimicrobial agents.

**Target:** 11 percent.

**Baseline:** 11 percent of nontyphoidal *Salmonella* isolates from humans were resistant to three or more classes of antimicrobial agents in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC, NCEZID.

**FS-3.6** Prevent an increase in the proportion of *Campylobacter jejuni* isolates from humans that are resistant to erythromycin.

**Target:** 2 percent.

**Baseline:** 2 percent of *Campylobacter jejuni* isolates from humans were resistant to erythromycin in 2006–08.

**Target setting method:** Maintain the baseline measure.

**Data source:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC, NCEZID.

**FS-4:** Reduce severe allergic reactions to food among adults with a food allergy diagnosis.

**Target:** 21.0 percent.

**Baseline:** 29.3 percent of adults with a food allergy diagnosis experienced severe allergic reactions to food in 2006.

**Target setting method:** Projection/trend analysis.

**Data source:** Food Safety Survey, FDA and USDA, FSIS.

**FS-5:** Increase the proportion of consumers who follow key food safety practices.

**FS-5.1** Increase the proportion of consumers who follow the key food safety practice of “Clean: wash hands and surfaces often.”

**Target:** 74.0 percent.

**Baseline:** 67.2 percent of consumers followed the key food safety practice of “Clean: wash hands and surfaces often.” in 2006.

**Target setting method:** 10 percent improvement.

**Data source:** Food Safety Survey, FDA and USDA, FSIS.

**FS-5.2** Increase the proportion of consumers who follow the key food safety practice of “Separate: don’t cross-contaminate.”

**Target:** 92 percent.

**Baseline:** 89 percent of consumers followed the key food safety practice of “Separate: don’t cross contaminate.” in 2006.

**Target setting method:** Projection/trend analysis.

**Data source:** Food Safety Survey, FDA and USDA, FSIS.

**FS-5.3** Increase the proportion of consumers who follow the key food safety practice of “Cook: cook to proper temperatures.”

**Target:** 50 percent.

**Baseline:** 37 percent of consumers followed the key food safety practice of “Cook: cook to proper temperatures.” in 2006.

**Target setting method:** Projection/trend analysis.

**Data source:** Food Safety Survey, FDA and USDA, FSIS.

**FS-5.4** Increase the proportion of consumers who follow the key food safety practice of “Chill: refrigerate promptly.”

**Target:** 91.1 percent.

**Baseline:** 88.1 percent of consumers followed the key food safety practice of “Chill: refrigerate promptly.” in 2006.

**Target setting method:** Projection/trend analysis.

**Data sources:** Food Safety Survey, FDA and USDA, FSIS.

**FS-6:** (Developmental) Improve food safety practices associated with foodborne illness in foodservice and retail establishments.

**Potential data source:** Retail Risk Factor Studies, FDA, CFSAN.

# HEALTHY NORTH CAROLINA 2020

## SEXUALLY TRANSMITTED DISEASE AND UNINTENDED PREGNANCY

Sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection, and unintended pregnancy affect tens of thousands of North Carolinians every year. These preventable conditions can lead to reduced quality of life as well as premature death and disability and result in millions of dollars in preventable health expenditures annually.<sup>17</sup> As with many diseases and health conditions, the burden of sexually transmitted diseases and unintended pregnancy falls disproportionately on disadvantaged populations, young people, and minorities.<sup>86-88</sup>

### 2020 Objectives

#### OBJECTIVE 1: DECREASE THE PERCENTAGE OF PREGNANCIES THAT ARE UNINTENDED

(KEY PERFORMANCE INDICATOR)

*Rationale for selection:* The term *unintended pregnancy* refers to a pregnancy that was mistimed or unwanted at the time of conception. Nearly half of all pregnancies in North Carolina are unintended, which is associated with delayed entry into prenatal care as well as low-birth-weight babies and poor maternal nutrition.<sup>89</sup>

CURRENT (2007) <sup>90</sup>	2020 TARGET
39.8%	30.9%

#### OBJECTIVE 2: REDUCE THE PERCENTAGE OF POSITIVE RESULTS AMONG INDIVIDUALS AGED 15-24 YEARS TESTED FOR CHLAMYDIA

*Rationale for selection:* Chlamydia is the most prevalent reportable STD in North Carolina. This infection can cause infertility and pelvic inflammatory disease (PID) in females. In 2008, individuals under the age of 30 years accounted for approximately 85% of new chlamydia cases across the state.<sup>86</sup>

CURRENT (2009) <sup>jj</sup>	2020 TARGET
9.7%	8.7%

#### OBJECTIVE 3: REDUCE THE RATE OF NEW HIV INFECTION DIAGNOSES (PER 100,000 POPULATION)<sup>kk</sup>

*Rationale for selection:* An estimated 35,000 North Carolinians have HIV/AIDS (including those who are unaware of their status). Furthermore, HIV/AIDS was the seventh leading cause of death among 25- to 44-year-olds in 2007.<sup>86</sup>

CURRENT (2008) <sup>91</sup>	2020 TARGET
24.7	22.2

jj Communicable Disease Branch, North Carolina Department of Health and Human Services. Written (email) communication. July 19, 2010. kk Diagnosis rate includes children, adolescents, and adults.

## Disparities in Sexually Transmitted Disease and Unintended Pregnancy

*Unintended pregnancy:* Education, income, race, and marital status are all associated with unintended pregnancy. Women with less than a high school education are 1.6 times as likely to have an unintended pregnancy than women with greater than a high school education, and women making less than \$15,000 are 3.4 times as likely as women making \$50,000 or more (2007). In addition, African American women are 1.7 times as likely as white women to report their pregnancy was unintended (59.6% versus 33.9% in 2007). Unmarried women, as well as women on Medicaid, are more likely than their counterparts to report unintended pregnancy (2007).<sup>92</sup>

*Chlamydia:* The highest rates of chlamydia are found among females aged 15-24 years and males aged 20-24 years (2008). Non-Hispanic African American females are at particular risk for infection, with infection rates seven times that of non-Hispanic white females (2008). These disparities can partially be explained by screening and reporting bias. Most cases are among women because they are tested more frequently. In addition, data are biased toward public clinics.<sup>86</sup>

*HIV:* New HIV infections, pediatric cases, AIDS cases, and AIDS-related death place a great burden on non-Hispanic African Americans in North Carolina. Nearly two-thirds (64%) of all new adult/adolescent HIV diagnoses are among non-Hispanic African Americans, with a rate of 79.5 new diagnoses per 100,000 population (2008). The second highest rate is among Hispanics (35.8 new diagnoses per 100,000 population in 2008). These two rates are 8.3 times higher and 3.7 times higher, respectively, than the non-Hispanic white diagnosis rate of 9.6 new cases per 100,000 population (2008). According to 2008 data, males in all racial/ethnic categories are more likely than women to receive a diagnosis of HIV infection. Injecting drug users and men who have sex with men also are at increased risk for contracting HIV (2008).<sup>86</sup>

## Strategies to Prevent and Reduce Sexually Transmitted Disease and Unintended Pregnancy

Level of the Socioecological Model	Strategies
<b>Individual</b>	Use protection to prevent STDs and unintended pregnancy; get screened for human immunodeficiency virus (HIV) if at increased risk for HIV infection (or if pregnant) <sup>93</sup> ; get the HPV vaccine if you are a female aged 11-26 years. <sup>94</sup>
<b>Family/Home</b>	Talk to your children about the consequences of risky sexual behavior; encourage females aged 11-26 years to get the HPV vaccine. <sup>94</sup>
<b>Clinical</b>	Provide screening, counseling, and treatment of STDs/HIV infection as recommended by the US Preventive Services Task Force <sup>93</sup> ; screen women younger than 25 years and others at risk for chlamydia <sup>95</sup> ; use provider-referral partner notification to identify people with HIV <sup>96</sup> ; counsel injecting drug users (IDUs) who are at increased risk for HIV <sup>97</sup> ; offer HPV vaccine to females aged 11-26 years <sup>94</sup> and to males aged 9-26 years <sup>98</sup> ; provide interventions for men who have sex with men. <sup>99</sup>
<b>Schools and Child Care</b>	Ensure that all students receive comprehensive sexuality education <sup>17,100</sup> ; implement evidence-based healthful living curricula in schools <sup>17,31</sup> ; deliver group-based comprehensive risk reduction (CRR) to adolescents to promote behaviors that prevent or reduce the risk of pregnancy, HIV, and other STDs. <sup>101</sup>
<b>Insurers</b>	Provide coverage for STD/HIV screening and counseling for sexually active adolescents and high-risk adults; provide screening for chlamydia among women younger than 25 years and for others at increased risk, with no cost sharing. <sup>34,11</sup>
<b>Community</b>	Expand availability of family planning services and community-based pregnancy prevention programs, such as the Nurse Family Partnership <sup>17,85</sup> ; educate youth about the importance of sexual health <sup>100</sup> ; support school-based and school-linked health services <sup>31</sup> ; provide youth development-focused behavioral interventions coordinated with community service components <sup>102</sup> ; create sterile needle exchange programs for IDUs <sup>97</sup> ; provide group and community-level interventions for men who have sex with men. <sup>99</sup>
<b>Public Policies</b>	Pass policies that ensure comprehensive sexuality education for all students <sup>17,100</sup> ; provide funding to support school-based and school-linked health services and achieve a statewide ratio of 1 school nurse for every 750 middle and high school students <sup>31</sup> ; fund community education campaigns to increase awareness of sexual health <sup>100</sup> ; fund expansion of family planning services and community-based pregnancy prevention programs for low-income families, such as the Nurse Family Partnership. <sup>17,85</sup>

## Healthy People 2020 Summary of Objectives

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### HIV

**Number            Objective Short Title**

#### **Diagnosis of HIV Infection and AIDS**

HIV-1	HIV diagnoses
HIV-2	New HIV infection
HIV-3	HIV transmission rate
HIV-4	AIDS
HIV-5	AIDS among heterosexuals
HIV-6	AIDS among men who have sex with men
HIV-7	AIDS among injection drug users
HIV-8	Perinatally acquired HIV and AIDS

#### **Medical Health Care, Survival, and Death After Diagnosis of HIV Infection and AIDS**

HIV-9	Early HIV diagnosis
HIV-10	HIV care and treatment
HIV-11	Survival after AIDS diagnosis
HIV-12	HIV deaths

#### **HIV Testing**

HIV-13	Awareness of HIV serostatus
HIV-14	HIV testing
HIV-15	HIV testing in TB patients

#### **HIV Prevention**

HIV-16	HIV/AIDS education in substance abuse treatment programs
HIV-17	Condom use
HIV-18	Unprotected sex among men who have sex with men

## Topic Area: HIV

**HIV-1:** (Developmental) Reduce new HIV diagnoses among adolescents and adults.

Potential data source: HIV Surveillance System, CDC, NCHHSTP

**HIV-2:** (Developmental) Reduce new (incident) HIV infections among adolescents and adults.

Potential data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-3:** Reduce the rate of HIV transmission among adolescents and adults.

Target: 3.5 new infections per 100 persons living with HIV.

Baseline: The HIV transmission rate was 5.0 new infections per 100 persons living with HIV in 2006.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-4:** Reduce new AIDS cases among adolescents and adults.

Target: 13.0 new cases per 100,000 population.

Baseline: 14.4 new cases of AIDS per 100,000 population aged 13 years and older were diagnosed in 2007.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-5:** Reduce new AIDS cases among adolescent and adult heterosexuals.

Target: 10,000 new cases.

Baseline: 11,110 new cases of AIDS were diagnosed among persons aged 13 years and older who reported specific heterosexual contact with a person known to have, or be at high risk for, HIV infection in 2007.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-6:** Reduce new AIDS cases among adolescent and adult men who have sex with men.

Target: 15,074 new cases.

Baseline: 16,749 new AIDS cases were diagnosed among males aged 13 years and older who reported sexual contact with other men or with both men and women in 2007.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-7:** Reduce new AIDS cases among adolescents and adults who inject drugs.

Target: 5,409 new cases.

Baseline: 6,010 new AIDS cases were diagnosed among injection drug users aged 13 years and older in 2007.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-8:** Reduce perinatally acquired HIV and AIDS cases.

**HIV-8.1** (Developmental) Reduce newly diagnosed perinatally acquired HIV cases.

Potential data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-8.2** Reduce new cases of perinatally acquired AIDS.

Target: 25 new cases.

Baseline: 28 perinatally acquired AIDS cases were diagnosed in 2007.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-9:** (Developmental) Increase the proportion of new HIV infections diagnosed before progression to AIDS.

Potential data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-10:** (Developmental) Increase the proportion of HIV-infected adolescents and adults who receive HIV care and treatment consistent with current standards.

Potential data source: Medical Monitoring Project (MMP), CDC, NCHHSTP.

**HIV-11** Increase the proportion of persons surviving more than 3 years after a diagnosis with AIDS.

Target: 96.8 percent.

Baseline: 88.0 percent of persons diagnosed with AIDS survived more than 3 years after diagnosis in 2006.

Target setting method: 10 percent improvement.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-12:** Reduce deaths from HIV infection.

Target: 3.3 deaths per 100,000 population.

Baseline: 3.7 deaths due to HIV infection per 100,000 population occurred in 2007 (age adjusted to the year 2000 standard population).

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**HIV-13:** Increase the proportion of persons living with HIV who know their serostatus.

Target: 90.0 percent.

Baseline: 80.6 percent of persons aged 13 years and older living with HIV were aware of their HIV infection in 2006.

Target setting method: Maintain consistency with national programs, regulations, policies, and laws.

Data source: HIV Surveillance System, CDC, NCHHSTP.

**HIV-14:** Increase the proportion of adolescents and adults who have been tested for HIV in the past 12 months.

**HIV-14.1** Increase the proportion of adolescents and adults who have been tested for HIV in the past 12 months.

Target: 16.9 percent.

Baseline: 15.4 percent of persons aged 15 to 44 years reported that they had an HIV test in the past 12 months, outside of blood donation, in 2006–08. Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-14.2** (Developmental) Increase the proportion of men who have sex with men (MSM) who have been tested for HIV in the past 12 months.

Potential data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-14.3** Increase the proportion of pregnant women who have been tested for HIV in the past 12 months.

Target: 74.1 percent.

Baseline: 67.4 percent of women aged 15 to 44 years who completed a pregnancy in the past 12 months reported that they had an HIV test as part of prenatal care in 2006–08.

Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-14.4** Increase the proportion of adolescents and young adults who have been tested for HIV in the past 12 months.

Target: 17.2 percent.

Baseline: 15.6 percent of persons aged 15 to 24 years reported that they had an HIV test in the past 12 months, outside of blood donation, in 2006–08.

Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-15:** Increase the proportion of adults with tuberculosis (TB) who have been tested for HIV.

Target: 80.3 percent.

Baseline: 73.0 percent of persons aged 25 to 44 years with TB were tested for HIV in 2008.

Target setting method: 10 percent improvement.

Data source: National TB Surveillance System, CDC, NCHHSTP.

**HIV-16:** Increase the proportion of substance abuse treatment facilities that offer HIV/AIDS education, counseling, and support.

Target: 59.8 percent.

Baseline: 54.4 percent of publicly and privately funded treatment facilities known to SAMHSA reported that they offer HIV testing, HIV/AIDS education, counseling, and support, or have special substance abuse treatment programs for persons living with HIV/AIDS in 2008.

Target setting method: 10 percent improvement.

Data source: National Survey of Substance Abuse Treatment Services (N-SSATS), SAMHSA.

**HIV-17:** Increase the proportion of sexually active persons who use condoms.

**HIV-17.1** Increase the proportion of sexually active unmarried females aged 15 to 44 years who use condoms.

Target: 38.0 percent.

Baseline: 34.5 percent of sexually active unmarried females aged 15 to 44 years reported using a condom at last sexual intercourse in 2006–2008. Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-17.2** Increase the proportion of sexually active unmarried males aged 15 to 44 years who use condoms.

Target: 60.7 percent.

Baseline: 55.2 percent of sexually active unmarried males aged 15 to 44 years reported using a condom at last sexual intercourse in 2006–08.

Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**HIV-18:** (Developmental) Reduce the proportion of men who have sex with men (MSM) who reported unprotected anal sex in the past 12 months.

Potential data source: National HIV Behavioral Surveillance System (NHBS), CDC, NCHHSTP.

### Sexually Transmitted Diseases

<b>Number</b>	<b>Objective Short Title</b>
STD-1	Chlamydia
STD-2	Chlamydia among females
STD-3	Annual screening for genital Chlamydia by Medicaid
STD-4	Annual screening for genital Chlamydia by insurance plans
STD-5	Pelvic inflammatory disease
STD-6	Gonorrhea
STD-7	Primary and secondary syphilis
STD-8	Congenital syphilis
STD-9	Human papillomavirus infection
STD-10	Genital herpes

## Topic Area: Sexually Transmitted Diseases

**STD-1:** Reduce the proportion of adolescents and young adults with Chlamydia trachomatis infections.

**STD-1.1** Reduce the proportion of females aged 15 to 24 years with Chlamydia trachomatis infections attending family planning clinics.

Target: 6.7 percent.

Baseline: 7.4 percent of females aged 15 to 24 years who attended family planning clinics in the past 12 months tested positive for Chlamydia trachomatis infections in 2008.

Target setting method: 10 percent improvement.

Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-1.2** Reduce the proportion of females aged 24 years and under with Chlamydia trachomatis infections enrolled in a National Job Training Program.

Target: 11.5 percent.

Baseline: 12.8 percent of females aged 24 years and under who enrolled in a National Job Training Program in the past 12 months tested positive for Chlamydia trachomatis infections in 2008.

Target setting method: 10 percent improvement.

Data sources: STD Surveillance System (STDSS), CDC, NCHHSTP; the National Job Training Program, U.S. Department of Labor.

**STD-1.3** Reduce the proportion of males aged 24 years and under enrolled in a National Job Training Program with Chlamydia trachomatis infections.

Target: 6.3 percent.

Baseline: 7.0 percent of males aged 24 years and under who enrolled in a National Job Training Program in the past 12 months tested positive for Chlamydia trachomatis infections in 2008.

Target setting method: 10 percent improvement.

Data sources: STD Surveillance System (STDSS), CDC, NCHHSTP; National Job Training Program, U.S. Department of Labor.

**STD-2:** (Developmental) Reduce Chlamydia rates among females aged 15 to 44 years.

Potential data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-3:** Increase the proportion of sexually active females aged 24 years and under enrolled in Medicaid plans who are screened for genital Chlamydia infections during the measurement year.

**STD-3.1** Increase the proportion of sexually active females aged 16 to 20 years enrolled in Medicaid plans who are screened for genital Chlamydia infections during the measurement year.

Target: 74.4 percent.

Baseline: 52.7 percent of sexually active females aged 16 to 20 years enrolled in Medicaid plans were screened for genital Chlamydia infections during the measurement year, as reported in 2008.

Target setting method: Projection/trend analysis.

Data source: Healthcare Effectiveness Data and Information Set (HEDIS), NCQA.

**STD-3.2** Increase the proportion of sexually active females aged 21 to 24 years enrolled in Medicaid plans who are screened for genital Chlamydia infections during the measurement year.

Target: 80.0 percent.

Baseline: 59.4 percent of sexually active females aged 21 to 24 years enrolled in Medicaid plans were screened for genital Chlamydia infections during the measurement year, as reported in 2008.

Target setting method: Projection/trend analysis.

Data source: Healthcare Effectiveness Data and Information Set (HEDIS), NCQA.

**STD-4:** Increase the proportion of sexually active females aged 24 years and under enrolled in commercial health insurance plans who are screened for genital Chlamydia infections during the measurement year.

**STD-4.1** Increase the proportion of sexually active females aged 16 to 20 years enrolled in commercial health insurance plans who are screened for genital Chlamydia infections during the measurement year.

Target: 65.9 percent.

Baseline: 40.1 percent of sexually active females aged 16 to 20 years enrolled in commercial health insurance plans were screened for genital Chlamydia infections during the measurement year, as reported in 2008.  
Target setting method: Projection/trend analysis.  
Data source: Healthcare Effectiveness Data and Information Set (HEDIS), NCQA.

**STD-4.2** Increase the proportion of sexually active females aged 21 to 24 years enrolled in commercial health insurance plans who are screened for genital Chlamydia infections during the measurement year.  
Target: 78.3 percent.  
Baseline: 43.5 percent of sexually active females aged 21 to 24 years enrolled in commercial health insurance plans were screened for genital Chlamydia infections during the measurement year, as reported in 2008.  
Target setting method: Projection/trend analysis.  
Data source: Healthcare Effectiveness Data and Information Set (HEDIS), NCQA.

**STD-5:** Reduce the proportion of females aged 15 to 44 years who have ever required treatment for pelvic inflammatory disease (PID).  
Target: 3.59 percent.  
Baseline: In 2006–08, 3.99 percent of females aged 15 to 44 years reported that they had ever required treatment for pelvic inflammatory disease (PID).  
Target setting method: 10 percent improvement.  
Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**STD-6:** Reduce gonorrhea rates.

**STD-6.1** Reduce gonorrhea rates among females aged 15 to 44 years.  
Target: 257 new cases per 100,000 population.  
Baseline: 285 new cases of gonorrhea per 100,000 females aged 15 to 44 years were reported in 2008.  
Target setting method: 10 percent improvement.  
Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-6.2** Reduce gonorrhea rates among males aged 15 to 44 years.  
Target: 198 new cases per 100,000 population.  
Baseline: 220 new cases of gonorrhea per 100,000 males aged 15 to 44 years were reported in 2008.  
Target setting method: 10 percent improvement.  
Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-7:** Reduce sustained domestic transmission of primary and secondary syphilis.

**STD-7.1** Reduce sustained domestic transmission of primary and secondary syphilis among females.  
Target: 1.4 new cases per 100,000 population.  
Baseline: 1.5 new cases of primary and secondary syphilis per 100,000 females were reported in 2008.  
Target setting method: 10 percent improvement.  
Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-7.2** Reduce sustained domestic transmission of primary and secondary syphilis among males.  
Target: 6.8 new cases per 100,000 population.  
Baseline: 7.6 new cases of primary and secondary syphilis per 100,000 males were reported in 2008.  
Target setting method: 10 percent improvement.  
Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-8:** Reduce congenital syphilis.  
Target: 9.1 new cases per 100,000 live births.  
Baseline: 10.1 new cases of congenital syphilis per 100,000 live births were reported in 2008.  
Target setting method: 10 percent improvement.  
Data source: STD Surveillance System (STDSS), CDC, NCHHSTP.

**STD-9:** (Developmental) Reduce the proportion of females with human papillomavirus (HPV) infection.

**STD-9.1** (Developmental) Reduce the proportion of females with human papillomavirus (HPV) types 6 and 11.  
Potential data sources: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS; National Health Interview Study (NHIS), CDC, NCHS.

**STD-9.2** (Developmental) Reduce the proportion of females with human papillomavirus (HPV) types 16 and 18.  
Potential data sources: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS; National Health Interview Study (NHIS), CDC, NCHS.

**STD-9.3** (Developmental) Reduce the proportion of females with other human papillomavirus (HPV) types.  
Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**STD-10:** Reduce the proportion of young adults with genital herpes infection due to herpes simplex type 2.

Target: 9.5 percent.

Baseline: 10.5 percent of young adults tested positive for herpes simplex virus type 2 in 2005-08.

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

# HEALTHY NORTH CAROLINA 2020 MATERNAL AND INFANT HEALTH

## 2020 Objectives

Maternal health is an important predictor of newborn health and well-being, and addressing women's health is essential to improving birth outcomes. Many factors affect women's health, including individual health behaviors, access to appropriate care, and socioeconomic factors. Focusing on the health of a woman *before* and *during* her pregnancy is essential to the reduction of poor birth outcomes such as low birthweight, pre-term birth, and infant death.<sup>67,68</sup>

### OBJECTIVE 1: REDUCE THE INFANT MORTALITY RACIAL DISPARITY BETWEEN WHITES AND AFRICAN AMERICANS

*(KEY PERFORMANCE INDICATOR)*

*Rationale for selection:* Infant mortality refers to the death of a baby in its first year of life. Racial and ethnic disparities in infant mortality in North Carolina persist. The death rate of African American babies is nearly 2.5 times the death rate of white babies. Of all infant mortality racial/ethnic disparities in the state, this disparity is the greatest.<sup>69</sup>

CURRENT (2008) <sup>dd</sup>	2020 TARGET
2.45	1.92

### OBJECTIVE 2: REDUCE THE INFANT MORTALITY RATE (PER 1,000 LIVE BIRTHS)

*Rationale for selection:* Over 1,000 babies (under age 1) died in 2009 in North Carolina.<sup>70</sup> The most prevalent causes of infant mortality are birth defects, prematurity, low birth weight, and Sudden Infant Death Syndrome (SIDS).<sup>71</sup>

CURRENT (2008) <sup>ee</sup>	2020 TARGET
8.2	6.3

### OBJECTIVE 3: REDUCE THE PERCENTAGE OF WOMEN WHO SMOKE DURING PREGNANCY

*Rationale for selection:* Smoking during pregnancy is associated with multiple adverse birth outcomes, including low-birth-weight babies and pre-term deliveries.<sup>72</sup> Women who smoke during pregnancy are more likely to have a baby who is premature, who has a low birth weight, or who dies because of SIDS.<sup>73</sup>

CURRENT (2008) <sup>74</sup>	2020 TARGET
10.4%	6.8%

<sup>dd</sup> State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. May 13, 2010. <sup>ee</sup> State Center for Health Statistics, North Carolina Department of Health and Human Services. Written (email) communication. May 13, 2010.

## Disparities in Maternal and Infant Health

*Infant mortality:* Whites have the lowest infant mortality rate (6.0 deaths per 1,000 live births), versus a rate of 13.5 deaths per 1,000 live births for all minorities (2008).<sup>75</sup> As described in the objective, the greatest racial/ethnic disparity exists between whites and African Americans.<sup>ff</sup>

*Smoking during pregnancy:* Education, age, and race/ethnicity are associated with maternal smoking. White, non-Hispanic women with less education and who are younger are more likely to smoke during pregnancy, as are American Indian women.<sup>76</sup>

## Strategies to Improve Maternal and Infant Health

Level of the Socioecological Model	Strategies
<b>Individual</b>	Plan your pregnancy <sup>77</sup> ; enter into pregnancy healthy <sup>85</sup> ; be tobacco free during pregnancy <sup>79</sup> ; access pre- and postnatal care <sup>80,81</sup> ; breastfeed your baby <sup>82</sup> ; space apart pregnancies by 2 to 3 years. <sup>83</sup>
<b>Family/Home</b>	Maintain a tobacco-free home <sup>27</sup> ; put children on their backs to sleep <sup>79</sup> ; do not use soft bedding. <sup>79</sup>
<b>Clinical</b>	Promote reproductive life planning <sup>84</sup> ; screen all pregnant women for tobacco use and provide counseling <sup>34</sup> ; screen for postpartum depression <sup>34</sup> ; encourage women in good health to breastfeed. <sup>82</sup>
<b>Schools and Child Care</b>	Put children on their backs to sleep <sup>79</sup> ; do not use soft bedding. <sup>79</sup>
<b>Worksites</b>	Encourage employers to provide time and space for their employees to breastfeed. <sup>82,gg</sup>
<b>Insurers</b>	Provide coverage with no copays for breastfeeding and smoking cessation counseling for pregnant women. <sup>34,82,hh,ii</sup>
<b>Community</b>	Expand availability of family planning services and community-based pregnancy prevention programs for low-income families, such as the Nurse Family Partnership <sup>17,85</sup> ; support the “Back to Sleep” campaign <sup>79</sup> ; offer age-appropriate education to student and parent groups. <sup>82</sup>
<b>Public Policies</b>	Create policies that encourage formal training on breastfeeding and lactation in medical schools and residency programs <sup>82</sup> ; fund expansion of family planning services and community-based pregnancy prevention programs for low-income families, such as the Nurse Family Partnership. <sup>17,85</sup>

## Healthy People 2020 Summary of Objectives

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### Maternal, Infant, and Child Health

Number	Objective Short Title
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#### Morbidity and Mortality

MICH-1	Fetal and infant deaths
MICH-2	Deaths among infants with Down syndrome
MICH-3	Child deaths
MICH-4	Adolescent and young adult deaths
MICH-5	Maternal deaths
MICH-6	Maternal illness and complications due to pregnancy
MICH-7	Cesarean births
MICH-8	Low birth weight and very low birth weight
MICH-9	Preterm births

#### Pregnancy Health and Behaviors

MICH-10	Prenatal care
MICH-11	Prenatal substance exposure
MICH-12	Childbirth classes
MICH-13	Weight gain during pregnancy

#### Preconception Health and Behaviors

MICH-14	Optimum folic acid levels
MICH-15	Low red blood-cell folate concentrations
MICH-16	Preconception care services and behaviors
MICH-17	Impaired fecundity

#### Postpartum Health and Behavior

MICH-18	Postpartum relapse of smoking
MICH-19	Postpartum care visit with a health worker

#### Infant Care

MICH-20	Infants put to sleep on their backs
MICH-21	Breastfeeding
MICH-22	Worksite lactation support programs
MICH-23	Formula supplementation in breastfed newborns
MICH-24	Lactation care in birthing facilities

#### Disability and Other Impairments

MICH-25	Fetal alcohol syndrome
MICH-26	Disorders diagnosed through newborn bloodspot screening

MICH-27	Birth weight of children with cerebral palsy
MICH-28	Neural tube defects
MICH-29	Children with Autism Spectrum Disorder and developmental delay screening

### Health Services

MICH-30	Access to medical home
MICH-31	Care in family-centered, comprehensive, coordinated systems
MICH-32	Newborn bloodspot screening and follow-up testing
MICH-33	Very low birth weight infants born at level III hospitals

### Topic Area: Maternal, Infant, and Child Health

#### Morbidity and Mortality

**MICH-1:** Reduce the rate of fetal and infant deaths.

**MICH-1.1** Reduce the rate of fetal deaths at 20 or more weeks of gestation.

Target: 5.6 fetal deaths per 1,000 live births and fetal deaths.

Baseline: 6.2 fetal deaths at 20 or more weeks of gestation per 1,000 live births and fetal deaths occurred in 2005.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System-Fetal Death and Natality (NVSS-FD, NVSS-N), CDC, NCHS.

**MICH-1.2** Fetal and infant deaths during perinatal period (28 weeks of gestation to 7 days after birth).

Target: 5.9 perinatal deaths per 1,000 live births and fetal deaths.

Baseline: 6.6 fetal and infant deaths per 1,000 live births and fetal deaths occurred during the perinatal period (28 weeks of gestation to 7 days after birth) in 2005.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System-Fetal Death, Mortality, and Natality (NVSS-FD, NVSS-M, NVSS-N), CDC, NCHS.

**MICH-1.3** All infant deaths (within 1 year).

Target: 6.0 infant deaths per 1,000 live births.

Baseline: 6.7 infant deaths per 1,000 live births occurred within the first year of life in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System-Mortality and Natality (NVSS-M, NVSS-N), CDC, NCHS.

**MICH-1.4** Neonatal deaths (within the first 28 days of life).

Target: 4.1 neonatal deaths per 1,000 live births.

Baseline: 4.5 neonatal deaths per 1,000 live births occurred within the first 28 days of life in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System-Mortality and Natality (NVSS-M, NVSS-N), CDC, NCHS.

**MICH-1.5** Postneonatal deaths (between 28 days and 1 year).

Target: 2.0 postneonatal deaths per 1,000 live births.

Baseline: 2.2 postneonatal deaths per 1,000 live births occurred between 28 days and 1 year of life in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System-Mortality and Natality (NVSS-M, NVSS-N), CDC, NCHS.

**MICH-1.6** Infant deaths related to birth defects (all birth defects). Target: 1.3 infant deaths per

1,000 live births.

Baseline: 1.4 infant deaths per 1,000 live births were attributed to birth defects (all birth defects) in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality and Natality (NVSS–M, NVSS–N), CDC, NCHS.

**MICH–1.7** Infant deaths related to birth defects (congenital heart defects).

Target: 0.34 infant deaths per 1,000 live births.

Baseline: 0.38 infant deaths per 1,000 live births were attributed to congenital heart and vascular defects in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality and Natality (NVSS–M, NVSS–N), CDC, NCHS.

**MICH–1.8** Infant deaths from sudden infant death syndrome (SIDS). Target:

0.50 infant deaths per 1,000 live births.

Baseline: 0.55 infant deaths per 1,000 live births were attributed to sudden infant death syndrome in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality and Natality (NVSS–M, NVSS–N), CDC, NCHS.

**MICH–1.9** Infant deaths from sudden unexpected infant deaths (includes SIDS, Unknown Cause, Accidental Suffocation, and Strangulation in Bed).

Target: 0.84 infant deaths per 1,000 live births.

Baseline: 0.93 infant deaths per 1,000 live births were attributed to sudden unexpected/unexplained causes in 2006.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality and Natality (NVSS–M, NVSS–N), CDC, NCHS.

**MICH–2:** Reduce the 1-year mortality rate for infants with Down syndrome.

Target: 43.7 deaths within the first year of life per 1,000 infants with Down syndrome.

Baseline: 48.6 deaths within the first year of life per 1,000 infants diagnosed with Down’s Syndrome occurred in 2005–06.

Target setting method: 10 percent improvement.

Data source: National Birth Defects Prevention Network.

**MICH–3:** Reduce the rate of child deaths.

**MICH–3.1** Children aged 1 to 4 years. Target: 25.7 deaths per 100,000 population.

Baseline: 28.6 deaths among children aged 1 to 4 years per 100,000 population occurred in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**MICH–3.2** Reduce the rate of deaths among children aged 5 to 9 years.

Target: 12.3 deaths per 100,000 population.

Baseline: 13.7 deaths among children aged 5 to 9 years per 100,000 population occurred in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**MICH–4:** Reduce the rate of adolescent and young adult deaths.

**MICH–4.1** Adolescents aged 10 to 14 years.

Target: 15.2 deaths per 100,000 population.

Baseline: 16.9 deaths among adolescents aged 10 to 14 years per 100,000 population occurred in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**MICH–4.2** Adolescents aged 15 to 19 years.

Target: 55.7 deaths per 100,000 population.

Baseline: 61.9 deaths among adolescents aged 15 to 19 years per 100,000 population occurred in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**MICH–4.3** Young adults aged 20 to 24 years.

Target: 88.5 deaths per 100,000 population.

Baseline: 98.3 deaths among young adults aged 20 to 24 years per 100,000 population occurred in 2007. Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS.

**MICH–5:** Reduce the rate of maternal mortality.

Target: 11.4 maternal deaths per 100,000 live births.

Baseline: 12.7 maternal deaths per 100,000 live births occurred in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Mortality and Natality (NVSS–M, NVSS–N), CDC, NCHS.

**MICH–6:** Reduce maternal illness and complications due to pregnancy (complications during hospitalized labor and delivery).

Target: 28.0 percent.

Baseline: 31.1 percent of pregnant females suffered complications during hospitalized labor and delivery in 2007.

Target setting method: 10 percent improvement.

Data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

**MICH–7:** Reduce cesarean births among low-risk (full-term, singleton, vertex presentation) women.

**MICH–7.1** Reduce cesarean births among low-risk women with no prior cesarean births.

Target: 23.9 percent.

Baseline: 26.5 percent of low-risk females with no prior cesarean birth had a cesarean birth in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Natality (NVSS–N), CDC, NCHS.

**MICH–7.2** Reduce cesarean births among low-risk women giving birth with a prior cesarean birth.

Target: 81.7 percent.

Baseline: 90.8 percent of low-risk females giving birth with a prior cesarean birth had a cesarean birth in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Natality (NVSS–N), CDC, NCHS.

**MICH–8:** Reduce low birth weight (LBW) and very low birth weight (VLBW).

**MICH–8.1** Low birth weight (LBW).

Target: 7.8 percent.

Baseline: 8.2 percent of live births were low birth weight in 2007.

Target setting method: Projection/trend analysis.

Data source: National Vital Statistics System–Natality (NVSS–N), CDC, NCHS.

**MICH–8.2** Very low birth weight (VLBW).

Target: 1.4 percent.

Baseline: 1.5 percent of live births were very low birth weight in 2007.

Target setting method: Projection/trend analysis.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–9:** Reduce preterm births.

**MICH–9.1** Total preterm births.

Target: 11.4 percent.

Baseline: 12.7 percent of live births were preterm in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–9.2** Late preterm or live births at 34 to 36 weeks of gestation.

Target: 8.1 percent.

Baseline: 9.0 percent of live births were late preterm or occurred at 34 to 36 weeks of gestation in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–9.3** Live births at 32 to 33 weeks of gestation.

Target: 1.4 percent.

Baseline: 1.6 percent of live births occurred at 32 to 33 weeks of gestation in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–9.4** Very preterm or live births at less than 32 weeks of gestation.

Target: 1.8 percent.

Baseline: 2.0 percent of live births occurred at less than 32 weeks of gestation in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

## **Pregnancy Health and Behaviors**

**MICH–10:** Increase the proportion of pregnant women who receive early and adequate prenatal care.

**MICH–10.1** Prenatal care beginning in first trimester.

Target: 77.9 percent.

Baseline: 70.8 percent of females delivering a live birth received prenatal care beginning in the first trimester in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–10.2** Early and adequate prenatal care.

Target: 77.6 percent.

Baseline: 70.5 percent of pregnant females received early and adequate prenatal care in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–11:** Increase abstinence from alcohol, cigarettes, and illicit drugs among pregnant women.

**MICH–11.1** Alcohol.

Target: 98.3 percent.

Baseline: 89.4 percent of pregnant females aged 15 to 44 years reported abstaining from alcohol in the past 30 days in 2007–08.

Target setting method: 10 percent improvement.

Data source: National Survey on Drug Use and Health (NSDUH), SAMHSA.

**MICH–11.2** Binge drinking.

Target: 100 percent.

Baseline: 95.0 percent of pregnant females aged 15 to 44 years reported abstaining from binge drinking during the past 30 days in 2007–08.

Target setting method: Total coverage.

Data source: National Survey on Drug Use and Health (NSDUH), SAMHSA.

**MICH–11.3** Cigarette smoking.

Target: 98.6 percent.

Baseline: 89.6 percent of females delivering a live birth reported abstaining from smoking cigarettes during pregnancy in 2007.

Target setting method: 10 percent improvement.

Data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**MICH–11.4** Illicit drugs.

Target: 100 percent.

Baseline: 94.9 percent of pregnant females aged 15 to 44 years reported abstaining from illicit drugs in the past 30 days in 2007–08.

Target setting method: Total coverage.

Data source: National Survey on Drug Use and Health (NSDUH), SAMHSA.

**MICH–12:** (Developmental) Increase the proportion of pregnant women who attend a series of prepared childbirth classes.

Potential data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH–13:** (Developmental) Increase the proportion of mothers who achieve a recommended weight gain during their pregnancies.

Potential data source: National Vital Statistics System–Nativity (NVSS–N), CDC, NCHS.

**Preconception Health and Behaviors**

**MICH–14:** Increase the proportion of women of childbearing potential with intake of at least 400 µg of folic acid from fortified foods or dietary supplements.

Target: 26.2 percent.

Baseline: 23.8 percent of non-pregnant females aged 15 to 44 years reported a usual daily total intake of at least 400 µg of folic acid from fortified foods or dietary supplements in 2003–06.

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

**MICH–15:** Reduce the proportion of women of childbearing potential who have low red blood cell folate concentrations.

Target: 22.1 percent.

Baseline: 24.5 percent of non-pregnant females aged 15 to 44 years had low red blood cell folate concentrations in 2003–06.

Target setting method: 10 percent improvement.

Data source: National Health and Nutrition Examination Survey (NHANES) CDC, NCHS.

**MICH–16:** Increase the proportion of women delivering a live birth who received preconception care services and practiced key recommended preconception health behaviors.

**MICH–16.1** (Developmental) Discussed preconception health with a health care worker prior to pregnancy.

Potential data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP;

California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-16.2** Took multivitamins/folic acid prior to pregnancy.

Target: 33.1 percent.

Baseline: 30.1 percent of females delivering a recent live birth took multivitamins/folic acid every day in the month prior to pregnancy as reported in 2007.

Target setting method: 10 percent improvement.

Data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-16.3** Did not smoke prior to pregnancy.

Target: 85.4 percent.

Baseline: 77.6 percent of females delivering a recent live birth did not smoke in the 3 months prior to pregnancy as reported in 2007.

Target setting method: 10 percent improvement.

Data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-16.4** Did not drink alcohol prior to pregnancy.

Target: 56.4 percent.

Baseline: 51.3 percent of females delivering a recent live birth did not drink alcohol in the 3 months prior to pregnancy as reported in 2007. Target setting method: 10 percent improvement.

Data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-16.5** Had a healthy weight prior to pregnancy.

Target: 53.4 percent.

Baseline: 48.5 percent of females delivering a recent live birth had a normal weight (i.e., a BMI of 18.5-24.9) prior to pregnancy as reported in 2007. Target setting method: 10 percent improvement.

Data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-16.6** (Developmental) Used contraception to plan pregnancy.

Potential data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-17:** Reduce the proportion of persons aged 18 to 44 years who have impaired fecundity (i.e., a physical barrier preventing pregnancy or carrying a pregnancy to term).

**MICH-17.1** Reduce the proportion of women aged 18 to 44 years who have impaired fecundity.

Target: 10.8 percent.

Baseline: 12.0 percent of females aged 18 to 44 years had impaired fecundity in 2006-08.

Target setting method: 10 percent improvement.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS.

**MICH-17.2** (Developmental) Reduce the proportion of men aged 18 to 44 years who have impaired fecundity.

Potential data source: National Survey of Family Growth (NSFG), CDC, NCHS.

## **Postpartum Health and Behavior**

**MICH-18:** (Developmental) Reduce postpartum relapse of smoking among women who quit smoking during pregnancy.

Potential data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-19:** (Developmental) Increase the proportion of women giving birth who attend a postpartum care visit with a health worker.

Potential data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

## **Infant Care**

**MICH-20:** Increase the proportion of infants who are put to sleep on their backs.

Target: 75.9 percent.

Baseline: 69.0 percent of infants were put to sleep on their backs in 2007.

Target setting method: 10 percent improvement.

Data sources: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC, NCCDPHP; California's Maternal and Infant Health Assessment (MIHA), Maternal, Child and Adolescent Health Department, California State Health Department.

**MICH-21:** Increase the proportion of infants who are breastfed.

### **MICH-21.1** Ever.

Target: 81.9 percent.

Baseline: 74.0 percent of infants born in 2006 were ever breastfed as reported in 2007-09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIRD and NCHS.

### **MICH-21.2** At 6 months.

Target: 60.6 percent.

Baseline: 43.5 percent of infants born in 2006 were breastfed at 6 months as reported in 2007-09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIRD and NCHS.

### **MICH-21.3** At 1 year.

Target: 34.1 percent.

Baseline: 22.7 percent of infants born in 2006 were breastfed at 1 year as reported in 2007-09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIRD, and NCHS.

### **MICH-21.4** Exclusively through 3 months.

Target: 46.2 percent.

Baseline: 33.6 percent of infants born in 2006 were breastfed exclusively through 3 months as reported in 2007-09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIRD, and NCHS.

### **MICH-21.5** Exclusively through 6 months.

Target: 25.5 percent.

Baseline: 14.1 percent of infants born in 2006 were breastfed exclusively through 6 months as reported in 2007–09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIIRD, and NCHS.

**MICH–22:** Increase the proportion of employers that have worksite lactation support programs.

Target: 38 percent.

Baseline: 25 percent of employers reported providing an on-site lactation/mother’s room in 2009.

Target setting method: Projection/trend analysis.

Data source: Employee Benefits Survey, Society for Human Resource Management (SHRM).

**MICH–23:** Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life.

Target: 14.2 percent.

Baseline: 24.2 percent of breastfed newborns born in 2006 received formula supplementation within the first 2 days of life as reported in 2007–09.

Target setting method: Projection/trend analysis.

Data source: National Immunization Survey (NIS), CDC, NCIIRD, and NCHS.

**MICH–24:** Increase the proportion of live births that occur in facilities that provide recommended care for lactating mothers and their babies.

Target: 8.1 percent.

Baseline: 2.9 percent of 2007 live births occurred in facilities that provide recommended care for lactating mothers and their babies as reported in 2009.

Target setting method: Projection/trend analysis.

Data source: Breastfeeding Report Card, CDC, NCCDPHP.

## **Disability and Other Impairments**

**MICH–25:** Reduce the occurrence of fetal alcohol syndrome (FAS).

Target: Not applicable.

Baseline: 3.6 cases of fetal alcohol syndrome per 10,000 live births in 2006 were suspected or confirmed among children born in 2001–04 (standardized to 2006 U.S. live births).

Target setting method: This measure is being tracked for informational purposes. If warranted a target will be set during the decade.

Data source: Fetal Alcohol Syndrome Surveillance Network (FASSnet), CDC, NCBDDD.

**MICH–26:** Reduce the proportion of children diagnosed with a disorder through newborn blood spot screening who experience developmental delay requiring special education services.

Target: 13.6 percent.

Baseline: 15.1 percent of children aged 3 to 10 years diagnosed with a disorder through newborn bloodspot screening experienced developmental delay requiring special education services in 1991–2004.

Target setting method: 10 percent improvement.

Data sources: The Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCBDDD.

**MICH–27:** Reduce the proportion of children with cerebral palsy born as low birth weight infants (less than 2,500 grams).

Target: 45.0 percent.

Baseline: 50.0 percent of children aged 8 years with cerebral palsy were born as low birth weight infants (less than 2,500 grams) as reported in 2006.

Target setting method: 10 percent improvement.

Data source: Autism and Developmental Disabilities Monitoring (ADDM) Network, CDC, NCBDDD.

**MICH-28:** Reduce occurrence of neural tube defects.

**MICH-28.1** Reduce the occurrence of spina bifida.

Target: 30.8 live births and/or fetal deaths with spina bifida per 100,000 live births.

Baseline: 34.2 live births and/or fetal deaths with spina bifida per 100,000 live births were diagnosed in 2005-06.

Target setting method: 10 percent improvement.

Data source: National Birth Defects Prevention Network (NBDPN), CDC, NCBDDD.

**MICH-28.2** Reduce occurrence of anencephaly.

Target: 22.1 live births and/or fetal deaths with anencephaly per 100,000 live births. Baseline: 24.6 live births and/or fetal deaths with anencephaly per 100,000 live births were diagnosed in 2005-06.

Target setting method: 10 percent improvement.

Data source: National Birth Defects Prevention Network (NBDPN), CDC, NCBDDD.

**MICH-29:** Increase the proportion of young children with an Autism Spectrum Disorder (ASD) and other developmental delays who are screened, evaluated, and enrolled in early intervention services in a timely manner.

**MICH-29.1** Increase the proportion of young children who are screened for an Autism Spectrum Disorder(ASD) and other developmental delays by 24 months of age.

Target: 21.5 percent.

Baseline: 19.5 percent of children aged 10 to 36 months who were screened for an Autism Spectrum Disorder (ASD) and other developmental delays were screened by 24 months of age as reported in 2007.

Target setting method: 10 percent improvement.

Data source: National Survey on Children's Health (NSCH), HRSA, MCHB, and CDC, NCHS.

**MICH-29.2** Increase the proportion of children with an ASD with a first evaluation by 36 months of age.

Target: 42.9 percent.

Baseline: 39.0 percent of children aged 8 years with an ASD had a first evaluation by 36 months of age, as reported in 2006.

Target setting method: 10 percent improvement.

Data source: The Autism and Developmental Disabilities Monitoring (ADDM) Network, CDC, NCBDDD.

**MICH-29.3** Increase the proportion of children with an ASD enrolled in special services by 48 months of age.

Target: 57.6 percent.

Baseline: 52.4 percent of children aged 8 years with an ASD were enrolled in special services by 48 months of age, as reported in 2006.

Target setting method: 10 percent improvement.

Data source: Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCBDDD.

**MICH-29.4** (Developmental) Increase the proportion of children with a developmental delay with a first evaluation by 36 months of age.

Potential data source: National Survey of Child's Health (NSCH), HRSA, MCHB, and CDC, NCHS.

**MICH-29.5** (Developmental) Increase the proportion of children with a developmental delay enrolled in special services by 48 months of age.

Potential data sources: National Survey of Child's Health (NSCH), HRSA, MCHB, and CDC, NCHS.

## Health Services

**MICH-30:** Increase the proportion of children, including those with special health care needs, who have access to a medical home.

**MICH-30.1** Increase the proportion of children who have access to a medical home.

Target: 63.3 percent.

Baseline: 57.5 percent of children under age 18 years had access to a medical home in 2007.

Target setting method: 10 percent improvement.

Data source: National Survey of Children's Health (NSCH), HRSA, MCHB, and CDC, NCHS.

**MICH-30.2** Increase the proportion of children with special health care needs who have access to a medical home.

Target: 51.8 percent.

Baseline: 47.1 percent of children under age 18 years with special health care needs had access to a medical home in 2007.

Target setting method: 10 percent improvement.

Data source: National Survey of Children with Special Health Care Needs (NS-CSHCN), HRSA, MCHB, and CDC, NCHS.

**MICH-31:** Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.

**MICH-31.1** Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems.

Target: 22.4 percent.

Baseline: 20.4 percent of children aged 0 through 11 years with special health care needs received their care in family-centered, comprehensive, and coordinated systems in 2005–06.

Target setting method: 10 percent improvement.

Data source: National Survey of Children with Special Health Care Needs (NS-CSHCN), HRSA, MCHB, and CDC, NCHS.

**MICH-31.2** Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems.

Target: 15.1 percent.

Baseline: 13.7 percent of children aged 12 through 17 years with special health care needs received their care in family-centered, comprehensive, and coordinated systems in 2005–06.

Target setting method: 10 percent improvement.

Data source: National Survey of Children with Special Health Care Needs (NS-CSHCN), HRSA, MCHB, and CDC, NCHS.

**MICH-32:** Increase appropriate newborn blood-spot screening and follow-up testing.

**MICH-32.1** Increase the number of States and the District of Columbia that verify through linkage with vital records that all newborns are screened shortly after birth for conditions mandated by their State-sponsored screening program.

Target: 45 States (44 States and the District of Columbia).

Baseline: 21 States verified through linkage with vital records that all newborns were screened shortly after birth for conditions mandated by their State-sponsored screening program in 2010.

Target setting method: Projection/trend analysis.

Data source: National Newborn Screening and Genetics Resource Center, HRSA, MCHB.

**MICH-32.2** Increase the proportion of screen-positive children who receive follow-up testing within the recommended time period.

Target: 100 percent.

Baseline: 98.3 percent of screen-positive children received follow-up testing within the recommended time period in 2006–08.  
Target setting method: Total coverage.  
Data source: Title V Information System, HRSA, MCHB.

**MICH–32.3** (Developmental) Increase the proportion of children with a diagnosed condition identified through newborn screening who have an annual assessment of services needed and received.

Potential data source: National Newborn Screening and Genetic Resource Center, HRSA, MCHB.

**MICH–33:** Increase the proportion of very low birth weight (VLBW) infants born at Level 3 hospitals or subspecialty perinatal centers.

Target: 83.7 percent.

Baseline: 76.1 percent of VLBW infants were born at Level III hospitals or subspecialty perinatal centers in 2008.

Target setting method: 10 percent improvement.

Potential data source: Title V Information System, HRSA, MCHB.

# HEALTHY NORTH CAROLINA 2020 ENVIRONMENTAL HEALTH

## 2020 Objectives

The environment in which individuals live and work affects their health. Contaminants in water and air can have adverse health consequences. Both short-term and chronic exposure to pollution can be serious health risks. Air pollution from ozone can lead to respiratory symptoms, disruption in lung function, and inflammation of airways.<sup>163</sup> Water pollution has been linked to both acute poisonings and chronic effects.<sup>164,165</sup>

The worksite is another aspect of the environment that is important to consider in the public's health. Unsafe work conditions can lead to poor health and even to extreme outcomes such as death.

### OBJECTIVE 1: INCREASE THE PERCENTAGE OF AIR MONITOR SITES MEETING THE CURRENT OZONE STANDARD OF 0.075 PPM<sup>xx</sup>

(KEY PERFORMANCE INDICATOR)

*Rationale for selection:* People with asthma are especially sensitive to ozone exposure. Ozone has been linked to increased frequency of asthma attacks and use of health care services. Ozone exposure may also affect respiratory system development in very young children.<sup>163</sup>

CURRENT (2007-09) <sup>yy</sup>	2020 TARGET
62.5%	100%

### OBJECTIVE 2: INCREASE THE PERCENTAGE OF THE POPULATION BEING SERVED BY COMMUNITY WATER SYSTEMS (CWS) WITH NO MAXIMUM CONTAMINANT LEVEL VIOLATIONS (AMONG PERSONS ON CWS)

*Rationale for selection:* A community water system is a type of public water system that provides water to the same population year-round.<sup>166</sup> Approximately three out of four North Carolinians reside in areas serviced by community water systems.<sup>167</sup> Reducing contaminants protects the public's health by ensuring that those on CWS receive safe drinking water.

CURRENT (2009) <sup>zz</sup>	2020 TARGET
92.2%	95.0%

### OBJECTIVE 3: REDUCE THE MORTALITY RATE FROM WORK-RELATED INJURIES (PER 100,000 EQUIVALENT FULL-TIME WORKERS)

*Rationale for selection:* Although the actual number of North Carolinians who die from work-related injuries is not large, these deaths are unnecessary and preventable. Agriculture, forestry, fishing, and hunting; construction; and transportation and utilities are among the industries with the highest death rates in North Carolina.<sup>aaa</sup>

CURRENT (2008) <sup>bbb</sup>	2020 TARGET
3.9	3.5

xx Parts per million.

yy Division of Air Quality, North Carolina Department of Environment and Natural Resources. Written (email) communication. June 21, 2010.

zz Public Water Supply Section, North Carolina Department of Environment and Natural Resources. Written (email) communication. May 18, 2010. aaa Bureau of Labor Statistics, US Department of Labor. Written (email) communication. September 16, 2010.

bbb Bureau of Labor Statistics, US Department of Labor. Written (email) communication. September 16, 2010.

## Disparities in Environmental Health

*Ozone:* Urban and rural areas have ground-level ozone, although it tends to be higher in urban areas. In addition, particular individuals are at increased risk from the deleterious effects of ozone exposure, including children, people with asthma and lung disease, older adults, infants, and active people of all ages.<sup>168</sup>

*Fatalities from work-related injuries:* Certain industries are more hazardous and therefore have increased rates of occupational fatality compared with rates of other industries. Compared with the overall 2008 state mortality rate of 3.9 fatalities per 100,000 equivalent full-time workers, the rate is 41.7 fatalities (per 100,000 equivalent full-time workers) for agriculture, forestry, fishing, and hunting; 10.2 fatalities (per 100,000 equivalent full-time workers) for transportation and utilities; and 9.7 fatalities (per 100,000 equivalent full-time workers) for construction.<sup>ccc</sup> In addition, national data show that certain groups are more at risk for fatal occupational injuries, including men, individuals aged at least 65 years, and Hispanic workers.<sup>169,170</sup>

## Strategies to Improve Environmental Health

Level of the Socioecological Model	Strategies
<b>Individual</b>	Carpool, use public transportation, combine errands, conserve electricity, set your air conditioner to a higher temperature <sup>171</sup> ; properly use and dispose of hazardous materials like motor oil and pesticides and use pesticides and fertilizers in moderation. <sup>172</sup>
<b>Clinical</b>	Work with community coalitions for strong state air pollution control measures <sup>173</sup> ; advocate for energy-saving and pollution-minimizing practices. <sup>173</sup>
<b>Schools and Child Care</b>	Encourage students to take part in the Youth at Work: Talking Safety occupational safety training program <sup>174</sup> ; enforce a “no idling” policy to improve air quality. <sup>175</sup>
<b>Worksites</b>	Reduce environmental risks in the workplace <sup>176</sup> ; inform all employees of applicable safety and health standards and protect all employees who work with hazardous materials <sup>177</sup> ; meet Occupational Safety and Health Act requirements to provide a workplace that is “free from recognized hazards that are causing or are likely to cause death or serious physical harm.” <sup>ddd</sup>
<b>Community</b>	Establish carpools, public transportation, or bike-friendly community transportation systems <sup>171</sup> ; implement low-impact development requirements by zoning boards <sup>178</sup> ; follow best available technology for specific contaminants in community water systems, and refer to Environmental Protection Agency (EPA) guidance for simultaneous compliance when making treatment changes <sup>179</sup> ; perform regular monitoring of the water supply as required by the Safe Drinking Water Act and the North Carolina Drinking Water Act. <sup>eee,fff</sup>
<b>Public Policies</b>	Encourage implementation of fuel alternatives <sup>173</sup> ; support policies that promote stronger emission standards for vehicles <sup>180,181</sup> ; support policies that promote reduction of power plant emissions <sup>182</sup> ; develop water rates that support future community water system infrastructure needs. <sup>183</sup>

ccc Bureau of Labor Statistics, US Department of Labor. Written (email) communication. September 16, 2010. ddd 29

USC §654.

eee 42 USC §300g.

fff NCGS §130A-311.

